

# Zuckerberg San Francisco General Hospital & Trauma Center

## Infection Prevention & Control Annual Plan

*Time Period Covered = Fiscal Year (FY)*

### **VISION:**

To be the best hospital by exceeding patient expectations and advancing community wellness in a patient centered, healing environment that incorporates evidence-based infection prevention and control practices.

### **MISSION:**

To provide safe, quality healthcare and trauma services with compassion and respect while protecting patients from healthcare-associated infections (HAI).

### **PHILOSOPHY**

The Infection Prevention and Control Department believes that providing first class health care to our patients requires a program founded on evidence-based measures to prevent HAI. Protecting healthcare workers is also paramount, and we believe in reducing the risk of infectious occupational exposures and hazards for all personnel at Zuckerberg San Francisco General Hospital & Trauma Center (ZSFG). We also believe that a fundamental component to protect patients, visitors, and staff is through education to increase understanding and application of basic infection prevention measures.

The Infection Prevention and Control Department embraces the organizational values and aligns the plan around ZSFG True North Metrics.

**RISK ASSESSMENT** – *Below is the list of risk factors that are considered at a minimum every year. As each factor may change based upon previous year's information (shown in annual report) the explanatory narrative is updated each year.*

- Universal Healthcare-Associated Infection Risks
- ZSFG Microbiological Risk
- ZSFG Trauma and Critical Care Risk
- ZSFG and Construction Risk
- ZSFG and Financial Risk

### **SCOPE OF PROGRAM:**

The Infection Prevention and Control (IC) Department serves healthcare personnel, patients, and visitors in various ways; roles played by members of the Department include epidemiologist, consultant, educator, and investigator. A complete description of services provided may be found in the ZSFG IC Manual, Section 1; *Infection Control Program*. The IC department reports directly to the Medical Executive Committee (MEC) and the Performance Improvement and Patient Safety Committee (PIPS) on all activities identified in the annual plan and other unscheduled activities that may arise throughout the year. In addition, the IC department reports surveillance results to other appropriate committees, groups and task forces as identified in **Section B; Performance Measures** of this document. The IC department interfaces with members of various inspecting agencies, including The Joint Commission (TJC) and California Department of Public Health (CDPH).

The goals in this document are grouped and presented by type of activity. The prioritization of all activities is shown in the IC Risk Assessment Prioritization List which was developed using input from the following sources: ICC membership completion of the *Infection Control Risk Assessment Tool* (see Appendix A), the previous year's historical data, emerging infectious issues, and information from the areas listed below (complete details available in ZSFG Administrative Policy 8.09 *Hospital Plan for Provision of Patient Care*). While all activities are recognized as important, the IC department will prioritize specific interventional activities based on this risk assessment.

### **Scope of Services:**

ZSFG is a public health hospital licensed for a total of 393 beds: 284 acute beds, 30 Skilled Nursing beds, and 79 mental health beds. In addition, it is licensed by the California Department of Social Services Community Care Licensing Division for 41 beds. ZSFG scope also includes serving as the designated quarantine hospital and only Level 1 trauma center for the city and county of San Francisco and northern San Mateo County (approximately 1.5 million people).

### **Personnel:**

The hospital employs 3,400 ZSFG/City and County of San Francisco (CCSF) employees and approximately 1,900 University of California employees including physicians, specialty nurses and house staff. ZSFG is affiliated with the University of California, San Francisco (UCSF) for contracted services. Through its affiliation with the UCSF School of Medicine, the hospital has approximately 500 active and 550 courtesy members of the Medical Staff. Each year approximately 400 third or fourth year medical students, 900 residents and 60 clinical fellows are trained at ZSFG.

In addition, ZSFG provides approximately 200 clinical nursing placements at the Associate, Baccalaureate and Masters levels for students from UCSF, the California State University System, local community colleges, and Bay Area private universities and colleges each year.

### **Population served:**

ZSFG is part of the Community Health Network and serves as the primary community hospital for residents living in the southeast and northeast sections of the City and provides care to about one-half of the MediCal and low-income uninsured residents of San Francisco with a consistent percentage of our patient population identified as homeless. ZSFG's patient population continues to have a high percentage of ethnic minorities. Our patients' age distribution ranges from newborn to geriatric with the largest percentage falling between the ages of 25 – 64 years.

### **Top five infectious organisms of concern for SF General Hospital** *(the organisms have remained consistent but the order may vary from year to year):*

- Tuberculosis
- Influenza
- *Clostridium difficile*
- Multi-Drug Resistant (MDR) Organisms, e.g. Extended spectrum  $\beta$ -lactamase producing *Escherichia coli* or *Klebsiella pneumoniae*, *Acinetobacter baumannii*, *Pseudomonas aeruginosa*, Vancomycin-Resistant *Enterococcus* (VRE) or other organism based on final microbiology sensitivity report as determined by IC/ID
- *Staphylococcus aureus* (Methicillin-Resistant (MRSA) and Sensitive)

### **Geographical Location and potential impact:**

San Francisco serves as a port city which increases the risk of being an entry point for certain infectious diseases (e.g. MDR Tuberculosis (TB), MERS-CoV, or Pandemic Influenza). Other potential problems include earthquakes and their associated risks (e.g. traumatic injuries, loss of potable water and functional sewer system leading to the potential increased risk of fecal-oral spread diseases).

**A. GOALS (constant) AND OBJECTIVES (constant are shown below, additional items may be added as necessary based upon previous year's trends and activities)** are in alignment with the ZSFG Strategic Plan and the True North Metrics, the most critical and clearly spelled out for this department being aligned around "Safety – Zero Patient Harm" and "Care Experience – Patient Satisfaction":

1. Facilitate a coordinated process to prevent healthcare associated infections (HAI) in patients and health care workers in accordance with current California Occupational Safety and Health Administration (CAL-OSHA) regulations, SF Department of Public Health (SFDPH), California Department of Public Health (CDPH), Centers for Disease Control and Prevention (CDC) guidelines and The Joint Commission (TJC) standards through education of staff, patients, and visitors on appropriate infection prevention practices utilizing various types of media and format. (On-going)

- a. IC personnel will provide education on Infection Control, Tuberculosis Prevention and Control Plan, Bloodborne Pathogen Exposure Control Plan, Standard Precautions (SP), and ZSFG isolation categories on a monthly basis through scheduled New Employee Orientation. Educational material will be updated as needed based upon changes to standards and new information. (Measures of Success (MOS) for education will be maintained by Department of Education & Training (DET))(On-going)
  - b. Annual education will be accomplished via ZSFG on-line education portal, division/department annual updates and videotapes in combination with unit IC liaison briefings. (MOS for education will be maintained by DET)
  - c. Implement CDC's National Health Safety Network (NHSN) program activities as required by CDPH.
2. While the ultimate goal is to have Zero HAI, each year there is an identified percentage decrease from the known HAI Rates from previous fiscal year (FY) as identified by the appropriate HAI reduction task force. For those years that zero is achieved the goal will be to maintain all surveillance and prevention activities to sustain zero. (*True North Metric: Safety – Zero Patient Harm*) (Refer to Section B; **Performance Measures** below for HAI specific goal and complete details of surveillance studies.) (On-going)
    - a. Collaborate with Quality Management (QM), Nursing Executive Committee - Quality & Safety and clinical personnel in the implementation of Institute for Healthcare Improvement (IHI) activities by assisting with educational programs on facility specific HAI and policies to prevent/reduce their occurrence utilizing appropriate professional organization standards and/or performance measures for target audience (e.g. Surgical Site Infection (SSI) Reduction, Ventilator Associated Events (VAE), Central Line Associated-Blood Stream Infection (CLA-BSI), and Catheter Associated-Urinary Tract Infections (CA-UTI) bundles).
    - b. Collaborate with appropriate specific HAI reduction task forces on developing processes to promote decreased utilization of invasive devices (central lines, indwelling urethral catheters, ventilators) as soon as clinically appropriate using educational efforts, electronic medical record prompts and encouragement/implementation of device utilization discussion in interdisciplinary patient rounds. IC personnel will provide NHSN device utilization rates for external comparison and ZSFG unit-specific device utilization rates for internal comparison. Reduction goals to be established by appropriate task forces.
    - c. Collaborate with inpatient and outpatient dialysis units to decrease known HAI rates from FY2016/17. ZSFG participates in the NHSN outpatient dialysis infection tracking program plus all positive culture reports are received through daily microbiology surveillance reports and the inpatient unit is part of the ZSFG HAI surveillance program. In addition the IC department participates in the monthly dialysis Quality Assurance/Performance Improvement meetings.
  3. Provide a safe, healthy environment for all personnel, patients, and visitors through the following measures: (*True North Metric: Safety – Zero Patient Harm and Workforce Care & Development: Workforce Injuries*)
    - a. Ensure the facility provides the appropriate means to prevent possible transmission of infectious illness through blood exposures of all types in accordance with the CAL-OSHA Bloodborne Pathogens Standard. (On-going)
      - 1) Provide education on the Bloodborne Pathogen Exposure Control Plan and the staff members' responsibilities in complying with this directive. Components include prompt reporting of exposures, and adherence to Standard Precautions. The topics are reflected in the ZSFG IC Manual and in initial/annual employee education.
      - 2) Participate in the Safety Device Committee in the evaluation and purchasing (if necessary) of improved needle safety devices (e.g. sharps disposal containers, safety needles/syringes, safety lancets, plastic capillary tubes, etc.) and other exposure prevention devices (e.g.. personal protective equipment)(On-going)
    - b. Ensure the facility provides the appropriate level of equipment cleaning/disinfection to prevent transmission of infectious organisms through shared fomites (indirect contact)
      - 1) Perform annual survey across the facility to identify locations where procedures are performed utilizing re-usable devices/instruments, to include point of care ultrasound procedures.

- 2) Collaborate with Biomedical Engineering department to ensure new equipment has been reviewed for appropriate cleaning/disinfecting processes.
- 3) Collaborate with clinical and support service personnel to ensure education on proper cleaning/disinfecting processes and that instructions are present in the area of use.
- c. Ensure the facility provides appropriate means to prevent possible transmission of infectious illness through respiratory exposures, to include but not limited to Tuberculosis (TB), meningococcal disease and influenza.
  - 1) Maintain year-round respiratory hygiene measures as recommended by CDC to decrease the potential spread of undiagnosed illness.
  - 2) Perform annual TB risk assessment according to the CDC's *Guidelines for Preventing the Transmission of Mycobacterium TB in Health-care Settings*, most current version. Based upon the risk assessment, determine number and location of employees that require TST monitoring in partnership with Occupational Health Services of ZSFG and UCSF. (MOS will be maintained by Occupational Health Services)
  - 3) Provide influenza immunizations at no cost to all ZSFG campus personnel, to include employees, faculty, contractors, students and volunteers.
  - 4) Ensure respiratory hygiene stations and public notices are prominently displayed throughout influenza seasons. Examples include in-house television monitors displaying flu mitigation messages and large posters displayed in all three main lobbies in B-5 and B-25.
- d. Ensure Food and Nutritional Services (FNS) utilize appropriate practices to prevent transmission of foodborne illness through: (Refer to Section B.2.d. and B.3.b. for MOS)
  - 1) Proper food handling practices through all stages of preparation to include thawing, preparation, serving, cool down, and storage in accordance to Food Safety Code.
  - 2) Proper cleaning and sanitation of food preparation surfaces, kitchen surfaces and equipment, food storage areas and environmental surfaces in accordance with Food Safety Code and equipment manufacturers' instructions.
- e. Ensure the facility provides the appropriate level of environmental cleaning to prevent transmission of infectious organisms through direct and indirect contact. (Refer to Section B.3.a for MOS)
  - 1) Construction/Renovation Activities: In order to protect individuals within the hospital from potential exposure to harmful organisms and/or substances during any disruption to the structure, an Infection Control Risk Assessment (ICRA) will be accomplished by qualified personnel (number and type determined by scope of project). Facilities Management from ZSFG and/or UCSF will notify IC personnel of activities during the planning phase and an initial ICRA will be performed.
    - a. The ICRA will be used to determine what level of protective barriers are required prior to project start and what type of surveillance activities need to be performed in accordance with ZSFG IC Manual Policy 7.09; *Renovation and Construction Guidelines*.
    - b. The ICRA will be updated as needed based upon findings during routine surveillance or changes in project plan.
    - c. The results of the ICRA(s) will be reported to the ICC and EOC upon completion.
    - d. See **Section B.3.c.** of this plan for surveillance frequency and reporting.
  - 2) Environment of Care (EOC) Rounds: IC representatives will participate in the EOC rounds under the coordination of the ZSFG Safety Officer.
- f. Ensure the facility provides safe water at all point of use fixtures through use of measures prescribed in the Precept/ZSFG Utility Water Safety Management Plan. The plan is a consolidation of tasks and policies that are specifically implemented to control Legionella and other waterborne pathogens, and is in support of the Environment of Care Standard EC.02.05.01 EP 1-13, as well as the ANSI/ASHRAE Standard 188-2015, Legionellosis: Risk Management in Building Water Systems.
  - 1) Ensure risk assessment is updated when major changes occur in building occupancy or construction or renovation activities may impact the water system components.
  - 2) *Legionella* Testing: To ensure that levels remain at or below recommended levels *Legionella* is tested on a quarterly basis.

- 3) Ensure all required maintenance and monitoring is done for all structures, systems and components as set forth in the water management plan.
4. Promote community health and safety by facilitating communication between ZSFG clinical staff, CDPH and SFDPH Communicable Disease Control and Prevention division. (*True North Metric: Safety – Zero Patient Harm* and *Workforce Care & Development: Workforce Injuries*). The following items will be reported in accordance with state and local regulations:
  - a. Diseases as required by SFDPH, list of diseases and timeframe for reporting located at <http://www.sfcdcp.org/reportablediseases.html> and ZSFG IC Manual, Policy No. 1.08; *DHS Reportable Diseases*.
  - b. Severe *Staphylococcus aureus* infection in a previously healthy person; reportable to SFDPH for forwarding to CDPH.
  - c. HAI as required by CDPH through NHSN (e.g. Central Line-Associated Blood Stream Infection (CLA-BSI), Surgical Site Infections (SSI), Lab ID – *Clostridium difficile*, MRSA, VRE).
  - d. “Outbreak” Management: The ICC recognizes that outbreaks may occur in our facility or in the community. Depending on the circumstances, there may be an associated increase in the number of patients who need treatment.
    - 1) For community-based outbreaks the IC Department will work in accordance with SFDPH guidelines.
    - 2) For a facility-based outbreak, the steps recommended in ZSFG IC Manual, Policy 1.09; *Outbreak Investigations* will be followed and, based upon the type and projected number of possible patients, notification will be made to Emergency Management Coordinator for potential activation of the ZSFG Emergency Response Plan: Section 11; *Hazard Specific Plan – Disease Outbreak*
    - 3) Actions will be documented and reported to the ICC (and other committees as appropriate) for evaluation of effectiveness of actions and potential areas for improvement.
5. Perform Documentation Reviews in order to ensure that ZSFG personnel are provided with the current practices on prevention and control of HAI and other infectious diseases. (*True North Metric: Safety – Zero Patient Harm*) (On-going)
  - a. Involve ICC and unit liaisons, where appropriate, in the review process of ZSFG IC Manual; ZSFG IC Manual policies are reviewed and revised bi-annually with the exception of the Bloodborne Pathogen and TB Exposure Control Plans which require annual review.
  - b. Conduct policy reviews to ensure that healthcare personnel are provided with current information to protect themselves, patients, and visitors.

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## B. PERFORMANCE MEASURES:

1. **Outcome Surveillance Studies:** All standardized criteria, formulas used for rate calculations, and data collection forms/tools are maintained in the computer-based surveillance folder at Epi-center\$ Sfgh03 (J)/Common/ New/\_Surveillance.
  - a. ***Clostridium difficile* Incidence Rate** (NPSG.07.03.01; CA SB 1058, CMS Star Measure): further information provided in Section 4; *Sentinel Organisms*) (*Supports Sections A.1- 3*):
    - 1) **Threshold:** ZSFG Rate from preceding year.
    - 2) **Goal:** Decrease rate by 25% from preceding year (*data shown in each annual plan*)
    - 3) **Reporting/Feedback:** Rates will be reported monthly to ICC/MEC and quarterly to ICC/PIPS/MEC/CDPH; annually to Nursing Executive Committee – Quality and Safety (NEC-Q&S). In addition, if cluster detected it will be reported immediately to affected unit(s) for intervention.
    - 4) **Personnel:** IC Department, Nursing, Medical Staff
  - b. **CLA-BSI** (NPSG.07.04.01; CA SB 739; CMS 1533; CMS Star Measure) (*Supports Section A.2*)
    - 1) **Areas:** All in-patient units
    - 2) **Length of Time:** Continuously (1 Jan – 31 Dec)
    - 3) **Stratification:** By location and by catheter site, i.e. Subclavian, Femoral, Internal Jugular or Peripherally Inserted Central Catheter (PICC).
    - 4) **Threshold:** Current Published NHSN Rates:
      - a) Non-ICU = calculated rate that aligns with NHSN non-critical care units
      - b) ICU: calculated rate that aligns with NHSN critical care categories
    - 5) **Goal:** Decrease CLA-BSI rate by 25% from preceding year (*data shown in each annual plan*)
    - 6) **Reporting/Feedback:** Monthly case numbers to SCIP Task Force; Rates will be formally reported quarterly to the SCIP Task Force/Critical Care Committee (CCC)/ICC/PIPS/MEC/ CDPH; annually to NEC-Q&S.
    - 7) **Personnel:** Vascular Access Service RN / IC Department
  - c. **Surgical Site Infection (SSI)** (NPSG.07.05.01; CMS Star Measure) (*Supports Section A.2*):
    - 1) **What:** Monitor patients for development of SSI as a result of surgical procedures
    - 2) **Who:** All Patients
    - 3) **Length of Time:** Continuously
    - 4) **Stratification:** By Procedure;
    - 5) **Threshold:** Current Published NHSN SIR Data
    - 6) **Goal:** Decrease SSI SIR by 25% from previous year (*data shown in each annual plan*)
    - 7) **Reporting/Feedback:** quarterly report to the following committees; SCIP Task Force / OR/ICC/MEC/PIPS/CDPH; annually to NEC-Q&S; feedback to individual surgeons and departments as needed.
    - 8) **Personnel:** IC Department / OR – Nurse Manager / Perioperative PI Coordinator / Surgical Services Representatives
  - d. **CA-UTI** (NPSG.07.06.01; CA SB 739; CMS 1533; CMS Star Measure) (*Supports Section A.2*)
    - 1) **Areas:** All in-patient units
    - 2) **Length of Time:** Continuously (1 Jan – 31 Dec)
    - 3) **Stratification:** By location
    - 4) **Threshold:** Current Published NHSN Rates
      - a) Non-ICU = calculated rate that aligns with NHSN non-critical care units
      - b) ICU: calculated rate that aligns with NHSN critical care categories
    - 5) **Goal:** Decrease CA-UTI rate by 25% from preceding year (*data shown in each annual plan*)
    - 6) **Reporting/Feedback:** Quarterly to CCC/ICC/PIPS/MEC/ CDPH; annually to NEC-Q&S.
    - 7) **Personnel:** IC Department
  - e. **Infection Related Ventilator-Associated Condition (IVAC) and Possible/Probable VAP** (IHI Initiative) (*Supports Section A.2*)
    - 1) **Areas:** Critical Care

- 2) **Length of Time:** Continuously (1 Jan – 31 Dec)
  - 3) **Stratification:** By location
  - 4) **Threshold:** Current Published NHSN IVAC Rates: *)(NOTE: as IVAC is new criteria effective 1 Jan 2013 there will be no NHSN defined rate available for comparison for this year)*
    - a) ICU: calculated rate that aligns with NHSN critical care categories
  - 5) **Goal:** Decrease IVAC/VAP rates by 25% from preceding year *(data shown in each annual plan)*
  - 6) **Reporting/Feedback:** Quarterly to the CCC/ICC/PIPS/MEC; annually to NEC-Q&S
  - 7) **Personnel:** IC Department
- f. Skilled Nursing Facility Surveillance: 4A – Medical / Behavioral Health Center (BHC) (NPSG Goal 7) (Supports Section A.2 and CA Licensing)**
- 1) **What:** Monitor for the development of new HAI or infectious disease while in SNF
  - 2) **Who:** Residents of 4A and BHC
  - 3) **Length of Time:** Continuously
  - 4) **Stratification:** For HAI: by type of infection; for other infectious diseases: case by case basis
  - 5) **Threshold:** Current published rates:
    - a) Per CDC NHSN Report: CLA-BSI; CA-UTI
    - b) Per APIC/SHEA Report: Pneumonia
  - 6) **Goal:** Decrease rates by 25% from preceding year *(data shown in each annual plan)*
  - 7) **Reporting/Feedback:** 4A will report rates monthly to IC staff and quarterly to the ICC. IC staff will provide immediate feedback whenever adverse trends are identified and assist with further investigation as necessary to identify and alleviate possible contributing factors.
  - 8) **Personnel:** IC Department / Nurse Manager, 4A-SNF
- g. Healthcare Associated Infection Review and Sentinel Event Reporting Process (CA SB 158; Patient Safety and Infection Control & NPSG 7)**
- 1) **Healthcare Associated HAI Review:**
    - a) **What:** Monitor for the development of HAI
    - b) **Who:** Inpatients
    - c) **Length of Time:** Continuously
    - d) **Stratification:** Type of infection and location of patient
    - e) **Reporting/Feedback:** Results will be grouped using two criteria:
      - i. Type of infection:
        - Blood stream infections (sub-set CLA-BSI)
        - UTI (sub-set CA-UTI)
        - Pneumonia (sub-set VAP)
        - Surgical Site Infection
        - Other – as identified by NHSN criteria categories
      - ii. HAI present/Patient Impact Score:
        - No HAI = 0
        - HAI present, no impact on patient stay = 1
        - HAI present, affected stay (prolonged stay or increased level of care) = 2
        - HAI present, meets Sentinel Event criteria = 3

Results reported as aggregate data with trend analysis HAI to ICC/PIPS/MEC and Risk Management annually. HAI category 3 will be reported as soon as discovered through the Sentinel Event process after discussion at IC staff meeting.
  - f) **Personnel:** IC Department
- 2) **Sentinel Event Review:** A member of IC department participates in root cause analyses (RCA) due to sentinel events that may have occurred as a result of a HAI.
- 3) **Morbidity Review:** IC works in collaboration with departmental Morbidity and Mortality (M&M) functions in reviewing cases where HAI caused lasting morbidity, either through record review performed by IC practitioner or IC co-chair (Infectious Diseases physician) or meeting participation.

- 4) **Mortality Review:**
  - a) **What:** Monitor for deaths that may have occurred as a result of HAI.
  - b) **Who:** All in-patient deaths identified through mortality reports.
  - c) **Length of Time:** Continuously
  - d) **Reporting/Feedback:** A report is provided annually to ICC/MEC.
  - e) **Personnel:** IC Department
  
2. **Process Surveillance Strategies (CA SB 739 requirement)** are accomplished as a collaborative effort between IC and Quality Management (QM) personnel. QM personnel monitor for adherence to the ZSFG-selected IHI bundles and in addition IC personnel perform the following:
  - a. **SP–Hand Hygiene - (NPSG.07.01.01; CA SB 158) (Supports Section A.1 & 2):**
    - 1) **What:** a) Staff clean hands as appropriate according to ZSFG IC Manual Policy 3.01; *Hand Hygiene* and b) Unit Liaisons submit HH observations every month.
    - 2) **Areas:** All areas that provide direct patient care.
    - 3) **Length of Time:** On-going.
    - 4) **Method:** IC trained observers will perform visual surveillance using a standardized checklist. Each observer will document a minimum of 20 personnel in their unit each month. The personnel observed do NOT need to be assigned to their unit.
    - 5) **Stratification:** By unit and profession
    - 6) **Threshold:** a) 90% overall; b) 90% by unit
    - 7) **Goal:** a & b: 90%
    - 8) **Reporting/Feedback:** a) HH Compliance Rate quarterly to ICC/MEC/PIPS; annually to NEC-Q&S; b) List of compliance to data submission by unit/department will be sent to appropriate manager/supervisor quarterly.
    - 9) **Personnel:** IC Department / IC Unit Liaisons
  - b. **Central Line Insertion Practice (CLIP) Measures (Safety Network Institute-Quality Improvement Program (SNI-QIP) and NPSG.07.04.01):**
    - 1) **What:** Aseptic Technique to include the use of sterile single use gel and sterile probe cover when ultrasound is used.
    - 2) **Areas:** All patient care areas where CLs are inserted.
    - 3) **Length of Time:** Continuously
    - 4) **Stratification:** By location
    - 5) **Goal:** Proper measures will be followed 100% for all CL insertions.
    - 6) **Reporting/Feedback:** Quarterly to ICC/MEC/PIPS/CCC; annually to NEC-Q&S.
    - 7) **Personnel:** IC Department / Nursing
  - c. **Influenza Immunization - (NPSG.07.01.01; CA SB 158; CMS Star Measure )(Supports Section A.1 & 2):**
    - 1) **What:** Monitor for compliance to influenza immunization requirement, either through receipt of immunization or signing of ZSFG declination statement.
    - 2) **Who:** All ZSFG campus personnel, to include employees, faculty, contractors, students and volunteers.
    - 3) **Length of Time:** Annually between October 1 – March 31
    - 4) **Method:** OHS personnel will enter names of immunized personnel into EHS database and then calculate compliance via two methods:
      - a.  $\frac{\text{\# of personnel immunized}}{\text{\# of personnel on campus}} \times 100 = \text{Immunization Compliance Rate}$
      - b.  $\frac{\text{\# of personnel with signed declination}}{\text{\# of personnel on campus}} \times 100 = \text{Declination Rate}$
    - 5) **Stratification:** By unit or department and job classification (as defined by NHSN).
    - 6) **Threshold:** *Previous year's data:* a) Immunization Rate Overall; b) Declination Rate
    - 7) **Goal:** Established in accordance with Healthy People 2020: a: 90% & b: < 7 %
    - 8) **Reporting/Feedback:** a) Individual unit and department managers will receive overall immunization compliance rates and a list of non-compliant individuals monthly at a

- minimum, beginning November. b) Immunization Compliance Rate will be reported to ICC/MEC/NEC-Q&S monthly during influenza season; PIPS annually. c) Immunization Compliance data will be submitted to NHSN annually at the end of the influenza season.
- 9) **Personnel:** Employee Health Services
- d. **Antibiotic Usage** (*CA SB 739 requirement*): ZSFG's guidance and protocols for antibiotic usage are maintained in the ZSFG IC Manual located on the Community Health Network (CHN) intranet. They were developed in collaboration between the IC department, Pharmacy and Therapeutics – Antibiotic Usage sub- committee, and the Infectious Disease (ID) Pharmacist. ID Pharmacist monitors and evaluates antibiotic orders on a daily basis for appropriateness and makes recommendations as needed.
- e. **Food Safety Practice: Temperature Control** (*Supports Section A.3.c*)
- 1) **What:** IC rounds consists of assessment for proper temperature of food items during various stages of handling, to include cooking, serving, cool down, and storage.
  - 2) **Areas:** FNS sections: Dinex tray line, Blast Chill Freezer, Refrigerators, and Cafeteria food service line.
  - 3) **Length of Time:** Semi-Annual (scheduled on alternate quarters from EOC rounds)
  - 4) **Method: Observational:** IC designee will observe staff performing real-time temperature verification for random food items, in various stages of handling, to include cooking, re-heating, cooling down, serving, and storing/holding using a Food Services Checklist developed using the Food Safety Code temperature ranges.
  - 5) **Goal:** 100% compliance.
  - 6) **Reporting:** ICC
  - 7) **Personnel:** IC Department; Food & Nutritional Services supervisory personnel
- f. **MRSA Active Surveillance Testing:** (*CA SB 1058 - Health facilities: bacterial infections.*)
- 1) **What:** Physician response to e-mail notification of patients from categories a – d below who tested positive for MRSA nasal surveillance culture within 24 hours of admission.
  - 2) **Who:** Five selected categories of patients
    - a) Discharge from an acute care facility w/ in the past 30 days
    - b) Admission to an ICU or burn unit
    - c) Patient receiving hemodialysis
    - d) Transfer from a skilled nursing facility
    - e) Pre-op patient w/ documented medical condition making them susceptible to infection – deferred until clarification of qualifying medical conditions per CDPH
  - 3) **Area:** Hospital-wide
  - 4) **Length of Time:** Continuously
  - 5) **Stratification:** Per Unit
  - 6) **Threshold/Goal:** 90% of contacted physicians will respond to e-mail notification. Reported out as:
 
$$\frac{\# \text{ of physician responses / month}}{\# \text{ of physician notices sent / month}} \times 100$$
  - 7) **Reporting/Feedback:** Above rate plus the rate of positive cultures will be reported monthly to IC department and medical staff and formally reported quarterly to medical staff/ICC/PIPS/MEC.
  - 8) **Personnel:** IC Department / Clinical Medical Staff / Microbiology personnel
  - 9)

### 3. Environmental Surveillance:

- a. **Visual: On-going (scheduled through EH & S)** (*Supports Section A.3.d*):
- 1) **What:** Environment of Care (EOC) Rounds consist of assessment for proper care and maintenance of the facility, equipment, and supplies used in patient care.
  - 2) **Areas:** All patient care and select non-patient care (e.g. Clinical Lab, Pharmacy) areas at ZSFG.
  - 3) **Length of Time:** On-going
  - 4) **Method:** An IC Practitioner will visually survey each patient care area semi- annually as a part of the EOC/Safety Inspection Team. The ICP will use a standardized checklist. Minor

discrepancies will be addressed and corrected immediately. Discrepancies requiring action by another department or a recommended change in process will be identified in writing and suggestions will be offered to correct the item.

- 5) **Reporting:** Immediate feedback is provided to unit personnel; issues will be reported as needed to ICC.
- 6) **Personnel:** IC Department

**b. Food & Nutritional Services** – (*Supports Section A.3.c*)

- 1) **What:** IC Rounds consists of assessment for proper cleaning of food preparation and cooking surfaces during all stages of work and for proper care and maintenance of the facility, equipment, and supplies used in food preparation and storage areas.
- 2) **Areas:** All patient food preparation areas at ZSFG.
- 3) **Length of Time:** Quarterly as an on-going measure.
- 4) **Method:** IC designee will visually survey the kitchen to include food preparation items (steam kettles, grill tops, ovens) and food storage areas such as refrigerators, for overall cleanliness using a Food Services Checklist developed using the Food Safety Code and equipment manufacturers' directions.
- 5) **Reporting:** Immediate feedback is provided to Food & Nutritional Services personnel; issues will be reported as needed to appropriate supervisory personnel and ICC for corrective actions; routine reports will be provided to ICC and ALCC.
- 6) **Personnel:** IC Department; FNS supervisory personnel

**c. Sterilizers** (*Supports Section A.3*): Daily spore tests conducted. Results documented in individual sections, and positive results are reported immediately to the IC department in accordance with ZSFG IC Manual Policy 6.10; *Biological Monitors with Positive Results/Sterilization Failure* and Sterile Processing Department Policy S8.0; *Sterilization and Equipment Recall from the Sterile Processing Department*. Quarterly reports given to the ICC.

**d. Construction/Renovation** (*TJC Requirement EC.8.30*) (*Supports Section A.3.d.*): Targeted; level and frequency determined based upon ICRA results. Refer to ZSFG IC Manual Policy 7.09 for further details. Each project will have an action plan developed by IC personnel and submitted to ICC for review. Compliance to plan will be reported quarterly to ICC and EOC.

**4. Sentinel Organisms** (*Supports Section A.1 & 2*): The following organisms were selected for routine surveillance reporting based upon nationally-identified and/or ZSFG-specific concerns. The primary method for prevention of spread within the facility is adherence to Standard Precautions. Certain organisms will require additional isolation precautions as listed in ZSFG IC Manual Policy 3.08; *Alphabetical List of Diseases/Conditions with Required Precautions*. Measures taken for improvement in compliance in these areas will be applicable for all organisms and are monitored under **Process Surveillance 2.a: SP – Hand Hygiene** and **3.a: Visual**.

- a. *Clostridium difficile*
- b. Methicillin-resistant *Staphylococcus aureus* (MRSA)
- c. Extended Spectrum Beta-Lactamase producing organisms; e.g. *Escherichia coli* and *Klebsiella pneumoniae*
- d. Highly resistant gram-negative bacteria such as *Enterobacter* spp., *Acinetobacter* spp., *Pseudomonas aeruginosa*

Trend analysis will be reported monthly to ICC; quarterly to MEC/PIPS; annually to NQF. Any significant deviation from normal baseline will be assessed and reported “real-time” based on situation. Any changes to strategies already in place will be developed as needed based upon trend analysis.

**5. ZSFG Occupational Health Program Reports** (early reporting available by request if needed to evaluate potential exposure or compliance issues): Standards determined by various authorities including CAL-OSHA, TJC, and CDC.

- a. Tuberculosis PPD Skin Conversions: semi-annually

- b. Tuberculosis screening compliance rates: annually
- c. Tuberculosis cases in HCW: in all cases, as soon as suspected or identified.
- d. New employee immunity status/immunization compliance per ZSFG IC Manual, Policy 5.01; Infectious Disease Screening: reported annually.
- e. Influenza vaccine rate of administration and declination: reported Oct – March at monthly ICC meeting.

6. **SF City & County DPH: Bloodborne Exposure Incident Reporting:** annually (Point of Contact: SFDPH, 101 Grove)

**C. QUALITY IMPROVEMENT INITIATIVE** – *Will vary based upon trends seen throughout the hospital and requests from clinical staff and/or Executive Leadership. Based upon the level of effort involved QI projects may require more than 1 year of effort. Each selected project will be done utilizing the A3 Thinking framework.*

## **D. PROGRAM RESOURCES**

### **1. Personnel**

- a. 2—Certified Infection Control Practitioners
- b. 1—Novice Infection Control Practitioner
- c. 2—Infectious Diseases Physicians (also perform other functions)
- d. 1—Programmer Analyst
- e. 1—Healthcare Analyst

2. **Key Infection Control Data Items / Data Sources:** IC Programmer Analyst has access to the following:

- a. Infection Control IN-INFECT-CTRL data base server
- b. Patient Registration and Admission data (Siemens LCR/EAD & DPH SQL Server Repository)
- c. Microbiology / Clinical Laboratory (Misys Sunquest system)
- d. Intensive Care Units (ICIP/DAR)
- e. Respiratory Therapy (ICIP/DAR and ZSFG Citrix Server)
- f. Hospital Census Data (ZSFG ADT ReportViewer FTP Server)
- g. InPatient Pharmacy: (Siemens system / ZSFG Web Dist. Report Server)
- h. ORMIS Citrix web portal
- i. Nursing Assessments data (DPH SQL Server for Nursing Assessments)

3. **Infection Control Web Site:** Infection Control maintains a web site on the CHN intranet and uses it to publish numerous policies, procedures and supplemental information to help prevent infections at ZSFG and ensure compliance with hospital policies, etc.

Appendix A

**Infection Control Risk Assessment Tool**

Name: \_\_\_\_\_ Department: \_\_\_\_\_

**Instructions:** Rate each line item with respect to its probability of occurring facility-wide on any given day, the likely impact if it occurs, and quality of current systems in place to address it. Multiply the three numbers in each line to arrive at a score for each item. Please return to IC by fax to 206-4360 or e-mail [elaine.dekker@ucsf.edu](mailto:elaine.dekker@ucsf.edu).

Potential Risks/Problems	Probability of Event Occurring on Any Given Day (Facility-wide)					Likely Risk to/Impact on SFGH if Event Occurs (e.g., Health, Financial, Legal, Regulatory)				Quality of Preparedness/Response Systems Currently in Place					Score
	Expected	Likely	Maybe	Unlikely/Rare	Never	Catastrophic	Serious	Moderate	Minimal	None	Poor	Fair	Good	Solid	
	4	3	2	1	0	4	3	2	1	5	4	3	2	1	
<b>Infections of Interest</b>															
Example line			2				3					3			=2x3x3 = 18
<i>C. difficile</i>															
ESBL-producing <i>E. coli</i>															
Influenza															
MRSA															
Tuberculosis															
Vancomycin-resistant <i>Enterococci</i>															
Varicella Zoster Virus / Chickenpox															
<b>Failure of Prevention Activities</b>															
Lack of Hand Hygiene															
Lack of PPE use - Gloves															
Lack of PPE use - Gowns															
Lack of PPE use - Mask/Eye shield															
Lack of Ventilator-associated pneumonia (VAP) prevention															
Lack of Central Line-associated Bloodstream Infection (CLA-BSI) Prevention															
Lack of Surgical Site Infection (SSI) Prevention															
Lack of Catheter-associated Urinary Tract Infection (CA-UTI) Prevention															
Lack of Respiratory Hygiene/Cough Etiquette															
Lack of bleach cleaning/disinfecting of surfaces when warranted															
<b>Isolation Activities</b>															
Lack of High Level Respiratory Isolation when warranted															
Lack of Low Level Respiratory Precautions when warranted															
Lack of Enhanced/Special Contact Precautions when warranted															
<b>Policy and Procedure</b>															
Lack of current policies or procedures															
Failure of staff to follow established policy or procedures															
<b>Preparedness</b>															
Exposure to Pandemic Influenza/Other Respiratory Infections															
Exposure to Novel Pathogen(s) e.g. Viral Hemorrhagic Fever (Ebola)															

Appendix A

Potential Risks/Problems	Probability of Event Occurring on Any Given Day (Facility-wide)					Likely Risk to/Impact on SFGH if Event Occurs (e.g., Health, Financial, Legal, Regulatory)				Quality of Preparedness/Response Systems Currently in Place					Score
	Expected 4	Likely 3	Maybe 2	Unlikely/ Rare 1	Never 0	Catastrophic 4	Serious 3	Moderate 2	Minimal 1	None 5	Poor 4	Fair 3	Good 2	Solid 1	
<b>Healthcare Associated Infections</b>															
Ventilator-associated pneumonia															
Central venous catheter-associated BSI															
Surgical Site Infections (SSI) - Ortho Spine with Implants															
SSI -Total Hip															
SSI - Total Knee															
SSI - Colorectal															
SSI - Abdominal Hysterectomy															
SSI - Vaginal Hysterectomy															
SSI - Vascular															
Non-specific HAI - Hospital-wide															
Non-specific HAI - Long Term Care															
Catheter-associated UTI															
Outbreak															
Sentinel event															
<b>Environment</b>															
Infection from inadequate sterilization															
Infection from inadequate air handling															
Infection from improper cleaning/disinfection/food handling in Food & Nutritional Services Dept															
Infection from inadequate cleaning/disinfection in patient care areas															
Infection related to construction/renovation															
<b>Regulatory mandates</b>															
Negative patient outcome from lack of MRSA Active Surveillance Testing Process															