

## National Audit of Clinical Practice for Adults with Non-Tuberculous Mycobacteria Pulmonary Disease (NTM-PD)

### Part One

- Practitioner Name: (Optional)
- Hospital Name: (Drop-down list)
- Hospital Location:
  - SCOTLAND NORTHERN IRELAND WALES
  - NORTH OF ENGLAND LONDON
  - MIDLANDS
  - SOUTH OF ENGLAND
  - Other (Please, specify)
- Role in treating NTM-PD patients: (Please select all that apply)
  - Dietitian
  - Medical Doctor
  - Microbiologist
  - Nurse
  - Pharmacist
  - Physiotherapist
  - Psychologist
  - Other (Please, specify)

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1. In which services are patients with NTM lung disease managed in your institution?
- Respiratory medicine
  - Infectious disease
  - Joint Respiratory / Infectious Disease clinic
  - Other Specialty (Please, specify)

2. What kind of non-pharmacological interventions are available for NTM-PD in your institution? (Please select all that apply)
- Dietitian
  - Health psychology
  - Physiotherapy for airway clearance Pulmonary rehabilitation
  - Specialist nurse
  - Other (Please, specify)

3. Asking in more detail about respiratory physiotherapy for airway clearance in your NTM-PD patients, who can access this? (Please select all that apply)
- All NTM-PD patients.
  - NTM-PD patients with bronchiectasis
  - Only NTM-PD patients with severe symptoms Not available for NTM-PD patients
  - Other (Please, specify)

## Part 2

In this part, we are asking about three consecutive NTM-PD patients diagnosed from 1 January 2022 onwards in your service.

Patient:

(1, 2, 3)

1. Date of NTM-PD diagnosis following the British Thoracic Society (BTS) guidelines:

Date: 00/00/0000

(a patient must have characteristic symptoms, compatible radiology, and two or more positive sputum samples of the same NTM species or one positive bronchial wash/lavage or compatible histopathological findings with one positive culture.) (Roll-over pop ups)

2. Age at NTM-PD diagnosis (years):

- 18 - 30
- 31 - 40
- 41 - 50
- 51 - 60
- 61 - 70
- 71 - 80
- 81 - 90
- > 90

3. Gender:

- Male
- Female
- Other

4. Patient ethnic group: (Drop down menu of the NHS 17 Ethnic categories)

5. Respiratory Co-morbidities at the time of NTM-PD diagnosis: (Please select all that apply)

- Alpha-1 antitrypsin deficiency Asthma
- Bronchiectasis
- COPD
- Cystic Fibrosis
- HIV
- ILD (Interstitial lung disease)
- PCD (Primary ciliary dyskinesia)
- Previous NTM-PD
- Previous TB
- Sarcoidosis
- None
- Other (Please, specify)

6. Co-morbidities as per the Charlson Co-morbidity Index list (CCI) at the time of NTM-PD diagnosis: (Please select all that apply)

- Myocardial Infarction
- Congestive heart failure
- Peripheral vascular disease
- Cerebrovascular accident or transient ischemic attack
- Dementia
- Chronic obstructive pulmonary disease
- Connective tissue disease
- Peptic ulcer disease
- Mild liver disease
- Uncomplicated diabetes
- Hemiplegia
- Moderate to severe chronic kidney disease
- Diabetes with end-organ damage
- Localized solid tumour
- Lymphoma
- Moderate to severe liver disease
- Metastatic solid tumour
- AIDS
- None

7. Radiographic pattern on imaging (CT scan if possible) performed closest to NTM-PD diagnosis? (Please select all that apply)

- Emphysema
- Fibro-cavitary
- ILD
- Mixed bronchiectatic cavitary
- Nodular-bronchiectatic
- Normal
- Solitary large nodule
- Other (Please, specify)

8. What mycobacterial species were identified prior to any specific antimicrobial treatment initiation? (Please select all that apply)

- M. abscessus
- M. chelonae
- M. fortuitum
- M. gordonae
- M. kansasii
- M. malmoense
- M. szulgai
- M. xenopi
- Mycobacterium avium complex, MAC
- Other (Please, specify)

- MAC (including M. avium, M. intracellulare, and M. chimaera)

9. Was the patient's diagnosis and treatment plan discussed within a local multidisciplinary team (MDT)?

- Yes
- No
- Not sure

10. What type of supporting information was provided to the patient during their clinical visit? (Please select all that apply)

- Verbal explanation of NTM-PD diagnosis
- Written educational resources
- Directed to peer-support networks
- Directed to patient-focused websites
- None
- Other (Please, specify)

11. Was the patient seen by a respiratory physiotherapist for NTM-PD management following their diagnosis? (Please select all that apply)

- Yes
- No
- Not sure

12. If they were seen by a respiratory physiotherapist, what airway clearance interventions were used to manage their NTM-PD? (Please select all that apply)

- Active cycle of breathing techniques (ACBT)
- Autogenic drainage
- Chest-physiotherapy (CPT) - details not documented
- High frequency chest wall oscillation (HFCWO) Vest
- Hypertonic saline (HS)
- Intrapulmonary Percussive Ventilator (IPV)
- Mucoactive agents.
- Positive expiratory pressure (PEP) therapy devices e.g. Acapella, Flutter, Aerobika, etc.
- Postural drainage
- Other (Please, specify)

13. Was the patient enrolled in a pulmonary rehabilitation programme for the management of NTM-PD following their NTM-PD diagnosis?

- Yes
- No
- Do not know

14. Did the patient see a dietitian for the management of NTM-PD following their NTM-PD diagnosis?

- Yes
- No
- Do not know

15. Was a specialist nurse involved in their NTM-PD management?

- Yes
- No
- Do not know

16. Was specific antimycobacterial therapy given to treat their NTM-PD?

- Yes
- No
- Not sure
- Other (Please, specify)

17. If the patient had antibiotic treatment for NTM-PD with Amikacin or Macrolides (e.g. Azithromycin or Clarithromycin), did they have objective hearing tests with audiometry before and during antibiotic treatment?

- Yes
  - i. Before treatment only
  - ii. During treatment only
  - iii. Before and during treatment
- No
- Not applicable

18. If the patient had antibiotic treatment for NTM-PD with e.g. Macrolides, Quinolones, Clofazimine, or Bedaquiline, did they have ECG (electrocardiogram) monitoring to evaluate arrhythmias or QTc changes before and during antibiotic treatment?

- Yes
  - i. Before treatment only
  - ii. During treatment only
  - iii. Before and during treatment
- No
- Not applicable

19. If the patient had antibiotic treatment for NTM-PD with e.g. Ethambutol and Linezolid, did they have regular objective visual acuity (vision) tests before and during antibiotic treatment?

- Yes
  - i. Before treatment only
  - ii. During treatment only
  - iii. Before and during treatment
- No
- Not applicable

20. Was the patient provided with regular follow-up care for NTM-PD in secondary or tertiary healthcare settings?

- Yes
- No

21. When was the patient last evaluated by your service?

Date: 00/00/0000

22. What was the patient's current care status and state of health when last evaluated?

- Discharged
- Still under care on a specific antimicrobial treatment for NTM-PD
- Still under care but not on a specific antimicrobial treatment for NTM-PD
- Unknown i.e. not fully evaluated/clear from the clinical notes
- Dead
- Not sure