HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Infection Prevention and Control Department		
Document:	Multidisciplinary Policy and Procedure (MPP)		
Title:	Collection and Care of Specimen		
Applies To:	Nurses and Technician		
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1. PURPOSE:

1.1 To ensure that all staff are aware of the rationale for appropriate specimen collection and the correct procedures.

2. DEFINITONS:

2.1 Specimen collection is taking samples from patients for the purpose of laboratory examination in order to identify micro-organisms causing infection.
2.2 Culturing: is allowing the bacteria present in a specimen to grow under specific controlled conditions.
2.3 Specimen: is a sample taken from a patient or any materials used in patient care.

3. POLICY:

3.1 All specimens are considered infectious, standard precaution shall be practiced during collecting and handling of laboratory specimen. All personnel must practice standard precautions when collecting and handling patient specimen.
3.2 Mandatory data includes patient identifiers - surname/forename, date of birth, Medical Record number), location and requestor details and relevant clinical details.
3.3 The specimen container should also be clearly labelled with patient identification and sample type/source.
3.4 The supervisor, microbiology laboratory shall be consulted and advised of any special investigation (culturing of environment and personnel) in order to provide preparation of materials and personnel needed.

4. PROCEDURE:

4.1 General principles
- 4.1.1 Specimens should be obtained using safe techniques and practices. Compliance with existing health and safety and infection control policies/guidelines.
- 4.1.2 Infection Control Precautions and Hand Hygiene are important when collecting specimens.
- 4.1.3 Appropriate personal protective equipment (e.g. gloves and aprons) should always be worn when collecting/handling blood, body fluids and tissue specimens/samples.
- 4.1.4 Waste, including sharps should be disposed of safely and appropriately.
- 4.1.5 Specimens should be transported to the laboratory promptly. Delay may result in the loss of viability of some organisms, or may lead to overgrowth by contaminating organisms.

4.2 General procedure
- 4.2.1 Explain and discuss procedure with patient. (Ensure patient understands procedure and gives consent)
- 4.2.2 Decontaminate hands appropriately (Reduce the risk of infection transmission Minimise contamination)

4.2.3 Place specimens and swabs in appropriate, correctly labelled containers. Send specimens to laboratory promptly, with fully completed request form.(To ensure organisms for investigation are preserved. To ensure correct results are attributed to correct patient).

4.2.4 If specimens cannot be sent to a laboratory immediately, they should be stored as follows:

4.2.4.1 Blood culture samples in a 37°C incubator

4.2.4.2 All other specimens in a specimen refrigerator at a temperature of 4°C, where the low temperature will slow the bacterial growth

4.3 Classification of Specimens to be Cultured Normally Sterile

4.3.1 Blood.

4.3.2 Bladder Urine.

4.3.3 Spinal Fluid (CSF).

4.3.4 Other internal body fluids (peritoneal, joint fluid).

4.3.5 Trachea, bronchi and sinuses.

4.3.6 Any materials I fluids purchased as sterile or processed in C.S.SD.

4.4 Normally Colonized Areas:

4.4.1 Skin.

4.4.2 Upper respiratory tract.

4.4.3 Gastrointestinal tract.

4.4.4 Female lower genital tract.

4.4.5 Urethra.

4.5 Contaminated Areas

4.5.1 Decubitus ulcer - uninfected.

4.5.2 Trachea and large bronchi, in intubated patient.

4.6 GENERAL GUIDELINES FOR SPECIMEN COLLECTION AND HANDLING:

4.6.1 Obtain specimen before initiating or changing antibiotic therapy.

4.6.2 Specimens of any type must be collected and handled with aseptic techniques at all times.

4.6.3 Specimens should be free from contamination. Avoid contamination of specimen during collection and handling. Sources of contamination include the patient's skin and the hands of personnel, unsterile containers, instruments or devices.

4.6.4 Site from which the specimen is to be collected should be prepared and cleansed to avoid any external contamination, (e.g. blood culture).

4.6.5 Specimens should be collected in sterile containers with sterile devices except for stool and urine analysis. Containers should be free from any inhibitory materials such as residual detergents or disinfectants.

4.6.6 Specimen containers must have tight fitting lids or caps so that specimen does not get contaminated or does not leak out and contaminate the outsides of containers and other surfaces or the hands of personnel.

4.6.7 If spillage occurs and the outside surfaces become soiled, wipe it with disinfectant before sending to the laboratory.

4.6.8 Avoid contamination of the forms, place in the separated pocket of the specimen bag.

4.6.9 Specimens shall be transported to the laboratory as soon as possible after collection because time and temperature are important aspects of the outcome.

4.6.10 Specimens shall be routinely collected at times when prompt processing is possible. Long delays in transport can result in the growth of insignificant bacterial contamination.

4.6.10.1 Label specimens container with the patient's name, medical record number.

4.6.10.2 Never label the lid or cover of the container.

4.7 INFORMATION FOR THE LABORATORY:

4.7.1 The two patient identifiers must be present (patient's name and patient's medical record number) on the patient's wrist band.

4.7.2 Room and ward number.

4.7.3 Diagnosis, tentative or established.

4.7.4 Antibiotic therapy, steroids or immunosuppressive drugs.

4.7.5 Physicians name.

4.7.6 Date and time of specimen collection.

4.7.7 All tests ordered

4.8 CULTURE TECHNIQUES:

4.8.1 Blood Culture (Aseptic technique is imperative to avoid contamination).

4.8.2 Perform Hand hygiene and gloves shall be worn

4.8.3 Adequate preparation of the skin to remove the transient and resident flora is the most important aspect in drawing blood.

4.8.4 When removing the needle avoid touching the needle to skin outside the prepared area.

4.8.5 Before inserting blood to the culture bottle , the seal should be cleaned with 70% Alcohol and the needle to be changed.

4.8.6 When removing the needle avoid touching the needle to skin outside the prepared area

4.8.7 Before inserting blood to the culture bottle , the seal should be cleaned with 70% Alcohol and the needle to be changed.

4.9 Catheters: Catheters are usually colonized

4.9.1 Foley's Catheter Tips: Shall not be cultured because they are invariably colonized or contaminated with resident periurethral flora, if infection is expected, urine culture can be sent.

4.10 Urine

4.10.1 Delay in processing a urine specimen may produce results non-compatible with clinical condition.

4.10.2 Process shall be done within one hour of collection or be refrigerated up to 24 hours from time of collection.

4.10.3 Midstream clean catch is the appropriate specimen for culture.

4.10.4 If Foley catheter is present, use syringe to withdraw urine after disinfecting the site of puncture with alcohol or Betadine.

4.10.5 If urine analysis is ordered alone, urine bag should be changed and the specimen can be taken from there.

4.11 Wound Culture:_ (Superficial wound / bed sore).

4.11.1 Clean with sterile saline or sterile water (this will not interfere with the culture result; it will remove the skin contaminants).

4.11.2 Dry with sterile gauze

4.11.3 Take swab from the wound to all areas.

4.12 Anaerobic Culture

4.12.1 Sites for anaerobic culture

4.12.1.1 Since many body sites are colonized by anaerobic organism only certain sites are appropriate for culture (refer to attachment A & B).

4.12.1.2 Specimen that may contain anaerobic organism must be collected in a manner that minimizes contact with air and the specimen must be planted at once.

4.12.1.3 If aspiration or biopsy is not possible an anaerobic swab may be possible. In general specimen containing normal flora. e.g. mouth or vagina are unfit for anaerobic.

4.12.2 A gram stain shall be performed on all specimens submitted for anaerobic culture.

4.12.3 Anaerobes shall be considered when organisms are seen on smear but do not grow on routine aerobic cultures. Sites for cultures for anaerobic specimens.See appendex 7.1

5. MATERIALS AND EQUIPMENT:

5.1 **Forms and Records:**

5.1.1 N/A

5.2 **Materials and Equipment**

5.2.1 N/A

6. RESPONSIBILITIES:

6.1 All personnel must practice standard precautions when collecting and handling patient specimen.
6.2 It is the responsibility of IPC department to implement this policy.

7. APPENDICES:

7.1 Sites for Cultures for Anaerobic Specimens
7.2 Specifics on specimen collection

8. REFERENCES:

8.1 Specimen Collection Setting www.nehta.gov.aulDGL/tesffspecimen collection setting.htol
8.2 NHS GUIDELINES FOR MICROBIOLOGY SPECIMEN COLLECTION. May 2015 https://www.nhsborders.scot.nhs.uk/media/355227/Guidelines-for-Microbiology-Specimen-Collection-Nov-15.pdf

9. APPROVALS:

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7.1 Sites for Cultures for Anaerobic Specimens

APPROPRIATE SITES	INAPPROPRIATE SITES
Normally sterile body fluids - blood, bile, pleural, peritoneal, joint and spinal fluid, surgical specimens from normal sterile sites.	Specimens contaminated by endogenous anaerobic flora, sputum, throat swabs, fecal specimens, rectal swabs and vaginal swabs.
Abscess contents, deep wound aspirates, surgical biopsy specimens.	Superficial wound swabs, sites obviously contaminated by intestinal contents.
Trans tracheal or percutaneous lung aspirates.	Sputum, bronchoscopy washings, nasopharyngeal or throat swabs.
Suprapubic bladder as irates.	Voided or catheterized urine specimens.
Culdocentesis fluid	Cervical or vaginal swabs.

7.2 Specifics on specimen collection

Where possible all specimens should be taken prior to commencing antimicrobial therapy.

Site/Specimen	Action	Comments
Eye swab	1.Gently evert lower eyelid. Using swab held parallel to cornea gently rub conjunctiva of lower eyelid. 2 Chlamydia swab if required should be taken after bacterial swab.	In all but superficial eye infections corneal scrapings may be required. Please discuss with opthamology. If both eyes to be swabbed a separate swab should be used for each.
Ear swab	Place swab into outer ear and rotate gently.	No drops/antibiotics/other chemotherapeutic agents should have been used in the aural region for 3 hours prior to taking the swab.
Nose swab	1. Moisten swab with sterile saline or transport media swab the anterior nares by gently rotating swab. 2. The same swab can be used for both nostrils	
Pernasal swab	1. Pass special soft mounted wire swab along the floor of the nasal cavity, to the posterior wall of the nasopharynx. 2. Rotate gently.	Swabs can be obtained from the microbiology department. Care needs to be taken to minimise trauma and to ensure the correct area is sampled.
Throat swab	1. The patient should stick out their tongue whilst the swab is guided down the side of the throat to make contact with the tonsillar fossa or any other area with a lesion or exudates. If concerns re atypical pneumonia/viral infections a throat swab should be sent in virus transport media.	A tongue depressor may be required. Avoid touching any other area of the mouth or tongue in order to minimize contamination.
Sputum	1. Ensure specimen is sputum, not saliva. 2. Encourage patients who have difficulty producing sputum to cough deeply first thing in the morning. 3. Physiotherapy may also be helpful in getting a sample.	Send sputum to lab immediately – delays can lead to overgrowth of contaminating flora, and the death of potentially pathogenic flora.
Wound swab	1. Do not routinely sample wounds/ulcers – only sample if infection suspected. 2. Take swabs prior to dressing. 3. Rotate swab gently over area to be sampled.	Pus, if present should be sent in preference to a swab – send in a sterile screw capped container.
Ulcer swab	1. Clean chronic ulcers with sterile saline or tap water prior to sampling. 2. Slough and necrotic tissue should be removed. 3. Sample viable tissue with signs of inflammation, gently rotating the swab.	Do not sample routinely.
High Vaginal swab	1. Introduce speculum into vagina to separate the vaginal walls. 2. Roll swab over vaginal vault sampling the lateral and posterior fornices.	High vaginal swabs are the idea – avoid contamination with vulval/skin flora by use of a speculum.
Endocervical swab	1. Introduce speculum into vagina to obtain a clear view of cervix. 2. Swab should be rotated gently in the endocervicalos. 3. If testing for Chlamydia, a second swab should be taken and placed in viral transport media.	Avoid touching vaginal walls to minimise contamination. Chlamydia swabs should be rotated a little more firmly as seeking to collect epithelial cells.
Penile swab	1. Retract prepuce. Gently rotate swab in urethral meatus. 2. If gonorrhoea is suspected, send a swab from the distal 1-2cm of the urethra	Gently insert and rotate swab. Send to lab promptly in transport media.
Rectal swab	1. Pass swab carefully through anus into rectum. 2. Rotate gently.	Aiming to minimise trauma and ensure a rectal (and not anal) sample is taken.

	3. If threadworms suspected take swab from perianal region, and break off into bijou of sterile saline (available from lab). Alternatively take sellotape slide.	Threadworms lay their ova on perianal skin. Sellotape slides are taken by pressing a piece of sellotape to the perianal skin, and placing onto a microscope slide. They are best taken first thing in the morning.
Faeces	1. Where possible, ask the patient to defaecate into a clinically clean bedpan. 2. Scoop enough material to fill a third of the specimen container using the spatula / spoon. (If liquid faeces, approximately 15mls should be collected). 3. Segments of tapeworm that are seen easily in faeces should be sent to the laboratory for identification. 4. Patients suspected of suffering from amoebic dysentery should have any stool specimens dispatched to the laboratory immediately. Notifying the laboratory when sending.	Aiming to minimise contamination. If patient is collecting sample at home advise to avoid contamination with urine/disinfectants, and to label clearly. If ova/cysts/parasites suspected, up to 3 samples over the space of a week may be required to improve detection rates. The parasite causing amoebic dysentery is characteristic in its fresh state, but is difficult to identify when dead.
Urine	1. Specimens of urine should be collected as soon as possible after the patient wakens in the morning and at the same time each morning if more than one specimen is required. 2. Dispatch all specimens to the laboratory as soon after collecting as possible.	The bladder will be full due to overnight accumulation of urine. Later specimens may be diluted. Urine samples should be examined within 2 hours of collection, or refrigerated. At room temperature bacterial overgrowth will occur and may lead to misinterpretation.
Midstream specimen of urine (male)	1. Retract the prepuce and clean the skin surrounding the urethral meatus with water. 2. Ask the patient to direct the first and last part of his stream into a urinal or toilet but to collect the middle part of his stream into a sterile container.	Aiming to prevent contamination.
Urine for Chlamydia	1. First void urine of the day should be placed into a sterile container (White topped). 2. If first void not collected, wait until patient has not micturated for 2hours, then collect first void.	Do not use boric acid containers.
Midstream specimen of urine (female)	1. Clean the urethral meatus with water. 2. Use a separate gauze swab for each cleansing swab. Clean from the front to the back. 3. Ask the patient to micturate into a bedpan or toilet. Place a sterile receiver or a wide mouthed container under the stream and remove before the stream ceases. 4. Transfer the specimen into a sterile container.	Aiming to prevent contamination, particularly with perianal flora.
Vomit	1. Preferable: Viral Swab - wet swab with vomit and place in viral transport medium 2. If no viral transport immediately available, collect small amount of vomit where practicable [minimum 1ml] in Universal container 3. Ensure outside of any transport containers used are free from contamination	For Norovirus only Do not use boric acid containers