SOP Objective

To ensure that Cystic Fibrosis patients colonised or infected with Mycobacterium abscessus are cared for appropriately and actions are taken to minimise the risk of cross-infection.

This SOP applies to all staff employed by NHS Greater Glasgow & Clyde and locum staff on fixed term contracts and volunteer staff.

KEY CHANGES FROM THE PREVIOUS VERSION OF THIS SOP

- References updated

Document Control Summary

Approved by and date	Board Infection Control Committee 25th March 2019
Date of Publication	3rd April 2019
Developed by	Infection Control Policy Sub-Group
Related Documents	National IPC Manual SOP Hand Hygiene SOP Terminal Clean of Isolation Rooms SOP Twice Daily Clean of Isolation Rooms SOP Cleaning of Near Patient Equipment SOP Decontamination
Distribution/ Availability	NHSGGC Infection Prevention and Control Internet www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/
Lead Manager	Board Infection Control Manager
Responsible Director	Board Medical Director

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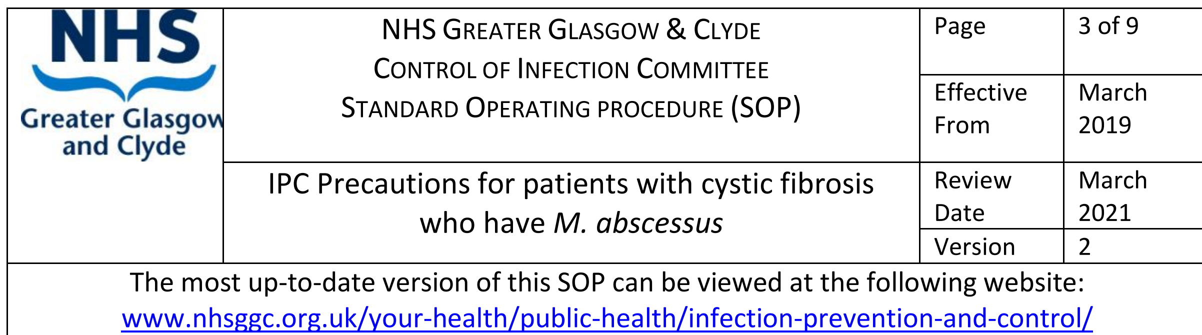

1. Responsibilities

Healthcare Workers (HCWs) must:

- Follow this SOP.
- Inform their line manager if this SOP cannot be followed.

Senior Charge Nurse (SCN) must:

- Ensure that written information is available for patients and parents / carers.
- Ensure that staff are aware of the content of this SOP.
- Support HCWs and IPCTs in following this SOP.

Managers must:

- Support HCWs and Infection Control Teams (ICTs) in following this SOP.
- Cascade new SOPs to clinical staff after approval by the Board Infection Control Committee (BICC).

ICTs must:

- Keep this SOP up-to-date.
- Provide education opportunities on this SOP.
- Monitor epidemiology of *Mycobacterium abscessus* within facility(ies) and advise on infection control precautions as necessary.

2. General information on *Mycobacterium abscessus*

The organism	*Mycobacterium abscessus* (including subspecies *M abscessus*, *M bolletii* and *M massiliense*) is a non-tuberculous mycobacterium and is associated with worse clinical outcomes in colonised CF patients. Colonisation is a relative contraindication to transplantation. There is no difference in infection control precautions between smear positive and smear negative patients.
Mode of spread	Routes of acquisition and transmission are not fully elucidated but potential environmental sources including water systems have been implicated. Recent evidence also suggests cross transmission between patients is possible, through direct and indirect droplet transmission, and the airborne route have been suggested as mechanisms of spread within a hospital setting.
Case definition	A patient is considered to be *M abscessus* positive after molecular confirmation of an isolate from a respiratory sample within the last 12 months, or are currently on treatment for *M abscessus*.
Incubation period	Weeks to several months

3. Transmission Based Precautions for *Mycobacterium abscessus*

Accommodation (Patient Placement)	All patients must be isolated in a side room with ensuite facilities and transmission based precautions in place. Where available this should be a negative pressured room. The door must remain closed. Patients should be placed in the designated ward for CF patients with M abscessus. Where possible, all other treatments and procedures while an in-patient should be conducted in this room. Outpatient appointments must be scheduled where patients with CF who are colonised/infected with different pathogens are seen at different clinic sessions e.g. morning or afternoon or a different day. Patients with CF should not be taken to Hospital Group Activities or communal patient areas such as Play Areas (including within the Royal Hospital for Children Atrium), school room, Radio Lollipop, shops, coffee bars or restaurants, etc. Special arrangements can be made by the CF Team to allow single patient (plus family), to watch a movie in the Medicinema in the children's hospital. Patients with CF attending RHC are advised not to visit Queen Elizabeth University Hospital unless specifically arranged by RHC CF Team. Patients with CF attending QEUH are advised not to visit the RHC unless specifically arranged by RHC CF Team.
Isolation rooms (RHC)	As far as possible, the following rooms should be used for paediatric patients with *M. abscessus:*

Ward	Room No	Room No
CDU	OBW-048 (Bedroom 17)	OBW-053 (Bedroom 18)
2c	ARU-106 (Bedroom 5)	ARU-111 (Bedroom 6)
3a	GW3-055 (Bedroom 15)	GW2-051 (Bedroom 16)
3b	GW2-053 (Bedroom 5)	GW2-025 (Bedroom 19)

	3c	GW1-053 (Bedroom 9)	GW1-058 (Bedroom 10)

Isolation rooms (QEUH)	As far as possible, single rooms within Ward 7a, should be used for adult patients with *M. abscessus.*
Patient environment	**Hospital Inpatient setting** Domestic staff should be informed by the nurse in charge of the ward if there is a patient in isolation/ bed space that requires twice daily cleaning. Follow recommendations in **NHSGGC SOP Twice Daily Clean of Isolation Rooms** for cleaning of reusable patient equipment and environmental. **Outpatient clinics** Clinic rooms should be cleaned as soon as possible after use (or before being used for a patient with CF), with 1,000 ppm chlorine based detergent. If the patient has Non Tuberculous Mycobacterium (M Abscessus), the room should be cleaned immediately after use, and before another patient uses it.
Patient equipment	Single use items should be used where possible and these items disposed of between patients. Reusable respiratory and other equipment should be single patient dedicated as far as possible e.g. peak flow meters, spirometers, stethoscopes as long as cleaning is undertaken after each use. * If trolleys are used for transporting equipment between rooms they should be cleaned prior to the clinic and between patients using 1000ppm chlorine based detergent. Fans should not be used within patient rooms. If used for individual patients a risk assessment should be in place, including a review date, and included in daily cleaning schedule. ***Please refer to NHSGGC decontamination SOPs for individual items of respiratory equipment.**

	Refer to • **NHSGGC SOP Cleaning of Near Patient Equipment** • **NHSGGC Decontamination SOP**
Hand Hygiene	Hands must be decontaminated before and after each direct patient contact, after contact with the environment after exposure to body fluids, e.g. respiratory droplets, and before any aseptic tasks. Patients should be encouraged to carry out thorough hand hygiene, especially after episodes of coughing / sputum induction.
Moving between wards, hospitals and departments (including theatres)	Where possible, patients should be seen for tests and procedures within their own room (in-patient or clinic). Staff including medical staff, physiotherapists, phlebotomists etc should visit patients in their room. *M abscessus* patients should attend other departments (including theatres) at the end of a list, and never at the same time or on the same list as other CF patients. Areas and equipment should be cleaned with 1000ppm chlorine based detergent following departure of patient as above. In operating theatres arrangements should be made to ensure segregated patients do not mix in the admission or recovery areas.
Patient Clothing	If parents or carers take personal clothing home, staff must place soiled clothing into a patient clothing bag. Staff must also provide a NHSGGC Home Laundry Information Leaflet.
Personal protective equipment	The following personal protective equipment should be worn by all staff providing clinical care within 1 metre of patients with *M abscessus* • Disposable gloves • Disposable apron or gown • Where there is a risk of splashing with blood and or body fluids to mucous membranes of face then, either a disposable visor, or goggles and surgical mask

	During Aerosol Generating Procedures (AGP)s and up to 2 hours after (if remaining in the room) • Disposable gloves • Disposable apron or gown • FFP3 Mask (fit tested) and goggles / visor • Only essential staff should remain in the room during AGP and for up to 2 hours after • Isolation room door must be kept closed at all times. Visitors other than household contacts, should be advised to wait until the end of the 2 hour period before entering the room
Terminal Cleaning of Room	A terminal clean of the patient's room should be undertaken on departure of patient. If an AGP has just been undertaken prior to departure, the room should be left for two hours before the terminal clean is undertaken. Please refer to **NHS GGC SOP Terminal clean of isolation rooms**
Visitors	Visitors (including siblings) who have Cystic Fibrosis and who do not attend RHC CF Unit, should not visit any patient with CF within RHC (excluding family members). Patients' siblings who have CF and who currently attend RHC CF Unit may be allowed to visit after discussion with the CF Nurse Specialists. Visitors, including parents of CF patients, should not have contact with other patients with Cystic Fibrosis within clinic or hospital

4. Evidence Base

NIPCM (2018) Chapter 4Addendum for Infection Prevention and Control for Patients with Cystic Fibrosis (CF)

CF Trust our focus *Mycobacterium abscessus* Recommendations for Infection Prevention and Control (2017)

CF Trust Cross-infection policy (2015)

Saiman L and Siegel J (2004). Infection Control in Cystic Fibrosis. Clinical Microbiology Reviews: 17 (1); 57-71.

Bryant *et al* (2013). Whole-genome sequencing to identify transmission of *Mycobacterium abscessus* between patients with cystic fibrosis: a retrospective cohort study. Lancet: 381(9877):1551-60.

Griffith et al (2007). An Official ATS/IDSA Statement: Diagnosis, Treatment, and Prevention of Nontuberculous Mycobacterial Diseases. Am J Respir Crit Care Med: 175; 367–416 brosis: a retrospective cohort study'. *The Lancet* vol 381 May 4 2013, p 1551-1560. http://www.documents.hps.scot.nhs.uk/hai/infection-control/transmission-based-precautions/literature-reviews/mic-lr-gowns-2008-04.pdf