	POLICIES & PROCEDURES Number: **40-45** Title: **Cystic Fibrosis**
Authorization: [4] SHR Regional Infection Prevention and Control Executive Committee	Source**: Infection Prevention & Control** Date Initiated: April 7, 2009 Date Reaffirmed: Date Revised: Scope: SHR Agencies & Affiliates

Introduction

Cystic fibrosis (CF) is a relatively common genetic disorder affecting young people. The major cause of morbidity and mortality in CF is a build up of thick mucous which leads to a vicious cycle of infection and inflammation that causes progressive deterioration in pulmonary function, respiratory failure and death. The pathogens that cause these common CF related infections are usually transmitted by contact and/or droplet routes.

The respiratory secretions of ALL CF patients are potentially infected with microorganisms that could be harmful to that patient or another CF patient. This should always be kept in mind even if an organism has not yet been identified through a culture. All health care workers (HCWs) must use appropriate precautions when caring for a CF patient to prevent patient-to-patient transmission of these pathogens, either via direct contact or indirect contact by the HCW or the environment.

Transmission commonly occurs through direct (eg: kissing) or indirect contact with infected secretions (sharing a toothbrush or drinking glass with another CF patient). Patient education about interaction between patients is an essential part of the care of CF patients.

Specific infection control practices are recommended for both inpatient and ambulatory care settings, that should be based on the activities and the risks associated with the various environments.

Policy

1. Standard Precautions are recommended for all CF patients.

2. In addition to Standard Precautions, use Contact & Droplet Precautions for all CF patients infected (or colonized) with:
   - Methicillin resistant Staphylococcus aureus (MRSA)
   - Burkholderia cepacia complex
   - Vancomycin resistant Enterococci (VRE)
   - Multidrug-resistant Pseudomonas aeruginosa
   - Stenotrophomonas maltophilia
   - Respiratory syncytial virus (RSV)
   - Parainfluenza virus
   - Influenza virus
   - Adenovirus
   - Pertussis

3. Additional precautions may be necessary if patient is infected with an organism not mentioned above. Refer to *Precautions by Etiology – Clinical Presentation Reference Table,* in the Infection Prevention and Control manual.

Purpose

To decrease the risk of patient-to-patient transmission of respiratory pathogens between all patients via the direct route (ie: patient-to-patient) and/or the indirect route (ie: via the HCW or the environment) in both the inpatient and ambulatory care settings.

Procedure

1. Patient Placement

- Place the patient in a single room with private bathroom.
- Bathrooms and showers are not to be shared by more than one CF patient.
- **Do not** place CF patients in the same room (ie: **no** cohorting).
- If necessary (eg: a single room is not available) CF patients without an identified infection may share a room with patients **without** CF, who do not have an infection themselves **and** are at low risk for infection.
- If a pathogen is isolated that requires additional precautions, refer to specific policy.
- Post appropriate Contact and/or Droplet precaution signage.

2. Hand Cleansing and Gloving

- If antimicrobial soap and water is not readily available ensure the presence of easily accessible alcohol hand sanitizer in all patient rooms, pulmonary function testing rooms, nuclear medicine, audiology, ambulatory clinic rooms and in waiting areas for patients and families.
- Change gloves and cleanse hands after handling respiratory secretions or any objects contaminated with a patient's secretions before contact with another patient, object or environmental surface.
- Change gloves and cleanse hands when moving from a contaminated body site to either a clean body site, the respiratory tract, or to a respiratory device on the same patient.

3. Gowns

- When soiling with respiratory secretions from a patient is anticipated (eg: during chest physiotherapy, suctioning or when examining a patient who is known to have coughing spasms) wear a gown and remove the gown after such contact and before providing patient care to another patient.

4. Masks, Eye Protection and Face Shields

- Mask and eye shields, or a face shield should be worn when splashes or sprays of respiratory secretions, body fluids, blood or excretions are anticipated.
- Unless the patient is on droplet precautions **or** has poor cough etiquette there is no need for CF patients to routinely wear masks when outside of the patient room.

5. Patient Activity

- Allow patient activity outside the patient room only in accordance with the Additional Precautions required for specific pathogens. Refer to: *Precautions by Etiology – Clinical Presentation Reference Table,* in the Infection Prevention & Control manual.
- Consider the patient's capability for containing his or her respiratory tract secretions, age, ability to use proper hygiene, and ability to adhere to the guidelines of the Additional Precautions being used.
- Have patient perform hand hygiene before leaving the room.
- Avoid direct contact between CF patients unless they are co-habitants (ie: live in the same house).
- May use hospital activity rooms (eg: play room, exercise room or school room) only when no other CF patients are present.
- After a patient has left a hospital activity room, clean surfaces and items handled by the patient with a hospital approved disinfectant.
- CF patients **must** maintain at least a one meter (three feet) distance from other CF patients.
- Unless the patient is on droplet precautions, there is no need for CF patients to routinely wear masks when outside of the patient room.
- Perform all respiratory interventions including aerosol therapy, airway clearance, and sputum collection within the patient's room.
- Encourage patients to use their own home airway clearance devices during both inpatient and clinic situations.
- CF patients should not have chest physiotherapy with other CF patients present.

6. Patient Transportation

- Consider the patients capability for containing his or her respiratory tract secretions, age, ability to use proper hygiene, endemic levels of pathogens in an individual center, and ability to adhere to the guidelines of the additional precautions being used.
- Have patient perform proper hand hygiene before leaving the room.
- CF patients **must** stay at least one meter (three feet) away from other CF patients.
- Unless patient is on droplet precautions there is no need for CF patients to routinely wear masks when outside of the patient room.
- If the patient is on additional precautions refer to the precaution specific guidelines for patient transportation.

7. Patient-Care Equipment

- If the patient is on additional precautions refer to the precaution specific instructions for dealing with patient-care equipment.
- The sharing of nebulizers or other respiratory therapy equipment between CF patients (including siblings) is not permitted.

8. Visitors

- Instruct visitors regarding hand hygiene before and after patient contact.
- If the patient is on additional precautions refer to the precaution specific guidelines for visitors.
- CF patients **must** stay at least one meter (three feet) from other CF patients.

- Contact between CF patients should be limited to avoid patient-to-patient transmission of pathogens. Discourage physical contact between CF patients.

9. Patient and Family Teaching

- Patients should understand the nature of their infectious process and the precautions being used, as well as the prevention of transmission to other patients, family and friends during their hospital stay and upon their return to the community.
- The Infection Prevention and Control Professional or CF educator may be called to assist with education.
- Review, and if necessary, instruct the patient and their family how to clean, disinfect, and dry respiratory equipment that will be used in the home. The CF nurse clinician or respiratory therapy can be consulted for this teaching.
- Instruct patients who live with another CF patient that although contact can't be avoided, routine use of hand hygiene, respiratory hygiene and cough etiquette practices will limit contact with each other's respiratory secretions.
- Instruct patients and families to anticipate and avoid situations where there is a risk for acquisition of CF pathogens that could arise as a result of being in environments with other CF patients (eg: sharing car rides with other CF patients, being in close proximity in CF clinic waiting rooms, attending CF related activities like education days, fund raisers).

10. Environmental Cleaning

- Cleaning is performed in the same manner as for all patients. Cleaning staff should wear appropriate PPE if additional precautions are in place.
- For cleaning at discharge or discontinuation of precautions, refer to Environmental Cleaning in Contact Precautions policy located in the Infection Prevention and Control manual.

11. Clinics

- Within the patient waiting area and clinic rooms attempt to limit close contact between CF patients.
- CF patients **must** stay at least one meter (three feet) away from other CF patients.
- Schedule and manage patients to minimize time in the common waiting areas.
- Patients whose cultures show no growth of any pathogens for at least one year should be scheduled into the first slots of the clinic day.
- Patients infected with *MRSA, Burkholderia cepacia complex, and Multidrug resistant Pseudomonas aerruginosa* should be scheduled into the final clinic slots of the day to minimize patient interaction with other patients.
- Instruct patients and family members to observe proper hand hygiene on arrival at the clinic.
- Ensure readily available and accessible dispensers of alcohol hand sanitizers in the waiting areas for use by the patient and their families.
- Instruct patients in the basics of respiratory hygiene and cough etiquette.
- Have tissues readily available and a garbage receptacle readily accessible for patients in order to assist them in maintaining respiratory hygiene and cough etiquette.
- Discourage patient use of common items (eg: the clinic's computer and toys in the waiting area) that cannot be easily cleaned between patients.

- As much as possible, keep the patient in the same clinic room and have each individual clinic specialist circulate through.
- Allow only one patient into the room when a cough producing procedure is being performed.
- After the patient is finished in the examination room, clean all surfaces and equipment that may have come in to contact with the patient or HCW.

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