University Hospitals of Morecambe Bay NHS Foundation Trust

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Which Principles of the NHS Constitution Apply? **Please list from principles 1-7 which apply** 1-7 Principles	**Which Staff Pledges of the NHS Constitution Apply?** **Please list from staff pledges 1-7 which apply** 1, 2 Staff Pledges

Does this document meet the requirements of the Equality Act 2010 in relation to Race, Religion and Belief, Age, Disability, Gender, Sexual Orientation, Gender Identity, Pregnancy & Maternity, Marriage and Civil Partnership, Carers, Human Rights and Social Economic Deprivation discrimination? **Yes**

Document for Public Display: Yes

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BEHAVIOURAL STANDARDS FRAMEWORK

To help create a great place to work and a great place to be cared for, it is essential that our Trust policies, procedures and processes support our values and behaviours. This document, when used effectively, can help promote a workplace culture that values the contribution of everyone, shows support for staff as well as patients, recognises and celebrates the diversity of our staff, shows respect for everyone and ensures all our actions contribute to safe care and a safe working environment - all of which are principles of our Behavioural Standards Framework.

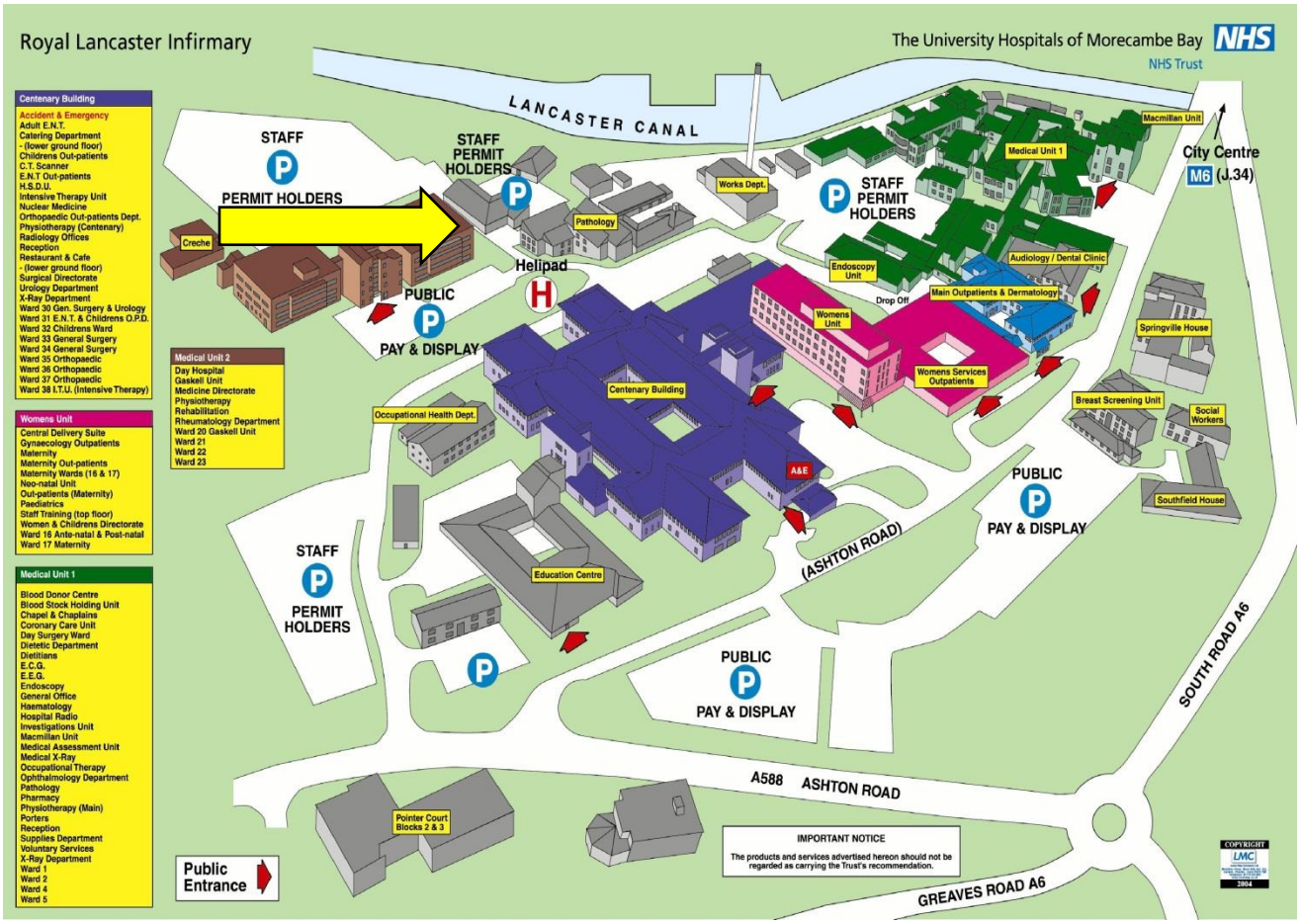
Behavioural Standards Framework – Expectations 'at a glance'

1. SUMMARY

Introduction to University Hospitals of Morecambe Bay NHS Foundation Trust Microbiology department

The Microbiology service at the University Hospital of Morecambe Bay NHS Trust (UHMBT) is provided from Royal Lancaster Infirmary (RLI) and Furness General Hospital (FGH) Each laboratory is covered by Medical and Scientific staff and specialist advice is available on the selection of tests and the interpretation of results.

Royal Lancaster Infirmary – Microbiology
New Pathology Block

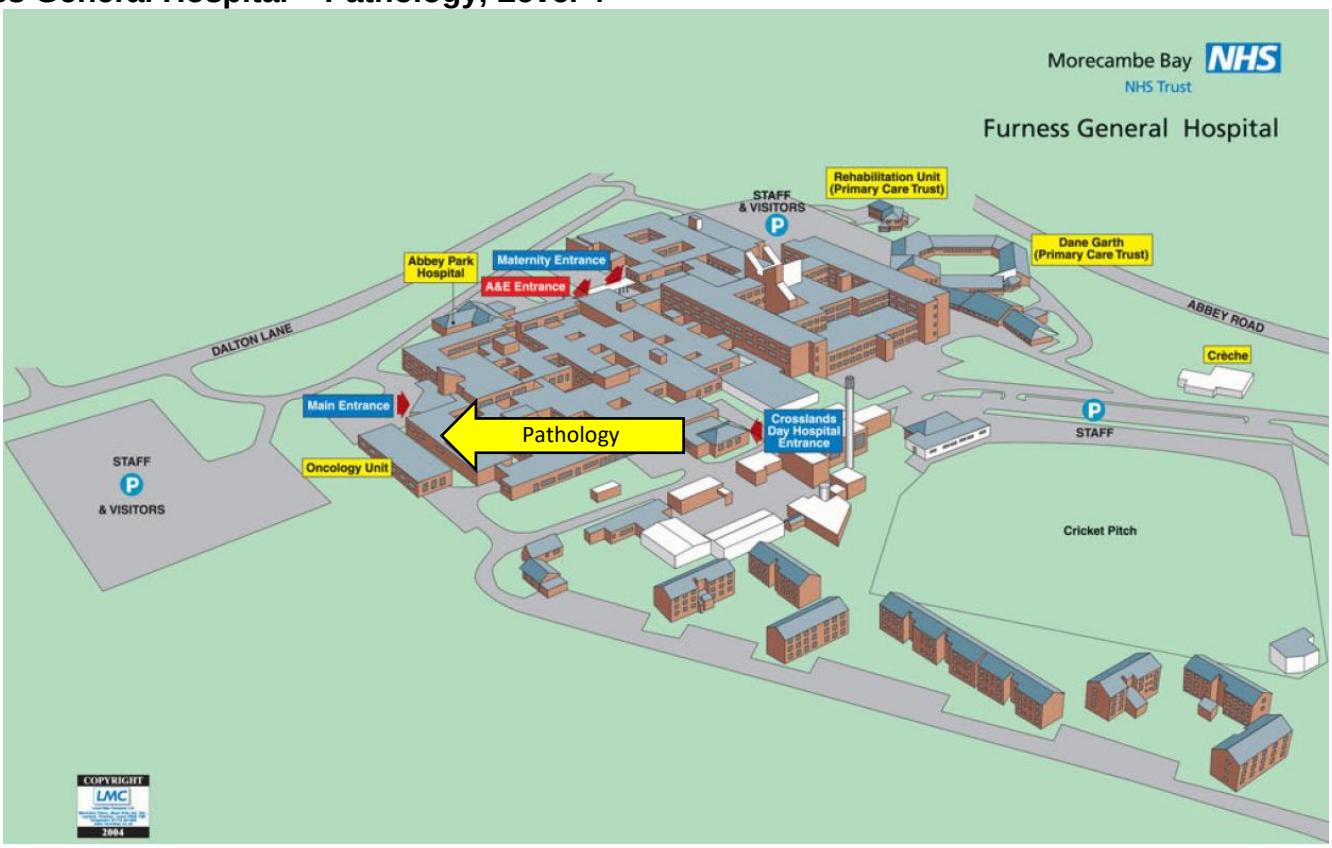


Travel to Microbiology Department

Arriving by Road
There are road signs to the hospital as you enter Lancaster.
From the south, leave M6 at Junction 33. Head north along the A6 to Lancaster (for approximately 5 miles) passing the University. On approaching the roundabout on the south side, take the first exit leading to A588 (Ashton Road) , then take second turning on the right , follow the road around then take first turning on the left land, the new pathology block is now on your right hand side and sign posted .

From the north, leave the M6 at Junction 34. Turn left on A683 to Lancaster. Follow A6 south signs, take the third exit leading to the A588 as above.

Furness General Hospital – Pathology, Level 4



From Barrow: Follow signs to Dalton along Abbey Road. The hospital is opposite Furness House Hotel on Dalton Lane.
From Dalton: From Abbey Road junction with Park Road, continue onto Barrow Road and turn right opposite Furness House Hotel onto Dalton Lane.
Head to the main hospital entrance and proceed right through the foyer and into the corridor. Sign posted on the right hand side is level 4 pathology , follow signage to pathology reception

From the north/A590: The hospital is signposted from the A590 onto Park Road before turning right onto Barrow Road for 500 yards then right onto Dalton Lane, then as above

Laboratory Telephone Numbers

RLI

Reception:	01524 583770 (int. 53770)
Microbiology:	01524 583775 (int. 53775)
Microbiology medical Sectaries	01524519254 (int. 49254)

FGH

Reception:	01229 491050 (int. 51050)
Microbiology:	01229 491061 (int. 51061)
Microbiology medical Sectaries	01229403790 (int. 43790)

2. PURPOSE

This manual provides information about the services and tests provided by the Microbiology Departmer UHMBT. These include: opening times, specimen collection and delivery, safe specimen transportation completion of request forms, requesting and reporting policy and warning about hazards of clinical specimen.

3. SCOPE

This information is for all users of the laboratory services including hospital physicians, nurses and laboratory personnel.

4. USER MANUAL

4.1. Opening times

Routine Laboratory Opening Times for sample culture interpretation an reporting

RLI
Core working day: 8:30 am to 8.00 Monday- Saturday.
Core working day: 9.00 am to 8.00 Sunday
An on-call Emergency Service is available, on a restricted range of tests (see section 7), from 8.00 pm to 9.00 am.

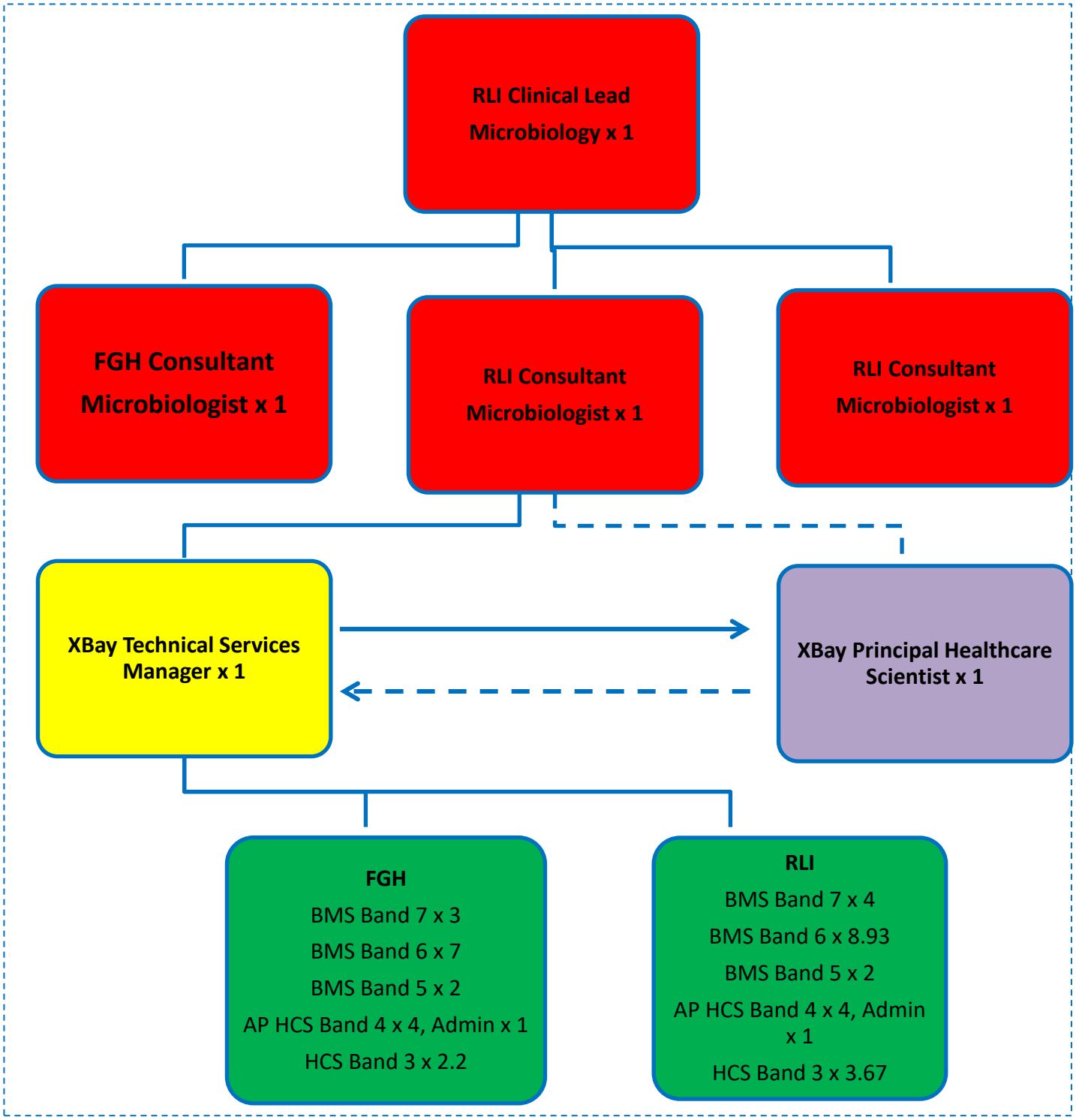
.**FGH**
Core working day: 9.00 am to 8.00 Monday- Sunday.
An on-call Emergency Service is available, on a restricted range of tests (see section 7), from 8.00 pm to 9.00 am**.**

Bank Holiday
Core bank holiday : 9.00 am to 8.00 pm
Core bank holiday weekend
Saturday 8.00 am to 8.00 pm
Sunday 8.00 am to 8.00 pm
An on-call Emergency Service is available, on a restricted range of tests (see section 7), from 8.00pm to 9.00 am.

4.2. Senior Microbiology Contact Details

Name	Title	Internal	External
Mr Nigel Nelson	Pathology Services Manager	49701	01524 519701
Professor Craig Williams	Clinical Lead Consultant Microbiologist	FGH 01229403790 RLI 01524519254	Through switch board
Dr Luca Kormos	Consultant Microbiologist		
Dr Kate Ogah	Consultant Microbiologist		
Mr Joseph Boyce	Technical Services Manager, Microbiology	01229491061	07813525396
Mr Peter Burkhart	Principal Healthcare Sciences	53771	01524 583771

4.3. Microbiology Staff structure



Key

4.4. Advice and Guidance access to Consultant Microbiologist

Consultation about the investigation and management of infection is welcomed. Early liaison over infection control matters, especially outbreaks is encouraged.

Microbiologists are available to advise on examinations, the use of services, clinical indications and limitations of the examination procedure and the frequency of examination requests and interpretation of results (ISO 15189:2012) [1].

The Consultant Microbiology team consists of 4 Consultant Microbiologists who provide a service across the three main hospital sites at Barrow in Furness, Royal Lancaster Infirmary and Westmoreland General Hospital

Instructions for contacting the Consultant Microbiologist during the working day
The Microbiology consultant team can be contacted

- Through the Microbiology medical sectaries on telephone numbers stated in section 1 Monday to Friday 9 am to 5 pm
- Between 8 am-9 am via switchboard
- Between 5-6 pm via switch board
- Saturday 8 am – 2 pm via switch board

It is important to have the following information available when contacting the Consultant Microbiologist team.
Previous Microbiology results
Antibiotic Allergies
Antibiotic history for last month
Renal and Liver function
Current and previous WCC and CRP

The turnaround time for advice and guidance provided by the Constant Microbiology team is monitored to ensure maintenance of quality.

Instructions for contacting the Consultant Microbiologist out of Hours
The microbiology out of hours consultant emergency service exists to provide advice on the management and diagnosis of new acute episodes of infection occurring out of hours or unexpected deterioration of current infective conditions out of hours. The out of Hours service covers from

- 6 pm to 8 am Monday to Friday
- 2 pm on Saturday to 8 am on Monday

The high volume of calls experienced by the Consultant team out of hours is managed through the algorithm in appendix 1, this **MUST** be followed if out hours advice is required after immediate patient management

Remember advice on antibiotic treatment is always available on the Microguide app , alternatively use hyperlink https://cms.horizonsp.co.uk/viewer/mbht/adult

Who to alert in cases of suspected high risk infections

Patients with suspected infections of hazard group 3 and 4 pathogens (eg Middle East Respiratory Syndrome (MERS), Severe Acute Respiratory Syndrome (SARS), viral haemorrhagic fevers such as Lassa fever, Marburg or Ebola virus) the Infection Prevention and Control Team or the Microbiologist on call (out of hours) MUST be consulted before any specimens are taken.

Infection Prevention and Control team

Infection Prevention and Control Nursing Team consists of a matron and a lead nurse who work across the trust with additional site based specialist nurses and clinical support workers.

The Infection Prevention and Control team provide advice on all aspects of
Infection Prevention and Control throughout the trust including community services working in close collaboration with the consultant microbiologists and other specialties and services including those external to the organisation.

The Director of Infection Prevention & Control (DIPC) is responsible for the delivery of infection prevention and control within the organisation and produces the trust annual report, providing details on the organisation's infection prevention and control programme and publication of HCAI data for the organisation.

The infection prevention and control team provide a service Monday to Friday (excluding bank holidays) from 8am to 5pm. The team are based at RLI and FGH but support the whole organisation on all aspects of Infection Prevention. The trust IP strategy is available on the procedural document library and details the arrangements for infection prevention and control and how the trust will demonstrate compliance to the health and social care act**.**

4.7. Hazards of Clinical Specimen

IMPORTANT REMINDER TO ALL HEALTH CARE WORKERS involved in the collection, packing, storage or transport of CLINICAL SPECIMENS

All specimens should be regarded as being potentially infective.

You have a personal and statutory duty of care to protect the Health and Safety both of yourself and of others who deal directly or indirectly with patient specimens and/or associated clinical waste.
Failure to comply with Trust infection prevention policies is notifiable under the Trust's Incident Reporting Scheme, whether or not an accident, injury or infection has resulted: the Trust does not indemnify its staff in cases where there has been a clear breach of its own policy.

The following Infection Prevention Policy applies to any clinical material taken from a patient and sent to a diagnostic laboratory:

• The specimen must be placed in a suitable container and the lid or cap tightly secured to prevent leakage.
• The container must be sealed in a leak-proof bag, which will contain any spillage accidentally occurring during transit.
• Laboratory staff have a discretionary right to discard any sample that is received in a state which renders it hazardous for them to handle. Where there is perceived to be a lack of duty of care, this will be reported via the Trust Incident reporting system.
• Clinical samples must not be sent to outside agencies other than via the Trust's own transport systems; if to be posted, the sender is directly responsible for complying with current postal regulations.
It is essential that ALL the RELEVANT CLINICAL DETAILS are supplied on the Request Form:

Specimens from High Risk patients known or suspected to be carrying airborne or blood borne viruses or other infectious agents must be labelled as High Risk in accordance with the Trust's Infection Prevention Policy. A yellow 'Danger of Infection' label must be affixed to the Request Form and the specimen container.
If in doubt, please contact the Microbiology Department

9368

4.8. Microbiology Quality Management

NHS Clinical laboratories accredited by the United Kingdom Accreditation Service (UKAS) to ISO 15189.

The University Hospitals of Morecambe Bay NHS Foundation Trust ,Microbiology laboratory is 'a UKAS accredited medical laboratory No. 9368

Details are available on the UKAS website www.ukas.com, (click on 'Search UKAS Accredited Organisations and type 9368 in the search function).

Where tests are not included on the laboratory's scope of UKAS accreditation the following caveat is added to the report:

UHMBT Microbiology is a UKAS accredited medical laboratory No.9368 ; this test is currently not on our schedule of accreditation.

Alternatively please see the Laboratory Test Directory (A to Z) on the UHMBT intranet site (FirstPort) at: http://uhmb/clinicalservices/pathology/testdir/Pages/default.aspx

External quality assessment (EQA) schemes
Assesses Microbiology's performance against other laboratories. The department participates in a variety of national and international schemes that are annually audited for their suitability.

Scheme providers are

- **UK National External Quality Assessment Scheme (UKNEQAS)**
- **QCMD** schemes UHMBT Microbiology currently participate in:
- **Labquality** schemes UHMBT Microbiology currently participate in:

Internal quality assurance
1% of our work is re-submitted to determine reproducibility and repeatability of results

Internal quality controls and comprehensive audits
This includes regular scheduled clinical audits of issued reports to monitor the quality of results.

4.9. Scope of Service and Tests Available Urgently

For specific details regarding sample type and collection procedures, reference intervals, turn-around times and other pertinent information, please consult the Laboratory Test Directory (A to Z) available on the intranet site - FirstPort**.**

4.10. Production of Microbiology reports

It is the responsibility of the Microbiology Laboratory to produce reports in a timely manner, expected turnaround times for each test group can be found in the Laboratory Test Directory (A to Z) , turnaround time for provisional results from samples relating to urgent /life threatening problems can be seen in 4.13 and will be communicated promptly and directly to clinicians caring for patients by telephone; to aid in this process please ensure contact details for results are clearly indicated on request form.

The Microbiology department monitors turnaround times for all sample types , actively investigating any sample type that falls below a 97% compliance turnaround time target

4.11. Issuing of Microbiology reports and Clinical responsibility for acting on results

All samples received within pathology will have a report produced. There are several methods of distributing and receiving reports.

Reports are available electronically in two information systems; Lorenzo for hospital sites, released immediately after reporting from the laboratory; Indigo Review for GPs, released every 15 minutes after reporting from the laboratory.

Email reporting is also available for those locations not on the N3 network or unable to access Indigo.

Paper copies are sent upon request only. Original paper reports from referral laboratories are sent to requestor and results are either transcribed onto the laboratory information management system or scanned directly onto Lorenzo.

Lorenzo reports

Most Microbiology reports will be issued to Lorenzo, at which point responsibility of reviewing and acting upon the result will fall to the requesting clinician.

In patients

Traditionally a clinician who orders a test is responsible for receiving and acting upon the results once available. This may require direct action by the clinician or a transfer of responsibility to another clinician, for example a consultant writing to the patient's GP with the details of the results and any action that is required. Likewise, if tests are required as a pre-requirement for a hospital referral a GP would be responsible for making the hospital aware of the relevant results as part of the referral process.

Patients following discharge

The first is that the clinician who orders the test is responsible for reviewing, acting and communicating the result and actions taken to the General Practitioner and patient even if the patient has been discharged.
The second is that every test result received by a GP practice for a patient should be reviewed and where necessary acted on by a responsible clinician even if this clinician did not order the test.

These processes are in compliance with

General Medical Council: Good Medical Practice - Continuity and coordination of care - Paragraph 44 details responsibility to share relevant information with colleagues involved in the patients' care[2]

General Medical Council: Leadership and management for all doctors - Communication within and between teams - Paragraph 10-13 details guidance on team working and sharing of information.[3]

Management of Investigation Results in the Emergency Department [4]

Standards for the communication of patient diagnostic test results on discharge from hospital [5]

Further reports and amendments on Lorenzo

There will be incidences when a further report will be issued, in this case the report will again require acknowledgment but will remain in request date order, this means that it will not appear at the top of the Lorenzo sample list, it is the responsibility of the requesting clinician to ensure all outstanding reports are acknowledged to ensure further reports are also read.

Amended reports
Amended reports usually constitute a change from the original, such as a reporting error; in these instances these amended reports may have an impact on the patient's treatment. In such circumstances a verbal attempt will be made to alert the requesting clinician as to the change and a clearly labeled amended report will be issued. .Again, as with the further reports, the report will be in date order and require acknowledgment.

4.12. Results which will be telephoned to the clinical team in addition to a Lorenzo report

Urgent Sample processing

Samples urgently requested for processing to provide microscopy or cell counts are outlined in tables in section 4.13 and will have provisional results phoned through to the requester additionally a provisional report will be issued onto Lorenzo .

Culture isolates

Provisional culture results from processed samples that will influence patient management such as

- Positive blood cultures results phoned through to the requester additionally a provisional report will be issued onto Lorenzo.
- E. coli 0157
- Shigella – non S. sonnei
- All other faecal pathogens in in-patients only
- Strep Gp A other than throat swabs
- Strep Gp B (in Children's Unit/SCBU/Maternity Unit)
- Typhoid/paratyphoid
- Legionella
- Mycobacterium spp
- Multi-resistant gram negative isolates (MRSA VRE CPE)

Molecular Investigations

Significant molecular results will be phoned through to the requester after consultation with the Consultant Microbiology Team and / or Infection prevention team

4.13 Urgent test requests

Urgent tests available during the working day (9-am to 8pm)

IF URGENT – TELEPHONE LAB TO WARN OF ARRIVAL

All investigations are available within designated turnaround time of receipt in lab if URGENT (any analytical problems causing delays will be advised by laboratory staff when telephoned).

The table below offers a guide to expected turnaround times for urgent samples upon receipt into the laboratory

Sample type	Urgent result available	Expected Turnaround time
Swab /Pus	Microscopy (Gram stain)	60 minutes
	Culture	Preliminary result 24 hours
Fluids /aspirates	Microscopy (Gram stain & cell count if applicable)	60 minutes
	Culture	Preliminary result 24 hours

	Synovial crystals	60 minutes
Tissue	Microscopy (Gram stain)	60 minutes
	Culture	Preliminary result 24 hours
Respiratory samples	Microscopy (Gram- if deemed of clinical value)	60 minutes
	Culture	Preliminary result 24 hours
	AAFB (MTB) Mycobacterium stain	60 minutes

Urgent tests available outside of the working day – on call

Microbiology do not have a BMS on site from 8 pm to 9 am, it is necessary to contact the on-call laboratory scientist through switch board to arrange testing of the urgent samples outside of these hours , otherwise the sample will not be processed

Requests for sample investigation should only be made if the result will have a direct impact on patent's treatment. The table below is approved list of samples that will be processed urgently on request**.**

Sample type	**Urgent result available**	**Expected Turnaround time**
Cerebral spinal fluid	Cell count & Microscopy *	1.5 to 2 hours depending on results
Synovial fluids	Microscopy and Crystals	1.5 hours
Supra pubic aspirates	**Cell count**	**1 hour**

The following samples should not be routinely requested as urgent, as it is not possible for the laboratories to deliver the level of activity this would involve. These samples will be examined only when the result may materially influence patient management , again contact Laboratory Microbiologist to arrange testing .

Sample type	Urgent result available	Expected Turnaround time
Fluids – synovial fluid, CSF, Aspirates, pleural , Ascitic fluid	Microscopy (Gram stain & cell count if applicable)	2 hours
	Synovial crystals	
Tissue – operative samples from theatre various	Microscopy (Gram stain)	
Respiratory samples- Bronchial lavage from ITU or sample requested form Consultant Chest physician	Gram-	
	AAFB (MTB) Mycobacterium stain	
Urine*	Microscopy	
Pregnancy test except from Emergency Department (ED) and Gynaecology ward	Qualitative BhCG	
CAPD fluids-at the request of the Renal Nurse specialist	Microscopy	
Legionella/Pneumococcal Urinary	Qualitative antigen	

Antigen from ED/ITU	detection	
Samples for TB, unless requested directly by the Consultant Chest physician	Microscopy and AAFB (MTB) Mycobacterium stain	

The following samples will <u>not</u> be processed urgently without Consultant Microbiologist approval
Faeces, swabs, sputum, Tracheal aspirates, urine , Nail, skin or hair fungal investigations, H.pylori stool antigen test and ASOT

Communication of urgent or clinical impacting results
Preliminary results that will have an immediate clinical impact on patient care or infection prevention and control will be discussed with the Consultant Microbiology team or Infection prevention and control teams communicated accordingly
Blood culture results are automatically generated and will appear on Lorenzo. An initial report is automatically generated and issued onto Lorenzo to indicate when a positive blood culture bottle has been detected. As the laboratory investigation of the positive bottle continues, the new results will be Updated onto Lorenzo.

Limited urgent availability
The laboratory should be contacted by telephone when an urgent sample is being sent.
An urgent sample that cannot be repeated should **NOT** be sent via the pneumatic tube in case the sample container breaks or sample is sent or delivered to wrong receiving station resulting in delay, sample spoilage or failure of receipt.

4.14. Microbiology Consultant only requests

The following requests must be discussed and agreed by the Consultant Microbiologist before they will be tested:

- Biofire Enteric molecular testing
- Biofire Respiratory molecular testing.
- Biofire encephalitis / meningitis molecular testing

4.15. Request Forms – Minimum Data Set Policy

1. Requests should be made by utilising the electronic requesting system if available, on T Quest or Lorenz, alternatively use the Microbiology Request Form.
2. Use the tick boxes provided, when appropriate, otherwise specify the test required legibly.
3. The following information **is ESSENTIAL** when requesting laboratory investigations:
    a. Hospital number and/or NHS number *
    b. Patient's name - surname and forename(s) -
    c. Patient's date of birth
    d. Investigation(s) requested.
    e. Patient's Consultant or GP.
    f. Location for report.

4. The following information is **IMPORTANT** in order to process a specimen appropriate and in a timely manner :

a. Patient's address
b. Nature of specimen, e.g. blood, urine, CSF etc.
c. Date and time of sample.
d. Relevant clinical details – including any special information or precautions relevant to specimen handling and any risk of infection.
e. Requesting Doctor's name in block capitals, signature and bleep number/extension.

*NHS number should always be specified on blood tube samples for Microbiology

Clinical details

The tests (standard operating procedures) used in Microbiology are based on Public Health England (PHE),UK Standards for Microbiology Investigations (UK SMIs) .These are a comprehensive referenced collection of recommended algorithms and procedures for clinical microbiology.
To comply with additional test clinical details are required to aid in patient diagnosis, detailed relevant clinical history should be supplied.

Clinical details should indicate why the sample has been taken, anatomical site, for example stating wound swab without any further details is not acceptable. If the patient is immunocompromised, pregnant and in cases of gastroenteritis or fevers if foreign travel has occurred in the past 21 days.
If the patient has any antibiotic allergy is also important as this will affect the antibiotics released for treatment on the final report

4.16. Microbiology sample collection

Only Microbiology supplied specimen containers should be used to collect and transport samples to the department. This requirement is containers must be CE marked , have achieved the correct quality standard i.e. M40 for swabs and have been verified by the laboratory in accordance to ISO15189 :2012[1]

Microbiology offer a range of collection kits for use in addition to the specimen containers , listed below

- CSF collection kit
- Blood culture collection kit
- Enterobius vermicularis (Threadworm, pin worm) collection kit
- Corneal scrape kit

These specimen kit can be ordered along with other consumable outlined in 4.11

4.17. Ordering consumables (e.g. specimen containers)

Microbiology specimen containers will be distributed from the pathology department to hospital departments, GP practices within the Lancaster , Kendal and Furness locality and other service users such as GUM clinics

Requests for consumables are received on a daily basis via telephone, e-mail and by request form. All urgent requests will be dealt with on the day of receipt. Note that although we state to allow 7 days for delivery, this includes the transport times which may take several days.

To order laboratory consumables use forms

- DX029A LF (GP's),
- DX029D LF (Wards and Departments)

Send completed request for consumables via

Royal Lancaster Infirmary
Preferred Email RLIPathologystores@mbht.nhs.uk or Post to New Path lab stores RLI or
Tel. 53773 (Extn. 01524 583773)

Westmoreland General Hospital
Preferred Email WGHPathologystores@mbht.nhs.uk or Post to Path lab stores , WGH stores or
Tel. 55284 (Extn. 01539 795284)

Furness General Hospital
Preferred post to Path lab stores , FGH or Tel 51268 (Extn. 01229491268)

4.18. Specimen Collection and Delivery

FGH/ RLI
In patient / out patients specimens for routine analysis should arrive in the laboratories before 20:00 hours.

Regular collections are made from GP Surgeries and outlying Hospitals (see table below).

At RLI and FGH, there is a pneumatic tube delivery system from the wards.

WGH
At WGH, wards are responsible for arranging delivery of specimens to the laboratory during core hours or if urgent via Switchboard outside of the core hours.
There is no Microbiology laboratory at WGH , samples are distributed between FGH/ RLI Microbiology departments, for this reason any urgent samples should be arranged to be sent independently of the regular collections after discussion with Microbiology department
Specimens should be kept at room temperature until despatch unless otherwise stated.

Specimen Collection Trunking Route Times

Please note these delivery/collection routes on run on weekdays	Departs RLI	WGH	FGH	WGH	Returns to RLI
	08:30	09:15	10:30	11:30	12:45
	10:30	11:45	12:30	14.30	15:30
	16:00	17:45	18:30	20.00	21:00

GP Sample Delivery Arrival Times

FGH	RLI

Local Barrow GPs	12:30	13:30	Dalton Square King Street Rosebank University	Galgate Queen Square Scale Hall Meadowside
Coniston & Hawkshead	12:30			
Millom	13:00			
Ulverston & Dalton	13:30	14:00	Heysham Morecambe Health Centre West End	Owen Road Strawberry Gardens West Gate York Bridge
Outlying GPs	14:30	14:30	Ash Trees Carnforth Bentham Arnside Park View - Milnthorpe	Bentham Lunesdale – Kirkby Lonsdale Stoneleigh – Milnthorpe
Ulverston & Barrow	15:30			
Local Barrow GPs	16:00			
WGH				
Lakes and Kendal GPs	12:15 sent onto FGH	15:00	Sedbergh	
Sedbergh GPs	14:00 sent onto RLI	18:00	2nd run from all GP surgery's above and BMI	
Lakes and Kendal GPs	16:25 sent onto FGH	20:30	Station House James Cochrane Practice	

4.19. Telephone Enquiries

Before ringing the laboratory for a result please check the Indigo Review system or Lorenzo for the results.

Telephone enquiries for results can cause delays to laboratory activities resulting in delays in reporting samples.

Please keep enquiries for essential routine results to a minimum and before phoning please check that the results have not already been phoned, faxed, or the reports delivered.

Please have the following information to hand:-
The patient's RTX / NHS number
Date of birth
Ward
Date and time of specimen request
Tests result required.

4.20. Tests Offered and Antibiotic prescribing guidance

For a full list of tests offered, their reference ranges, units reported, turnaround times (TAT) and special collection requirements please see the Laboratory Test Directory (A to Z) on the UHMBT intranet site (FirstPort) at: http://uhmb/clinicalservices/pathology/testdir/Pages/default.aspx

Antibiotic guidance
For advice on antibiotic treatment first for information on the Microguide app , alternatively use hyperlink https://cms.horizonsp.co.uk/viewer/mbht/adult

If this does not provide the answer to your query, contact the Consultant Microbiologist team as outlined in 4.3

4.21. Result validity

Results are scrutinised and authorised by qualified staff or by the Consultant. Comments may be appended and additional investigations undertaken based on the clinical details provided and on previous results.

Whilst internal and external quality assurance programmes are in operation to ensure accuracy and precision of results, occasionally random errors may occur and escape detection. The clinician is often best placed to detect such errors. Therefore if you doubt the validity of a result, it is vital that you contact the relevant laboratory extension at once so that we can investigate and re-test samples whenever possible.

Please remember that certain factors may affect and possibly invalidate some test results, causing potential biological and analytical interference or misleading results. For example, blood transfusion and other intravenous fluids, antibiotics, anticoagulants, drugs, timing of specimen in relation to drug dose, type of tube, incorrect order of draw.
Please remember to give details of recent or current treatment on the request forms.

4.22. Factors which may adversely impact on validity of results

There are many factors that may affect the results obtained from laboratory investigations. Good laboratory practice and the laboratory quality management system minimises those factors that could occur within the laboratory. However the following factors that may contribute to erroneous laboratory results are out of the laboratory's control:

Adverse factors which may affect result	Reducing the risk
Delays in transporting samples to the Microbiology department. Samples should be submitted for investigation as soon as possible following collection to prevent deterioration of cells and changes in the relative quantities of micro-organisms present. The date of sample collections must be included with all requests.	Ensure samples are transferred to pathology as soon as possible after collection to prevent deterioration of cells and changes in the relative quantities of micro-organisms. • Notify microbiology of any urgent samples prior to sending them. • Use the POD system to transport blood cultures to Pathology
Insufficient volume of sample sent to the laboratory	Fill blood culture bottles appropriately • Where possible adhere to fill lines on sample containers (please do not overfill)
Contaminated samples	• Maintain aseptic sampling technique • Use the appropriate screw capped CE leak proof container for collecting samples - Laboratory Test Directory (A to Z) • Ensure sample containers are correctly sealed to prevent contamination • All sample transport containers must be securely closed to prevent sample leakage
Inappropriate transport medium and/or sample container	Use an appropriate plain screw capped CE leak proof specimen container to collect samples- Laboratory Test Directory (A to Z)
Inappropriate sample request	Ensure that the information on the request is correct, include the patient's clinical history – see section 4.8
Inappropriate storage conditions.	If the appropriate sample transport media and

Exposure to significantly raised or reduced room temperatures may affect the results obtained during laboratory investigations	containers are used, Laboratory Test Directory (A toZ)
Sample quality. The result of the laboratory investigation is dependent on the quality of the sample submitted to the laboratory	Ensure there is sufficient material or cells in the sample or on swabs. • Ensure the sample type is appropriate i.e. MSU or EMU • Ensure the sample site is clean • Maintain good aseptic techniques during sample collection
Presence of inhibitory substance in the samples. The presence of antimicrobials or other inhibitory substances in the sample may affect the results of laboratory investigations and the subsequent recovery of microorganisms	Any antimicrobial therapy the patient is on should be recorded in the clinical details section of the request

4.23. Storage of collected specimens prior to transferring to the laboratory

Exposure to significantly raised or reduced room temperatures may affect the results obtained during laboratory investigations. If the appropriate sample transport media or containers are used, samples for microbiological investigation should generally be stored in dry conditions at room temperature and not refrigerated. To ensure that results are clinically useful please store samples as shown in the table below:

Sample type	Storage conditions
Swabs Store between 2-30°C in dry conditions away from heat	Swabs Store between 4-30°C in dry conditions away from heat
Faeces	Store at 4- 8^{o}C
Blood Culture bottles	Store at ambient temperature in dry conditions away from heat and out of direct sunlight. Transfer to the laboratory as soon as possible after collection
Aspirate, washings, pus, tissues, fluids	
Urine: Boric acid container (red cap) – DO NOT under or overfill – adhere to the fill lines on the side of the sample container	Urine samples should be transferred to the laboratory as soon as possible after collection. Sample collected in a boric acid container should maintain the sample quality for up to 96 hours prior to processing at ambient temperature in dry conditions.
Non-boric acid container (white cap)	All urine sample collected in non-boric acid containers should be refrigerated to preserve sample quality.
Respiratory samples	Store at 4-8^{o}C
Samples of blood in blood tubes	
Mycology samples	Store at ambient temperature in dry conditions away from heat and out of direct sunlight. Transfer to the laboratory as soon as possible after collection

4.24. Requesting additional tests on microbiology samples

Requesting additional tests on microbiology samples cannot usually be performed unless they are serum samples. The following serum samples are retained for a minimum of 2 years and appropriate additional investigations may be requested for these serum samples at any time during this period providing there is sufficient volume of sample:

1. Antenatal screens
2. Needle stick
3. Any sample where the submitting clinician has specified the serum to be saved.

Please note: it is often not possible for additional investigations to be added to serum samples which have been sent for blood sciences investigations. If serology is required, an independent sample must be sent.

4.25. Data Protection Act and Patient Confidentiality

Important points to remember at all times when you viewing patient results

- A patient's right to confidentiality is protected by the law.
- You are expected to abide by the Data Protection Act at all times; it is in your contract of employment.
- All employees of the Trust are responsible for maintaining confidentiality. This duty of confidentiality is written into your employment contract. Breach of confidentiality of information gained, either directly or indirectly in the course of duty, is a disciplinary offence that could result in dismissal.
- You are only authorised to access the personal information you need to know in order for you to perform your duties. Gaining access or attempting to gain access to information that you do not need to know to carry out your work is a breach of confidentiality. So is passing information on to someone who is not authorised to receive it. Any personal information given for one purpose must not be used for another purpose without the consent of the individual concerned because that use may breach confidentiality.
- All personal information must be treated as confidential, not just clinical information.
- You should understand your responsibilities to protect the confidential information you collect and use, by following the rules and guidance in the Trust's Policy for Confidentiality.

Protecting Confidentiality

- Never attempt to access information on patients whose care you are not directly involved in, e.g. family members. This is a breach of confidentiality and will be treated as such.
- Smartcards – You must never share smartcard access. Don't leave your card in the PC when you are not using it or share your card and PIN details.
- Security - Always log off your computer or lock the screen using CTRL-ALT-DEL and 'Lock Computer' when not in use.
- Confidentiality Policy - staff are not permitted to take confidential information off site without specific authorisation. This can be enforced via the Disciplinary Policy. You should be particularly careful with small paper items e.g. handover sheets, letters. If items are inadvertently removed to home there are 2 courses of action – secure disposal at home by shredding / burning or return document to work for secure disposal in confidential waste. No confidential waste should EVER be disposed of in general waste.

If in doubt about anything above, please ask your line manager or log a call via Service Desk to

Information Governance or email information.governance@mbhci.nhs.uk

Medico-legal samples
Procedure / Method

- These specimens must be bought to the laboratory by the requesting clinician or representative.
- Reception staff must contact the laboratory, if samples of this type are received.
- Samples must then be received into the hands of a registered Biomedical Scientist (BMS). A 'Chain of Evidence' form [Chain of evidence form M X 022 LF] must be completed by the person delivering the specimen and by the BMS who receives it. The chain of evidence form must accompany the specimen or any consequent isolates through all stages of laboratory analysis.
- Contact Microbiology laboratory if a 'Chain of Evidence' form is required.
- Match the patient identifying data on the specimen with request form. If there is a mismatch or the specimen is leaking the BMS will not accept it
-

Safeguarding Vulnerable Adults, Children and Young People

Microbiology department are fully complicit with the UHMBT safeguarding policies, any microbiological results that may suggest a safeguarding issue will result in concerns being raised.

The Trust's safeguarding Policies can be accessed through the Trust Procedural Documents Library website

4.26. Complaints Procedure

COMMENTS, COMPLIMENTS & COMPLAINTS

The UHMBT Microbiology Service Laboratory is committed to offering high quality specialist microbiology services that meet and respond to the needs of all service users.
If something has gone wrong or you are not happy with any aspect of our services then please do let us know or alternatively if there is something we have done well we would be grateful for your feedback.
Patient compliments and complaints must be directed through the Patient Advice and Liaison Service (PALS)

The PALS Offices are located on each site and are open Monday to Friday, 10 am - 4pm (excluding bank holidays).

Sometimes it may not be possible to speak to a PALS Officer immediately, so you may prefer to contact them on 01539 795497 or email pals@mbht.nhs.uk

Complaints from service users must initially be discussed with a senior member of staff and will be logged to be resolved informally. Formal complaints can be directed through to PALS (as above) or emailed to commentsandcomplaints@mbht.nhs.uk

Departmental issues will be recorded as a CAPA, organizational and or clinical issues will be logged in the Ulysses system.

4.27. Informed Consent

Patients have a fundamental legal right to determine what happens to them. Informed consent to

treatment and care is therefore absolutely necessary and also a matter of common courtesy between health professionals and patients.

The Department of Health has issued a range of guidance documents on consent and these should be consulted for details of the law and good practice requirements on consent. This procedure sets out the standards and procedures in the University Hospitals of Morecambe Bay NHS Trust which aim to ensure that health professionals are able to comply with the guidance.

In the Clinical Laboratory setting tests are undertaken on the understanding that they were ethically obtained after the patient was informed on the nature of the test usually by the requesting doctor.

No samples are stored for any purpose other than to undertake tests requested and for a period of time to confirm results should the need arise. If samples are stored for research purposes, ethical approval must have been sought and documentations are available on file.

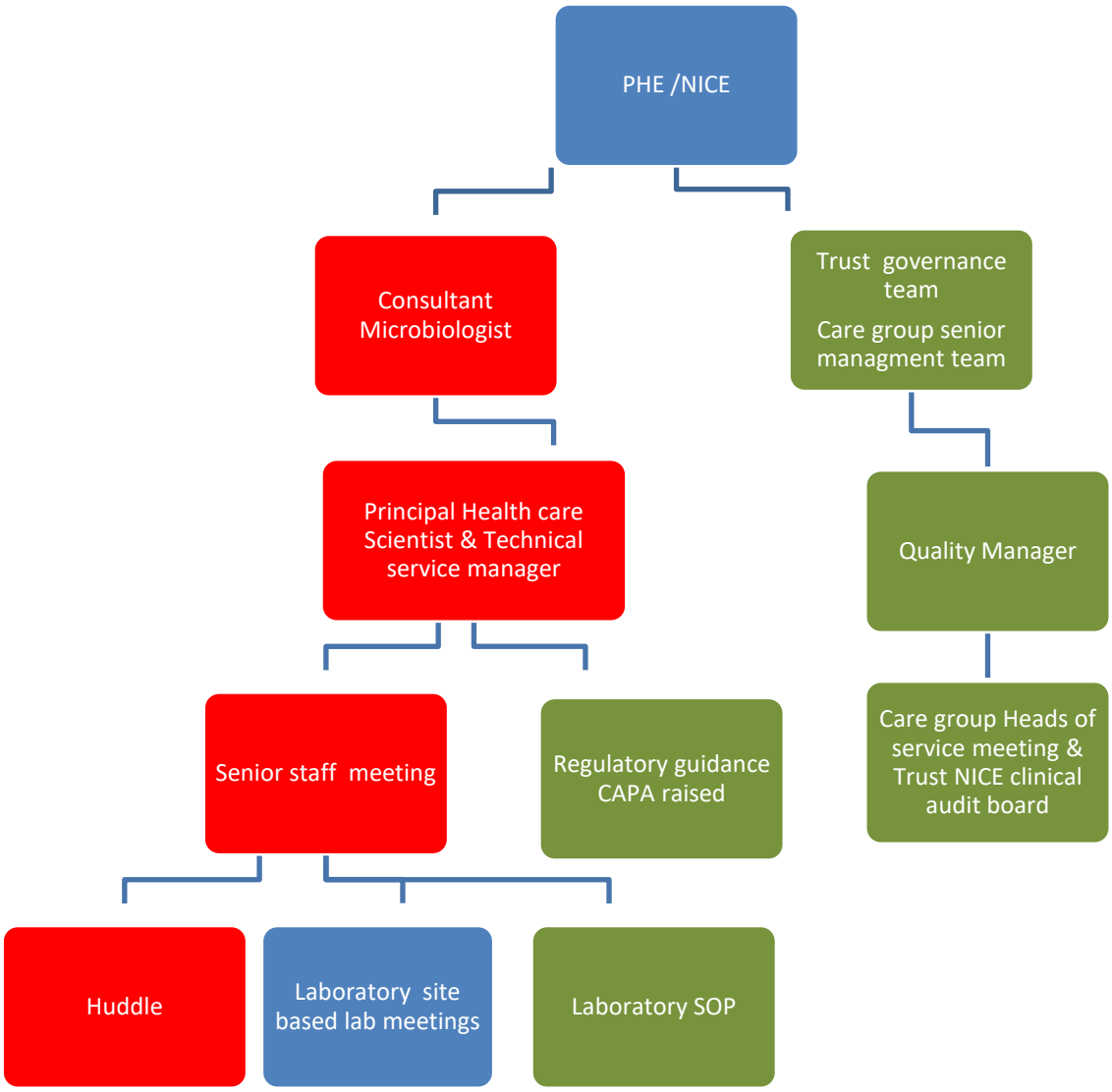
4.28. Information cascade for PHE guidelines change, PHE briefing notes and NICE guidance assessment

Public Health England (PHE) exist to protect and improve the nation's health and wellbeing, and reduce health inequalities. The PHE is an executive agency, sponsored by the Department of Health and Social Care.

The National Institute for Health and Care Excellence (NICE) provides national guidance and advice to improve health and social care

The Clinical Microbiology department receive clinical updates in a variety of formats , some may be urgent, usually in the form of PHE briefing notes, other in the change or development of pathways in the treatment of disease through updates of / or new NICE guidance

The figure below outlines how the information once received is cascaded, the boxes in red indicate how information can rapidly be cascaded to staff and clinicians if necessary this is usually verbal cascade with all staff being informed via the twice daily huddles. The green coloured boxes are the areas which ensure compliance and implementation of the laboratory to these new updates both for the UHMBH Trust in a governance perspective using Ulysses system and from a laboratory quality management system using Q pulse CAPA.



5. Attachments

Number	Title
Appendix 1	Consultant contact out of hours algorithm
Appendix 2	Equality & Diversity Impact Assessment Tool

6. Other relevant / associated documents

Unique Identifier	Title and web links from the document library
Microguide app	https://cms.horizonsp.co.uk/viewer/mbht/adult
PALS	email pals@mbht.nhs.uk
Microbiology Intranet page	http://uhmb/clinicalservices/pathology/bloodsciences/Pages/default.aspx
Information governance	information.governance@mbhci.nhs.uk
Comments and Complaints	commentsandcomplaints@mbht.nhs.uk
Sample stores RLI	RLIPathologystores@mbht.nhs.uk
Sample Stores WGH	WGHPathologystores@mbht.nhs.uk

7. Supporting references / evidence based documents

Number	References
1	International Standards Organisation (2012) *15189: Medical Laboratories – Requirements for quality and competence.* Geneva: ISO.
2	General Medical Council (2013) Good Medical Practice – Domain 3:Communication partnership and teamwork. [Online] Available from: https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-medical-practice/domain-3---communication-partnership-and-teamwork [Accessed 4.7.19]
3	General Medical Council (2012) Leadership and management for all doctors. [Online] Available from: https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors [Accessed: 4.7.19]
4	Royal College of Emergency Medicine (2017) Management of Investigation Results in the Emergency Department. [Online] Available from: https://www.rcem.ac.uk/docs/RCEM%20Guidance/Management%20of%20investigation%20results%20in%20the%20ED%20-%20updated%20Jul%202017.pdf [Accessed 4.7.19]
5	NHS England (2016) Standards for the communication of patient diagnostic test results on discharge from hospital. [Online] Available from: https://www.england.nhs.uk/patientsafety/wp-content/uploads/sites/32/2016/03/discharge-standards-march-16.pdf [Accessed 4.7.19]

8. Definitions/glossary of terms

Abbreviation or Term	Definition
AAFB	Acid Alcohol Fast Bacillus
ASOT	Anti Streptolysin O Titre
BMS	Biomedical Scientist
CAPD	Continuous ambulatory peritoneal dialysis
CRP	C react protein
CSF	Cerebrospinal fluid
CT1 /2	Core training year 1 or 2
DIPC	Director of Infection and Control
ED	Emergency Department
EMU	Early morning Urine
EQA	External Quality Assurance
FGH	Furness General Hospital
FY1	Foundation Year 1
FY2	Foundation Year 2
GP	General Practitioner
HCAI	Healthcare Associated Infection
MERS	Middle East respiratory syndrome
MSU	Midstream Urine
MTB	Mycobacterium tuberculosis
PALS	Patient Advice and Liaison Service
PHE	Public Health England
QCMD	Quality Control for Molecular Diagnostics
RLI	Royal Lancaster Infirmary
SARS	Severe acute respiratory syndrome
SMI	Standards for Microbiology investigation
SpR	Specialist Registrar
UKAS	United Kingdom accreditation service
UKNEQAS	United Kingdom national external quality assessment scheme
UHMBT	University Hospitals of Morecambe Bay NHS Foundation Trust
WCC	White cell count
WGH	Westmoreland General Hospital

9. Consultation with staff and patients

Enter the names and job titles of staff and stakeholders that have contributed to the document

Name	Job Title	Date Consulted
Ms Rachel Banks	Quality Manager	2/7/2019
Mr.Joe Boyce	Technical Services Manager, Haematology	2/7/2019
Consultant Microbiology Team	Consultant Microbiologist	2/7/2019

10. Distribution plan

Dissemination lead:	Principal Healthcare Scientist
Previous document already being used?	No
If yes, in what format and where?	N/A
Proposed action to retrieve out-of-date copies of the document:	N/A
To be disseminated to:	
Document Library	New documents are uploaded to the Document Library.
Proposed actions to communicate the document contents to staff:	Departmental Meetings and Q-Pulse, Consultant forums, antimicrobial resistance meetings

11. Training

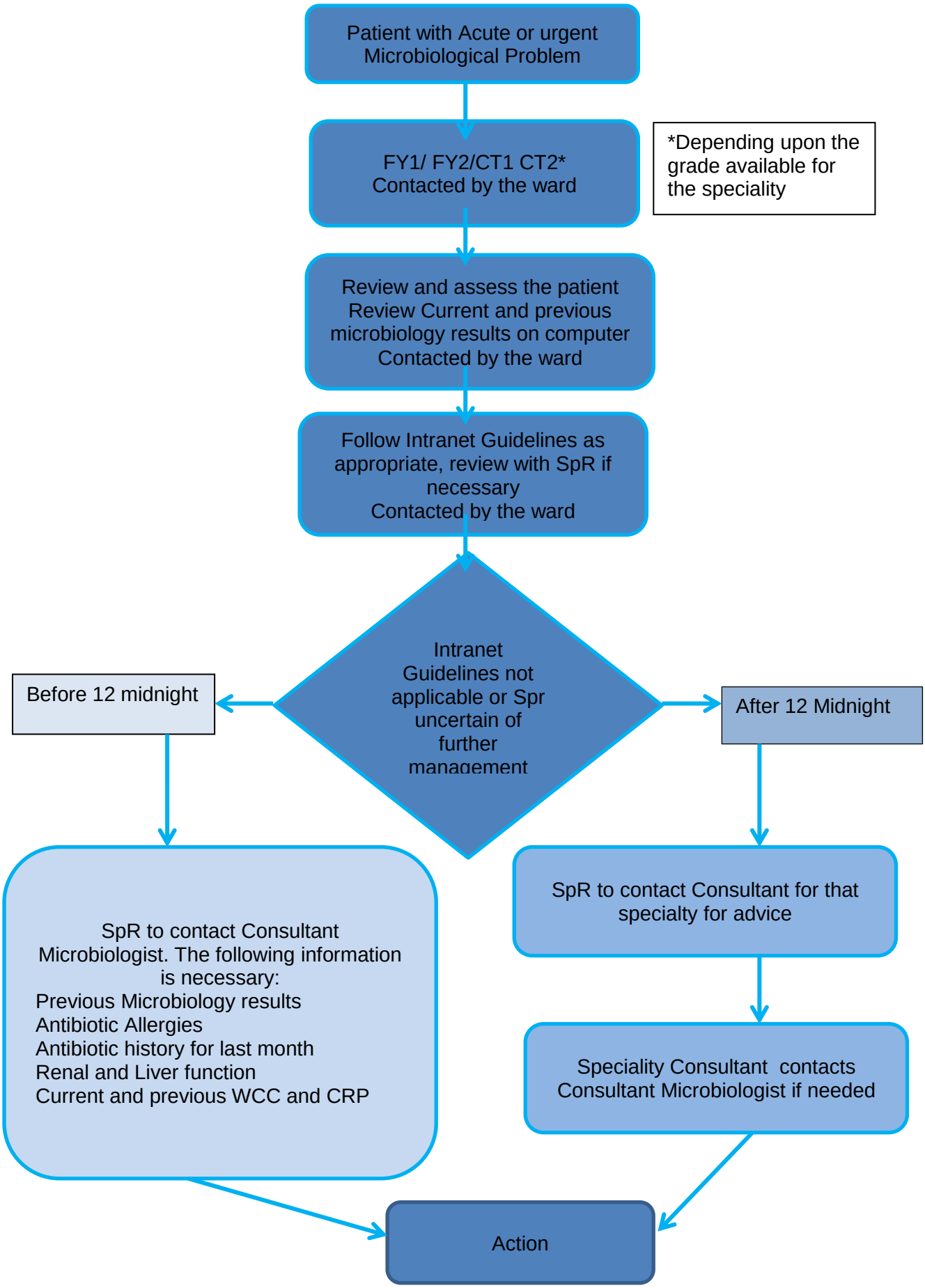
Is training required to be given due to the introduction of this policy? No

Action by	Action required	Implementation Date
N/A		

12. Amendment history

Version No.	Date of Issue	Page/Selection Changed	Description of Change	Review Date
			N/A New document	

Appendix 1: Consultant contact out of hours algorithm



Appendix 2: Equality & Diversity Impact Assessment Tool

University Hospitals of Morecambe Bay NHS Foundation Trust

Equality Impact Assessment Form

Department/Function	Department of Microbiology			
Lead Assessor	Peter Burkhart			
What is being assessed?	Microbiology User manual			
Date of assessment	12/03/2019			
What groups have you consulted with? Include details of involvement in the Equality Impact Assessment process.	Equality of Access to Health Group	☐	Staff Side Colleagues	☐
	Service Users	☐	Staff Inclusion Network/s	☐
	Personal Fair Diverse Champions	☐	Other (Inc. external orgs)	☒
	Please give details: Senior Microbiology team and Consultants			

1) What is the impact on the following equality groups?

Positive:	**Negative:**	**Neutral:**
➢ Advance Equality of opportunity ➢ Foster good relations between different groups ➢ Address explicit needs of Equality target groups	➢ Unlawful discrimination, harassment and victimisation ➢ Failure to address explicit needs of Equality target groups	➢ It is quite acceptable for the assessment to come out as Neutral Impact. ➢ Be sure you can justify this decision with clear reasons and evidence if you are challenged

Equality Groups	**Impact (Positive / Negative / Neutral)**	**Comments** ➢ Provide brief description of the positive / negative impact identified benefits to the equality group. ➢ Is any impact identified intended or legal?
Race (All ethnic groups)	Neutral	None
Disability (Including physical and mental impairments)	Neutral	None
Sex	Neutral	None
Gender reassignment	Neutral	None
Religion or Belief	Neutral	None
Sexual orientation	Neutral	None
Age	Neutral	None
Marriage and Civil Partnership	Neutral	None
Pregnancy and maternity	Neutral	None

Other (e.g. caring, human rights)	Neutral	None

2) In what ways does any impact identified contribute to or hinder promoting equality and diversity across the organisation?	No impact

3) If your assessment identifies a negative impact on Equality Groups you must develop an action plan **to avoid discrimination and ensure opportunities for promoting equality diversity and inclusion are maximised.**

- This should include where it has been identified that further work will be undertaken to further explore the impact on equality groups
- This should be reviewed annually.

Action Plan Summary

Action	**Lead**	**Timescale**

This form will be automatically submitted for review for Policies and Procedures once approved by Policy Group. For all other assessments, please return an electronic copy to EIA.forms@mbht.nhs.uk once completed.