Infection Prevention and Control Guidelines for Cystic Fibrosis Patients

Policy Owner: Epidemiology

POLICY STATEMENT
Based upon best practices for the care of cystic fibrosis patients, expanded infection prevention and control guidelines are to be implemented and used when caring for all cystic fibrosis (CF) patients to minimize the risk of transmitting pathogenic organisms.

AFFECTED STAKEHOLDERS

☒ Administrative Services
☒ Hired Staff
☒ Housestaff/Residents & Clinical Fellows
☒ Leased staff
☒ Medical Staff (includes Physicians, PAs, APNs)
☒ Patient Care Services (Nursing, PCT’s, Unit Clerks)
☒ Professional Services (Laboratory, Radiology, Respiratory, Pharmacy; etc.)
☐ Vendors/Contractors
☐ Other:

DEFINITIONS

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Cohorted</td>
<td>Grouping of patients (infected, colonized or with similar disease characteristics) who are physically separated, but grouped together and cared for by the same staff.</td>
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<tr>
<td>Cleaning</td>
<td>The removal of gross dirt and debris.</td>
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<tr>
<td>Cystic Fibrosis</td>
<td>A hereditary disease that affects the exocrine glands causing mucous to thicken and plug ducts and passageways, particularly in the lungs and pancreas. The disease typically emerges early in childhood and is life threatening.</td>
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<tr>
<td>Disinfection</td>
<td>A process that eliminates many or all microorganisms, except spores, and is done with liquid chemicals or with use of high heat temperatures.</td>
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<td>Primary Care Family Member</td>
<td>Family member or other designated individuals assisting with the care of the pediatric patient who normally provide care on a daily basis. See the policy CHOG Primary Care Family Members.</td>
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PROCESS & PROCEDURES

General Principles

1. Assume all cystic fibrosis patients may have transmissible pathogens.

2. Apply standard and contact precautions to all cystic fibrosis patients regardless of the setting.
   a. Wear a mask and eye protection when obtaining respiratory cultures as indicated by standard precautions.

3. Apply additional transmission-based precautions as appropriate; see Table A for transmission-based precautions for organisms/illnesses specific to the patient with cystic fibrosis.

4. Avoid risk factors associated with transmission of organisms.

5. Follow the Hand Hygiene Policy, especially:
   a. **Employees:** Perform hand hygiene before and after all patient contacts, before and after glove usage, when hands are contaminated with respiratory secretions, and when contact with patient equipment and/or toys occurs. Alcohol foam may be used in between hand washing with soap and water but should not be used for inpatients suspected or known to have C. difficile. Artificial fingernails, including gel overlays, extenders, or embellishments are prohibited for healthcare workers who provide patient care or prepare products for patient use and for healthcare workers, who supervise patient care services.

   b. **Patients:** Instruct patients on the importance of performing hand hygiene. Hand hygiene should be performed routinely, before and after airway clearance, before and after performing pulmonary function tests (PFTs), when hands are contaminated with respiratory secretions, after toileting, and before donning and upon removal of masks, gloves, and/or gowns. Alcohol foam may be used if hands are not visibly soiled.

   c. **Others:** Instruct others, i.e. family members and visitors, to perform hand hygiene before coming in to contact with the patient.

6. Change gloves immediately after performing a task. Immediate glove changing is necessary to avoid contamination of inanimate objects in the patient’s environment.

7. Instruct patients to wash their hands and wear a surgical/procedure mask and gown whenever they leave their room/treatment room. Masks must be changed when they become moist or soiled.

8. Instruct the patient to cough into tissues and dispose of the tissues in a waste receptacle immediately when performing specimen collection or airway clearance (whether assisted or not).
9. Ensure that dust containment and water leak policies are observed.

Inpatient Management

1. All cystic fibrosis patients will be placed in a private room. Sibling patients may be cohabited in the same room (in the Pediatric Hospital Only).

2. The patient is not allowed to eat other patients' food or share eating or drinking utensils.

3. The patient is not allowed to enter other patients' rooms.

4. The patient is not allowed to kiss or hug other patients. If the patient shakes hands with another individual, this individual is instructed to wash his/her hands as soon as possible.

5. CF patients should maintain a distance of at least 6 feet from other CF patients.

6. All respiratory procedures should be performed in patient rooms.

7. Follow this policy's Addendum 1, Cleaning, Disinfection, and Disposal of Cystic Fibrosis Respiratory Equipment (Table 1), to prevent the acquisition of pathogens from respiratory equipment.

8. All supplies are removed from the horizontal surfaces in the patient's room, and these surfaces are disinfected daily with the hospital-approved disinfectant. The cleanliness of the patient's room is strictly maintained. Encourage patients and families to minimize personal items on horizontal surfaces.

9. All patients with cystic fibrosis should be placed on contact isolation for the duration of their hospitalization. Other appropriate transmission-based precautions should be initiated as indicated. Use Table A below as a quick reference for the most common organisms seen in Cystic Fibrosis. See the Transmission-based Precautions policy Addendum 1, Alphabetical Disease/Organism Listing for Transmission-Based Precautions, for organisms not listed below.

TABLE A
Common Organisms Requiring Transmission-Based Precautions for CF Patients

<table>
<thead>
<tr>
<th>Organism</th>
<th>Droplet</th>
<th>Airborne</th>
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<tbody>
<tr>
<td>Adenovirus</td>
<td>X</td>
<td></td>
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<tr>
<td>Influenza</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Methicillin-resistant Staphylococcus aureus (MRSA)</td>
<td>X*</td>
<td></td>
</tr>
<tr>
<td>Mycobacterium tuberculosis</td>
<td></td>
<td>X</td>
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Parainfluenza | X
Respiratory Syncytial Virus (RSV) | X

*Organism present in the sputum or tracheal aspirates with active disease.

10. Patient transport outside of the room is allowed when deemed medically necessary. Patients should perform hand hygiene before donning a mask and gown when leaving their room.

†The patient’s nurse should be notified when the cystic fibrosis patient leaves their room and/or unit.

11. Patients may go outside the building but must wear surgical/procedure mask and gown while diligently performing hand hygiene. Patients should be educated to avoid exposure to tobacco smoke, water sources (i.e. fountain), and crowded areas when outside.

12. Toys that are taken to a patient’s room must be wiped with the hospital-approved germicide upon removal from the room, and then placed in the dirty toy bin for further disinfection.

13. All cystic fibrosis patients will be allowed to attend physical therapy as long as the Physical Therapy Guidelines for the Management of the CF Patient are adhered to. Cleaning and disinfection of Physical Therapy Equipment must take place prior to and after each use. Please review Addendum II for more specific information.

14. A refrigerator is provided in each patient’s room in order to meet his or hers caloric needs. All refrigerators must be cleaned between patient uses, according to disinfection guidelines.

15. Primary Care Family Members (PCFM) will not have access to the inpatient unit nourishment center in an effort to reduce the spread of pathogens that may be present in the family members of CF patients. This includes access to the linen closet, microwave, coffee and ice. The nursing staff will assist with linen, coffee, microwave, and ice needs. PCFM may keep food in the refrigerator that is provided for use in the patient’s room.

**Outpatient Management**

1. **Clinic Logistics**

   a. Patients will be scheduled and managed in an effort to minimize time in common waiting areas. Management will include a staggered clinical schedule *when possible*, placement of patients in an exam room immediately upon arrival *if possible*, and keeping the patient in one exam room while the providers rotate through the rooms.

   b. When a patient requires additional transmission-based precautions, other disciplines will be alerted as per Infection Control policy.
2. Clinic Waiting Areas

a. Patients and family members will be instructed to perform proper hand hygiene upon arrival to the clinic and throughout their clinic visit. Alcohol foam will be made available to patient and family members.

b. An attempt will be made to issue surgical/procedure masks to all CF patients upon check-in to the clinic. The CF patient is required to wear the mask when in common areas such as the waiting rooms, hallways, bathrooms, etc. Masks must be changed when they become moist or soiled.

c. Patients will be asked to follow respiratory etiquette throughout their clinic visit. Respiratory etiquette includes asking individuals to cover their mouths and noses when coughing and/or sneezing, disposing of tissues after use, and then performing hand hygiene. Tissues in no-touch receptacles should be provided at the point of entry along with appropriate means of disposal. Resources and instructions for performing hand hygiene should be readily available.

d. Physical contact among cystic fibrosis patients will be discouraged.

e. Patients will be instructed to maintain a distance of at least six feet from others while in common waiting areas to prevent droplet transmission of respiratory pathogens.

f. All respiratory procedures, including pulmonary function tests (PFTs), should be performed in the patient’s exam room.

g. Follow this policy’s Addendum 1, Cleaning, Disinfection, and Disposal of Cystic Fibrosis Respiratory Equipment (Table 1), to prevent the acquisition of pathogens from respiratory equipment.

3. Other Infection Prevention and Control Measures for Clinics

a. Standard and contact isolation precautions apply to all patients with CF.

b. Use Table A above as a quick reference for those most common organisms, which require additional precautions for CF patients. See the Transmission Based Precautions Policy, Addendum 1, Alphabetical Disease/Organism Listing for Transmission-Based Precautions, for organisms not listed below.

c. Exam rooms should be thoroughly cleaned between CF patients. The sheet (paper or linen) covering the exam table should be removed and properly disposed of once a patient has been discharged. All horizontal surfaces, including the exam table and door handles, should be cleaned with the hospital-approved disinfectant.

d. Vaccines should be administered according to the Advisory Committee on Immunization Practices (ACIP)/American Academy of Family Physicians recommendations.
e. Influenza immunization should be administered annually to cystic fibrosis patients 6 months of age or older. Encourage close contacts of patients to receive an annual influenza vaccine as well. Influenza immunizations should be administered by injection (no live virus).

**Home Care Management**

1. Patients and family members should be instructed not to share items that may come into contact with mucous membranes (e.g. eating utensils, toothbrushes, respiratory therapy equipment).

2. Patients and family members should be educated on the importance of hand hygiene and respiratory etiquette. Discourage family members and care providers from wearing artificial fingernails.

3. Patients and family members should be instructed to avoid activities with other cystic fibrosis relatives or friends, who may be associated with the transmission of pathogens, i.e. intimate contact, handshaking, kissing, prolonged car rides, etc.

4. Instructions should be provided on how to properly manage respiratory therapy equipment at home. Refer to this policy's Addendum 1, *Cleaning, Disinfection, and Disposal of Cystic Fibrosis Respiratory Equipment* (Table 2).

**Managing the Psychosocial Impact of Infection Control Guidelines**

1. Ensure that a clinical social worker and Child Life Services is available to address the psychosocial impact of the microbiological status of the patient and the infection control guidelines.

2. Inform and educate the patient, their identified parent/guardian, family members and others about the patient’s microbiological status and the psychosocial implications of following the infection control guidelines, especially when transmission-based precautions are required.

3. Utilize multi-media educational tools (print, audio, and video) specific to infection control education for patients and their families.

4. Ensure that the patient is able to maintain communication with family members and those outside of the hospital setting via phone or other methods that will not jeopardize the risk of transmission or acquisition of pathogens.

**REFERENCES, SUPPORTING DOCUMENTS, AND TOOLS**

*Addendum 1, Cleaning, Disinfection, and Disposal of Cystic Fibrosis Respiratory Equipment*

*Addendum 2, Physical Therapy Guidelines for the Management of the CF Patient*
"Infection Prevention and Control Guideline for Cystic Fibrosis: 2013 Update"
Infection Control and Hospital Epidemiology, Vol. 35, No. S1, Cystic Fibrosis Foundation Guideline (August 2014), pp. S1-S67

RELATED POLICIES
Hand Hygiene Policy

Isolation Precautions for CMC Primary Care Family Members

Transmission Based Precautions

APPROVED BY
Chief Executive Officer, Augusta University Medical Center

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