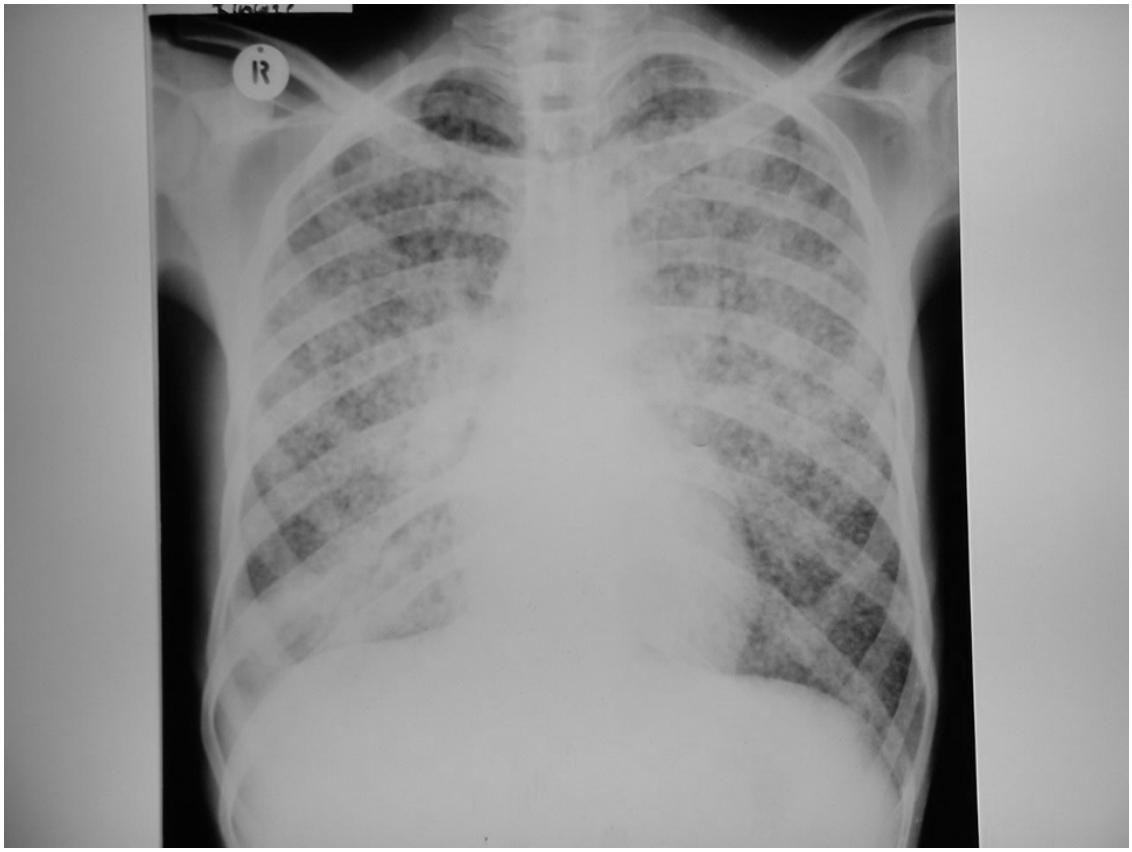
British Thoracic Society

BTS MDR-TB Clinical Advice Service Annual Report 2024



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EXECUTIVE SUMMARY

The BTS MDR-TB Clinical Advice Service was launched in January 2018 with the intention of fulfilling three key objectives: Facilitating the provision of expert advice on the treatment and monitoring of multidrug-resistant tuberculosis (MDR-TB); increasing the understanding of drug toxicity patterns across the UK and providing a formal gatekeeping function for the use of specially commissioned and novel drugs.

Provision of expert advice to clinicians

See Overview 1 (page 12): Service Activity in Numbers

The Service facilitates the provision of advice on a case-by-case basis. From 01 January 2024 to 31 December 2024 our panel of expert Clinical Service Advisers (CSAs) advised on 254 cases, of which over 46% were reported as known or suspected MDR/XDR-TB. Many other cases involved sensitive TB that was functionally MDR due to toxicity which are currently not counted under these categorisations.

Clinical Service Advisers provided 1,315 written advice messages to clinicians in this period, often within hours of a case being posted. Monthly teleconference multidisciplinary team (MDT) meetings are also used to discuss cases, and 88% of all new cases referred to the Service in 2024 had at least one MDT discussion. Treating clinicians and/or colleagues are invited to dial in to provide extra detail and ask additional questions. Interested observers from trainees and the wider TB community are also invited to dial in to the monthly virtual MDT meetings.

Drug toxicity patterns in the UK

Clinicians using the Service provide details of the reasons for ceasing treatment with each drug. In 2021 the reported toxicities were published as *The MDR-TB Drug Toxicity in the UK.* This report (available on the BTS website), has proved a valuable reference tool for UK-wide drug toxicity patterns.

Gatekeeping function – specialised commissioned and novel drugs

See Overview 2 (page 20: Specialised Commissioned and Novel Drugs)

The Service has continued to provide an independent review and consensus on supporting Blueteq applications for the use of bedaquiline and delamanid. In the reporting period, 35% of cases involving XDR, MDR or suspected MDR-TB have had one or more of these drugs recommended.

This important gatekeeping function has in 2024 evolved with NHSEs commissioning policy statement (pub. 26 June 2024) confirming BPaL/BPaLM as the preferred treatment option for all eligible patients with suspected, functional, or confirmed RR-TB, MDR-TB or pre-XDR TB. NHSE also approved extended (> 6months) and/or sequential and/or concomitant use of bedaquiline and delaminid for those same defined patient groups plus patients with XDR-TB (Pub. 28 June 2024).

Impact of the Clinical Advice Service

Expert clinical advice on the treatment and monitoring of cases of MDR-TB (and similar infections) or complex functionally resistant TB has a direct and immediate impact on patient care. These cases are increasingly complex, and the impact of prompt, expert clinical, microbiological, and public health advice is correspondingly increasingly important. Case referrals to the Service saw a 48% increase in the number of MDR-TB; XDR-TB and Suspected MDR-TB cases (102 cases) in 2024 over 2023 (69 cases).

The BTS MDR-TB Clinical Advice Service forms a crucial resource supporting the care of patients both directly and indirectly. Wider implications of the Service include facilitating ongoing training and development of the TB workforce.

The Service makes an essential contribution to promoting education for both referring clinicians and CAS advisors, through knowledge exchange and shared clinical experience of treating MDR-TB. We have recorded 64 person-hours of clinician involvement in MDTs over 2024 (for their own cases). However, we have not quantified the time many clinicians remain in the MDT after their own case has been discussed, which is common.

The MDTs also serve an important role supporting the training of Higher Specialty Trainees in Respiratory Medicine and Infectious Diseases. Over the reporting period, we recorded 243 person-hours of trainee/observer involvement. In May 2024 the scope of virtual learning offered was widened by staging a Webinar replicating one of the monthly MDT meetings with live case discussion of three, fictional, cases. A total of 127 people attended the webinar (25% of those registering to attend). A recording was subsequently made available from the BTS website with 155 downloads recorded.

CONTENTS

FOREWORD

This report covers the period January to December 2024, giving insight into and reflection of the increasing numbers of complex TB cases being seen by respiratory and infectious disease clinicians around the UK.

The Clinical Advice Service continues to see annual increases in the number of new cases brought for discussion and in 2024, for the first time, that reached over 200 (229) bringing us closer to an overall total of 1,000 cases since 2018. Its importance as a national resource in aiding the improved care of MDR and other complex TB patients in the UK demonstrably grows alongside the growing incidence of TB cases in the population.

The Service runs thanks to a group of highly respected Clinical Service Advisors, who generously give their time to review and feedback to TB colleagues who have submitted cases for advice. Respiratory and infectious disease physicians, paediatricians, microbiologists, public health consultants, pharmacists and TB nurses all bring complementary knowledge and experience into the Service. The involvement of a multi-disciplinary team (MDT) is essential to providing advice on the best and most appropriate treatments for the patients in our care. The engagement we have from microbiology colleagues means that whole genome sequencing data are at hand to feed into our live discussions. This MDT way of working means that the MDR-TB CAS not only serves to improve patient care but also improves our own knowledge and understanding. The opportunity to attend monthly MDTs is a core component of the TB Action Plan for England.

The MDR-TB Clinical Advice Service extended its educational offer to trainees this year by staging a webinar reproducing one of the live, virtual MDT meetings, something that was well received.

My predecessor, Professor Onn Min Kon, has brought valued guidance, commitment and vision to this role across the past seven years and all of us who work alongside him are extremely grateful for his stewardship and continuing support. I look forward to taking up the reigns for the following 3 years.

Dr Martin Dedicoat
Chair, BTS MDR-TB Clinical Advice Service Steering Group

This essential and unique resource, supporting clinicians managing the most complex cases of TB across the UK, has attracted a record number of case referrals in 2024, growing for 6 years in succession: A testament to the value of the Service in a climate of rising TB notifications and, crucially, rising numbers of multi-drug-resistant TB cases.

Referral of cases to the CAS will result in prompt, robust advice from a dedicated team of expert multi-disciplinary advisors. In addition to the advice available via the online forum, the monthly virtual MDT meetings allow the attending clinicians access to on-the-spot discussion and feedback.

Those colleagues volunteering their time as advisors are valued highly by the BTS Board for their part in maintaining this important service. We are hugely proud of this service and to those who give their time and expertise to improve patient outcomes.

BTS continues its commitment to this critical and indispensable advice portal supporting the management of MDR-TB in the UK.

Dr Richard Russell
Chair, BTS Board of Trustees (2024-2027)

BTS MDR-TB Clinical Advice Service Steering Group Membership 2024:

Dr Martin Dedicoat Professor Onn Min Kon	Chair (from 1 December 2024 & previously BIA representative member) Chair (demitted end November 2024)
Dr Toby Capstick	Consultant Pharmacist
Dr Suzi Coles	UK Health Security Agency representative
Dr Padmasayee Papineni	British Infection Association (BIA) representative
Professor Marc Lipman	British HIV Association (BHIVA) representative
Dr Felicity Perrin	Chair of the BTS TB Specialist Advisory Group (SAG)
Dr Esther Robinson	National Mycobacterial Reference Service (NMRS) representative
Professor Gerry Davies	BTS Consultant member
Lynn Altass Mr Jeff Featherstone Mr Stephen Hindle	NHSE (Corresponding member) retired March 2024 NHSE (Corresponding member) from April 2024 NHSE (Corresponding member) from April 2024
Dr Heinke Kunst	BTS Consultant member
Dr Pranabashis Halda	BTS Consultant member
Mr Mohammad Shadab	Lay representative
BTS Head Office Staff:	
Miss Sally Welham	BTS Chief Executive
Mr Miguel Souto	BTS Head of Clinical Programmes
Miss Suzanne Howard	BTS MDR-TB CAS Coordinator

ACKNOWLEDGEMENTS

The BTS MDR-TB Clinical Advice Service received initial funding from Public Health England (PHE) for the year 2017/18. Funding to support the continued operation of the Service was received from NHS England for the years 2021-2025. This support is gratefully acknowledged.

We would also like to acknowledge the Clinical Service Advisers who generously volunteer their time and expertise, without which the Clinical Advice Service would not be able to run. A full list of the Clinical Service Advisers who have supported the Service in 2024 is included on page 22.

If you would like to know more about the BTS MDR-TB Clinical Advice Service, please visit the BTS website at: https://www.brit-thoracic.org.uk/quality-improvement/lung-disease-registries/bts-mdr-tb-clinical-advice-service/

Cover photograph: Chest radiograph of a patient (deceased) with miliary tuberculosis.

The History of the BTS MDR-TB CAS

The BTS MDR-TB Clinical Advice Service launched in January 2018, building on the longstanding work of the previous MDR-TB Forum.

The original MDR Advisory Service Forum was launched in 2008, with Professor Peter Davies as the lead physician. This service was a huge step forward in the management of MDR-TB in the UK, providing a means of centralising case discussion. From 2011 this forum was managed by BTS, with Drs John Watson and Dr Martin Dedicoat acting as lead clinicians. This forum included fully anonymised patient data only.

The forum was very well received and provided an essential resource for clinicians. As a direct result of the success of this forum a new service was planned, expanding on the work of the existing forum. This new BTS MDR-TB Clinical Advice Service was launched in January 2018, formally collecting a range of patient information crucial for the provision of advice and essential for understanding patterns of drug toxicity in the UK. Professor Onn Min Kon was appointed Chair.

INTRODUCTION

The management of MDR-TB is more complex and associated with more adverse effects than standard TB treatment. The complexity of cases is broad, and a substantial proportion of patients have health, social or economic circumstances that confound their treatment and contribute to poor outcomes. The cost of treating MDR-TB is extremely high (at least 10 times that of drug sensitive TB), in part due to prolonged isolation in hospital and costly alternative anti-mycobacterial drugs.

There are four primary routes through which the Service works with to improve patient care:

- **Facilitating the provision of advice to clinicians**
  After written patient consent is obtained, clinicians may post their case to the Clinical Advice Service. Cases posted are reviewed and once approved by the Service administrator, the panel of expert Clinical Service Advisers (CSAs) are notified that a new case has been posted to the Service. The CSAs can review the anonymised case details, providing prompt advice on treatment and offer continued monitoring through the website.

  Additional support is provided via formal and structured, monthly, virtual multidisciplinary team meetings (MDTs). Treating clinicians are strongly encouraged to attend, providing an opportunity for real-time discussion with CSAs to reach an informed consensus for optimising patient care.

- **Providing an expert opinion on the use of specialised commissioned and novel drugs**
  One role of the panel of CSAs is to consider the appropriateness of the use of specialised commissioned and novel drugs. When clinicians make an Individual Funding Request (IFR), the CSAs advise on the appropriateness of this. When bedaquiline or delamanid funding is requested through the Blueteq system, applicants are asked to confirm discussion in a regional MDT and hence the MDR CAS provides this resource by real-time responses and monthly MDTs. The national TB plan now advocates that all MDR cases are discussed with the MDR CAS. A minimum of three CSAs must approve the proposed regimen containing both or either of these drugs.

- **Supporting research**
  All patients whose cases are discussed must give consent for their data to be processed for that purpose. Separately, patients are advised that their anonymised data may be used for the purpose of research, unless they choose to opt out. In 2020 BTS launched a data access request process, through which researchers from external organisations may apply to access pseudonymised data.

- **Increasing knowledge and understanding of drug toxicity patterns**
  In addition to providing clinicians with the tools needed to make the best clinical decisions for their patients, the intention is for the Service to support care across the UK by improving the understanding of drug toxicity patterns.

Who can participate in the BTS MDR-TB CAS and how many are doing so now?

The BTS MDR-TB Clinical Advice Service is open to all secondary and tertiary care institutions in England, Scotland, Wales, and Northern Ireland, as well as the island territories (Crown Dependencies). At the end of December 2024, over 700 clinicians had registered to use the Service and cases had been entered from a total of 170 sites across the UK. Overall, 900 cases had been discussed through the Service from January 2018 to December 2024.

Clinicians may bring cases of consenting patients with confirmed or suspected drug-resistant tuberculosis, as well as other complex tuberculosis or mycobacterial infections, to the Service for discussion. Data entry for individual patient records is divided into three sections:

- Patient demographic information (age, gender, comorbidities, etc.).
- Clinical features at the time the case is first brought to the Service.
- Follow-up information from subsequent clinic visits.

Service Ethics Approval, Information Governance and Data security

New ethical approval for the British Thoracic Society Multidrug Resistant Clinical Advice Service Database (22/LO/0698) was granted by the London – South East Research Ethics Committee (REC) in November 2022. This continues the 2017 REC approval stating that patient consent must be obtained before any patient information is entered into the BTS MDR-TB CAS. Information for patients and copies of the dataset are available on the BTS website at:
https://www.brit-thoracic.org.uk/quality-improvement/lung-disease-registries/bts-mdr-tb-clinical-advice-service/

All patient identifiable data (e.g. name, date of birth) are encrypted at the point of entry and visible only to the hospital team in the centre responsible for treating the patient. The British Thoracic Society Information Governance Policy and associated data security policy documents are available on the BTS website at: https://www.brit-thoracic.org.uk/about-us/governance-documents-and-policies/

Availability of advice through the MDR-TB CAS

The British Thoracic Society created the platform on which the MDR-TB Clinical Advice Service is provided to facilitate discussion between health care professionals in relation to individual patient cases of confirmed or suspected MDR-TB (or other complex TB/mycobacterium infections).

Neither the British Thoracic Society nor the MDR-TB Clinical Advice Service has any clinical responsibility or accountability for the patients that are discussed. The posting facility and reports provided are intended to support the clinician and to this end they are provided with a variety of experienced opinions and discussions to inform optimal clinical decision making, and this does not constitute medical advice from BTS. It remains the responsibility of the referring healthcare professionals involved in the Service to make decisions appropriate to the circumstances of each patient in consultation with the patient and or their guardian/carer.

Notes on data and percentages/denominators

Throughout this report figures are displayed as percentages and as exact figures (of the format *numerator/denominator*). When reading this report please be aware that:

- Denominators in this report always exclude cases where no response was entered.
- Unless otherwise stated, denominators in this report exclude cases where the saved response was 'not known' or 'not recorded'.
- Percentage figures are rounded to the nearest whole number throughout this report. This means rounding errors may lead to some total percentages adding up to, for example, 101%.

PART 1 – The Impact of the BTS MDR-TB CAS

The BTS MDR-TB Clinical Advice Service has a number of real-world benefits.

- **Directly supporting clinicians with advice**, the Service has significant impacts on the TB workforce:

> *May I please say a huge thank you to all of you for your expertise and incredibly fast responses. We are a low TB incidence area with varying levels of TB experience throughout the MDT. Accessing your time and expertise makes a huge difference to our practice and saves lives! Thank you all. Best wishes David.*
>
> David Thomas
> TB Consultant Nurse
> Royal Bournemouth Hospital

- **Supporting UK MDR-TB experts** by fostering closer ties among the expert community across the UK. The panel of expert advisers also includes a mix of new and more senior advisers, identifying and supporting the development of MDR-TB experts.
    - When treating clinicians dial in to discuss their own cases, they often remain on the call to observe other case discussions.
    - Clinical Service Advisers have described the MDTs as a unique opportunity for them to discuss a range of complex cases, and to learn from colleagues across a range of specialist areas.

- **Supporting and developing trainees** by providing the opportunity to observe expert national multidisciplinary discussions, increasing, and maintaining clinical expertise. The monthly virtual MDTs, which facilitate real-time discussion of individual cases, also have another important dimension: education

The BTS MDR-TB CAS across the UK

The BTS MDR-TB Clinical Advice Service was developed with the intention of supporting clinicians in the treatment and monitoring of patients across all four nations of the UK and the island territories (Crown Dependencies).

Since the launch of the Service in January 2018 clinicians have submitted cases of MDR-TB (and similar infections) to the BTS MDR-TB Clinical Advice Service from hospitals across England, Scotland, Wales, Northern Ireland, and the Isle of Man.

Cases of MDR-TB are more commonly treated in major cities, such as London and Birmingham. The geographical distribution of cases submitted to the CAS highlights the importance of sharing local expertise and experience nationally.

Overview 1: Service Activity in Numbers

When the BTS MDR-TB Clinical Advice Service was launched the intention was to provide an expert service that was responsive to the needs of clinicians. This overview provides a summary of the activities of the Service for the reporting period ending 31 December 2024.

Figure 3 shows the increase in numbers of new cases discussed through the BTS MDR-TB Clinical Advice Service over time, for all categories of disease (including NTM and complex sensitive TB). Cases are counted in the year they were first discussed. The number of cases received by the service has seen year on year growth, with a noticeable dip recorded in 2020 due to Covid-19. Figure 4 shows cases over time by disease category.

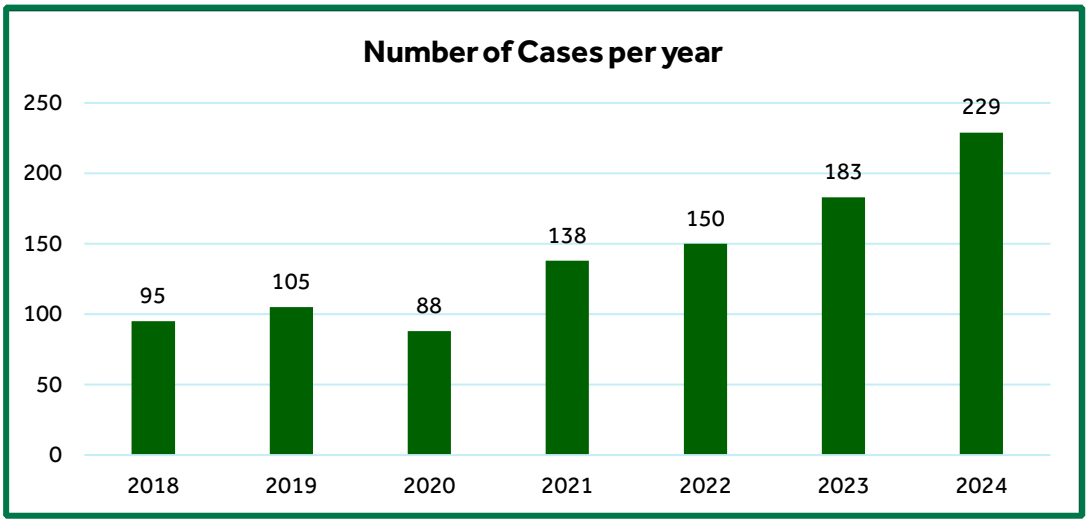

Figure 3: Cases in the MDR Clinical Advisory Service over time

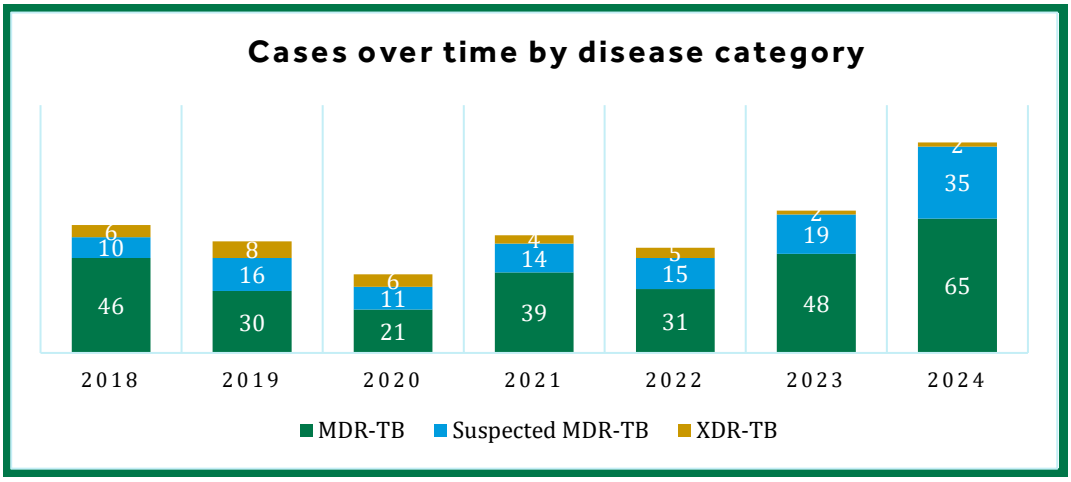

Figure 4: Cases in the MDR Clinical Advisory Service by disease category over time

728 clinicians are registered on the Clinical Advice Service

From a total of **171** hospitals across all four nations of the UK, and the Isle of Man

52

Expert Clinical Service Advisers

- Respiratory medicine
- Pharmacy
- Paediatrics
- Infectious diseases
- TB nursing
- Public health
- Microbiology

254

Cases discussed by our panel of expert advisers

1,315

Individual messages from expert Clinical Service Advisers to clinicians who have posted cases. These messages are separate to the MDT discussions, and initial responses are often received within hours.

Discussion is a key element in identifying the best approach to treatment and monitoring for each individual case.

Monthly virtual MDT meetings
209 case discussions on 195 cases

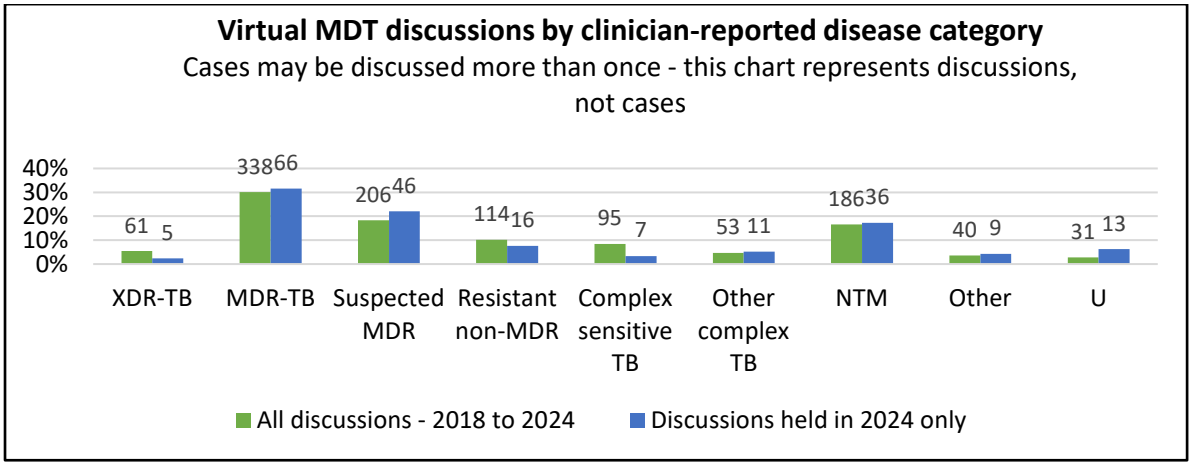

Figure 5: Number of virtual MDT case discussions by clinician reported disease category

MDT 2024 *CASE DISCUSSIONS*

5 XDR-TB

66 MDR-TB

46 Suspected MDR-TB

16 Resistant non-MDR-TB

NTM **36**

Other/Unknown **22**

Other complex TB **11**

Complex sensitive TB **7**

Of **all new** cases referred to the CAS in 2024 were discussed at at least one virtual MDT

Of **new XDR-TB, MDR-TB or Suspected MDR-TB** cases referred to the CAS in 2024 were discussed at virtual MDT

Of **all cases** brought to the BTS MDR-TB Clinical Advice Service have been discussed at our monthly virtual MDTs*. The remaining 15% were provided with advice without requiring MDT discussion.

12 Virtual MDTs were held, with a mean of 17 cases discussed per meeting. Cases may be discussed at MDT as often as needed.

37
Hours of **MDT** discussion, with one MDT every month

64
Person-hours of **clinician MDT involvement.** Estimated as 20 minutes per case. Many clinicians stay on the call longer for personal learning.

748
Person-hours of **adviser MDT involvement**. Our expert advisers gave their time, knowledge and experience voluntarily

243
Person-hours of **trainee / observer MDT involvement**

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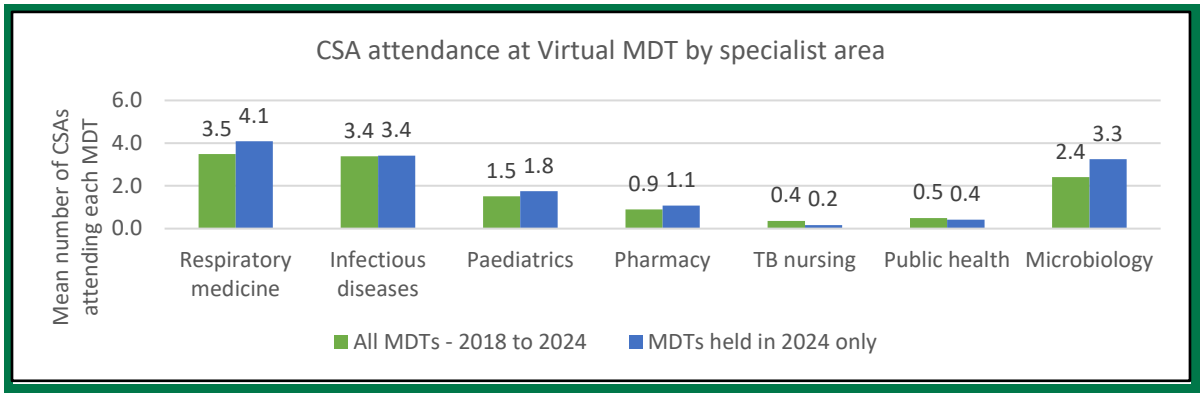

Figure 6: CSA attendance at virtual MDTs by specialist area

MDT WEBINAR: May 2024

- **127**

Trainees/People attended

- **155**

Trainees/people downloaded /viewed the recording

PART 2 – Multi and Extensively Drug-Resistant Tuberculosis (MDR AND XDR-TB)

This section of the report deals with cases reviewed from January 2024 to the end of December 2024, initially categorised by the clinician as being either XDR-TB, MDR-TB or suspected MDR-TB.

The World Health Organisation (WHO) definitions, as of January 2021[1]:

Pre-XDR-TB: TB caused by Mycobacterium tuberculosis(M.tuberculosis) strains that fulfil the definition of MDR/RR-TB and which are also resistant to any fluoroquinolone*

XDR-TB: TB caused by Mycobacterium tuberculosis (M. tuberculosis) strains that fulfil the definition of MDR/RR-TB and which are also resistant to any fluoroquinolone and at least one additional Group A drug*

*The fluoroquinolones include levofloxacin and moxifloxacin as they are the fluoroquinolones currently recommended by WHO for inclusion in longer regimens. The Group A drugs are currently levofloxacin or moxifloxacin, bedaquiline and linezolid, therefore XDR-TB is MDR/RR-TB that is resistant to a fluoroquinolone and at least one of bedaquiline or linezolid (or both). The Group A drugs may change in the future; therefore the terminology Group A is appropriate here and it will apply to any Group A drugs in the future.

In 2024, **41** centres have contributed cases classified by the treating clinician as either XDR, MDR or suspected MDR-TB to the BTS MDR-TB Clinical Advice Service:

102 patient demographic records

70 complete clinical/diagnosis records

9 follow-up records representing 8 unique patients.

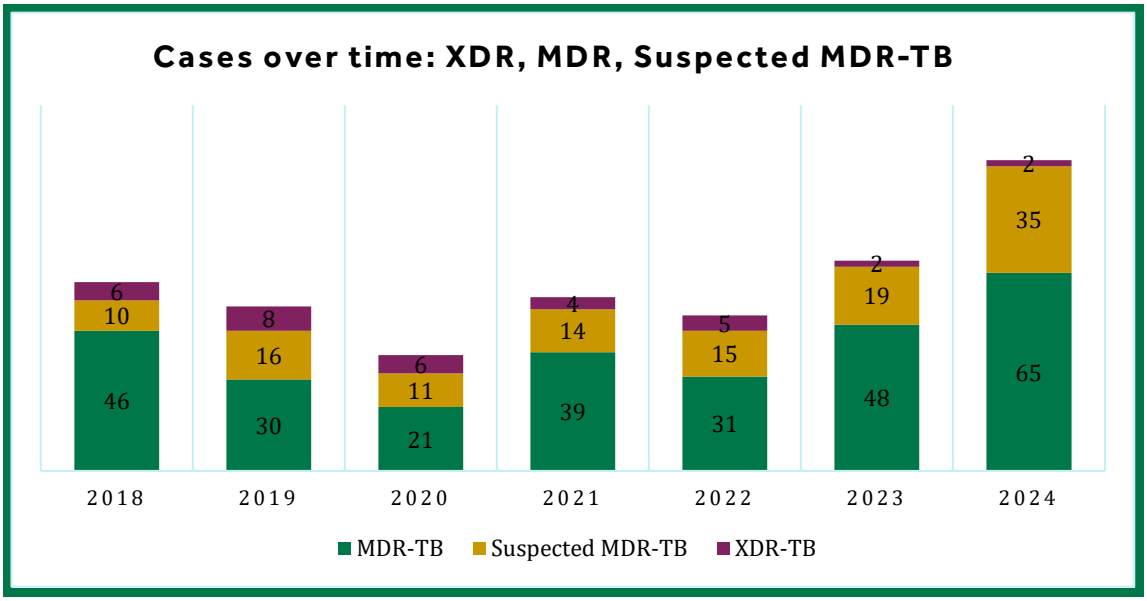

Figure 7: Case number totals over time for clinician reported XDR-TB, MDR-TB and Suspected MDR-TB

2.1 THE MDR/XDR-TB PATIENT COHORT

There was a balanced split of male (54%) and female (46.5%) patients, and the majority were of South Asian (34.7%), White (23.8%), or Black African (20.8%) ethnicity.

The mean age of patients at the time their case was first discussed on the CAS was 33.9 (*± 15.6*), with ages ranging from 3 to 87. More than half of patients (55%) were aged 20–39 years.

Just over half of patients (53%, 34/64) had recorded clinical risk factors. Where present the most common were smoking, and Immunosuppression. 16% of cases that reported Immunosuppression recorded biological therapy (anti TNFα) as the cause. Three cases of immunosuppression were due to HIV co-infection (overall 4% of the population had HIV co-infection).

The majority (89.7%, 78/87) of patients had no listed social risk factors. Of those who did the most common was homelessness 55.6% (80% currently homeless). Alcohol addiction, prison (> 5 years ago) and drug use were each reported in around 33% of cases. Where drug use was a known risk factor, (2 patients) both patients were still actively using drugs.

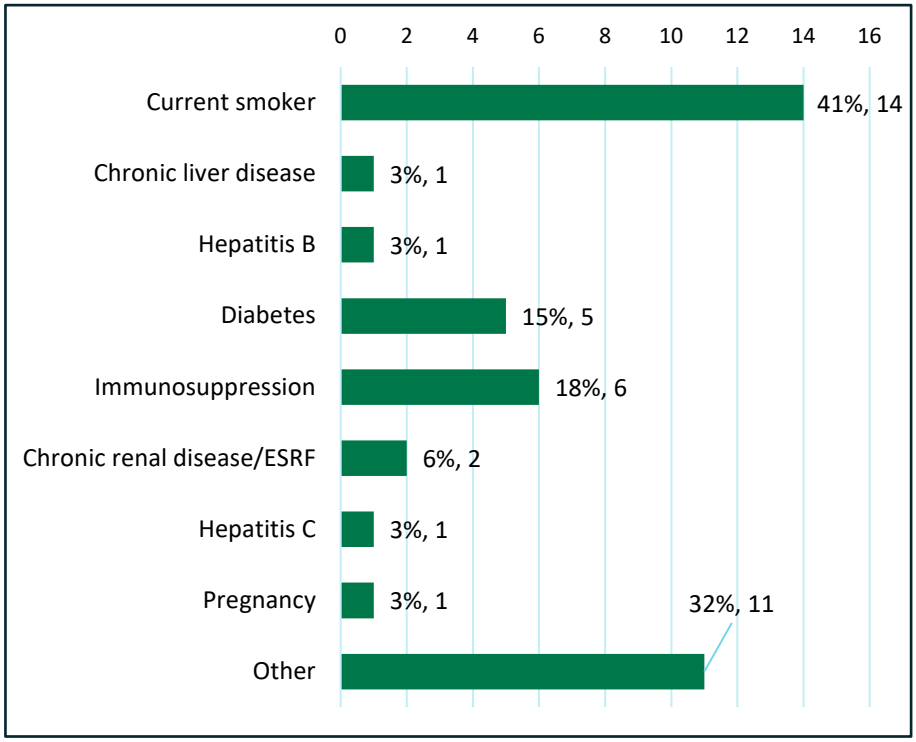

Figure 8: Clinical risk factors at first discussion (Total records:34)
Clinical risk factors recorded for all patients with known or suspected MDR/XDR-TB .

Overall, occupation reported for categories where the risk of exposure to TB may be elevated include education (14.4% of all cases) and healthcare (9.3%). Over half (50.5% (49/97) of the cases discussed in this reporting period, involved a patient whose occupation was recorded as 'other'.

2.2 CLINICAL/DIAGNOSTIC DATA

Cough (55%), weight loss (44%), fever (32%), lymph node swelling (27%), and night sweats (27%), were the most commonly reported symptoms. Overall, 9% (8) of screened patients were reported to be asymptomatic. The majority of patients (75%) experienced symptoms for between one and six months before their case was entered onto the Service. No patients reported experiencing symptoms for over a year.

Excluding sputa, where smear samples were obtained the most commonly reported techniques were bronchoalveolar lavage (BAL) /endobronchial washing (4.5% of cases) and lymph node aspirate (2.5% of cases).

Overall, 66% of cases had pulmonary involvement, with extra-thoracic and intra-thoracic lymph node involvement (27% and 20%) and pleural disease (7%) also frequently reported.

Overall, 22.5% (23) of patients were known to have a previous diagnosis of TB. Of these, 13% involved active and 10% latent TB.

Key Figures

- **66%** of cases had pulmonary involvement
- **9%** of patients asymptomatic
- **23%** previously diagnosed with TB *(13% active, 10% latent)*
- **58.4%** required contact tracing
- **25%** did not identify if any contact tracing was required
- **78.8%** had therapy observed in some way (e.g. DOT/VOT)

Contact tracing was required in 58.4% (52/89) of cases, while contact tracing requirements were unreported in 25% (22/89) of cases. Therapy was directly observed (DOT) in 38.8% (23/68) and video observed (VOT) in 25% (10/47) of cases. Therapy was self-administered (SAT) in 39.7% (27/68) of cases.

2.3 DRUG RESISTANCE

Local molecular laboratory capacity was responsible for 93% of cases (65/70) of initial MTB identification by PCR, with rpoB mutation representing rifampicin resistance present in 94% of cases where known (65/69).

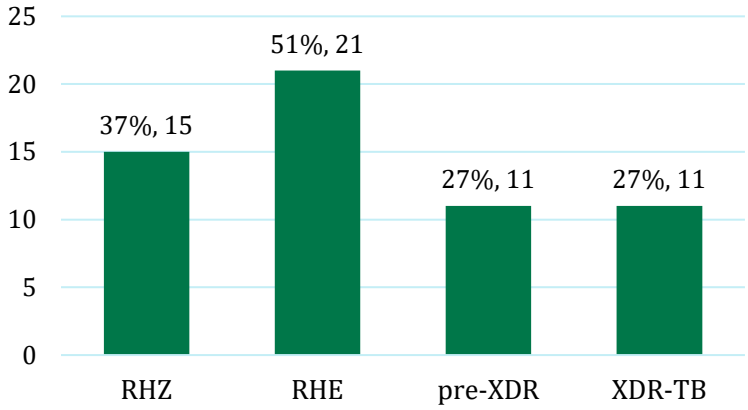

Figure 9: Clinician-reported resistance pattern
Resistance patterns as reported by clinicians. These figures do not draw from whole genome sequencing (WGS) data.

Of the 41 patients known or suspected XDR/MDR-TB (as described by the treating clinician), 37% (15/41) were specifically reported as resistant to each of rifampicin (R), isoniazid (H), and pyrazinamide (Z), and 51% (21/41) to R, H and Ethambutol (E).

Using the 2021 World Health Organisation (WHO) definitions [1], 27% (11/41) of cases would be considered to meet the definition of pre-XDR TB, and 27% (11/41) of cases met the definition for full XDR-TB.

PART 3 – Complex Sensitive TB and Drug Resistant Non-MDR TB

This section of the report deals with cases reviewed from January to the end of December 2024, initially categorised by the clinician as being either complex sensitive TB, drug resistant non-MDR TB or other complex TB. The cases included in this section were contributed by 28 different centres.

48 patient demographic records

48 complete clinical/diagnosis records

2 follow-up records representing 2 unique patients.

3.1 THE COMPLEX SENSITIVE/RESISTANT NON-MDR TB PATIENT COHORT

Patients were predominately female (60.4%, 29/48), and the majority were of either South Asian (45.8%), White (22.9%), or Black African (12.5%) ethnicity.

The mean age of patients at the time their case was first discussed on the CAS was 41.6 (*± 19.4*), with ages ranging from 6 to 87. Nearly half of patients (44%) were aged 20 – 39.

Over half of patients (59.1%, 26/44) had listed clinical risk factors. Where present the most common was immune-suppression (50%). Cases where immunosuppression was a factor, biological therapy (anti TNFα) was the cause in 50% of cases. 7% of cases of immune-suppression were due to HIV co-infection. Smoking was reported in 27% of cases, chronic renal disease in 23% of cases and diabetes, and chronic liver disease were each reported in 19% of cases.

Only 11.4% (5/44) of patients listed with a social risk factor and in all (100%) the risk was reported alcohol addiction.

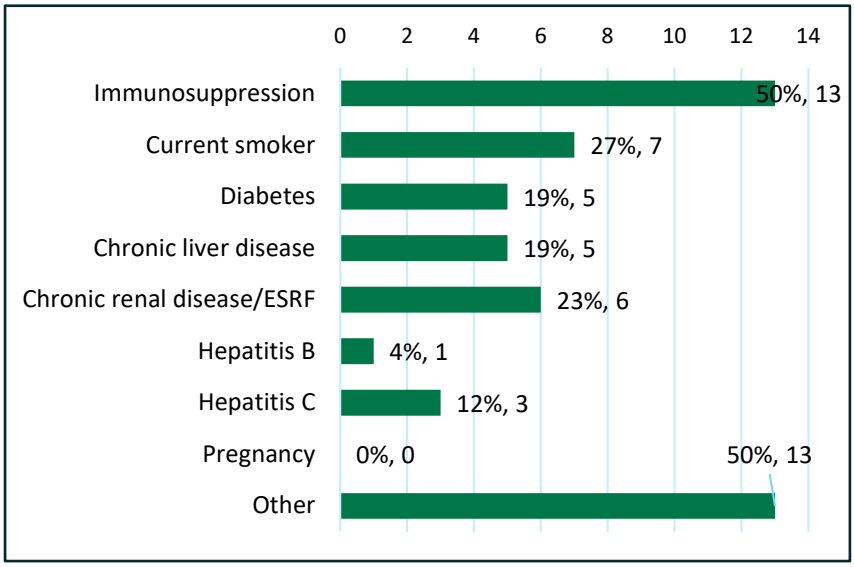

Figure 10: Clinical risk factors at first discussion
Clinical risk factors recorded for all patients with complex sensitive TB or resistant non-MDR TB, 2024.

Overall, 32% (8/25) of the cases discussed between January and December 2024 involved a patient who was known not to be in work. Occupation categories where the risk of exposure to TB may be expected to be elevated were healthcare (6% of cases), and education (6%).

3.2 CLINICAL/DIAGNOSTIC DATA

Cough (47%), weight loss (47%), fever (40%), and lymph node swelling (40%) were the most commonly reported symptoms. Half of patients (50%) experienced symptoms for between one and six months before their case was entered into the Service, with 14% of patients experiencing symptoms for a year.

Excluding sputa, where smear samples were obtained, techniques reported were lymph node aspirate 2.3% (6/48 cases) and bronchoalveolar lavage (BAL) /endobronchial washing (1/48 cases).

Overall, 69% of cases had pulmonary involvement, with extra-thoracic and intra-thoracic lymph node involvement also frequently reported (38% and 15%).

Overall, 4.2% of patients were known to have a previous diagnosis of Latent TB and 2.1% with Active TB.

Contact tracing was reported as required in 53.8% (7/13) of cases. Therapy was self-administered (SAT) in 85% (12/14) of cases, 14.3% of cases were DOT.

Key Figures

- **69**% had pulmonary involvement
- **6.3%** previously diagnosed with TB *(2.1% Active TB and 4.2% Latent TB)*
- **44%** required contact tracing
- **53.8%** contact tracing required
- **85%** therapy was self administered (SAT)

PART 4 – Specialised Commissioned and Novel Drugs

NHS England's commissioning policy statement (pub. 26 June 2024) confirming BPaL/BPaLM as the preferred treatment option for all eligible patients with suspected, functional, or confirmed RR-TB, MDR-TB or pre-XDR TB. NHSE also approved extended (> 6months) and/or sequential and/or concomitant use of bedaquiline and delaminid for those same defined patient groups plus patients with XDR-TB (Pub. 28 June 2024). NHS England has commissioned use in patients who meet the following criteria:

- Treatment agreed following discussion with the MDT of the MDR-TB treatment centre or the regional MDT in conjunction with an MDR-TB treatment centre; treatment of children must also be agreed after discussion with a Paediatric Infectious Diseases Centre.
- The patient must be managed with directly or video observed therapy.
- The treatment regimen must be designed according to current WHO recommendations[2], based on known resistance patterns and tolerance to individual drugs.

The BTS MDR-TB Clinical Advice Service can be considered as providing the function of a regional/national MDT to consider support of Blueteq applications for the use of these drugs.

The information presented here relates to individual patient treatment history at first entry. Data on the panel supporting the prescription (or continuing use of) bedaquiline or delamanid is based on the outcome of virtual MDT case discussion meetings and on support through consensus reached outside MDT discussion.

Of the cases registered with the BTS MDR-TB CAS in 2024, 27.5% (56/204) involved a clinician requesting support to use of bedaquiline or delamanid. Of these requests for only bedaquiline were 37.5% (21/56) or only delamanid (1.8% 1/56). In addition, bedaquiline was requested as part of BPaL or BPaLM regimen in 60.7% (34/56) of cases.

Overall, the panel recommended at least one of bedaquiline and delamanid in 96.4% (54/56) of all cases. Of these 89.3% (50/56) were made in response to requests from the clinician. Bedaquiline was recommended in 7.4% (4/56) of cases in the absence of any clinician request.

Key Figures

- More than **27%** of all cases in 2024 involved a clinician seeking to use bedaquiline, or delamanid
- The panel supported using Bdq and/or Dlm in **89.3%** of cases where requests were made, and **35%** (19/54) of cases were known or suspected XDR/MDR-TB
- Bedaquiline was requested as part of BPaL/BPaLM regimen in over **60%** (34/56) of cases

A full breakdown of support for the use of bedaquiline and/or delamanid by disease category is included in Overview 2 below.

Overview 2: Specialised Commissioned and Novel Drugs

The BTS MDR-TB Clinical Advice Service provides an important gatekeeping function for the use of specialised commissioned and novel drug therapies, conducting independent reviews and providing consensus on whether to support use (or continued use beyond 24 weeks) of bedaquiline and delamanid.

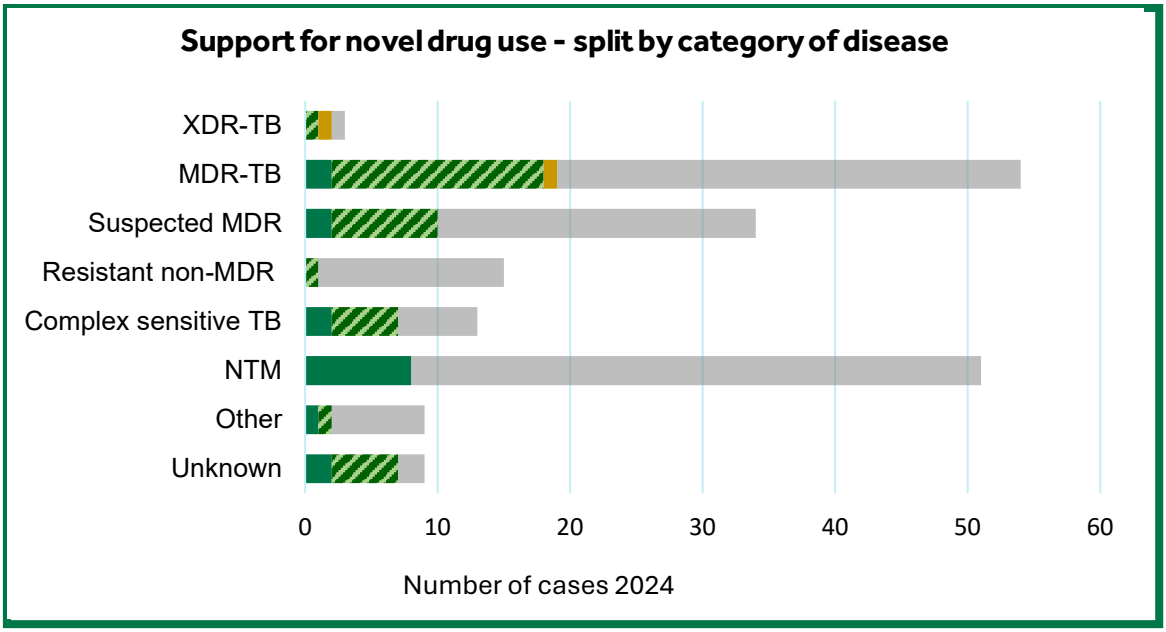

Figure 10: Support for novel drugs

Bedaquiline only
Delamanid only
BPaLM
Not requested/supported

This figure (Figure 10) shows the absolute numbers of cases discussed during this reporting period, as reported at entry to the Service. Further analysis is required to determine the eventual categorisation of cases reported as suspected MDR-TB.

The proportion of cases where the panel supported the use of one or more novel drug treatments is high (35% of cases reported to have known or suspected XDR/MDR-TB). Considering the gatekeeping function of the Service, these data highlight the essential role of expert discussion in case management.

These figures may be artificially low, as cases where advisers indicated conditional support (e.g. dependent on pending sensitivity results, or on the loss of another drug) have not been counted.

	Bedaquiline only	BPaLM (inc BPaL)	Delamanid only	Not requested/supported
XDR-TB	0% (0/3)	33.33% (1/3)	33.33% (1/3)	33.33% (1/3)
MDR-TB	3.7% (2/54)	29.6% (16/54)	1.8% (1/54)	64.8% (35/54)
Suspected MDR-TB	5.9% (2/34)	23.5 % (8/34)	0% (0/34)	70.6% 24/34)
Resistant non-MDR	0% (0/15)	6.6% (1/15)	0% (0/15)	93% (14/15)
Complex sensitive TB	15.4% (2/13)	38.5% (5/13)	0% (0/13)	46% (6/13)
NTM	15.7% (8/51)	0% (0/51)	0% (0/51)	84.3 % (43/51)
Other	11% (1/9)	11% (1/9)	0% (0/9)	77.7% (7/9)
Unknown	22.2% (2/9)	55.5% (5/9)	0% (0/9)	22.2% (2/9)

CLINICAL SERVICE ADVISERS

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Further information on the work of the British Thoracic Society can be found on the following websites:

British Thoracic Society (BTS)

BTS MDR-TB Clinical Advice Service

Respiratory Futures