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Policy Area Infection Prevention
Applicability UNC Medical Center

Patients with Cystic Fibrosis

I. Description

Addresses the Infection Prevention management of patients with Cystic Fibrosis (CF)

II. Rationale

Cystic Fibrosis patients are often colonized with multiple drug-resistant organisms (MDROs). An effective infection prevention policy is necessary to minimize the spread of MDROs to other patients and persons with CF receiving care at UNC Medical Center (UNCMC).

III. Policy

The following guidelines are based on the infection prevention and control guidelines of the Cystic Fibrosis Foundation (Infection Prevention and Control Guideline for Cystic Fibrosis: 2013 Update) and are specific to UNCMC.

A. General Principles of Healthcare Settings

1. All patients with CF must be placed on Contact Precautions, regardless of colonization with or without MDROs. They should be assigned a private room and not assigned a bed in a curtained space (e.g., 4WST). All patients with CF should wear a surgical mask when in a healthcare facility to reduce the risk of transmission or acquisition of CF pathogens except during pulmonary function testing, in the clinic exam room, or in the patient's hospital room. 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 (EMR) with a patient infection status flag stating "CF Patient".

- b. A "CF Patient" infection flag in the EMR requires initiation of Contact Precautions for that patient, regardless of the patient's location. UNCMC will define antibiotic resistance as provided in the Infection Prevention policy: [Isolation Precautions](#). Patients with CF and MDROs will continue to be flagged in the EMR, per UNCMC policy.
2. In all settings, it is the policy of UNCMC that all healthcare personnel (HCP) must comply with Contact Precautions for all patients with CF. When entering the room, HCP are required to perform hand hygiene and wear gloves and an isolation 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.
3. 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 this policy. Infection Prevention personnel will also be available as needed for assisting with patient and visitor/family education and adherence issues.
4. Live plants in water or dirt pose a potential risk to CF patients and must be approved by the patient's physician.
5. Patients with CF and a first positive AFB positive isolate (smear or culture) must be placed on Airborne Precautions until TB is excluded. For patients with a history of Nontuberculous Mycobacteria (NTM), Airborne Precautions are not needed if the attending physician does not suspect or treat the patient for TB. If MTB is suspected or in the differential diagnosis, the patient must be placed on Airborne Precautions until diagnosed or ruled out per the Infection Prevention policy: [Tuberculosis Control Plan](#).
 - 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 Precautions. Negative TB PCRs on smear negative or smear indeterminate samples cannot be used to discontinue Airborne Precautions due to lower PCR sensitivity in those scenarios.
 - 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 Infection Prevention policy: [Tuberculosis Control Plan](#).
6. Clinic exam room surfaces must be disinfected with an EPA-registered disinfectant after each patient with CF.
7. Infants born to mothers with Cystic Fibrosis will be placed on contact isolation if the mother has a history of an MDRO. If the mother does not have a MDRO, the infant does not need isolation precautions (unless the infant has CF).

B. Surveillance Strategies

1. Infection Prevention provides comprehensive surveillance for all UNCMC facilities.

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 (e.g. x-ray, OR). As part of their rehabilitation, some patients need to exercise outside their rooms.
2. CF patients 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. The patient should don a clean hospital gown, clean clothes, or a clean hospital gown over their clothing prior to leaving the room.
 - c. Patients perform hand hygiene before leaving room.
 - 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 or doorways.
 - i. Please refer to [Attachment 1: Guidelines for Activities of CF Patients](#)
 - f. Patients 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 contain any wound drainage.
 - g. Patients must be able to manage their respiratory secretions in a manner to prevent droplet spread of organisms.
 - h. Patients may not ambulate in the hall if they are on Droplet or Airborne Precautions.
 - i. If the patient wishes to leave the unit, they must be accompanied by a HCP. Inpatients may not enter public areas at any UNCMC facility such as the gift shop or cafeteria, even when accompanied by a HCP. Inpatients who wish to go outdoors must be accompanied by a HCP at all times on UNCMC property.
 - j. Patients who cannot or will not follow these requirements must be accompanied by a HCP 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, Infection Prevention may temporarily suspend these privileges.

3. If a HCP is accompanying a Cystic Fibrosis patient:
 - a. The HCP will don gloves, and an isolation gown if anticipating contact with the patient or their environment to enter the room and prepare the patient.
 - 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 HCP will remove their contaminated PPE and perform hand hygiene.
 - e. The HCP should then don a clean isolation gown and gloves prior to leaving the room only if contact with the patient or their medical equipment (e.g., oxygen tank, IV pole) is anticipated.
 - f. The patient should be instructed not to handle any items in the environment. If it is necessary for the patient to handle items, such as stair rails when walking down stairs, then the HCP should thoroughly clean these items with an EPA-registered 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 HCP must doff PPE if worn and perform hand hygiene.

D. Respiratory Therapy

1. All disposable nebulizer components (e.g., aerosol tracheal mask, aerosol face mask, and mist tent) are changed every 24 hours. This includes the mouth piece, nebulizer cup, connectors, tubing, and mask. Between treatments on the same patient or when visibly soiled, the small volume medication nebulizers will be rinsed with sterile water and air-dried at least 3 feet away from the sink, or separated by a splash guard. Do not store wet nebulizers in a plastic bag. Refer to the Infection Prevention policy: [Respiratory Care Department](#).
2. All disposable airway clearance devices components (e.g., intrapulmonary percussive ventilation devices, acoustical percussors, and oscillating positive expiratory pressure devices) are changed every 24 hours. Between treatments on the same patient or when visibly soiled, the device components will be rinsed with sterile water and air-dried at least 3 feet away from the sink or separated by a splash guard. Do not store wet components in a plastic bag.

E. Ambulatory Settings

1. Contact precautions per the Infection Prevention policy: [Isolation Precautions](#) will be followed when providing care for all CF patients.

2. All patients with CF must wear a surgical mask outside of the clinic room, regardless of colonization with MDROs.
3. All patients with CF must maintain at least a six foot distances from other patients with CF in waiting areas.
4. Ideally, patients will be roomed immediately. If a patient does need to wait, they should be offered an option to wait outside and have their cell phone used to contact them when the clinic room is ready.

F. Compliance with Infection Control Guidelines

1. In the CF Foundation Guidelines, it is recommended that adherence to infection control guidelines by HCP be monitored, and that feedback be provided to the CF Team. It is the responsibility of area leadership to ensure compliance with the CF infection control guidelines.

G. 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 CF will not be assigned to work with CF patients.

IV. References

Infection Prevention and Control Guideline for Cystic Fibrosis: 2013 Update, ICHE 2014, Vol. 35, No. S1.

Related Policies

[Infection Prevention Policy: Isolation Precautions](#)

[Infection Prevention Policy: Respiratory Care Department](#)

[Infection Prevention Policy: Tuberculosis Control Plan](#)

Attachments

[1: Guidelines for Activities of CF Patients](#)

Approval Signatures

Step Description

Approver

Date

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