UCSF COVID-19 CONTROL PLAN

I. Program Administration
Hospital Epidemiology and Infection Prevention (HEIP) as coordinated by the Director, Medical Directors and Associate Medical Director is responsible for designing, implementing, evaluating, and maintaining the UCSF COVID-19 Control Plan. HEIP collaborates with representatives from Occupational Health Services, Nursing, Hospital Administration, Emergency, Environmental Health and Safety, Facilities, Admitting, Hospitality, and Clinical Laboratories. Input from other departments/individuals with required expertise is sought as needed.

II. Background
COVID-19 is an illness caused by the SARS-CoV-2 virus. Person-to-person transmission is occurring widely in the United States.

III. Contacts for additional guidance

COVID-19 ID Attending for Adults
Page: 415-443-0190 available 24 hours a day

Pediatric ID service
Page: 415-443-2384, Voalte Pediatrics ID service

Hospital Epidemiology and Infection Prevention (HEIP)
A. Moffitt-Long or Mt. Zion: (during business hours) 415-353-4343; (during non-business hours) ML Hospital Supervisor Spectralink 415-353-8036 or 415-353-1964;
B. Mission Bay: (during business hours) 415-866-9242 or 415-806-0269 (cell); (during non-business hours) Benioff Children's Hospital-SF Hospital Supervisor 415-502-0728; MB Adult Hospital Clinical Resource Nurse 415-502-0562;
C. Benioff Children's Hospital Oakland: (during business hours) 510-428-3733; (during non-business hours) cellphone 510-459-3702, pager 510-718-1466, or BCHO Nursing supervisor 510-428-3885 ext 6997

Public Health Departments
A. For Moffitt-Long, Mission Bay, and Mt. Zion, contact the San Francisco Department of Public Health (SFDPH) Communicable Disease Control at (415) 554-2830; if calling during non-business hours, (415) 554-3613 to reach the SFDPH on-call physician.
B. For BCHO, contact the Alameda County Department of Public Health (ACDPH) at 510-267-3250, or during non-business hours call 925-422-7595.

IV. Standards During the COVID-19 pandemic
A. Lobby and point of entry screening
   1. Healthcare personnel screening
      a. Healthcare personnel will be required to:
         a. Perform daily screening that includes questions on symptoms, exposures, and COVID-19 diagnosis
         b. The criteria for the daily screening are available at the UCSF Occupational Health Services Return to Work guideline.
   2. Patient and Visitor screening
      a. Patients will be screened for symptoms, exposure, or prior COVID-19 diagnosis on admission, presentation to the ED, and for all ambulatory encounters


a. Patients will not be denied care, but will have their visit postponed or they will be directed to a Respiratory Symptom Clinic (RSC) if they have a positive screen.

b. Visitors including caretakers will be screened daily for symptoms, exposure, or prior COVID-19 diagnosis. Positive screens will be referred for further consideration to the Nursing Supervisor.

B. Personal protective equipment
   1. All UCSF Health employees
      a. Are required to wear a surgical mask while in the patient care buildings as per guidance
      b. Are required to use eye protection for ALL direct patient care. Eye protection is acceptable but not required in the clinical environment when not involved in direct patient care
      c. Are required to follow PPE re-use and extended use guidelines
   2. Patients
      a. Are required to wear a surgical mask while in the patient care buildings when possible as per guidance
         a. Patients ≤2 years of age should not be masked because it is not safe. Other young children >2 years of age should be offered a mask if it is safe and tolerated. For younger children, if safe, you can cover the crib, stroller, and car seat with a clean sheet during transport.
         b. Patients are to wear a surgical mask during transport and when healthcare personnel are in the patient room when age appropriate, safe, and tolerated.
   3. Visitors/caretakers
      a. Are required to wear a surgical mask while in the patient care buildings as per guidance.
      b. Caretakers of inpatient pediatric patients are to wear a surgical mask during transport and when healthcare personnel are in the patient room

V. Identification and evaluation of patients with possible COVID-19 infection
   Early identification of a Patient Under Investigation (PUI):
   Rapid identification of individuals with compatible symptoms and institution of appropriate isolation measures are critical in reducing the risk of COVID-19 transmission. The current CDC Persons Under Investigation (PUI) definition is available here.

Clinicians should use their judgment to determine if a patient has signs and symptoms compatible with COVID-19. COVID-19 testing is presently readily available and does not require approval.
Consultation with the COVID ID attending (adult patients) and the pediatric ID service (pediatrics) is available 24 hours a day to assist with case evaluation and management.

The criteria are intended to serve as guidance for evaluation. Patients should be evaluated on a case-by-case basis.

VI. COVID Testing
   Use COVID-19 PCR testing for the diagnosis of COVID-19. Other COVID-19 tests such as point of care test (Abbott ID Now), serology, and antigen testing can provide supplemental information but should not be used alone for COVID-19 diagnosis for asymptomatic (pre-procedural or admission) testing or suspected/confirmed/exposed COVID-19 patients.

Testing should be guided by the COVID-19 clinical algorithms and does not require additional approval. Refer to the clinical algorithms adult and pediatric.

Appropriate PPE to wear during test collection
   Obtaining an NP, mid-turbinate or OP specimen is not considered an aerosolizing procedure and a negative pressure/airborne infection isolation room is not required. Perform testing in a
room with the door closed. Healthcare personnel obtaining nasopharyngeal/oropharyngeal swabs for COVID-19 testing should practice diligent hand hygiene and don:
  i. N95 respirator/eye protection OR powered air purifying respirator (PAPR)
  ii. gloves
  iii. gown

Obtaining the COVID-19 PCR test
A pooled nasopharyngeal (or mid-turbinate swab) and oropharyngeal swab should be collected for the COVID-19 PCR. Other alternatives are also available if the patient has contraindications for testing. Please refer to the following link for detailed information on choosing and collecting the test:
  - Clinical algorithms (adult and pediatric)
  - COVID-19 PCR Test Update
  - Nasal wash collection
  - Videos

What additional samples can be collected?
Please contact the COVID-ID attending (adults) or pediatric ID service (pediatrics) if concern for a false-negative COVID-19 result to discuss additional testing. Induced sputum is not recommended.

When a positive COVID-19 test is reported, the Microbiology lab and HEIP will report the result to the San Francisco Department of Health.

Estimated COVID-19 PCR turnaround times
The turnaround times of COVID-19 PCRs differs by population and may vary over time due to other factors such as reagent availability.

Test turnaround time (TAT) is based on when sample arrives in the lab. Estimates do not account for samples that require repeat runs due to technical issues. Phone calls from providers asking for expedited processing or status updates for individual patient samples take away lab staff from doing testing and cause delays in all results. If results are time-sensitive, do not call the lab until the full TAT has elapsed.

For more information refer to the UCSF Testing Guidance.

VII. Precautions for Emergency Department (ED) and OB Triage
In order to rapidly identify and isolate patients who may be infectious, providers should evaluate each patient presenting with symptoms concerning for COVID-19 according to the adult and pediatric algorithms.

A. Management of symptomatic patients with suspected COVID-19, COVID-19 exposed, and confirmed COVID-positive patients. Limit nursing and physician staff to essential personnel.
  B. Place patient on "Novel Respiratory Isolation (droplet, contact, N95/PAPR)"
    1. PPE for all health care personnel will include:
       a. N95 and face shield or PAPR
       b. gloves
       c. gown
  C. Room placement
    1. If patient is not receiving a continuous aerosol generating procedure place them in a private room with the door closed at all times
    2. For patients who are receiving continuous aerosol generating procedures place patient in AIIR/negative pressure room
a. Examples of continuous AGPs include high flow oxygen, non-invasive ventilation, mechanical ventilation, tracheostomy in place
b. If an AIIR/negative pressure room is not available, place patient in private room with door closed until room is available.
c. Do not place patient in a Protected Environment room that is positively-pressured.

D. Signage
   i. Post the ‘Novel Respiratory Isolation’ sign on the door of the patient’s room.
   ii. Post a healthcare personnel sign-in sheet. Before entering the patient’s room, all healthcare personnel will indicate entry into the patient’s room by completing a row on the sheet.
   iii. Keep doors to the AIIR/negative pressure isolation rooms, including anteroom doors, closed at all times except when healthcare personnel or patients enter or exit the room.

b) For all aerosol generating procedures, irrespective of concern for COVID-19 infection:
   i. N95 respirator/eye protection or PAPR
   ii. gloves
   iii. gown

If a patient gets a discrete aerosol generating procedure (e.g. nebulized medication), place the aerosol-generating procedure sign on door during and for 1 hour after the procedure. The health care personnel should wear the N95/eye protection (or PAPR), gloves, gowns when entering the room and for 1 hour after the procedure (may be shorter depending on the procedure room’s number of air changes/hour).

ED Discharge to home
If the patient is not admitted to the hospital and is discharged home and has a COVID-19 test pending:
   2. Instruct the patient to remain at home pending the COVID-19 test result.
   3. Teach the patient about infection control practices to use at home including diligent handwashing, cough etiquette, and masking if appropriate.
   4. For management questions of adult patients call COVID ID attending and for pediatric patients the peds ID service (page 415-443-2384).
   5. For additional information, give them a copy of the CDC’s interim guidance if you are sick.
   6. Give and instruct the patient to wear a surgical mask if tolerated, safe, and age appropriate as they leave the hospital.

After patient leaves the ED
   1. Keep exam room empty with door closed with appropriate isolation signage for 1 hour after the last aerosol-generating procedure was performed (including nebulized medication). Obtaining an NP swab is not considered an aerosolizing procedure and does not require the room to be empty for one hour.
   2. Clean room with approved hospital disinfectant including blood pressure cuff, stretcher, counters, bedside table etc. Discard contaminated supplies.
   3. If the cleaner wears the appropriate PPE described in the algorithms above, they can clean the room prior to the one-hour wait time since the last aerosol-generating procedure.

VIII. Ambulatory Areas
   A. Ambulatory guidance is available on the infection prevention website under ‘Ambulatory Guidelines.’
   B. If an ambulatory patient presents to the lobby and has a positive screen due to symptoms, exposure, or known COVID diagnosis, they should be directed to the Respiratory Symptom Clinic.
1. If the patient arrives in the clinic and is noted to have symptoms concerning for COVID, an exposure, or known COVID diagnosis:
   a. Room the patient immediately with door closed
   b. Place ‘Novel Respiratory Isolation’ sign on door
   c. HCW entering room are to wear gloves, gown, N95, face protection
   d. Triage acuity of patient (vitals, brief history, exam)
   e. Refer patient to the RSC or ED as indicated

c) Discontinuation of isolation criteria for COVID confirmed patients

For COVID-19 positive patients refer to the following guidance for duration of isolation. If questions arise, contact HEIP.

If date of symptom onset cannot be determined, or patient is asymptomatic, the date of the first positive COVID-19 PCR test will be used.

When the isolation is discontinued, continue standard process including daily bath, linen change, and cleaning.

IX. Procedural and Operative Areas

The Prepare Clinic algorithms provide recommendations for pre-procedural patient COVID PCR testing: adult and pediatric.

The perioperative and preprocedural PPE and workflow recommendations are available for adult and pediatrics.

X. Inpatient Management

A. Inpatient management of asymptomatic patients with COVID-19 test pending

The algorithms guide room type, PPE recommendations, isolation signage/orders, and testing for asymptomatic patients with COVID-19 test pending: adult and pediatric.

B. Inpatient management of symptomatic patients with suspected COVID-19, COVID-19 exposed, and confirmed COVID-positive patients

In order to rapidly identify and isolate patients who may be infectious, providers should evaluate each patient presenting with symptoms concerning for COVID-19 according to the adult and pediatric clinical algorithms. The algorithms guide room type, PPE recommendations, isolation signage/orders, and testing: adult and pediatric.

Limit nursing and physician staff to essential personnel.

1. During transport and when healthcare personnel are in the patient room, ask the patient to wear a surgical mask. Patients ≤2 years of age should not be masked because it is not safe. Other young children >2 years of age should be offered a mask if it is safe and tolerated. For younger children, if safe, you can cover the crib with a clean sheet during transport.

2. Specimen Collection
   Obtaining an NP, mid-turbinate, nasal wash, or OP specimen is not considered an aerosolizing procedure. Healthcare personnel obtaining nasopharyngeal/oropharyngeal swabs for COVID-19 testing should practice diligent hand hygiene and don:
   a. N95 respirator/eye protection or PAPR
   b. gloves
   c. gown
3. Place patient on "Novel Respiratory Isolation (droplet, contact, N95/PAPR)".
   PPE for all health care personnel will include:
   a. N95 and face shield or PAPR
   b. gloves
   c. gown

4. Room placement
   a. For patients who are receiving continuous aerosol generating procedures place
      patient in AIIR/negative pressure room and order ‘Airborne isolation’ in addition to
      ‘Novel Respiratory Isolation’ to guide room placement.
      i. Examples of continuous AGPs include high flow oxygen, non-invasive
         ventilation, mechanical ventilation, tracheostomy in place
      ii. If an AIIR/negative pressure room is not available, place patient in private room
         with door closed until room is available.
      iii. Do not place patient in a Protected Environment room that is positively-
           pressured.
   b. Prior to admitting these patients, the accepting primary nurse will:
   c. For patient receiving a continuous AGP and also on ‘Airborne Isolation’, make sure the
      negative-pressure room is verified by Facilities to be “Negative;” ensure the green
      Facilities tag is affixed to the door(s).
      a. Confirm with Facilities via MCSS Work Order that the room is at negative
         pressure.
      d. Obtain and enact all activities detailed in the Novel Respiratory Isolation Evaluation
         Room Packet.

5. If patient is not receiving a continuous aerosol generating procedure place them in a private
   room with the door closed.

6. Signage
   a. Post the ‘Novel Respiratory Isolation’ sign on the door of the patient’s room.
   b. Post a healthcare personnel sign-in sheet. Before entering the patient’s room, all
      healthcare personnel will indicate entry into the patient’s room by completing a row on
      the sheet.
   c. Keep doors to the AIIR/negative pressure isolation rooms, including anteroom doors,
      closed at all times except when healthcare personnel or patients enter or exit the room

7. Isolation Order
   a. In Apex, order ‘Novel Respiratory Isolation (Droplet + Contact + N95/PAPR); also
      add Airborne Isolation if continuous AGPs

8. At the time of admission
   a. Educate patient about the reasons for isolation precautions.
   b. Instruct patients to
      i. Cover their mouth and nose with tissue when coughing or sneezing and to wear a
         surgical mask when healthcare personnel or visitors are in the room and anytime
         that they need to leave their room
      ii. During transport and when healthcare personnel are in the patient room, ask the
          patient to wear a surgical mask. Patients ≤2 years of age should not be masked
          because it is not safe. Other young children >2 years of age should be offered a
          mask if it is safe and tolerated. For younger children, if safe, you can cover the
          crib with a clean sheet during transport.
      iii. To remain in the room at all times with the doors closed unless emergency
          diagnostic or therapeutic procedures (e.g., CAT scan, surgery, etc.) are urgently
          required and cannot be performed in the patient’s room. When leaving the room,
the patient will disinfect hands, put on a clean hospital gown, put on a surgical mask (if safe and age appropriate), and a clean sheet on the patient’s body (See “Transport of Patient”). If the patient is a younger child, cover the crib with a clean sheet during transport if safe.

9. During admission
   a. Refer to the adult and pediatric clinical algorithm for room type, PPE recommendations, isolation signage/orders and testing recommendations.
      i. For questions about COVID-19 treatment or additional diagnostic questions (including discussion of false negative results) follow algorithm. Contact the COVID ID attending for adult patients and the COVID peds ID service for pediatric patients.
      ii. Discontinuing isolation: Follow the clinical algorithm to determine changes in isolation. Consideration can be made for discontinuing precautions if COVID-19 is no longer being considered as a diagnosis (i.e., there is an alternative diagnosis and concern for COVID-19 is low).

10. Discontinuation of isolation criteria for COVID confirmed patients
    For COVID-19 positive patients refer to the following guidance for duration of isolation. If questions arise, contact HEIP.

    If date of symptom onset cannot be determined, or patient is asymptomatic, the date of the first positive COVID-19 PCR test will be used.

    When the isolation is discontinued, continue standard process including daily bath, linen change, and cleaning.

11. COVID confirmed discharges
    a. Notify the Pathology Department prior to autopsy procedures for deceased patients with suspected or confirmed COVID-19. See below for Autopsy procedure recommendations.
       i. If the patient was receiving an aerosol generating procedure, the patient room is considered contaminated for 1 hour (>99.9% removal efficiency) after the patient leaves; keep vacant with doors closed for that interval of time. After 1 hour, discharge cleaning of the room will be performed prior to the admission of the next patient (see “Cleaning and Disinfection of Environment and Equipment”). Depending on the number of air changes per hour, the time the room needs to remain closed may be less than 1 hour (see air changes per hour table above).

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*https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html#b1

XI. Limiting staff contacts
A. For all patients with ‘Novel Respiratory Isolation’ limit ALL staff including nursing, physician, and ancillary staff to essential personnel.

B. Instruct dietary personnel and non-essential personnel not to enter the patient room for patients with in Novel Respiratory Isolation

Review the Novel Respiratory Isolation packet. All healthcare personnel entering the patient’s room will sign in on the Room Entry Log once per shift.

XII. Laboratory

A. All clinical specimens for patients who have pending COVID-19 testing or confirmed infection should be handled using Standard Precautions in accordance with routine procedures. Standard precautions includes:
   1. No need for separate labeling of specimens as suspected/confirmed COVID-19
   2. No need for double bagging of specimens
   3. Acceptable to submit specimens via the pneumatic tube system

XIII. Food service

A. Nutrition and Food services staff should not enter ‘Novel Respiratory Isolation’ rooms

B. Manage food service according to routine procedures. Nutrition and Food services staff can receive the soiled tray wearing gloved hands directly outside of the patient room. Place the soiled tray in the soiled food service cart. Remove gloves and clean hands.
   1. Use of disposable trays are not recommended

XIV. Trash and Linen

A. Place a trash receptacle in the hall outside the anteroom, or outside patient room if no anteroom.

B. Place a trash receptacle into the anteroom, or patient room if no anteroom.

C. Coordinate with Hospitality to hand off soiled linen and trash at times other than daily room clean.

D. Hospitality will handle trash and linen according to routine processes.

E. Sharps and non-hazardous pharmaceutical containers will be handled according to routine processes.

XV. Environment cleaning and disinfection

A. Room Pre-Occupancy Preparation (no PPE required)

B. Follow the PPE recommendations in the Hospitality isolation sign guidance document

C. Place soiled linen collection container in anteroom, or in patient room if no anteroom.

D. Personal Protective Equipment (PPE): Clean hands before putting on and after removing PPE every time.
   1. Hospitality staff will wear PPE as directed on the isolation sign.
   2. Clean hands prior to entering room and when removing PPE.

E. Cleaning Procedures
   1. Follow standard procedures for routine daily and discharge patient room cleaning (see XIV. Trash and Linen above).

F. Following discharge or transfer from the room
   1. For ‘Novel Respiratory Isolation’ the patient room is considered contaminated for 1 hour (>99.9% removal efficiency) after the patient leaves and should remain vacant with doors closed for that interval of time. After 1 hour, discharge cleaning of the room will be performed prior to the admission of the next patient (see “Cleaning and Disinfection of Environment and Equipment”). Depending on the number of air changes per hour, the time the room needs to remain closed may be less than 1 hour (see air changes per hour table above).
   2. Change privacy curtains.

G. Following cleaning
   1. ‘Novel Respiratory Isolation’ sign: Hospitality staff will page the Hospitality supervisor to report that cleaning is complete. The supervisor must visually inspect the room then will remove the
Novel respiratory isolation sign and inform nursing unit staff that the room has been cleaned and is ready for re-occupancy.

XVI. Equipment cleaning and disinfection
   A. Clean hands before putting on and after removing PPE every time.
   B. Equipment and/or devices that are not disposable must be cleaned to remove any blood or body fluids and disinfected with hospital-approved detergent-disinfectant. Cleaning and disinfection must be completed before the equipment is stored in the clean equipment area and before being used for other patients.
   C. Clean and disinfect equipment in the patient room or in the anteroom unless space constraints make this impossible.
   D. Thoroughly wet equipment surface(s) with hospital approved detergent-disinfectant and allow to remain undisturbed for the contact time specified by the disinfectant.
   E. All persons entering a ‘Novel Respiratory Isolation’ room will clean hands and wear PPE as directed on the isolation sign.
   F. If cleaning/disinfecting equipment in the anteroom, clean hands and wear PPE as directed on the isolation sign.

XVII. Transport
   The patient should remain in his/her room at all times with the doors closed unless emergency diagnostic or therapeutic procedures (e.g., CT scan, surgery, etc.) are required and cannot be performed in the patient’s room.
   A. Notify the area to which the patient is being transported that the patient is on ‘Novel Respiratory Isolation’ so that appropriate accommodations can be made. If possible, schedule these patients at the end of the day or when other patients are not waiting.
   B. For detailed information, review the PPE recommendation for transport guidance. Transporters will wear PPE as directed on the isolation sign prior to entering the patient’s room and before transferring the patient to a wheelchair or gurney.
   C. Before leaving the room, the patient will clean their hands, put on a clean hospital gown, and put on a surgical mask. Use a clean sheet that was not stored in the room to cover the patient's body before leaving the room. If the patient is a younger child, cover the crib during transport if safe.
   D. Once the patient has been transferred to a wheelchair or gurney, the transporter will remove gowns and gloves in the anteroom or patient room if no anteroom, clean hands, and will keep the face protection on during transport (N95 and face shield or PAPR). If direct patient care is expected, the transporter can use their clinical judgement and leave the gowns and gloves on during transport. If this is done, then staff cannot touch buttons, railings, and their surroundings with gloved hands.
   E. The transporter will continue to wear the face protection during transport (N95 and face shield or PAPR). If direct patient care is expected, the transporter can use their clinical judgement and leave the gowns and gloves on during transport. If direct patient care is not expected and gloves and gowns are removed, the transporter will bring extra PPE (gown, gloves, surgical mask) in case an emergency occurs during transport or the patient’s mask becomes wet.
   F. Receiving personnel (e.g., in radiology) and the transporter (if assisting with transfer) will clean hands and wear the PPE indicated for the study (i.e., N95 and face shield or PAPR, addition of gown and gloves if direct contact with the patient is anticipated).
   G. If still wearing their original face protection, the transporter will take care to avoid self-contamination when donning the remainder of the recommended PPE.
   H. Patients traveling to the Operating Room must be transported directly to the OR from their rooms.
XVIII. Restricting visitors
Visitor restriction policies for the ED and inpatient setting are in compliance with the City and County of San Francisco Department of Public Health Orders.

Detailed recommendations are available in the UCSF Health COVID-19 Guidelines for Restrictions and Exceptions. For specific pediatric caretaker guidance, review in the visitor guidelines.

XIX. Potential healthcare worker and patient exposures
A. Definition of Exposure: Any contact with confirmed COVID-19 for more than 15 minutes within 6 feet of the infected person without appropriate PPE; communicable period begins 48 hours before symptom onset or if asymptomatic, the date of the positive test.

B. HEIP responsibilities:
1. Review the medical record of any positive COVID-19 patient to ascertain whether proper isolation measures were instituted.
2. Review the patient’s status
3. Determine whether any potential exposure to hospital personnel occurred.
4. Determine whether any potential exposure to patients occurred.
5. Report exposures to Occupational Health Services.

C. Responsibilities of Occupational Health Services (OHS):
1. An overview of exposure, testing, return to work, and contact tracing is available
2. Identify all healthcare personnel who have entered a ‘Novel Respiratory’ isolation room by utilizing the sign-in sheets posted outside the room.
3. Provide self-monitoring instructions to all healthcare personnel who have entered the patient’s room.
4. Contact the supervisors of departments with exposed employees according to OHS processes to enhance case-finding.
5. Record all exposures and exposed employee information.
7. Exposed employees must measure their own temperatures twice daily and can continue to work as long as they do not have fever >100.0°F or respiratory symptoms (e.g. cough, shortness of breath or trouble breathing).
8. Exposed employees at the SF campuses will contact OHS (415) 353-4341 daily prior to reporting for each work shift for symptoms evaluation; at BCH-Oakland, contact Employee Health at 510-428-3620.
9. Employees determined to have suspect COVID-19 are restricted from work from the time of presentation of symptoms until clearance by OHS. Employees must obtain OHS/EHS clearance prior to returning to work.

XXII. Engineering Controls
A. Airborne Infection Isolation rooms (AIIRs)
1. A table of AIIRs is located in Appendix A.
2. Ventilation requirements for these rooms include:
   3. A minimum of 12 air changes/hour airflow
   4. Direct air exhaust to the outside or HEPA filtration of air prior to recirculation
   5. Maintenance of negative pressure relationships with the adjacent corridor

B. Regular monitoring and maintenance of engineering controls
1. Engineering controls, including all negative air pressure areas of the hospital and HEPA filtration systems, undergo regular monitoring and maintenance by the Facilities Management.

C. AIIRs in the Emergency Department
1. The Parnassus and MB Emergency Department AIIRs must be verified by Facilities as “negative” before being used for patients on Airborne Precautions.
2. The Oakland campus has no AIIRs in the Emergency Department. Room 5 has negative pressure and would be the preferred location for a suspect COVID-19 patient.

XXIII. Sputum Induction and Bronchoscopy Procedures

A. Policies and procedures
   1. During any aerosol-generating procedure, healthcare workers in the patient room must wear a gown, gloves, PAPR or N95 with goggles/face protection during procedure and when entering room 1 hour after procedure. Place aerosol-generating procedure sign on door during and when entering the room for 1 hour after.
   2. PPE guidance for aerosol-generating procedures is available.

B. Sputum Induction
   1. Cough- and aerosol-generating procedures such as nebulizer treatments, sputum induction, bronchoscopy, open suctioning and endotracheal intubation may facilitate transmission of the COVID-19 virus to healthcare workers.

Bronchoscopy
   1. Cough- and aerosol-generating procedures such as nebulizer treatments, sputum induction, bronchoscopy and endotracheal intubation may facilitate transmission of the COVID-19 virus to healthcare workers.
   2. Bronchoscopy will be performed on suspected COVID-19 patients only when medically necessary.
   3. Patients with diagnosed or suspected COVID-19 requiring bronchoscopy must have the procedure performed in an AIIR or area or HEPA filtered room (e.g., Endoscopy Suite).
   4. Patients must remain in the room until coughing has subsided. Advise the patient to cover their mouth and nose with a tissue when coughing.
   5. A surgical mask will be worn by the patient during transport.
   6. The procedure room must not be used for at least 1 hour following bronchoscopy to allow sufficient time for appropriate ventilation. Depending on the location, if the air changes per hour are higher, then the time the room is contaminated may be less than 1 hour.

XXIV. Decedent care

A. Refer to guidelines for decedent care of confirmed or suspected COVID-19
B. COVID test all deceased patients. Order to be written by provider. Collect COVID sample and send to lab. For additional questions, contact Decedent Affairs.
C. Follow standard routine procedures when transporting the body after specimens have been collected and the body has been bagged. Disinfect the outside of the bag with a product with EPA-approved emerging viral pathogens claims expected to be effective against COVID-19 applied according to the manufacturer’s recommendations. Wear disposable nitrile gloves when handling the body bag.

XXV. Clinical Laboratory and Autopsy Procedures

A. Clinical laboratories
   Send specimens to UCSF Microbiology Laboratory.

B. Other Clinical Laboratory Tests
   Do NOT order viral isolation (culture) to be performed at UCSF. Specimens will not be accepted for viral isolation/culture. PCR testing (rapid influenza/RSV and respiratory viral panel) may be ordered.

C. Autopsy
   1. Notify Pathology prior to autopsy on a patient being ruled out for or with confirmed COVID-19.
      a. The autopsy will occur in the AIIR of the Pathology Laboratory.
b. See CDC recommendations for collection of postmortem clinical and pathology specimens for SARS-CoV-2 testing here.

c. Limit the number of personnel working in the Autopsy suite during the autopsy procedure.

d. Staff involved in the autopsy procedure must wear a fluid-resistant or impervious gown with full sleeve coverage; waterproof apron; goggles or face shield; N95 respirator that they have been fit tested for or PAPR; and double surgical gloves with an interposed layer of cut-proof synthetic mesh gloves.

e. Staff may wear surgical scrub suits, surgical cap, and shoe covers per Autopsy routine protocols.

f. Protective outer garments must be carefully removed when leaving the autopsy room and discarded in appropriate orange biohazard-lined trash and soiled laundry receptacles immediately outside the entrance. Hands must be disinfected upon removal of personal protective equipment. Clean and disinfect any reusable PPE per manufacturer’s instructions prior to reuse.

g. The autopsy AIIR will be vacated for at least 1 hour following completion of the autopsy.

h. Avoid aerosol-generating procedures such as the use of oscillating saws whenever possible to decrease the risk of occupational exposure. Consider the use of hand shears as an alternative cutting tool. If an oscillating saw must be used, attach a vacuum shroud to contain aerosols.

XXV. Coordination with the Department of Public Health

Upon notification of a possible COVID-19 case, HEIP will:

1. Evaluate the possibility that the patient has COVID-19.

2. If the patient meets the CDC’s PUI criteria, HEIP will report pertinent information immediately to the Department of Public Health.

Attachments:

Appendix A: UCSF West and East Bay Campuses: Airborne Infection Isolation Rooms (AIIRs)
Appendix A

UCSF West Bay Campuses: Airborne Infection Isolation Rooms (AIIRs)
### Parnassus — Negative Ventilation and ATD/All Room Status

<table>
<thead>
<tr>
<th>Floor</th>
<th>Permanent Negative Rooms Meeting UCSF Policy 3.1.2 ATD at All Times</th>
<th>Permanent Negative Rooms Requiring Addition of Scrubbers to Achieve UCSF Policy 3.1.2 ATD/W</th>
<th>Temporary Negative Rooms Meeting ‘UCSF CDC Plus Interim Policy’</th>
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<tbody>
<tr>
<td>1st</td>
<td>Long (Includes RE) (Note: This is not an Infant Room, so it is excluded from the Total Count Below)</td>
<td>Long (Includes RE)</td>
<td>Long (Includes RE)</td>
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### Mission Bay — Negative Ventilation and ATD/All Room Status

<table>
<thead>
<tr>
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<tr>
<td>1st</td>
<td>Emergency CRT, CRT</td>
<td>Permanent Negative Rooms Requiring Addition of Scrubbers to Achieve UCSF Policy 3.1.2 ATD/W</td>
<td>Temporary Negative Rooms Requiring Addition of Scrubbers to Achieve ‘UCSF CDC Plus Interim Policy’</td>
</tr>
<tr>
<td>2nd</td>
<td>Recovery Treat &amp; AS4</td>
<td>Recovery Treat &amp; AS4</td>
<td>Recovery Treat &amp; AS4</td>
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</tbody>
</table>

### Mt. Zion — Negative Ventilation and ATD/All Room Status

<table>
<thead>
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</tr>
</tbody>
</table>

### Note

- **AIRBORNE PRECAUTION**: eMR designations require facilities work order to effect ATD/All Negative Pressure designation and regulatory monitoring — as well as a work order to return to regular pressure in order to return to normal. Includes Permanent Negative!
### East Bay Campuses: Airborne Infection Isolation Rooms

#### Negative Ventilation and ATD/All Room status Oakland 52nd Street Campus

<table>
<thead>
<tr>
<th>Floor</th>
<th>Permanent Negative Rooms Meeting ATD/All at all times</th>
<th>Permanent Negative Rooms Requiring Addition of Scrubber to achieve ATD/All</th>
<th>Rooms that can be made negative &amp; ATD/All compliant through air manipulation and addition of a scrubber</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd</td>
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<tr>
<td></td>
<td>PICU BED 17</td>
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<td></td>
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<tr>
<td></td>
<td>4 South 4312</td>
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</tr>
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</table>

#### Negative Ventilation and ATD/All Room status Oakland Summit Campus

<table>
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<th>Permanent Negative Rooms Requiring Addition of Scrubber to achieve ATD/All</th>
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</tr>
</thead>
<tbody>
<tr>
<td>4th</td>
<td>4 Med/Summit 4003, 4045, 4051</td>
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</tr>
<tr>
<td>5th</td>
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Appendix B: Postmortem COVID-19 Testing

**Purpose:** This appendix outlines the clinical procedures for required postmortem SARS-CoV-2/COVID-19 testing per SFDPH Health Order C19-14 (6/25/20) and the follow-up workflow for cases with positive SARS-CoV-2 results.

1. **Indications for post-mortem COVID-19 testing**
   All deceased patients will be tested for COVID-19 unless they meet the following exceptions:
   a. Stillborn infants
   b. COVID positive at time of death (COVID-19 confirmed in the patient’s APeX record)
   c. COVID recovered as flagged in the patient’s APeX record
   d. There is a COVID-19 RNA Qualitative test (COVID-19 RNA, RT-PCR) in the lab with pending results at the time of death.

2. **Obtaining lab order and sample for COVID-19 testing**
   a. **Providers:** The provider enters a COVID-19 Postmortem Test order (COVID-19 RNA, Qualitative test) for the deceased patient (the Discharge-Deceased Navigator in APeX displays a reminder for this). The admission COVID-19 PRN order can also be used to send the lab sample prior to transport of the decedent off the unit.
   b. **Nursing:** The nurse collects the lab specimen prior to transport of the patient to the morgue. The Discharge-Deceased Navigator in APeX displays a reminder for this and displays the date/time of death; the last COVID-19 RNA, RT-PCR test result; and active COVID-19 orders. The admission COVID-19 PRN order can also be used to send the lab sample prior to transport of the decedent off the unit. The nurse contacts the provider if no order placed.

3. **Decedent Affairs (DA) Workflow**
   **Parnassus & Mt Zion:**
   1. The medical record is reviewed to determine last COVID-19 test timing and result.
   2. If the COVID-19 test was not performed close to time of death (TOD), the record is reviewed to verify exclusion criteria met as reason for no post-mortem test.
   3. Procedure if patient sent to cold room/morgue without an indicated postmortem COVID-19 test:
      a. If the COVID-19 test was not performed and the decedent does not meet exclusion criteria, the *attending physician* at the TOD is emailed and the *resident or fellow* on service are contacted with request to enter an order for the COVID-19 lab test.
      b. At the same time, DA staff notify the Unit Director (UD)/Assistant Unit Director (aUD) that there is a need for COVID-19 testing on a patient in the morgue once the provider enters the test order.
      c. The UD/aUD are contacted by DA staff to let them know the lab order has been entered.
      d. The Autopsy Tech is contacted by DA staff to coordinate a time for test sample collection by nursing.
      e. The test sample is hand-delivered to the Microbiology lab with the labelled sample and printed requisition form by the designated nurse.
   4. The chart is monitored for documentation of the test results and the Decedent Affairs Daily Morgue Log is updated when completed and the mortuary is contacted with notification of the test result.
   5. If the test result is positive, *Spiritual Care* is notified.

   **Mission Bay/BCH**
   1. The medical record is reviewed to determine last COVID-19 test timing and result.
   2. If the COVID-19 test was not performed close to time of death (TOD), the record is reviewed to verify exclusion criteria met as reason for no post-mortem test.
   3. Procedure if patient sent to cold room/morgue without an indicated postmortem COVID-19 test:
      a. If the COVID-19 test was not performed and the decedent does not meet exclusion criteria, the *attending physician* at the TOD is emailed and the *resident or fellow* on service are contacted with request to enter an order for the COVID-19 lab test.
      b. At the same time, DA staff notify the Unit Director (UD)/Assistant Unit Director (aUD) and Hospital/Nursing Supervisor that there is a need for COVID-19 testing on a patient in the morgue once the provider enters the test order.
c. The UD/aUD/Supervisor are contacted by DA staff to let them know the lab order has been entered.
d. The Autopsy Tech is contacted by DA staff to coordinate a time for test sample collection by nursing.
e. The test sample is hand-delivered to the Microbiology lab with the labelled sample and printed requisition form by the designated nurse.
4. The chart is monitored for documentation of the test results and the Decedent Affairs Daily Morgue Log is updated when completed and the mortuary is contacted with notification of the test result.
5. If the test result is positive, Spiritual Care is notified.

4. Follow-up workflow for positive postmortem COVID-19 test results:
   a. Microbiology Lab and Nursing:
      i. All initial positive (detected) COVID-19 test results are communicated as a Critical Test Result with a phone call to the unit where the patient expired.
      ii. The nurse who receives the Critical Test Result call from the lab, documents the result and who was notified (Attending physician at time of death- found in Discharge Summary Note) in the deceased patient’s medical record in Critical Result section (flowsheet or Communication Navigator) after the read back to confirm communication with the lab staff.
      iii. The nurse notifies the Unit Director with the aforementioned information
      iv. Per Lab Manual procedures for Critical Test Results, subsequent positive results are posted in Results Review section of APeX, yet are not verbally communicated to the unit/dept.
   b. Hospital Epidemiology and Infection Prevention (HEIP)
      i. The HEIP staff review the positive culture report at least twice a day for positive COVID-19 test results.
      ii. The HEIP staff notify the Occupational Health Services (OHS) staff with positive test result information and conduct an exposure investigation. If an exposure is confirmed, a Technical Advisor’s Huddle is scheduled.
         Technical Advisor Huddle
         a. Purpose: To confirm case definition for an exposure
         b. Participants: HEIP: medical director, director, IP lead and the Occupational Health COVID Response Team (OHCRT): medical director, director and/or clinical operations manager, OHS lead/staff member
      iii. The HEIP physicians may recommend a second COVID-19 test based on clinical review of the case. The HEIP Medical Director will enter an order for the lab test (using the recent encounter of TOD). The HEIP staff will coordinate lab sample collection with the Hospital/Nursing Supervisor to be completed in the morgue. This second test procedure does not delay OHS notification and follow up OHS procedures.
   c. Occupational Health COVID Response Team (OHCRT)
      i. An OHCRT member is assigned to the case.
      ii. The OHCRT member conducts a review of the deceased patient’s medical record and participates in the Technical Advisor Huddle.
      iii. The OHCRT Leadership or team member schedules and conducts a follow-up Stakeholder’s Huddle.
         OHCRT Stakeholder’s Huddle
         a. Purpose: To review the definition of exposure and infectious period for the case. Confirm onset of symptoms (if any), review the procedures performed on the unit along with attendees, confirm movements of patient within the hospital, confirm the services/staff who attended the patient on the unit, and identify any support services who may have had contact. Confirm the use of PPE on the unit. Provide opportunity for questions and raise concerns. Determine which staff may need to be removed from the unit due to exposures.
         b. Participants: OHCRT Leadership and relevant team members, HEIP Leadership and relevant Infection Preventionist(s), Unit Director(s), Attending Physician(s), Service Chief(s), Dept Leads, and other Supervisors as indicated (e.g. APP leads, Respiratory Care, Transport, etc.)
iv. OHCRT conducts contact tracing/interviews per standard workflows and communicates the Return to Work outcome and any follow up for staff/providers identified in contact tracing.

d. Supervisors/Directors and Service Chief/Attending Roles
   i. Assist OHCRT with identification of the services and staff/providers involved in care of patient
   ii. Provides OHCRT with names, roles, and email address as well as phone number of staff/providers in their dept/service
   iii. If an email notification is indicated as part of the contact tracing process, they will assist in dissemination to those affected providers, staff, and/or learners

e. Decedent Affairs
   i. Contact Attending Physician and request that family be notified of positive COVID-19 test result

References
3. https://clinlab.ucsf.edu/results-reporting