

SCHEDULE 2 – THE SERVICES

A. Service Specifications

1. Service name	Tropical Medicine and Parasitology (All ages)
2. Service specification number	B07/S/c
3. Date published	10/06/2025
4. Accountable Commissioner	NHS England Blood and infection Email: england.npoc-bloodandinfection@nhs.net

5. Population and/or geography to be served

5.1 Population covered

This is an all-ages service covering the whole of England.

The risk from imported infection is significant and rising due to the following:

- a) Increasing global travel, especially to both the tropics and sub-tropics. For example, more than 1,500 malaria cases are diagnosed in the UK each year, including over 200 cases of severe, potentially fatal, Falciparum malaria.
- b) Increasing population movements, including immigration, asylum application, students, non-governmental organisations, and travel related to military and defence.
- c) Climate change resulting in spread of vector-borne infectious diseases to countries not previously classified as 'tropical' e.g., transmission of Dengue fever reported in France.
- d) Rising iatrogenic immunosuppression increasing risk of opportunistic and complex parasitological and other imported infections

5.2 Minimum population size

This is a highly specialist service delivered through 2 centres:

- Liverpool Tropical and Infectious Disease Unit, Royal Liverpool University Hospital, in conjunction with the Liverpool School of Tropical Medicine (LSTM).
- Hospital for Tropical Diseases (HTD), University College Hospital London (UCLH), in conjunction with the London School of Hygiene & Tropical Medicine (LSHTM).

The services operate as specialist North and South 'Hubs' within the NHSE network of Specialised Regional Infectious Diseases Centres (SRIDCs) and Paediatric Infectious Diseases (PID) centres. These Tropical Hubs will support improved patient access and delivery of high-quality local care through this separately commissioned specialist Network.

6. Service aims and outcomes

6.1 Service aims

1. The primary aim is to work with the SRIDC and PID Network to provide efficient access to high-quality highly specialist care for patients of all ages with suspected or proven imported infections and parasitological conditions. The scope includes specialist diagnostics, treatment and disease prevention. It involves working to address inequalities in access to specialist diagnostics and clinical services, plus wide variation in clinical management approaches and corresponding patient outcomes (e.g., severe malaria, echinococcosis etc.).
2. In addition to improving the management of well-established conditions, the service aims to improve early recognition and surveillance of new and emerging infectious diseases resulting from habitat destruction, climate change and global travel. This involves working particularly closely with UKHSA reference laboratories and their specialist clinical teams.
3. With a shared focus on non-endemic pathogens, the service aims to work closely with providers of the High Consequence Infectious Diseases (HCID) 'airborne' (170081S, 170082S) and 'contact' (B07/S/b) Service Specifications.
4. Whilst some 'tropical' conditions have significantly declined because of effective global eradication programmes (e.g., filariasis, trypanosomiasis, leprosy), it remains more important to retain diagnostic and clinical expertise for these increasingly rare infections. The service therefore aims to maintain a national repository of specialist diagnostic/clinical expertise.
5. Providers are co-located with internationally renowned Schools of Tropical Medicine, underscoring the aims to deliver high-quality research and training.
6. Since a large proportion of 'tropical' conditions are chronic and progressive, early diagnosis combined with effective treatment aims to provide a public health benefit and demonstrate cost-effectiveness.

6.2 Outcomes

The quality of specialised services is monitored through Specialised Services Quality Dashboards (SSQDs), which normally comprise a range of quality outcomes (including clinical outcomes) and quality metrics which are supported by regular data collections. SSQDs are available on NHS England's website at NHS commissioning » Specialised services quality dashboards

([england.nhs.uk](https://www.england.nhs.uk)). Included in the range of metrics that support understanding of the quality of the tropical medicine/parasitology service are:

1. Proportion patients admitted to Tropical Hubs from non-specialist providers within 48hrs of decision for intra-hospital transfer.
2. Proportion of patients with key conditions (e.g., visceral leishmaniasis, echinococcosis, snake envenoming) discussed in national multidisciplinary team (MDT) meetings run by Tropical Hubs, ensuring expert clinical and diagnostic input, and optimising access to specialist drug treatments or other specialist interventions e.g., surgery for hydatid liver cysts.
3. Setting up a data collection system to enhance national surveillance of important imported and emerging pathogens and facilitate production of clinical standards. This will involve working closely with UKHSA and analysing data collected by the national SRIDC network.

7. Service description

7.1 Service Model

1. Tropical Medicine & Parasitology providers operate as highly specialist Tropical Hubs within the network of Specialised Regional Infectious Diseases Centres (SRIDCs) and Paediatric Infectious Diseases (PID) centres.
2. To facilitate patient access and delivery of high-quality local care, patients with non-complex conditions are principally managed by SRIDCs and paediatric infection providers with specialist support from the Tropical Hubs (see 7.2 below).
3. Tropical Hubs are also commissioned to provide specialist clinical and diagnostic services to the wider NHS, including direct patient access ('walk-in' or self-referral) and referrals from primary care and non-specialist, secondary care. This includes providing:
 - a. Parasitology diagnostic services. The Tropical Hubs operate the only accredited diagnostic parasitology laboratory facilities in the country and include national parasitology reference laboratory functions and develop new diagnostics for clinical use.
 - b. 24-hour telephone access for UK healthcare professionals seeking expert clinical advice.
 - c. Specialist clinics (weekdays, including emergency clinics) and/or on-site Emergency Dept. assessments with Provider support (out of hours). These include emergency returning traveller, general tropical, parasitology, delusional infestation, tropical dermatology, bites & stings, specialist mycology, rabies post-exposure prophylaxis and post-tropical screening clinics.
 - d. Pre-Travel Clinics for patients with complex clinical co-morbidities, at higher risk of infection with worse outcomes.
4. For certain chronic conditions, Tropical Hubs are required to provide structured, remote, long-term support e.g., via specialist MDT meetings, which can be accessed by clinicians from across the UK. National MDT meetings include echinococcosis, leprosy, Chagas diseases, neuro-parasitology, tropical histopathology, leishmaniasis, brucellosis, snake envenoming and eosinophilia.
5. Tropical centres operate a specialist drug supply mechanism with expert support, to facilitate local patient management where feasible.
6. Tropical Hubs provide in-patient treatment (with appropriate 24/7 staffing and estate facilities) for diagnoses defined by the ICD10 codes detailed in Appendix 1 in conjunction with the treatment function code 352. Note, this may involve urgent intra-hospital transfer from across the UK and medical repatriation from overseas. The best admission arrangement for a paediatric patient is determined on an individual case basis and depending on clinical severity and age.
7. Tropical Hubs provide a specialist learning and research environment to maintain and develop national diagnostic and clinical expertise*.
8. Providers have a key role in developing NHS best practice guidelines and informing national policy on imported infections in conjunction with UKHSA.
9. Providers are partners with UKHSA in delivering the national 'Imported Fever Service' which supports local infection specialists with access to reference

laboratory diagnostics (including HCID diagnostics), associated clinical expertise, a weekly teleconference and plans for complex imported infection MDTs.

10. In conjunction with UKHSA, the Tropical Hubs have an important surveillance role for new and emerging imported pathogens and will work to involve the wider SRIDC Network in countrywide data collection.

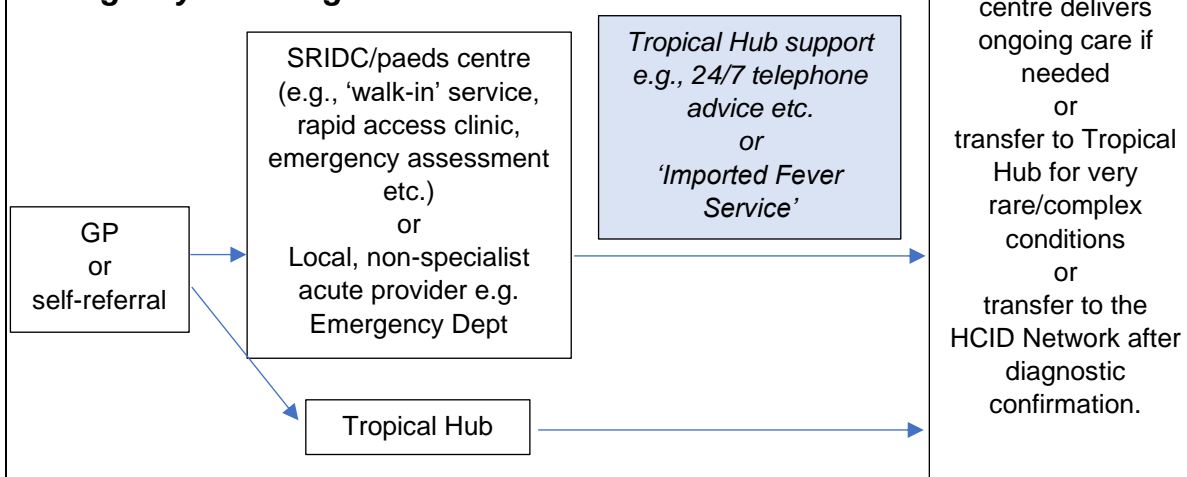
* Note, specialist accreditation in Tropical Medicine must entail training at one of the commissioned Tropical Hubs. Additional, non-mandatory, clinical training opportunities involving Tropical Hubs include academic programmes with links to the Tropical Schools, and rotation through UKHSA Rare & Imported Pathogens Laboratory/Imported Fever Service.

Patients will include those with suspected and diagnosed imported infections and parasitological diagnoses as listed within Appendix 1.

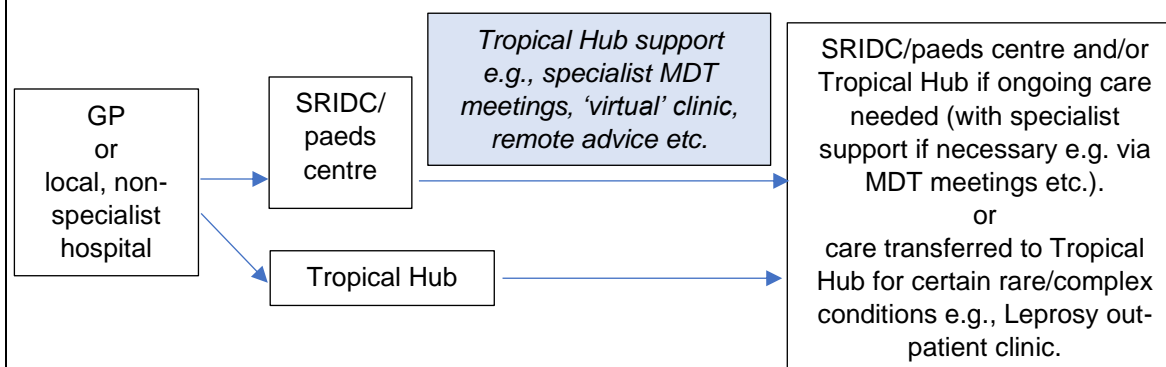
7.2 Pathways

Overall patient pathway

Emergency returning traveller flow:



Non-emergency tropical/parasitology outpatient flow:



Specialised patient pathway

- GPs or non-specialist, Acute secondary care providers may refer directly to SRIDCS/paediatric centres or Tropical Hubs e.g. for emergency assessment, specialist diagnostics and outpatient clinics. Open access emergency returning traveller clinic supports London, with a locally determined model in other regions; direction to SRIDCs local providers can be provided through initial telephone triage.
- SRIDCs/paediatric centres deliver local specialist care in most instances, with support from Tropical Hubs where required (e.g., via specialist national MDT meetings for echinococcosis, leprosy, Chagas diseases, Neuro-parasitology, Tropical histopathology, Leishmaniasis, and Eosinophilia.)
- Hub expertise is provided for children with suspected/confirmed 'tropical' or parasitological conditions, with use of the regional paediatric ID network where clinically appropriate.
- For rare or complex conditions, patients will be managed by the Tropical Hubs in the specialist out-patient clinics or exceptionally rarely by inpatient transfer, or by remote MDT meeting support to SRIDCs for local care. The majority of returning travellers and others with less complex tropical or parasitological conditions will be managed by local providers supported by SRIDCs/ PID centres.

Transition of children and young people to adult services is provided where needed, as a purposeful, planned and supported process. NICE guidelines recommend that planning for transition into adult services should start by age 13-14 years old at the latest, or as developmentally appropriate and continue until the young person is embedded in adult services.

7.3 Clinical Networks

All Providers will be required to participate in a networked model of care to enable services to be delivered as part of a co-ordinated, whole system approach. The Tropical Medicine & Parasitology service providers will therefore work closely with the following:

1. The national SRIDC network and PID centres. Whilst remaining the responsibility of the designated Tropical providers, specific specialist services may be delegated to SRIDCs/PID centres by mutual agreement, and with appropriate support and resources.
2. The HCID network for both airborne and contact pathogens (adults & children).
3. UKHSA specialist and reference laboratories and national clinical teams.

7.4 Essential Staff Groups

Providers are commissioned as SRIDCs (Service Specification B07/S/a), which includes, for example, provision of dedicated inpatient beds staffed by specialist nurses and professionals allied to medicine. In addition, there must be the following:

- Consultant(s) with specialist training in Clinical Parasitology which includes FRCPPath.
- Consultant(s) with a CCT in Tropical Medicine.
- ID Consultants with DTM&H and additional training in a specialist Tropical centre but not meeting full Tropical Medicine CCT requirements.

- Consultant(s) in Paediatric Infectious Diseases and/or Paediatrics with significant experience and expertise in Tropical Medicine & Parasitology.
- Specialist doctors and nurses in Pre-Travel Medicine.
- Trainees in General (internal) Medicine combined with ID/Tropical Medicine.
- Dedicated Infection Pharmacists
- Data management staff
- MDT coordinators

In the context of a well-established multidisciplinary practice, close working relationships with the following are essential:

- Consultant Radiologists with expertise in infection of the liver, brain and lung.
- Consultant Hepatologists and Thoracic surgeons with experience and active, on-going expertise in managing Echinococcal infections.
- Consultant Histopathologists with specific expertise in infectious diseases, including tropical medicine and parasitology.
- Consultant Neurologists
- Consultant Intensive Care Physicians
- UKHSA 'Imported Fever Service' Clinicians

The networked model will be developed towards, for example, a designated lead "tropical" clinician in each SRIDC, and potentially PID centres, who will contribute data and local expertise for their local service and to the national tropical med/parasitology service.

7.5 Essential equipment and/or facilities

- An on-site, UKAS accredited Parasitology diagnostic laboratory led by specialist clinicians.
- On-site microbiology including 'hot lab', point of care or other rapid diagnostics.
- Combined inpatient and outpatient care in dedicated environments, including ability to see and admit children in an appropriate clinical environment.
- Audio-visual facilities needed to host MDTs and other national meetings.
- Urgent out-of-hours courier services for possible dangerous pathogens requiring Category A laboratory handling and transport.

7.6 Inter-dependant Service Components – Links with other NHS services

Interdependent Service	Relevant Service Specification/Standards	Proximity to service (not applicable/co-located/same town/city)
Cancer Services		Co-located
Services for Blood and Marrow Transplantation		Co-located
Services for Women's Healthcare		Co-located
Intensive Care		Co-located

Infectious Diseases		Co-located
Psychology and psychiatric services		Co-located
Social services		Co-located
Dermatology Services		Co-located
Ophthalmology Services		Regional
Renal Services		Regional or co-located depending on hub
Intestinal Failure and Home Parenteral Nutrition Services		<i>Not applicable</i>
Cardiology and Cardiac Surgery Services		Regional
HIV Treatment and Care Services		<i>Co-located</i>
Allergy Services		<i>Co-located</i>
Immunology Services		Regional
Liver, Biliary and Pancreatic Medicine and Surgery services		<i>Co-located</i>
Children; particularly sections on: cardiology & cardiac surgery, ear nose and throat (ENT), gastroenterology, hepatology, neurosciences, ophthalmology, orthopaedic, renal, respiratory, HIV, and surgery services		Co-located or regional
Paediatric ID		Regional
Rheumatology Services		Co-located
Respiratory Services		Co-located
7.7 Additional requirements		
Providers will comply with the Adult ID Service Specification (B07/S/a) in addition to local and national policies, guidelines and other conditions of commissioning as required (including, but not limited to, mandatory surveillance systems, antimicrobial stewardship, governance, patient safety alerts and NICE).		
7.8 Commissioned providers		
<p>Hospital for Tropical Diseases, UCL Hospitals NHS Foundation Trust 2nd Floor Mortimer Market Capper Street, London, WC1E 6JB</p> <p>Tropical and Infectious Disease Unit, Royal Liverpool University Hospital, Liverpool University Hospitals Foundation Trust and Liverpool School of Tropical Medicine Pembroke Place, Liverpool L3 5QA</p>		
7.9 Links to other key documents		
<p>UK malaria guideline: https://www.journalofinfection.com/article/S0163-4453(16)00047-5/fulltext </p>		

UK malaria prevention guideline:

<https://assets.publishing.service.gov.uk/media/65a16fc674ae6600d738a64/guidelines-for-malaria-prevention-in-travellers-from-the-UK-2023.pdf>

British Infection Association (BIA) Enteric Fever guideline:

<https://pubmed.ncbi.nlm.nih.gov/35038438/>

BIA/HTD febrile returning traveller guideline:

[https://www.journalofinfection.com/article/S0163-4453\(09\)00154-6/fulltext](https://www.journalofinfection.com/article/S0163-4453(09)00154-6/fulltext)

BIA guideline for management of eosinophilia: J. of Infection 2024

[https://www.journalofinfection.com/article/S0163-4453\(24\)00262-7/fulltext](https://www.journalofinfection.com/article/S0163-4453(24)00262-7/fulltext)

UKHSA guideline on management of rabies post-exposure:

<https://assets.publishing.service.gov.uk/media/63ce5d4b8fa8f53fe29c7fbd/UKHSA-guidelines-on-rabies-post-exposure-treatment-January-2023.pdf>

HTD/UCLH/Health Services Laboratories National Parasitology Reference manual:

<https://www.hslpathology.com/services/hsl-parasitology/>

LSTM Delusional Infestation service:

<https://pubmed.ncbi.nlm.nih.gov/30239929/>

Utility of specialist infectious/tropical histopathology MDT:

<https://pubmed.ncbi.nlm.nih.gov/32576629/>

Variation in practice in management of cystic echinococcus

Current management of cystic echinococcosis: a survey of specialist practice - PubMed (nih.gov) - <https://pubmed.ncbi.nlm.nih.gov/25422388/>

Changing pattern of visceral leishmaniasis at HTD:

Visceral leishmaniasis and immunocompromise as a risk factor for the development of visceral leishmaniasis: a changing pattern at the hospital for tropical diseases, London - <https://pubmed.ncbi.nlm.nih.gov/25831056/>

HTD leprosy case management:

Diagnosing and treating leprosy in a non-endemic setting in a national centre, London, United Kingdom 1995-2018 - <https://pubmed.ncbi.nlm.nih.gov/36264976/>

Curriculum for Certificate Completion Training in Tropical Medicine

gmc-uk.org/-/media/documents/tropical-medicine-2021-curriculum-final-v1_1_pdf-92050679.pdf

LSHTM integrated academic training programme.

<https://www.lshtm.ac.uk/study/courses/professional-development/lshtm-integrated-academic-training-scheme>

Please refer to the <https://www.england.nhs.uk/publication/manual-for-prescribed-specialised-services/> for information on how the services covered by this specification are commissioned and contracted for.

Please refer to the <https://www.england.nhs.uk/commissioning/spec-services/key-docs/#id-rules> tool for information on how the activity associated with the service is identified and paid for.

Please refer to the relevant Clinical Reference Group <https://www.england.nhs.uk/commissioning/spec-services/npc-crg/> for NHS England Commissioning Policies which define access to a service for a particular group of service users.

Change form for published Specifications and Products developed by Clinical Reference Group (CRGs)

Product name: Tropical Medicine and Parasitology [all ages]

Publication number: B07/S/c

CRG Lead: Blood & Infection Clinical Lead

Description of changes required

Describe what was stated in original document	Describe new text in the document	Section/Paragraph to which changes apply	Describe why document change required	Changes made by	Date change made
Section 1.1: describes the context in which the services were being delivered when the specification was first developed in 2013.	Sections titled 'Population covered' and 'Population size' now provide a more concise and up to date description of the service and remove detail available elsewhere.	5.1 and 5.2	To update the context in which the service is now delivered and to remove unnecessary detail to make the overall specification more concise.	Tropical Medicine & Parasitology Specification Working Group (SWG)	April-Oct 2024
Section 2.1: 'The aim of the service is to provide efficient and effective specialist care for adults and children across the UK with proven or suspected tropical diseases, by	The primary aim is to work with the SRIDC and PID Network to provide efficient access to high-quality highly specialist care for patients of all ages with suspected or proven imported infections and	6.1	Updated to reference the SRIDC and PID network which are important elements within the ID strategy for a networked model of service delivery. This reflects the current and future expansion of hub-led MDTs that	Tropical Medicine & Parasitology Specification Working Group (SWG)	April-Oct 2024

supporting timely and efficient diagnosis, treatment and prevention (for those at risk of travel-related disease) and best outcomes.'	parasitological conditions. The scope includes specialist diagnostics, treatment and disease prevention. It involves working to address inequalities in access to specialist diagnostics and clinical services, plus wide variation in clinical management approaches and corresponding patient outcomes (e.g., severe malaria, echinococcosis etc.).		increasingly support care within the SRIDCs because of evolving remote working patterns and increasing skill dissemination across the network.		
Section 2.1: reference to referrals, diagnostics, core objectives and how they are delivered.	Reference to specialist diagnostics and to the modern context of new emerging infectious diseases as a result of habitat destruction, climate change and global travel.	6.1	The recent SARS-CoV-2 and Mpox clade 2 pandemics have highlighted the need for ongoing NHS clinical leadership in emerging and imported infection aligned with UKHSA	Tropical Medicine & Parasitology Specification Working Group (SWG)	April-Oct 2024

			services and leadership		
Section 2.1	More explicit about working with other services – UKHSA and the High Consequence Infectious Diseases services as part of the ID network.	6.1	As above, reflecting an increase in joint appointments, shared MDTs, new diagnostics.	Tropical Medicine & Parasitology Specification Working Group (SWG)	April-Oct 2024
Section 2.1: Providing the UK with the only accredited parasitology diagnostic laboratory, providing a tertiary referral travel clinic service which risk assess and manages patients with complex clinical co-morbidities who wish to travel and are at higher risk of infection and worse outcomes.	References the recent accreditation of the Liverpool lab, the increasing complexity of iatrogenic immunosuppression among people who plan to travel, and the co-location of both of the service hubs with internationally renowned and accredited Schools of Tropical Medicine	6.1	Accreditation of Liverpool lab, increasing complexity of immunosuppression and commissioned pre-travel services for complex patients.	Tropical Medicine & Parasitology Specification Working Group (SWG)	April-Oct 2024

Section 4: Key Service Outcomes section	New outcomes section developed and added in line with the Quality and Nursing Team approach to quality outcomes, metrics and measures.	6.2	Required as part of the new Service Specification template.	Tropical Medicine & Parasitology Specification Working Group (SWG)	April-Oct 2024
Section 2.2: Service description/care pathway – describes the service through key principles and service components. Wording alludes to a single service provider, which is inaccurate.	New service model section reiterates the important role of the Tropical Medicine & Parasitology service in the overall ID network with important details of the service delivered.	7.1	Updated service model description that includes concise details of the expected service. Now includes reference to both hub services.	Tropical Medicine & Parasitology Specification Working Group (SWG)	April-Oct 2024
Section 2.2: National referral service for suspected or proven Leprosy and leishmaniasis. A weekly outpatient clinic by the only leprologist in the UK; a monthly specialist	For certain chronic conditions, Tropical/Parasitology Hubs are required to provide structured, remote, long-term support e.g., via specialist MDT meetings, which can be accessed by clinicians from	7.1	More detail on the MDTs provided to support the wider ID network.	Tropical Medicine & Parasitology Specification Working Group (SWG)	April-Oct 2024

tropical histopathology MDT and reference laboratory support for molecular diagnostics; an outpatient ambulatory therapy service for patients with cutaneous and visceral leishmaniasis; multidrug therapy, specialist occupational therapy and dedicated surgical expertise for patients with leprosy.	across the UK. National MDT meetings include echinococcosis, leprosy, Chagas diseases, Neuro-parasitology, tropical histopathology, leishmaniasis, brucellosis, snake envenoming and eosinophilia.				
Section 2.2: Detail on tariffs and coding.	As this is a retained service, work has been undertaken to ensure the funding for the service has been appropriately accounted for and transferred into NHSE from ICBs where necessary.	7.1	Update required in the context of the 'retained' status of the Tropical Medicine/Parasitology Hub service. As stated in the new specification, diagnoses are defined by the ICD10	Tropical Medicine & Parasitology Specification Working Group (SWG)	April-Oct 2024

	The codes referenced in appendix 1 have been reviewed and updated by the PWG and Spec Comm finance team.		codes detailed in a revised Appendix 1 in conjunction with the treatment function code 352. This is a Tropical Medicine code and will be priced equivalent to 350 (Infectious Diseases) and paid by NHSE only to the Tropical/Parasitology Hub services.		
Deliver specialist training in tropical medicine as part of NHS consultant accreditation, including experience in a face-to-face pre-travel clinic. Deliver, as a Royal College of Physicians (RCP)-approved provider of the London Diploma in Tropical Medicine & Hygiene, all curriculum	* Note, specialist accreditation in Tropical Medicine must entail training at one of the commissioned Tropical/Parasitology Hubs. Additional, non-mandatory, clinical training opportunities involving Tropical/Parasitology Hubs include academic programmes with links to the Tropical Schools, and	7.1	Updated training responsibilities and arrangements.	Tropical Medicine & Parasitology Specification Working Group (SWG)	April-Oct 2024

requirements including clinical exposure to imported tropical infection as provided in specialist tropical centres.	rotation through UKHSA Rare & Imported Pathogens Laboratory/Imported Fever Service.				
No reference to surveillance	In conjunction with UKHSA, the Tropical/Parasitology Hubs have an important surveillance role for new and emerging imported pathogens and will work to involve the wider SRIDC Network in countrywide data collection.	7.1	Reflecting the important role of this service in surveillance, working with UKHSA.	Tropical Medicine Specification Working Group (SWG)	April-Oct 2024
No detailed pathway description or diagram	Addition of a patient pathway description and diagram to illustrate the service model and links to other services within the overall ID network, including paediatrics.	7.2	Illustration of the Tropical Medicine & Parasitology role within the overall ID network.	Tropical Medicine Specification Working Group (SWG)	April-Oct 2024

No 'networks' section in original specification	Addition of a clinical networks section that details the requirement to work within the ID network.	7.3	Illustration of the Tropical Medicine & Parasitology role within the overall ID network.	Tropical Medicine Specification Working Group (SWG)	April-Oct 2024
No sections specifically outlining staff or equipment in original specification	Addition of Essential staff groups and Essential equipment and/or facilities sections	7.4 and 7.5	Required as part of the new service specification template	Tropical Medicine Specification Working Group (SWG)	April-Oct 2024
Section 2.5: Interdependent services	Addition of 'Proximity to service' details.	7.6	Required as part of the new service specification template	Tropical Medicine Specification Working Group (SWG)	April-Oct 2024
Section 3: Applicable Service Standards	Links to other key documents updated section	7.9	Required as part of the new service specification template	Tropical Medicine Specification Working Group (SWG)	April-Oct 2024