Leicestershire Partnership NHS Trust

The Collection, Handling and Transport of Specimens Policy

This policy describes the key processes and procedures to be followed with regards to the collection, handling and transport of specimens by staff.

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Target audience:	ALL LPT Staff	
Type of Policy:	Clinical √	Non-Clinical
Which Relevant CQC Fundamental Standards?		

Contents

Version Control and Summary of Changes

Version number	Date	Comments (Description change and amendments)
Version 1		New guideline: Infection control guideline for the collection, handling and transport of specimens in community health services, inpatient facilities and primary care
Version 2	November 09	Review of guideline
Version 3	December 09	Amendments following consultation process revisions to incorporate requirements of NHSLA standards
Version 4	October 2010	Amendments to policy following comments from specialist advisors
Version 5	August 2011	Harmonized in line with LCRCHS, LCCHS, LPT (Historical organisations)
Version 6	October 2014	Review of policy
Version 7	May 2015	Review of policy against current legislation
Version 8	April 2018	Review policy and updated references and guidance. Amended and update to contribution list.
Version 9	February 2022	Policy reviewed, references and contribution list updated

For further information contact: Infection Prevention and Control Team (0116 295 1668)

Definitions that apply to this policy

Aseptic non touch technique (ANTT)	The standard intravenous technique used for the accessing of all venous access devices (VADs) regardless of whether they are peripherally or centrally inserted (Rowley et al 2010, Loveday et al 2014).
Blood Borne Virus (BBV)	A blood borne disease is a disease that can be spread through contamination by blood and other body fluids. Blood borne pathogens are microorganisms such as viruses or bacteria. The most common examples are HIV, hepatitis B and viral hemorrhagic fevers.
Clinical Specimen	A clinical specimen includes any substance either solid or liquid obtained from a patient for the purpose of analysis.
Colonised	Multiplication of a micro-organism within an individual (host) without causing cellular damage. A colonized host can serve as a source of infection.
Infection	The invasion and multiplication of microorganisms such as bacteria, viruses, fungi and parasites that present within the body and cause an inflammatory response.
Non-pathogenic	Biological agent that does not cause disease of illness to its host.
Pathogenic	A microorganism such as bacteria, virus, fungi and parasites that causes disease.
Personal Protective Equipment (PPE)	PPE is clothing or equipment that will protect the user against health or safety hazards at work.
Sexually Transmitted Infection (STI)	Infection transferred from one person to another via sexual contact.
Sharps	Any item which could puncture the skin and thus permit the entry of the bacteria and viruses into the body, i.e., used needles, scalpel blades.
Tuberculosis (TB)	An infectious disease usually caused by the bacterium Mycobacterium tuberculosis. Usually affects the lungs, but it can also affect other parts of the body, such as the brain, the kidneys, or the spine.
Venepuncture	The process of obtaining intravenous access for the purpose of intravenous therapy or obtaining a sample of venous blood.

1.0 Roles and responsibilities

1.1 The board of directors is responsible for formally reviewing the systems and processes which ensures handling and transportation of specimens are compliant across the trust.

1.2 The chief executive is responsible for the infection prevention and control within the trust. This encompasses ensuring provision of training compliance with good infection prevention and control practice, including handling and transportation of specimens.

1.3 The director of infection prevention and control (DIPC) has delegated responsibility for ensuring that effective systems and processes are in place to maintain compliance across the trust. Including processes for audit and training, and to minimize the risk of infection to patients, carers, visitors, and staff.

1.4 Operational and service leads, business managers, clinical operational managers and heads of service have responsibility for:

Ensuring systems are in place to monitor staff attendance at mandatory training and to act on non-attendance at training with teams/ departments.

- They must ensure adequate resources are available for staff to comply with this policy.
- Support and promote the principles for handling and transportation of specimens.
- They also ensure implementation of the IPC audit programme with the support of the IPC link nurses and identify and take initial action around areas of non-compliance.

1.5 All line managers are responsible for monitoring individual attendance at mandatory training and following up non-attendees; for ensuring clinical staff have access to the handling and transportation of specimen's policy: promoting the principles and ensuring monthly audits are performed and non-compliance acted upon and documented in an action plan.

1.6 Trust staff should ensure that handling and transportation of specimens are in accordance with this policy. Staff also have a responsibility to raise awareness of correct practice and principles with colleagues, services users, carers, and visitors.

1.7 Trust staff must report any near-miss, accidents, or incidents via the Trust incident reporting system.

1.8 The infection prevention and control committee are responsible for final ratification and dissemination of the collection handling and transportation of specimen's policy.

2.0 Purpose

The aim of the policy is to inform all Leicestershire Partnership Trust (LPT) staff on how to collect handle and transport specimens in accordance with the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2011, the Control of Substances Hazardous to Health Regulations 2002 (As amended) (COSHH). The Health and Safety at Work Act (1974) along with, the Health and Social Care Act 2008: Code of Practice on the Prevention and Control of Infections and Related Guidance (2015). To provide all staff employed by LPT with clear and robust process for the collection, handling and transporting of specimens.

To provide all staff employed by LPT with the necessary information on collection, handling and transporting of specimens to reduce the risk posed by cross contamination to staff, patients, visitors and the wider public.

The policy applies to all staff, permanent employees, staff employed on the bank, agency staff, those staff who work across trust sites and any honouree contract staff.

3.0 Summary of policy

To give clear guidance to all LPT staff responsible for obtaining and transporting specimens within inpatient facilities, community hospitals, community healthcare settings and patients own home. This will facilitate high quality specimens in order to achieve prompt microbiological diagnosis and ensure the patient is in receipt of the appropriate treatment and reducing inappropriate prescribing of antimicrobial drugs.

The policy identifies the requirements for the safe transport of specimens in line with the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2011. It also supports the reduction and minimisation of any potential infection or harm caused to staff, patients, visitors and the wider public during collection, handling and transporting specimens.

4.0 Introduction

A clinical specimen can be defined as any bodily substance, solid or liquid, that is obtained for the purpose of analysis, examples include blood, sputum, pus, urine, faeces, and skin tissue.

All specimens are potentially infectious, and all staff involved in collecting, handling, and transporting specimens must follow infection control precautions to reduce the risk of preventing transmission of infection and be aware of related infection prevention and control policies, examples Personal Protective Equipment (PPE) policy and Hand Hygiene policy.

Prompt, accurate laboratory reports are possible only if the specimen is properly collected, with the accompanied request form detailing patient information, stored, and transported safely. It is therefore essential that staff follow the correct processes (appendix 1)

Staff handling specimens are responsible and have a duty to safely collect, handle and transport specimens outline under the Health and Safety at Work Act (1974) and COSHH Regulations 2002 (As amended)
If specimens are not stored and transported safely, they pose a risk of infection to staff, patients and the wider public. Containers used for carrying and transporting specimens to pathology laboratories must be secure and conform to the relevant regulations set out in the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2011.

5.0 The collection, handling, and transport of specimens

Specimens should only be taken when there are clinical signs of infection, or a specific clinical need is identified.

5.1 Communication regarding specimen collection

It is the responsibility of the clinician to ensure that specimens are correctly obtained, placed in the correct container, labelled, and transported safely. The clinician is also accountable for staff to which this procedure is delegated ensuring that they have the knowledge of the process required.

If a patient is required to obtain their own specimens, it is important that they are given a full explanation of the process and a rationale (including the importance of hand washing prior to and on completion of the task) this information should be documented within LPT record systems for the patient. It is the responsibility of staff to ensure that all tests are explained fully so that the patient can give informed consent. Refer to LPT Consent to Examination or Treatment Policy.

It is essential that confidentiality be maintained at all times to ensure sensitive information is not revealed unnecessarily on request forms. This is of particular importance with blood borne viruses (BBV's) and sexually transmitted infections (STIs) as they can be deemed sensitive in nature.

5.2 Information required on specimen container and form

Poorly completed specimen request forms and poorly labelled specimen containers are likely to result in non-processing and be discarded by the laboratory. This will delay the diagnosis and the treatment for the patient.

Specimen containers must be clearly labelled with:

- Patient's full name Forename (s) & Surname
- Hospital 'S' number (or NHS number)
- Date of Birth
- Date and time of collection**.**

The form must include the following:

- Patient's full name Forename (s) & Surname
- Date of Birth
- Hospital 'S' number (or NHS Number)
- Sender's name, address, and contact number

(Identification)

- Geographical location of where specimen taken; so that the results can be sent back.
- Specimen type and site; different areas of the body are resident to different body flora.
- Date and time specimen taken; some organisms will deteriorate and become difficult to single out.
- Hazardous group 3 or 4 organisms (see section 5.4)
- Relevant clinical information: this is important and essential and will help the laboratory staff and the microbiologist to interpret results and lead to a more effective treatment.

Examples of clinical information

- Current/recent medication, including antibiotics, steroids or other immune-suppressive drugs, protein pump inhibitors, etc.
- Clinical signs and symptoms/investigation required
- Recent history of foreign travel

The expiry date of all primary specimen containers and transport media must be checked prior to use to ensure they are in-date.

Bottles/containers that have bar code labels attached, these should not be covered and easily accessible for scanning at the laboratory.

5.3 Collection of specimens

Always follow standard infection prevention and control precautions when handling specimens. It is essential to reduce the risk of contamination; this includes ensuring appropriate PPE is used, hand hygiene procedures adhered to, and all waste, including sharps waste is disposed of safely and correctly.

Staff need to be aware of the Asepsis and Aseptic Non-Touch Technique (ANTT) when collecting specimen such as blood cultures, wound swabs, and samples from catheter systems.

Ideally, when possible, always take the specimen prior to commencing treatment such as antibiotics or using antiseptics. If the patient is clinically unwell, deteriorating rapidly, sepsis or vulnerable, treatment must not be delayed obtaining a specimen. In this situation, a specimen should be taken as soon as possible.

MRSA swabs: antibacterial washes should not be used prior to obtaining a swab as may give a false negative result.

When collecting specimens collect fresh materials which are as free from extraneous contamination as possible, take material only from the site of infection, for example to sample an ulcer site for signs of infection, remove slough first and then take the specimen from the site. This will ensure appropriate material for analysis and limit the opportunity for incorrect results, i.e., a false negative.

See appendix 2 for samples of common specimens that maybe requested.

5.4 High-risk “BIOHAZARD” specimens

Additional precautions need to be taken when a specimen is known or suspected to contain Hazard group 3 or 4 organisms. They require handling and processing differently in the laboratory to protect laboratory staff and reduce the risk of cross infection.

Hazard Group 3	**Hazard Group 4**
Hepatitis B & C Virus	Viral Haemorrhagic Fever (Lassa and Ebola virus)
Chlamydia psittaci	

SARS virus	
Tuberculosis (TB)	
Human Immunodeficiency Virus (HIV)	*Note patients with viral hemorrhagic fever should not have specimens taken in the community. These patients will be managed in specialist facilities.
Escherichia coli 0 157 (E- coli 0157)	
Dysentery	
This is not an exhaustive list – If in doubt advice should be sought from microbiology or the infection prevention and control team. Advisory Committee on Dangerous Pathogens (2013) Approved List of Biological Agents. Health and Safety Executive: London	

These specimens must be labelled “HIGH RISK” or “DANGER OF INFECTION” and placed in biohazard bags. Bottles must be transported in a sealed section of a biohazard bag. The form must contain complete clinical information including high-risk status and placed in the outer pocket of the bag or applied to the adhesive strip on the bag and folded. Both the sample and form must be labelled “High Risk or Danger of Infection” label.

Where possible use the blue Blood Culture Collection Pack. This contains all the equipment required to collect blood cultures including a safety blood culture device for inoculating the culture bottles from a peripheral vein. Make sure the ‘blue’ information sticker is completed and placed in the patient’s records or document. If the blue bag blood culture collection pack is not used (e.g., in paediatrics or specimens collected from lines):

- Ensure the collection site and blood culture bottle tops are prepared appropriately.
- Following inoculation place the blood culture bottles into a clear specimen sample bag, attach completed request form. Document in the patient’s notes the name of the person taking the blood culture and the date and time.

Refer to the Venepuncture Policy for full procedural guidance for taking blood cultures.

5.5 Storage of specimens

Specimens can deteriorate with time; therefore, it is essential that they are correctly stored and transported in a timely manner to minimise any deterioration and should be transported to the laboratory as quickly as possible. If unsure about storage and/or time, please contact microbiology for advice.

Any fridge used for the storage of specimens must not be used for the storage of any drugs, including vaccines and food items. The fridge should have a minimum/ maximum thermometer, monitored daily, cleaned, and serviced as per manufactures instructions. Refer to the cleaning and decontamination of equipment, medical devices, and the environment (including the management of blood and bodily fluid spillages) policy.

Blood cultures must not be stored or refrigerated, send to the laboratory as soon as possible within a maximum of 4 hours (UK Standards for Microbiology Investigations 2014).

Sputum specimens must also be sent to the laboratory as soon possible, as respiratory pathogens will not survive for prolonged periods.

Do not store specimens, over the weekend or bank holidays. If necessary, send specimens to the laboratory using the approved taxi company for your area.

5.6 Transport of specimens

Under the Health and Safety at Work Act 1974, all staff have a responsibility to protect themselves and others including, patients and the wider public, from inadvertent contamination from hazardous substances.

All specimens must be placed in a designated secure collection area until ready for collection.

All specimens must be placed in a specimen bag with the required form in a separate pocket or attached to the adhesive strip of the bag and folded. If sample is of 'high risk' status, ensure specimen is placed in biohazard bag.

Appropriate transportation packaging should be used in line with the Carriage of Dangerous Goods and use of Transportable Pressure Equipment (amendments) Regulations (2011).

Specimens must be transported to the laboratory in transport containers, which comply with UN3373 regulations. (United Nations Economic Commission for Europe, 2017) requirements.

LPT staff who are expected to transport specimens in their own vehicle to healthcare premises must be provided with a secure, leak proof, robust container which complies with UN3373 regulations, such as a 'Daniel's red transport box or DGP Pathopak and bio bottle containers.

These containers must be cleaned after use with either a disinfectant wipe such as a clinell wipe or a disinfectant & detergent wipe such a biohazard wipe if contaminated with bodily fluid.

Larger specimens such as 24-hour urine collections should be placed in clear plastic sacks, which are tied at the neck. The request form should be attached to the outside of the bag. Do not use pins or staples to attach the form to the bag.

All staff who are required to transport specimens where there is a risk of spillage are offered Hepatitis B vaccinations. This will be assessed through the occupational health screening process for staff on appointment to the trust.

5.7 Leakages

If specimens are placed in the correct container, not over filled and lids secure the incidents of leakage will be extremely rare. Where a leakage of bodily fluids does take place during transportation, this will be dealt with by the laboratory staff on arrival, any leaking samples will be discarded and a report placed on the computer system, the clinician is responsible for check on the progress of the specimen. If leakage occurs prior to transportation then it is the clinicians responsible for taking the specimen to deal with the leakage in accordance with the Cleaning and decontamination of equipment, medical devices, and the environment (including the management of blood and bodily fluid spillages) policy. The incident must be reported and recorded.

6.0 Training

There is a need for training identified within this policy. In accordance with the classification of training outlined in the Trust Human Resources & Organisational Development Strategy this training has been identified as mandatory and role development training.

The course directory e source link below will identify who the training applies to, delivery method, the update frequency, learning outcomes and a list of available dates to access the training.

http://www.ulearnlpt.co.uk

A record of the event will be recorded on Ulearn as appropriate. The governance group responsible for monitoring the training is the Infection Prevention and Control Committee and Quality Assurance Committee.

7.0 References

Advisory Committee on Dangerous Pathogens (2013) Approved List of Biological Agents. Health and Safety Executive: London

Control of Substances Hazardous to Health Regulations 2002 (as amended in 2004) (COSHH).

www.hse.gov.uk/coshh/index.htm

Department of Health: The Health and Social Care Act 2008; Code of practice and on Prevention and Control of Infections and related guidance (updated 2015). https://www.gov.uk/government/publications/the-health-and-social-care-act-2008-code-of-practice-on-the-prevention-and-control-of-infections-and-related-guidance

Loveday HP, Wilson JA, Pratt RJ, Golsorkhi, A Bak JB, Prieto J and Wilcox M (2014) epic 3: National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England. Journal of Hospital Infection, supplement S1-S70

LPT Aseptic Non-Touch Technique / Clean Technique Policy (2018)

LPT Cleaning and decontamination of equipment, medical devices, and the environment (including the management of blood and bodily fluid spillages) policy (2018)

LPT Consent to Examination or Treatment Policy (2015) (Updated 2020)

LPT Hand Hygiene Policy (2019)

LPT Personal Protective Equipment for use in Healthcare Policy (2019)

LPT Venepuncture Policy (2015) (Updated 2020)
Public Health England: UK Standards for Microbiology Investigations Investigation of Blood Cultures (for Organisms other than Mycobacterium species) 2014

Rowley S, Clare S, Macqueen S, Molyneux R (2010) ANTT v2: An updated practice framework for aseptic technique. British Journal of Nursing 19(5)

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (amendment) Regulations 2011

The Health and Safety at work Act 1974

www.hse.gov.uk/coshh/index.htm

United Nations Economic Commission for Europe (UNECE) (2017) European Agreement concerning the International Carriage of Dangerous Goods by Road.

8.0 Stakeholders and Contribution List

Key individuals involved in developing the document

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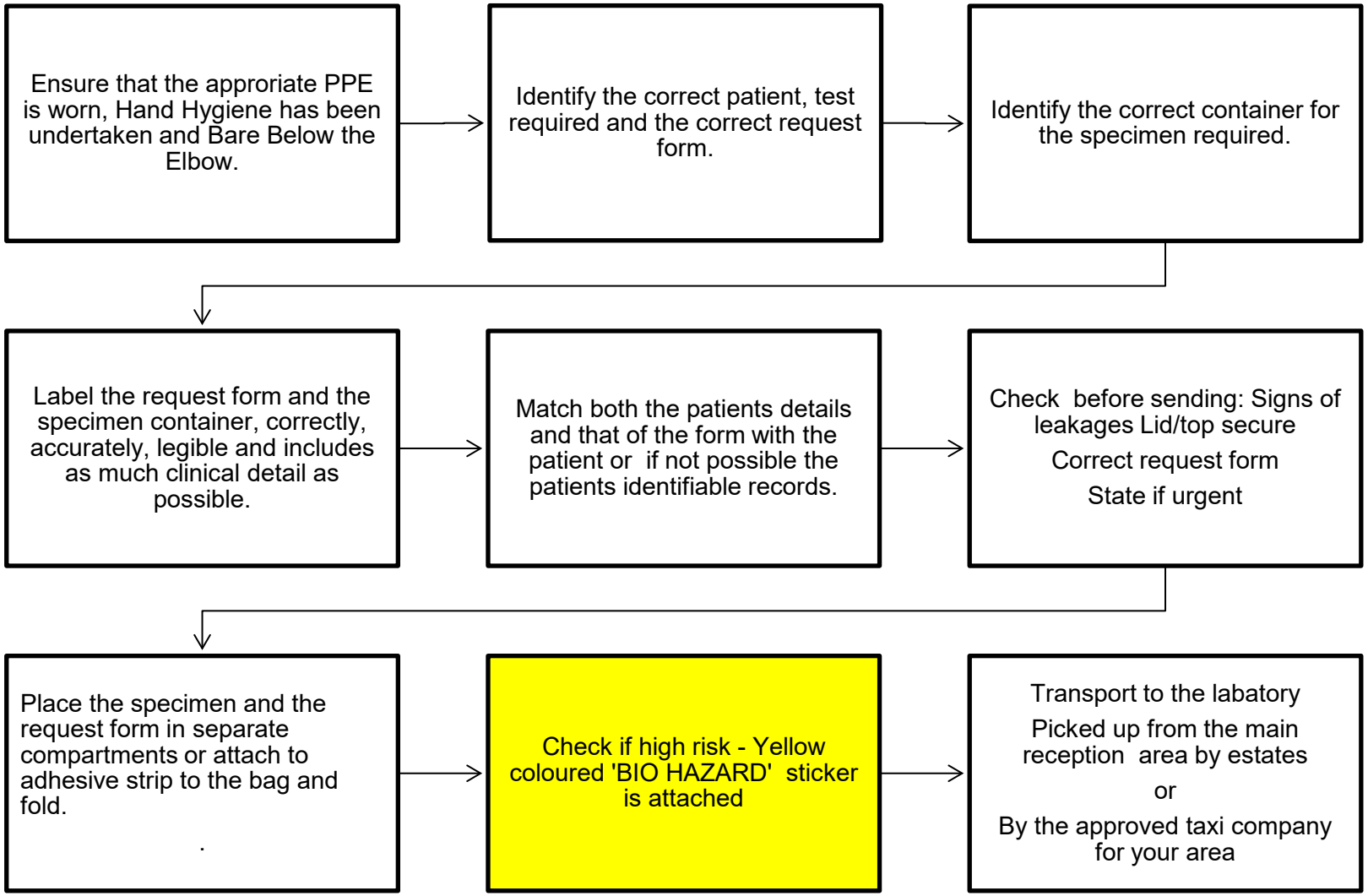
APPENDIX 1

Flow chart process



Appendix 2 Common specimens

Specimen	Container	Technique	Storage **If overnight , fridge storage can be recommended**
Axilla – can be moisten with sterile water (remove excess) or used dry.	Cotton tipped swab transport medium	Roll over skin of both armpits	Yes - specimen fridge no longer than 24hrs
Blood Cultures	Blue Blood Culture Collection Pack.	- Aseptic Non Touch Technique (ANTT)	**No – send directly to lab within 4hrs**.
Blood for routine investigations.	Various coloured tip bottles depending on test.	see venepuncture guidelines	Yes – specimen fridge at 4˚c No longer than 24hrs
Catheter specimen of urine (csu)	10mls Universal (white top) or Boric acid (red top) bottle	Aseptic Non Touch Technique (ANTT) should be used. Not be taken directly from catheter, use sampling port	Yes – specimen fridge no longer than 24hrs
Eye	Cotton tipped swab with appropriate transport medium should be used for suspected bacterial eye infections. For conjunctivitis a viral swab with viral transport medium.	Gently roll the swab over the conjunctival sac inside the lower lid. Hold the swab parallel to the cornea to avoid injury.	Yes - specimen fridge no longer than 24 hrs.
Faeces – obtain at the earliest opportunity if it is thought to be of an infective nature, patient has diarrhoea or develops diarrhoea within 72hrs of admission. No formed stool T4 or above.	15mls or walnut size - Stool container (blue top) with 'scoop'.	You can collect a sample even if contaminated, with urine. Indicate this on form information.	Yes - specimen fridge no longer than 24 hrs.
Groin - can be moisten with sterile water (remove excess) or used dry.	Cotton tipped transport medium	Rolled along both sides of the groin inner part of thigh, closest to the genitalia.	Yes - specimen fridge no longer than 24 hrs.
High Vaginal Swab	High Vaginal swab	Circle around the high vaginal wall once.	**No – send directly to lab**
Mid-Stream specimen of urine (msu)	10mls Universal (white top) or Boric acid (red top) bottle	First few seconds of the stream should be discarded. If the patient cannot participate then, collect in a sterile container and transfer to bottle.	Yes - specimen fridge no longer than 24 hrs.
Nose	Cotton tipped swab transport medium	Swab into the anterior nares, direct it up into the tip of the nose, and gently rotate. Both nares should be swabbed using the same swab.	Yes -- specimen fridge no longer than 24 hrs.
Pus	Depending on sample either Cotton tipped swab transport medium or sterile container.	Loose debris should be removed prior to swab. The deepest part of the wound should be sampled, avoiding the superficial microflora). Swabs should be well soaked in pus. If in a container the volume should ideally be 1ml	**No – send directly to lab**
Wound	Cotton tipped transport medium	Obtain the specimen prior to any dressing or cleaning procedure of the wound. Rotate on the area to collect exudate from the wound.	Yes –specimen fridge no longer than 24 hrs.

Please seek advice from Microbiology if taking an unfamiliar specimen or are in doubt.

Appendix 3

PRIVACY IMPACT ASSESSMENT SCREENING

Privacy impact assessment (PIAs) are a tool which can help organisations identify the most effective way to comply with their data protection obligations and meet individual's expectations of privacy. The first step in the PIA process is identifying the need for an assessment. **The following screening questions will help decide whether a PIA is necessary. Answering 'yes' to any of these questions is an indication that a PIA would be a useful exercise and requires senior management support, at this stage the Head of Data Privacy must be involved.**			
Name of Document:	**The collection, handling and transport of specimen's policy**		
Completed by:	**Claire King**		
Job title	**Infection Prevention and Control Nurse**	**Date**	01/02/2022
			Yes / No
1. Will the process described in the document involve the collection of new information about individuals? This is information in excess of what is required to carry out the process described within the document.			**No**
2. Will the process described in the document compel individuals to provide information about themselves? This is information in excess of what is required to carry out the process described within the document.			**No**
3. Will information about individuals be disclosed to organisations or people who have not previously had routine access to the information as part of the process described in this document?			**No**
4. Are you using information about individuals for a purpose it is not currently used for, or in a way it is not currently used?			**No**
5. Does the process outlined in this document involve the use of new technology which might be perceived as being privacy intrusive? For example, the use of biometrics.			**No**
6. Will the process outlined in this document result in decisions being made or action taken against individuals in ways which can have a significant impact on them?			**No**
7. As part of the process outlined in this document, is the information about individuals of a kind particularly likely to raise privacy concerns or expectations? For examples, health records, criminal records or other information that people would consider to be particularly private.			**No**
8. Will the process require you to contact individuals in ways which they may find intrusive?			**No**
If the answer to any of these questions is 'Yes' please contact the Head of Data Privacy Tel: 0116 2950997 Mobile: 07825 947786 **Lpt-dataprivacy@leicspart.secure.nhs.uk** **In this case, ratification of a procedural document will not take place until approved by the Head of Data Privacy.**			
IG Manager approval name:			
Date of approval			

Acknowledgement: Princess Alexandra Hospital NHS Trust