

HANDLING AND DELIVERY OF LABORATORY SPECIMENS POLICY

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DOCUMENT CONTROL

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Intended recipients: All clinical staff whatever their grade, role or status, permanent, temporary, full-time, part-time staff including locums, bank staff, volunteers, trainees and students. This Policy will be available to the general public on the Trust Internet			
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1. INTRODUCTION

- 1.1 A specimen is defined as any bodily substance taken from a person for the purpose of analysis, such as blood or urine. All specimens should be regarded as potentially infectious, and all members of staff involved in collecting, handling and transporting specimens must follow infection control precautions to prevent transmission of infection.
- 1.2 To reduce risks, the number of persons handling specimens should be kept to a minimum. Everyone handling specimens should be trained and should be aware of related infection control policies.
- 1.3 The quality of clinical specimens and the methods of collection, storage and transport can all have a significant impact on the accuracy of laboratory results. It is therefore essential that staff follow correct procedures to maximise the potential for accurate laboratory results.

2. PURPOSE & SCOPE

- 2.1 The purpose of this policy is to provide staff with the necessary information required to prevent transmission of infection to staff and the wider community from laboratory specimens, as well as measures required to ensure that high quality specimens are obtained.
- 2.2 The procedural document applies to all clinical staff including Temporary, Locum, Bank, Agency and Contracted staff.

3. DUTIES AND RESPONSIBILITIES

3.1 **The Trust Board, via the Chief Executive** will:

- Ensure there are effective and adequately resourced arrangements for the collection and transportation of specimens within the Trust.
- Identify a board level lead for Infection Prevention and Control.
- Ensuring that the role and functions of the Director of Infection Prevention and Control are satisfactorily fulfilled by appropriate and competent persons as defined by DH, (2008, revised 2011/2015).

3.2 **Director of Infection Prevention and Control (DIPC)** will:

- Oversee the local control of and the implementation of the Handling and Delivery of Laboratory Specimens Policy.

3.3 **The Infection Prevention and Control Implementation Group** will:

- Ensure that the procedures for the collection, handling and delivery of laboratory specimens are continually reviewed and improved within the Trust.

3.4 The Infection Prevention and Control Team will:

- Provide training and advice as required on the collection and handling of specimens.
- Investigate and action any lessons learned following untoward incidents relating to collection and/or handling of specimens.

3.5 Ward and Team Managers/Hospital Matrons/District and Community based Nursing Staff will:

- Ensure that a Datix report is raised for any untoward incident relating to the collection or handling of laboratory specimens.
- Ensure staff are aware of and adhere to the Handling and Delivery of Laboratory Specimens Policy.
- Ensure that staff are released to attend relevant Training and for recording attendance at training in electronic training records. All non-attendance at training will be followed up by managers.

3.6 All Clinical staff will:

- Adhere to the policies, guidelines and procedures pertaining to the Handling and Delivery of Laboratory Specimens which provide a framework for safe and best practice.
- Book themselves onto Induction Training and maintain mandatory training as detailed in the Training Matrix.

3.7 The Learning and Development Department will:

- Enter all data relating to Mandatory and Non-Mandatory training attendance onto the Learning Zone system and report non-attendance to Ward and Team Managers.

4. STAFF RESPONSIBILITIES

4.1 Everyone involved in collecting, handling and transporting specimens must be educated about standard infection control precautions and trained in:

- Hand hygiene
- The use of personal protective clothing
- The safe use and disposal of sharps

4.2 In addition, staff must be familiar with the infection prevention and control policies for: handling / disposal of clinical waste, blood / body fluid spillage, and prevention and management of exposure to blood-borne viruses.

4.3 Patients should be given advice on the collection, storage and transportation of specimens, where appropriate.

5. EXPLANATION OF TERMS USED

- 5.1 Specimen – a sample of tissue or bodily fluid collected by healthcare staff.
- 5.2 Laboratory – A clinical laboratory is where tests are done on clinical specimens in order to obtain information about the health of a patient. The Trust uses the laboratories of Southwest Pathology Service, in Taunton.
- 5.3 Handling – All parts of the process from the point of collection to delivery at the laboratory.

6. PATIENT CONSENT

- 6.1 Clinical staff must ensure that all tests are fully explained to patients so that they are able to give fully informed consent. There must be clear local systems for informing patients of test results. At the time of the test, the patient should be advised of how long they will have to wait for the result and the method by which they will be informed of it, e.g. during a follow-up appointment or by post. Staff must ensure the patient giving their consent fully understands; this may necessitate the use of an interpreter to ensure this is the case.

7. PRINCIPLES OF SPECIMEN COLLECTION

- 7.1 The clinician or person taking any specimens must ensure that the following principles are followed:
- effective hand washing is performed before and after collection of the specimen in accordance with the Hand Decontamination Policy;
 - appropriate protective clothing is worn when collecting the specimen i.e. non-sterile gloves, aprons and, where splashing is possible or expected, goggles or visor;
 - measures are taken to prevent contamination of the sample;
 - the specimen taking is at the correct time;
 - the correct specimen container is used;
 - the specimen container is tightly sealed to prevent leakage;
 - a vacuum blood collection system should be used when performing phlebotomy;
 - the outside of the container is free from contamination with body fluid
 - the sample is appropriately labeled with patients name, date of birth, patient number as well as the date and time that the specimen was obtained;
 - the appropriate request form is completed with details of the patient's relevant medical history, investigation required and dates of any antibiotic treatment received. Please ensure that the correct name is on the specimen container and the request slip;
 - the specimen container must be placed in an approved specimen bag and sealed, with the request form in the separate pouch which is attached;
 - the specimen is stored correctly and transported to the laboratory promptly;
 - the patient's confidentiality is maintained at all times;

- 7.2 All specimen containers should be checked for exterior contamination and disinfected according to the Spillage of Blood and Body Fluid Policy if necessary.

8. MICROBIOLOGICAL SPECIMENS

- 8.1 Microbiology results are crucial for identification of appropriate antibiotic therapy and application of infection control measures.
- 8.2 To ensure that accurate microscopy, culture and sensitivity results are obtained; steps must be taken to avoid contamination of the specimen with the patient's or clinician's own normal flora.
- 8.3 Antibiotic therapy may affect the specimen and inhibit bacterial growth in the laboratory cultures, and may produce misleading results. If possible the sample for microbiological investigation needs to be collected prior to the patient commencing antibiotic therapy. However, if collected during antibiotic therapy, the specimen should ideally be collected immediately before a dose is administered and details of the antibiotic therapy should be added to the appropriate section of the request form.

9. HIGH RISK SPECIMENS

- 9.1 All clinical specimens must be regarded as potentially infectious.
- 9.2 Specimens known or suspected to contain high-risk pathogens such as blood-borne viruses must be marked using a biohazard sticker on both the specimen container and the request form. These specimens must be double bagged in designated specimen bags.

10. STORAGE OF SPECIMENS

- 10.1 For accurate results to be obtained, the laboratory should receive specimens as soon as possible.
- 10.2 If for microbiological investigation, specimens should be sent to the laboratory without delay (ideally urine and sputum specimens should be examined within 2 hours of collection, and stool samples within 12 hours). However, where this is not possible specimens must be stored within a designated specimen fridge (but only for a maximum of 48 hours, at 4-8°C) and urine collected in sterile boric acid containers (red top). These measures will help prevent bacteria and contaminants from multiplying and giving misleading results. Under no circumstances should the ward drug or food fridge be used to store specimens.

However, it must be noted that samples taken for blood culture must not be refrigerated, but must be transported to the laboratory as soon as possible. Samples obtained for non-microbiological investigation also do not need to be refrigerated.

10.3 If any clinical specimens are to be stored in a refrigerator, it is essential that:

- there is a refrigerator for the purpose of specimen storage only
- the temperature in the refrigerator is kept between 4°-8°C (minimum and maximum temperature to be checked and recorded daily)
- the specimen refrigerator is not accessible to the public
- the specimen refrigerator is cleaned on a weekly basis, defrosted regularly, and cleaned and disinfected after any spillage or leakage.

10.4 A dedicated specimen fridge is available on all Trust inpatient sites and there must be local systems in place to ensure that the ward holding the fridge is aware of any specimens placed within it to ensure that they are made available for collection by the next courier / Trust transport service.

11. TRANSPORTATION OF CLINICAL SPECIMENS

11.1 Under the Health and Safety at Work Act (1974) and Carriage of Dangerous Goods Act (2013) all staff have an obligation to protect themselves and others, e.g. the public, from inadvertent contamination from hazardous substances.

11.2 All staff must therefore be aware of how to deal safely with clinical specimens and how to avoid any spillage or leakage of body fluids.

11.3 All specimens must be collected by porter / transport staff in a secure, robust, leak proof container with a biohazard label. These containers must be cleaned and disinfected weekly and after any visible spillage.

11.4 Containers designated for the transport of clinical specimens must never be used for the transportation of any other items.

11.5 Transportation of specimens by vehicle is always by a courier service or Trust transport to the appropriate laboratory.

12. TRAINING REQUIREMENTS

12.1 The Trust will ensure that all necessary staff (qualified, unqualified, other clinical staff, bank and agency staff) are appropriately trained in line with the organisation's training Matrix .

- Trust Induction Training
- Infection Prevention and Control Training

13. EQUALITY IMPACT ASSESSMENT

13.1 All relevant persons are required to comply with this document and must demonstrate sensitivity and competence in relation to the nine protected characteristics as defined by the Equality Act 2010. In addition, the Trust has identified Learning Disabilities as an additional tenth protected characteristic. If you, or any other groups, believe you are disadvantaged by

anything contained in this document please contact the Equality and Diversity Lead who will then actively respond to the enquiry.

14. MONITORING COMPLIANCE AND EFFECTIVENESS

- 14.1 Any audits, incidents, feedback or complaints will be monitored by the Infection Prevention and Control Assurance Group. Any good practice and learning points will be fed back to the appropriate Best Practice Groups.
- 14.2 The Infection Prevention and Control Assurance Group will monitor procedural document compliance and effectiveness where they relate to clinical areas.
- 14.3 The Infection Prevention and Control Assurance Group reports to the Clinical Governance Group every quarter.

15. COUNTER FRAUD

- 15.1 The Trust is committed to the NHS Protect Counter Fraud Policy – to reduce fraud in the NHS to a minimum, keep it at that level and put funds stolen by fraud back into patient care. Therefore, consideration has been given to the inclusion of guidance with regard to the potential for fraud and corruption to occur and what action should be taken in such circumstances during the development of this procedural document.

16. RELEVANT CARE QUALITY COMMISSION (CQC) REGISTRATION STANDARDS

- 16.1 Under the **Health and Social Care Act 2008 (Regulated Activities) Regulations 2014 (Part 3)**, the **fundamental standards** which inform this procedural document, are set out in the following regulations:

Regulation 9:	Person-centred care
Regulation 10:	Dignity and respect
Regulation 11:	Need for consent
Regulation 12:	Safe care and treatment
Regulation 13:	Safeguarding service users from abuse and improper treatment
Regulation 14:	Meeting nutritional and hydration needs
Regulation 15:	Premises and equipment
Regulation 16:	Receiving and acting on complaints
Regulation 17:	Good governance
Regulation 18:	Staffing
Regulation 19:	Fit and proper persons employed
Regulation 20:	Duty of candour
Regulation 20A:	Requirement as to display of performance assessments.

- 16.2 Under the **CQC (Registration) Regulations 2009 (Part 4)** the requirements which inform this procedural document are set out in the following regulations:

Regulation 11:	General
Regulation 12:	Statement of purpose
Regulation 16:	Notification of death of service user
Regulation 18:	Notification of other incidents

16.3 Detailed guidance on meeting the requirements can be found at <http://www.cgc.org.uk/sites/default/files/20150311%20Guidance%20for%20providers%20on%20meeting%20the%20regulations%20FINAL%20FOR%20PUBLISHING.pdf>

17. REFERENCES, ACKNOWLEDGEMENTS AND ASSOCIATED DOCUMENTS

17.1 References

Department of Health (2008) The Health and Social Care Act 2008, Code of Practice for health and social care on the prevention and control of infections and related guidance. (revised 2011)

Health and Safety at Work etc Act, (1974)

Management of Health and Safety at Work Regulations, (1999, revised 2006)

Control of Substances Hazardous to Health Regulations (COSHH), (2002)

DH Transport of Infectious Substances – best practice guidance for microbiology laboratories (2007)

DFT, Transport of Infectious Substances (2007, revised 2011)

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations, (2004 updated 2015)

Health and Safety Commission (1986) Safety in health service laboratories: the labelling, transport and reception of specimens

17.2 Cross reference to other procedural documents

Infection Prevention and Control Policy

Hand Hygiene Policy

Healthcare (Clinical) Waste Policy

Infection Prevention and Control Standard Precautions Policy

Outbreak of Infection Policy

Health and Safety Policy.

Risk management Policy

Risk Management Strategy

Untoward Event Reporting Policy and Procedure

All current policies and procedures are accessible in the policy section of the public website (on the home page, click on 'Policies and Procedures'). Trust Guidance is accessible to staff on the Trust Intranet.

18. APPENDICES

18.1 For the avoidance of any doubt the appendices in this policy are to constitute part of the body of this policy and shall be treated as such.

Appendix A – Swabbing and Specimens Guidance

Swabbing and Specimens Guidance

Nose Swab

This swab is taken as part of an MRSA screen.

Procedure

Gather equipment -
- Gloves
- Apron
- Blue topped Swab

Obtain informed consent or ensure that the patient is eligible following a capacity and best interest's assessment

Wash hands and apply apron and gloves

Check expiry date on swab packaging and remove swab

Moisten the swab using sterile water or the transport medium (taking care not to contaminate the swab or media)

Insert swab into the anterior nare (nostril)

Sweep upwards towards the top of the nare so that you are effectively swabbing the 'front/outside' aspect of the nostril, not the septum and choana (posterior nare)

Without contaminating the swab place into the culture medium

Provide the patient with a tissue if required

Dispose of waste

Remove apron and gloves and wash hands.

NOTE:

Nose or throat swabs (green topped) if requested for influenza should be done with guidance and instruction from Infection Prevention and control team and Microbiology

Wound swab

These swabs are indicated if wounds appear infected, inflammation, swelling, heat, pain, pus, necrosis, slough, reduced healing may all indicate that clinical infection is present. The patient may feel generally unwell or have a raised temperature. The same procedure would be used for swabbing the site of an indwelling device e.g. PEG or cannula if signs of clinical infection are present or for an MRSA screen.

Procedure

Gather equipment – Gloves (sterile if touching wound)

- Apron
- Blue topped swab

Wash hands and apply aprons and gloves

Clean the wound using normal sterile

Debride any superficial necrotic tissue and reclean using normal saline

*Check expiry date on swab packaging and remove swab

Swab the centre of the wound over clean exposed granulation tissue, if possible avoiding, where able slough or pus, for 30 secs, roll the swab gently to ensure the swab tip is covered

If the wound or area is dry, moisten the swab using sterile water or the transport medium (taking care not to contaminate the swab or media)

Without contaminating the swab place into the culture medium

*Dress wound

Dispose of waste

Remove apron and gloves and wash hands.

* consider changing gloves at these points

Urine Specimens

These specimens are indicated when there are clinical symptoms and signs of urine infection, e.g. Dysuria, frequency, nocturia. The patient may also feel generally unwell, have a raised temperature, abdominal, loin, lower back or suprapubic pain. Occasionally urinary infection may be associated with new onset confusion, or a sudden worsening of confusion. **Positive dipstix, without compatible symptoms/signs is NOT a good reason to send a urine culture.** Patients with indwelling urinary catheters will need a catheter specimen of urine sent as part of an MRSA screen.

Catheter specimen Urine (CSU) Procedure

A catheter specimen should only be obtained where possible via the needle –free sampling port which is integral to all urine drainage bags available in the UK, samples should NEVER be taken from the bag (tap) and the drainage system should NEVER be disconnected for the sole purpose of obtaining a specimen.

Gather equipment - Gloves
- Apron

- Sterets x 2
- Sterile syringe
- Safe sharp Needle (if sampling port is not needle free)
- Sharps box (if using a safe sharp needle)
- Red topped specimen pot
- Clamp (if required)

Wash hands and apply aprons and gloves

If no urine is visible in the tubing clamp the tubing a few centimetres below the sampling port and wait until sufficient urine collects. The catheter itself should never be clamped. If less than 10mls of urine can be collected, take advice from the laboratory at MPH as to appropriate specimen pot/container

Clean the sampling port with a steret and allow to dry

Insert the syringe or safe sharp needle into the sampling port; if using a safe sharp needle ensure that it is pointed at a 45 degree angle towards the plastic guard at the rear of the port

Without contaminating the sample transfer to the appropriate container

Dispose of any sharps immediately into a sharps bin

Clean the port with a steret

Remove apron and gloves and wash hands.

Midstream Urine Specimen (MSU) Procedure

- Gather equipment -
- Gloves
 - Apron
 - Sterile collection pot
 - Specimen pot

Instruct patient to wash hands and attend to genital hygiene

The patient should be instructed to hold the collection pot by the outside wherever possible and to avoid touching the sterile area inside

Instruct the patient to commence urinating but to direct the first part of the void down the toilet, collecting instead, the urine voided once a good flow has been established, in the sterile collection pot

Instruct the patient to complete the void down the toilet

Instruct the patient to wash their hands
Wash your hands and apply apron and gloves

Without contaminating the collection or specimen pots transfer the specimen for transportation. If less than 10mls of urine can be collected, take advice from the South West laboratory as to appropriate specimen pot/container.

Dispose of waste

Remove apron and gloves and wash hands.

If the patient is unable to carry out this procedure for themselves, a member of staff should attempt to catch a specimen, preferably mid stream, on their behalf. For men a sheath/convene could be used and a specimen obtained from the catheter bag tubing as described for a catheter specimen.

If the sample is contaminated with stools, then dispose and repeat procedure

Stool Specimen

A stool specimen is indicated whenever a patient presents with symptoms of diarrhoea that are not attributed to their underlying pathology or medication (with the exception of antibiotic associated diarrhoea). It is also requested in cases where staff are absent from work with symptoms of diarrhoea.

Procedure

Gather equipment -

- Gloves
- Apron
- Bed pan liner or similar receptacle
- Specimen pot

Wash hands and apply apron and gloves

Provide bed pan liner or other similar receptacle each time that the patient uses the toilet until a suitable specimen is obtained

When the patient has produced the sample, examine the stool for consistency, colour, blood or any other abnormality. Consider whether a specimen is suitable, there must be no contamination from urine

Without contaminating the specimen pot, transfer the specimen for transportation. Only liquid faeces will be tested by the laboratory so ensure that only this is collected and fill the pot to approximately one third.

Dispose of waste

Remove gloves and apron and wash hands

NB. Stool specimens are also requested when gastrointestinal bleeds are suspected; these are known as FOB's (Faecal Occult Blood specimens). Three FOB's are generally requested for diagnosis and formed stools are acceptable for this test, the procedure described above should be followed for collecting FOB's. FOB's should not routinely be collected whilst a woman is menstruating.

Sputum Specimens

A sputum specimen is indicated when a patient has symptoms of chest infection, shortness of breath and cough, usually productive with thick green or yellow sputum. The patient may also feel generally unwell with a raised temperature and complain of chest pains. In severe cases the patient may be confused due to hypoxia or cyanosed.

Procedure

Gather equipment - Gloves
- Apron
- Specimen pot

Wash hands and apply apron and gloves

Ensure patient is sat upright, support with pillows if required

Instruct the patient to breathe deeply, hold their breathe for a moment then cough

Collect expectorated sputum in specimen pot

Remove gloves and apron and wash hands

If the patient has difficulty expectorating sputum, it may be easier to obtain a specimen first thing in the morning or following nebulised medication. Assistance from a physiotherapist may be required in some cases.

Labelling and Documentation

All specimens should be labelled with the patient's name, DOB, hospital number (if known), Ward (if inpatient), date, time and type of specimen. Other information such as GP or address is sometimes requested.

The accompanying request form should also have all of the above including the GP and address filled in as standard. Any relevant antibiotics should be listed including the date on which they started should be noted within the relevant clinical history box. The reason for a specimen being sent should always be completed including any relevant dates, time scales etc. The correct test should be requested, e.g. MRSA screen, MC&S (microbiology, culture and sensitivity) and/or virology (? Viral gastroenteritis)

All specimens should be recorded in the patient's notes.