**Office of Origin: Department of Hospital Epidemiology and Infection Prevention (HEIP)**

## I. PURPOSE

A. Epidemiological studies demonstrate that the organisms infecting or colonizing Cystic Fibrosis (CF) respiratory tracts can transmit to other CF patients through direct contact or droplet transmission. Standard precautions, transmission-based precautions, appropriate hand hygiene for Healthcare Personnel (HCP), patients, and their families, and care of respiratory equipment to prevent the transmission of infectious agents are fundamental to preventing the transmission of potential pathogens to patients with CF. The following recommendations minimize transmission of resistant organisms in the hospital setting, ambulatory care, pulmonary function test sites, and social settings for adult and pediatric patients.

## II. REFERENCE

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E. CF Guidelines_CysticFibrosisFoundation_Infection Prevention and Control

F. Additional references: See Appendix i

DEFINITION

## III. POLICY

A. The goal of this policy is to outline measures that will minimize the spread of respiratory secretions and prevent transmission of respiratory tract pathogens to CF patients, including those who have undergone lung transplantation.

## IV. PROCEDURE

~~A.~~ Inpatient units, CF clinics, and Pulmonary Function Testing (PFT) and spirometry labs: Implement UCSF Isolation Precautions for every CF patient contact.

**1. Hospitalized Patients**

a. Signage and Room Placement

i. Assign CF patients to a private room with a private bathroom and affix the "UCSF Precautions" sign to the door.

ii. If assignment to a private room is not possible, CF patients may not share rooms with:

- Other CF patients
- Patients with tracheostomies
- Immunosuppressed patients, including those with neutropenia
- Any patient with transmission-based Isolation

iii. If assignment to a room with a private bathroom is not possible, CF patients may not share a bathroom with:

- Other CF patients
- Patients with tracheostomies
- Immunosuppressed patients, including those with neutropenia
- Any patient with transmission-based Isolation

b. CF patients may share a hospital room with a person who sleeps in the same room at home, e.g., siblings. Household members may stay in the patient's room.

c. Nursing will stock personal protective equipment (gowns and gloves, masks & eye protection, N95, PAPR) in the caddy outside of the CF patient's room.

d. Patients will have dedicated disposable equipment, e.g., stethoscope, blood pressure cuff, and thermometer.

**2. Standard and Transmission-Based Precautions and Personal Protective Equipment (PPE)**

i. As per the *UCSF Precautions* signage, HCP must anticipate potential contact with respiratory secretions through contact with the patient or the patient's environment; therefore, gowns, gloves, and masks/eye protection must be worn as follows:

(a) Wear a gown and gloves for all contact with a patient diagnosed with CF.

(b) For respiratory treatments:

(i) Wear eye protection

(ii) Wear a mask, or for aerosol-generating procedures, a fit-tested N95 or PAPR

(c) Additional PPE may be needed as part of Transmission-Based precautions. For example, if the patient has an airborne infectious disease or receives an aerosol-generating procedure, wear an N95 mask, eye protection, or a PAPR.

(i) For CF patients requiring isolation for other conditions or diseases, affix the appropriate Transmission-Based precautions sign on the door

(Contact, Enteric Contact, Droplet, Airborne, Novel Respiratory Isolation) and the UCSF Precautions sign.

(d) As part of Standard Precautions, wear a mask with eye protection for anticipated splashes or sprays of respiratory secretions or other body fluids, such as those created during cough-inducing procedures.

(e) CF patients must routinely wear surgical masks covering their mouth and nose outside of their inpatient rooms.

**3. Hand Hygiene**

a. Hand hygiene is the most important practice for preventing infection transmission. HCPs must practice hand hygiene following the **Hand Hygiene policy**.

b. Educate CF patients in frequent hand hygiene, using alcohol-based hand rubs and/or soap and water handwashing at sinks in their own rooms. CF Patients must perform hand hygiene before leaving their rooms and upon returning.

c. CF patients must routinely wear surgical masks covering their mouths and noses when out of their inpatient rooms and during appointments in the CF clinic.

**4. Equipment and Environmental Cleaning**

a. Clean the rooms occupied by CF patients or from which CF patients have been discharged according to routine cleaning procedures.

b. Follow hospital policy and procedure for disinfection and sterilization of patient care equipment.

c. Disinfect environmental surfaces when they become contaminated with respiratory tract secretions, e.g., during pulmonary function testing and body plethysmography.

**5. Respiratory Care and Pulmonary Function Testing**

a. Perform all respiratory interventions in the patient's room, including aerosol therapy, airway clearance, and sputum collection.

b. Dedicate airway clearance devices (e.g., flutter, acapella, pap device, therapy vest) to single-patient use during inpatient hospitalization.

c. Respiratory Therapy/PFT/spirometry equipment shall not be shared between CF patients.

i. Disinfect reusable equipment before re-use according to hospital policy for disinfection and sterilization.

ii. Disposable items not used for invasive purposes (e.g., nebulizers) may be issued per patient and reused for the same patient. The nursing unit, Respiratory Care, and other groups will determine the schedule for replacing such items as needed.

**6. Communal/Social Settings**

a. All communal settings, such as the PFT/spirometry labs and Child Life spaces including Playrooms, Schoolrooms, and the Teen Lounge, will accommodate one CF patient at a time except if they share the same household.

b. Immunocompromised patients including those with neutropenia or patients with a tracheostomy will not attend communal settings simultaneously as CF patients.

c. The charge nurse will communicate the admission of pediatric CF patients who are eligible for Child Life Services to the unit-based Child Life Specialist (CLS); this information is conveyed to the departmental Child Life CF Specialist.

d. Admission of CF patients to other pediatric inpatient nursing areas will be communicated to the Child Life CF specialist by the CLS following the patient.

e. The Child Life CF Specialist creates a daily schedule for programming spaces so that CF patients have assigned times that do not overlap with other CF patients.

f. Patients must wash their hands before entering the room.

g. CF patients must routinely wear surgical masks when outside of their inpatient rooms including Child Life spaces, assuming no age or clinical contraindications. The mask should cover the mouth and nose.

h. Disinfect equipment or toys handled by CF patients in accordance with UCSF toy cleaning and patient care equipment cleaning policies:

i. Toy Cleaning (HEIP Policy 5.3)
ii. Patient Care Equipment Cleaning Policy 2.01.02

i. CF patients using transmission-based precautions (Contact, Enteric Contact, Droplet, Airborne, or Novel Respiratory Isolation) may not use these communal facilities.

j. Patients with CF are not allowed to visit other CF patients' rooms

k. With a physician's order, CF patients can visit non-Child Life public areas (e.g., cafeteria, lobby, gift shop) with an appropriate escort; they must wear a mask.

l. In other non-Child Life public places such as the cafeteria, CF patients will maintain a distance of **6 feet** from other known CF patients except if they share the same household.

m. Benioff Children's Hospital Security Policy requires pediatric patients to be accompanied by a staff member when leaving the unit. They may also be accompanied by parents/guardians.

**7. Outpatient Ambulatory Practices**

a. Schedule and manage outpatients to minimize the time in the shared waiting area.

i. Stagger appointment times in the clinic schedule so CF patients do not share time in the waiting room. Ask CF patients to maintain 6 **feet** from other known CF patients in the ambulatory setting except if they share the same household.

ii. CF patients should be masked while in the healthcare facility, including waiting rooms and bathrooms. The patient may remove the mask in the exam room and while getting PFTs/spirometry.

(a) If the optimal size mask is unavailable, use the smallest mask available. If a CF patient does not tolerate a mask, encourage them to follow Respiratory Hygiene/Cough etiquette practices.

iii. Staff will wear gowns and gloves when caring for CF patients.

iv. Move patients with CF to an exam room as soon as one is available.

v. Keep the patient in one exam room; the CF team rotates through each room.

vi. PPE

(a) HCPs will wear gowns and gloves when caring for CF patients.

(b) For respiratory treatments:

(i) Wear eye protection

(ii) Wear a mask, or for aerosol-generating procedures, a fit-tested N95 or PAPR

(c) Additional PPE may be needed as part of Transmission-Based precautions. For example, if the patient has an airborne infectious disease or receives an aerosol-generating procedure, wear an N95 mask, eye protection, or a PAPR.

(i) For CF patients requiring isolation for other conditions or diseases, affix the appropriate Transmission-Based precautions sign on the door (Contact, Enteric Contact, Droplet, Airborne, Novel Respiratory Isolation) and the UCSF Precautions sign.

(d) As part of Standard Precautions, wear a mask with eye protection for anticipated splashes or sprays of respiratory secretions or other body fluids, such as those created during cough-inducing procedures.

(e) In healthcare settings, CF patients must routinely wear surgical masks covering their mouth and nose.

b. Ensure that ample alcohol-based hand rub is accessible and available in the corridors and each exam room. All care providers and patients should perform hand hygiene when entering and leaving each exam room.

c. Perform routine cleaning and disinfection of environmental surfaces and equipment.

i. Before and after spirometry and PFTs.

ii. Before the next CF patient is admitted to the exam room.

iii. After cleaning an exam room and equipment, including the stethoscope, if it is not disposable, no other CF patient may enter for 30 minutes as per national guidance. The 30-minute wait time between patients does not apply to non-CF patients or if a HEPA filter is on in the room.

d. Mucus produced by CF patients not captured for culture will be caught in a tissue and discarded into a waste receptacle in line with Respiratory Hygiene/Cough Etiquette. Hand hygiene should be performed afterward.

## V. HISTORY OF POLICY

A. Revised: Revised 6/02, 3/04, 10/04, 8/08, 11/11, 7/14, 8/17, 4/21, 8/24

Revision Team:

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| Deborah Yokoe, MD, MPH | Adult Infectious Disease Service, Hospital Epidemiology and Infection Prevention |
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| Michael Towne | Child Life Services, Manager |



## V. APPENDIX 1

References for CF Foundation's updated infection prevention policy

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Appendix I -cont'd
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    1.1 Standard Precautions and Transmission-Based Isolation
    1.2 Hand Hygiene Policy
    1.3 2.01.01 Patient Care
    1.4 Equipment Cleaning
    5.3 Toy Cleaning