I. Description
Addresses the infection control management of patients with Cystic Fibrosis who require Contact Precautions.

II. Rationale
Cystic Fibrosis patients are often colonized with multiple drug-resistant organisms (MDROs). An effective infection control policy is necessary to minimize the spread of MDROs to other patients receiving care at UNC Health Care (UNCHC).

III. Policy
UNCH Health Care has adopted the infection control guidelines of the Cystic Fibrosis Foundation (Infection Prevention and Control Guideline for Cystic Fibrosis: 2013 Update) with the following exceptions and additions.

A. General Principles of Healthcare Settings
1. All patients with CF must be placed on Contact Precautions, regardless of colonization with or without MDROs. All patients with CF could have pathogens in respiratory tract secretions that are transmissible to others. All areas (e.g. inpatient, ambulatory care, diagnostic, and perioperative services) must implement Contact Precautions for patients with CF.
   a. This will be communicated in the electronic medical record in the Infection Field with the denotation of CF.
   b. CF noted in the Infection Field in EPIC requires Contact Precautions for that patient, regardless of the patient’s location UNCHC will define antibiotic resistance as provided in the Isolation Precautions Infection Control Policy. Patients with CF and MDROs will continue to be flagged in the electronic medical record, per UNC Healthcare Policy.
2. In all settings, it is the policy of UNCHC that all health care workers, visitors, and family members must comply with Contact Precautions for all patients with CF. When entering the room, HCP are required to wear gloves and a yellow cover gown whenever clothing may
contact the patient or surfaces in the room. When exiting the room, the gown and gloves must be removed and hand hygiene performed. Patients may ambulate independently in the hall on the unit in which the patient is housed, provided the patient follows the guidelines for Patient Activity Outside of Hospital Room found in this policy. A trained adult primary caregiver (e.g., spouse, other family member, or person designated by the nurse manager) may also walk the patient in the hall on the unit where the patient in housed. Each patient and/or primary caregiver must demonstrate compliance with Contact Precautions. It will be the responsibility of the nursing staff to properly instruct the patient and/or caregiver regarding appropriate Contact Precautions and hand hygiene and to document training. Refer to Appendix 2 for the training instructions. It will be the responsibility of the medical staff to assist the nursing staff as necessary with patient and visitor/family education and enforcement of the Cystic Fibrosis Policy. Hospital Epidemiology personnel will also be available as needed for assisting with patient and visitor/family education and adherence issues.

a. Live plants in water or dirt pose a potential risk to CF patients and must be approved by the patients’ physician.

3. CF patients must be placed on Airborne Precautions for the first ever AFB smear positive isolate until the Mycobacterium species is identified as a non-tuberculosis Mycobacterium.
   a. Physicians or Infection Preventionists may request that a MTB PCR be performed by McClendon laboratories on the first AFB smear positive, to rule out TB and thus discontinue airborne isolation.
   b. For patients that have specimens for AFB lab tests ordered as a component of a procedural protocol (e.g., organ transplantation, CF/thoracic patient bronchoscopy). Airborne Isolation is not required, unless TB is suspected or in the differential diagnosis.
   c. For further information consult the TB Control Plan.

4. Clinic exam rooms must be disinfected after each patient with CF. Computers shall be disinfected after each patient on contact precautions and when visibly soiled. Gloves must be removed and hands cleaned after providing patient care and prior to use of computer equipment. Monitors, keyboards, and the mouse should be wiped with a germicidal disposable cloth (e.g., Sani-Cloth). Touch screens should be wiped with 70% alcohol. The surface should appear visibly wet and be allowed to air dry.

B. Surveillance Strategies
   1. Hospital Epidemiology provides comprehensive surveillance for all inpatients units and for UNC Home Health and Hospice.
   2. Hospital Epidemiology will conduct CF-specific surveillance for infections, if indicated.

C. CF Patient Activity Outside of Hospital Room
   1. CF patients will wear a surgical mask when they leave their rooms. They may leave their room for therapeutic purposes only. (e.g., x-ray, OR). As part of their rehabilitation, some patients need to exercise outside of their rooms.
   2. CF patients on Contact Precautions may ambulate outside their rooms only in the unit in which they are housed provided the following is done:
      a. Patients maintain a greater than 6 foot distance from other CF patients to prevent droplet and contact transmission of diseases.
      b. Patients perform hand hygiene before leaving their room.
c. Patients maintain a greater than 6 foot distance from other CF patients to prevent droplet and contact transmission of diseases.

d. Patients are instructed on infection prevention principles, including not touching objects in the environment, environmental surfaces, or other patients.

e. Patients must remain only within the unit corridors on the unit in which they are housed and may not enter other common areas, including but not limited to: visitor waiting rooms, nutrition areas, nursing stations, and other patient rooms.

f. Patient must not have an active infectious process where secretions/drainage are uncontrolled (i.e., not contained under a clean, occlusive dressing or on an exposed area of the body like the face). Dressings should be clean and should contain any wound drainage.

g. Patient must be able to manage their respiratory secretions in a manner to prevent droplet spread of organisms.

h. If the patient wishes to leave the unit, they must be accompanied by healthcare personnel.

i. Patients who cannot or will not follow these requirements must be accompanied by trained healthcare personnel when ambulating in the hallway. Pediatric patients unable to follow requirements may be accompanied by a HCP or a family member who is instructed on infection prevention and compliant with requirements. During outbreak situations, Hospital Epidemiology may temporarily suspend these privileges.

3. If a healthcare provider is accompany a Cystic Fibrosis patient:

a. The healthcare provider will don gloves, and an isolation gown if anticipating contact with the patient or their environment to enter the Contact Precautions room and prepare the patient for therapy.

b. The patient should don a clean hospital gown, clean clothes, or a clean hospital gown over their clothing prior to leaving the room.

c. Prior to leaving the room, the patient will perform hand hygiene independently or with assistance.

d. The healthcare provider will remove their contaminated gloves, and gown if applicable, and perform hand hygiene.

e. The healthcare provider should then don a clean isolation gown and gloves prior to leaving the room.

f. The patient should be instructed not to handle any items in the environment. The accompanying healthcare provider should avoid touching items in the environment. If it is necessary for the patient or healthcare personnel to handle items, such as stair rails when walking down stairs, then the caregiver should thoroughly clean these items with an EPA-registered hospital disinfectant as soon as possible. Ideally, cleaning should be done prior to leaving the area; however, if this is not possible, then cleaning will be done after the patient has been returned to their room.

g. After returning the patient to the room, the healthcare worker must remove gown and gloves and perform hand hygiene upon leaving the patient room.
D. Respiratory Therapy
   1. Soiled Tissues may be disposed of in trash receptacles.
   2. All nebulizers (e.g., aerosol tracheal mask, aerosol face mask, and mist tent) are changed by respiratory therapy every 24 hours. This includes the various plastic tubes, aerosol tubing, etc. Between treatments on the same patient, the small volume medication nebulizers will be taken apart, rinsed with sterile water and be allowed to air dry. The nebulizer should not be stored wet in a plastic bag. Refer to the Respiratory Care Infection Control Policy.

E. Ambulatory Settings: Organism-Specific Circumstances
   1. Patients with \textit{B. cepacia} will be scheduled as per CF Clinic policy.
   2. Gloves and gown will be worn when providing care for all patients colonized or infected with multidrug resistant organisms. Change gloves and gown then perform hand hygiene between patients.

F. Psychosocial Impact of Infection Control Guidelines
   1. In the CF Foundation Guidelines, it is recommended that adherence to infection control guidelines by health care workers be monitored, and that feedback be provided to the CF Team. Hospital Epidemiology will perform periodic assessments of isolation compliance; however, specific rounds for compliance with CF infection control guidelines will not be conducted.

G. Waiting area Behaviors in Outpatient Areas
   1. All patients with CF must wear a surgical mask outside of the clinic room, regardless of colonization with MDROs.

H. Volunteers
   1. All volunteers working with CF patients must be a member of the Hospital Volunteer Association and have completed the appropriate training. Since working with other CF persons would place them at risk, volunteers with Cystic Fibrosis will not be assigned to work with CF patients.

IV. References

V. Reviewed/Approved by
   Hospital Infection Control Committee

VI. Original Policy Date and Revisions
Appendix 1: Guidelines for Activities of CF Patients

<table>
<thead>
<tr>
<th>Hospital Facility</th>
<th>Mask</th>
<th>Yellow Cover Gown</th>
<th>Gloves</th>
<th>Additional Precautions</th>
</tr>
</thead>
</table>
| Play Atrium                       | Patient: Yes Staff: No Family: No | Patient: No Staff: Yes Family: No | Patient: No Staff: Yes Family: No | • May not attend while other patients are in the Play Atrium  
  • Staff will disinfect all equipment and/or toys used by the patient before use by another patient. |
| Cafeterias Coffee Shops Starbucks Gift Shop | May not visit | | | • Family may go, but must perform hand hygiene before leaving the room. |
| Hall on the unit the patient is housed | Patient: Yes Staff: No Family: No | Patient: No Staff: Yes Family: No | Patient: No Staff: Yes Family: No | • See ambulation guidelines in policy above |
| Nurses Station                    | May not visit | May not visit | May not visit | May not visit |
| Butterfly Garden (weather permitting) | Patient: Yes Staff: No Family: No | Patient: No Staff: Yes Family: No | Patient: No Staff: Yes Family: No | • Only if accompanied by health care provider (e.g., nurse, NA, physical therapist) |

 PERFORM HAND HYGIENE UPON ENTERING AND PRIOR TO LEAVING THE ROOM
<table>
<thead>
<tr>
<th>Hospital Facility</th>
<th>Mask</th>
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<th>Gloves</th>
<th>Additional Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside Hospital (UNCHC sponsored activities)</td>
<td>Patient: No</td>
<td>Patient: No, if 6 foot barrier cannot be maintained</td>
<td>Patient: No</td>
<td>• Only if accompanied by health care provider (e.g., nurse, therapist). Patients (including their family members) and staff will maintain a &gt;6 foot distance from other CF patients to prevent droplet and contact transmission. • Can be outdoor only if more than one CF patient is present.</td>
</tr>
<tr>
<td>Hospital School</td>
<td>Patient: Yes</td>
<td>Patient: No</td>
<td>Patient: No</td>
<td>• May attend only when other patients are not in the schoolroom. Staff will clean equipment (e.g., computer keyboards) after use</td>
</tr>
<tr>
<td>Transplant Support Group</td>
<td></td>
<td></td>
<td></td>
<td>• Follow guidelines for Outside Hospital</td>
</tr>
</tbody>
</table>

- Patients who require Contact Precautions may leave their room for therapeutic purposes only, see Activity Outside the Room Guidelines above.
Appendix 2: Cystic Fibrosis Patient/Care Giver Instructions for Walking in the Hall

1. Plan with the patient’s nurse a time to walk in the hallway.

2. Patient must wear a mask, a clean hospital gown, clean clothing, or a clean hospital gown over their clothing, and perform hand hygiene upon leaving the room.

3. Clean hands with soap and water (Ecolab 2% CHG) or alcohol based hand rub (Purell) upon leaving the patient room. Follow instructions below for performing hand hygiene.

4. Do not touch objects in the environment, environmental surfaces, or other patients. If patient or caregiver touches an object please ask nursing personnel to clean that area.

5. Patients must remain only within the unit corridors on the unit in which they are housed and may not enter other common areas, including but not limited to: visitor waiting rooms, nutrition areas, nursing stations, and other patient rooms.

6. Maintain a 6 foot or greater distance from other CF patients (other patients wearing surgical masks in hallway). If a 6 foot or greater distance cannot be maintained as two CF patients pass each other in the hallway, turn and walk in the opposite direction to avoid exposure to other CF patients.

7. Clean hands with soap and water (Ecolab 2% CHG) or alcohol based hand rub (Purell) upon returning to the patient room.

Instructions for Hand Hygiene

**ECOLAB 2% CHG Soap**

- Wet hands with warm water
- Apply 3 to 5 ml of soap (at least 2 pushes) and rub for 15 seconds covering all surfaces of the hands and fingers to include nail beds and between fingers
- Rinse hands with warm water
- Dry thoroughly with a disposable towel
- Use towel to turn off the faucet

**Purell® Alcohol Based Hand Rub**

- Apply alcohol-based hand rub to palm of one hand by pushing the lever twice.
- Rub hands together covering all surfaces of hand and fingers to include nail beds and between fingers until hands are dry.