

# Oxford University NHS Trust Infection Control Policy for Adults and Children with Cystic Fibrosis

**Category:** Policy

**Valid from:** 01/07/2014

**Date of next review:** 01/07/2017

**Approval:**  
**date/ Via**

**Further Information:**

**This Document Replaces:** New document

V4 01/07/2014

Prepared by: Stephen Chapman (Consultant Respiratory Physician and CF Adult Centre Director), Jeremy Hull (Consultant in paediatric respiratory medicine and Paediatric CF centre director) Derrick Crook (Head of Infection Control), Lily O'Connor (Infection Control Manager), Lisa Priestley (CF nursing sister), Cathy McKenny (CF advance nurse practitioner), Ali Gates (specialist respiratory physiotherapist)

## **Oxford University Hospitals**

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### **Introduction**

Prevention of bacterial infections in people with CF is extremely important. Whilst most bacteria are contracted from the environment, there is evidence of patient to patient spread of bacteria such as *Burkholderia cepacia* complex, *Pseudomonas aeruginosa*, *Mycobacterium abscessus* and MRSA. The NHS England service specifications for Adult Cystic Fibrosis (CF) require that the facilities for adults with CF take the need for infection control into consideration and demonstrate compliance with section 4.1 of the Cystic Fibrosis Trust 'Standards for the clinical care of Children and Adults with Cystic Fibrosis in the UK (2011)'. This will ensure that CF patients are not kept waiting in communal areas and that they remain segregated from each other at all times to minimise the risk of cross infection. Medical staff should be aware of the psychosocial implications of segregation, which may lead to feelings of isolation and loneliness in people with CF, and should address these issues with patients in a sensitive manner.

### **1. Policy objectives and scope**

This protocol describes the approach to cohorting and isolating adult patients with CF to achieve the aims stated in the Cystic Fibrosis Trust 'Standards for the clinical care of Children and Adults with Cystic Fibrosis in the UK (2011)'. More recently, the NTM guidance for CF Centres (circulated Oct 2013) specifies that all CF services must have a local infection control guideline that addresses *M. abscessus*, which is also included in this protocol. Guidance on the management of specific infections (e.g. MRSA) and advice on general infection control procedures such as standard precautions and decontamination can be found in the relevant infection control policies on the hospital intranet. In addition to the infection control measures outlined in this protocol, regular monitoring for cross-infection and epidemiological surveillance should take place by molecular typing.

## **2. Outpatient management**

### **2.1 Clinic Organisation**

- Strict non-mixing of all CF patients is required. Therefore outpatients must not sit in a communal waiting area, but instead be shown directly into a consulting room upon arrival.
- Patients known to have high risk infections (*Burkholderia cepacia* complex (BCC) infection, MRSA airway infection, *M. abscessus* infection and epidemic forms of *Pseudomonas aeruginosa*) should either not attend routine CF clinics (and attend a clinic either in a different location or on a different day) or they should be the last patient to be seen by all staff in a routine clinic.
- All clinic staff will visit patients in the same clinic room; patients will not move from room to room.
- Outpatients with CF should be advised not to wait in other communal areas (e.g. pharmacy waiting area, radiology), in order to reduce risk of contact with other CF patients.

### **2.2 Infection Control Procedures**

- Hospital facilities must maintain a high standard of cleanliness.
- A high standard of hygiene should be practiced by staff, particularly with regard to hand washing; alcohol gels or other suitable preparations must be available in every room. Routine periodic hand decontamination with alcohol-based rub should be performed between every patient contact, or between each activity for the same patient, when hands are not visibly soiled.
- In addition, hands should be washed with soap and water at the start and end of clinical duties, when hands are visibly soiled or potentially contaminated and following the removal of gloves.
- Clinical staff should be bare below the elbows. For patients with high risk infections (*Burkholderia cepacia* complex (BCC) infection, MRSA airway infection, *M. abscessus* infection and epidemic forms of *Pseudomonas aeruginosa*) disposable gloves and aprons should be worn for clinical examinations, testing of respiratory function and the collection of sputum samples.
- Patients and visitors should be encouraged to decontaminate their hands when they enter the clinic room and upon leaving.
- Patients should use hand gel to decontaminate their hands before use of a spirometer or other handheld apparatus. Patients with high risk infections must wash their hands with soap and water.
- All multi-use equipment such as stethoscopes, spirometers and saturation probes must be cleaned using universal sanitizing (Clinel) wipes after each patient examination.
- Spirometers must be used with bacterial/viral filters that are changed between patients.
- Collection of sputum specimens and cough swabs should be obtained in a well-ventilated room away from other patients.
- Sputum pots should be covered and soiled tissues must be disposed of in the clinical waste bin immediately after use. Sputum should not be expectorated down toilets, sinks or washbasins.
- If a room is required to be used for another CF patient, it must left for at least 30 minutes with the door closed. The surfaces should then be cleaned using Clinel green wipes.

## **3. Inpatient management**

### **3.1 Accommodation**

- All CF patients should be managed in en-suite single rooms with the door closed. If single rooms with en-suite facilities are unavailable, CF patients may be admitted into either single rooms or bays but must not share rooms including bathrooms and toilets with other CF patients. CF patients must not be placed in bays with non-CF patients who may have transmissible respiratory infections (such as bronchiolitis on the paediatric wards).
- CF patients known to have infection with *Burkholderia cepacia* complex (BCC) infection, *M. abscessus* or epidemic forms of *Pseudomonas aeruginosa* should be admitted to an en-suite single room on a different ward to other CF patients. At present, adult patients infected with Bcc or *M. abscessus* should be admitted to John Warin ward and non-Bcc/non-*M. abscessus* colonised patients should be admitted to Geoffrey Harris Ward. If two or more patients with *B. cepacia* complex or *M. abscessus* are admitted they should wherever possible be accommodated in single rooms either on separate medical wards or at opposite ends of John Warin ward and cared for by different nursing staff. Paediatric patients should be admitted to the negative pressure en-suite room on Bellhouse/Drayson ward.
- Wherever possible the nurse caring for a CF patient should not provide care to other patients with CF, or non-CF patients with infectious organisms such as MRSA or RSV.

### **3.2 Socialising**

- CF patients should be asked not to socialise with other patients on the ward or with other CF patients.
- CF patients should be allowed to go to non-clinical areas such as the shops, the canteen, recreational areas and the hospital school but visits should be planned to ensure that they do not come into contact with other CF patients.

### **3.3 Room and Equipment Cleaning**

- Single rooms occupied by CF patients must be cleaned thoroughly with detergent bleach before their admission, during admission and after discharge.
- All clinical equipment must be decontaminated according to manufacturer's recommendations and in line with the Trust's Disinfection and Cleaning Policy.
- On discharge, there should be terminal environmental cleaning with a detergent/bleach solution.

### **3.4 Infection Control Procedures**

- Hospital facilities must maintain a high standard of cleanliness.
- All staff and visitors must decontaminate their hands before and after contact with the patient, their immediate surroundings and on leaving the room/area.
- Medical staff should follow the hand hygiene policy and be 'bare below the elbow'.
- On ward rounds the number of people entering the room should be kept to an absolute minimum.
- For patients with high risk infections (*Burkholderia cepacia* complex (BCC) infection, MRSA airway infection, *M. abscessus* infection and epidemic forms of *Pseudomonas aeruginosa*) staff must wear disposable gloves and aprons and hand washing with soap and water must be performed before and after contact with each patient and/or their immediate environment.
- Nebuliser compressors should be single patient use.
- Spirometry and other respiratory function tests should be performed in a well-ventilated room away from other patients with CF.
- Collection of respiratory samples must take place in the patient's own room.

- Sputum pots should be covered and soiled tissues must be disposed of in the clinical waste bin immediately after use. Sputum should not be expectorated down toilets, sinks, washbasins or in showers
- Airway clearance techniques and any other physiotherapy procedures must be carried out in the patient's own room.
- Patients should be encouraged to use their own possessions and equipment in hospital.
- All other equipment and surfaces must be cleaned and dried between patients according to local infection control guidelines.
- For patients with high risk infections (*Burkholderia cepacia* complex (BCC) infection, MRSA airway infection, *M. abscessus* infection and epidemic forms of *Pseudomonas aeruginosa*) exercise where possible should be performed in a patient's own room with the door closed with any equipment being appropriately decontaminated after use. If exercise is performed in a communal area this must be on an individual basis at the end of the day.

**Appendix: Definition of patients with *M. abscessus* infection** (also applies to isolates identified as *M. chelonae*)

For the purpose of infection control measures, the following is recommended as the definition of patients with *M. abscessus* infection:

1. Patients who have had *M. abscessus* isolated from sputum or bronchoalveolar lavage (BAL) cultures within the last 12 months (whether or not they are symptomatic for *M. abscessus* infection)
2. Patients currently prescribed treatment for *M. abscessus*
3. Patients who have completed treatment for *M. abscessus* within the last 12 months

If subsequent sputum samples become negative for *M. abscessus*, the patient should still be regarded as a potential carrier from the date of the first negative sample for a total of at least twelve months. A minimum of 4x negative sputum samples is required during this twelve-month period, with the final negative sample at least twelve months after the first negative sample. For instances where sputum cannot be obtained a negative BAL off treatment would suffice.

Current evidence suggests that in applying infection control recommendations there should be no distinction between smear positive and smear negative cases of *M. abscessus* infection.

**References/Further reading**

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