

Collection of specimens/swabs

Val Dimmock, Lecturer in Practice

Procedure

The purpose of this presentation is to demonstrate the correct procedure for taking a variety of swabs. Please note that policies and procedures may vary in different Trusts. **It is essential that you have had training on the specific techniques before performing this skill.**

It is the personal and professional responsibility of healthcare practitioners to ensure that they are competent to undertake this procedure.

Specimens of tissue or fluid are collected when microbiological; biochemical or other laboratory investigations are required to aid diagnosis. The results of such investigations may classify the disease and determine diagnosis and treatment.

General principles:

Successful collection of specimens will depend on the following:

- Collection at the appropriate time
- Use of the correct technique
- Use of the correct equipment
- Safe transportation to the laboratory without delay

Healthcare practitioner's role:

- To identify the requirement of a microbiological investigation
- To initiate the procedure
- To collect the desired material in the correct container
- To arrange prompt delivery to the laboratory

Collection of specimens/swabs

Collection of specimens:

- Samples should be collected before the start of any treatment
- If an unusual specimen is required check any specific requirements with the laboratory eg skin and mucous membranes, pus, biopsies

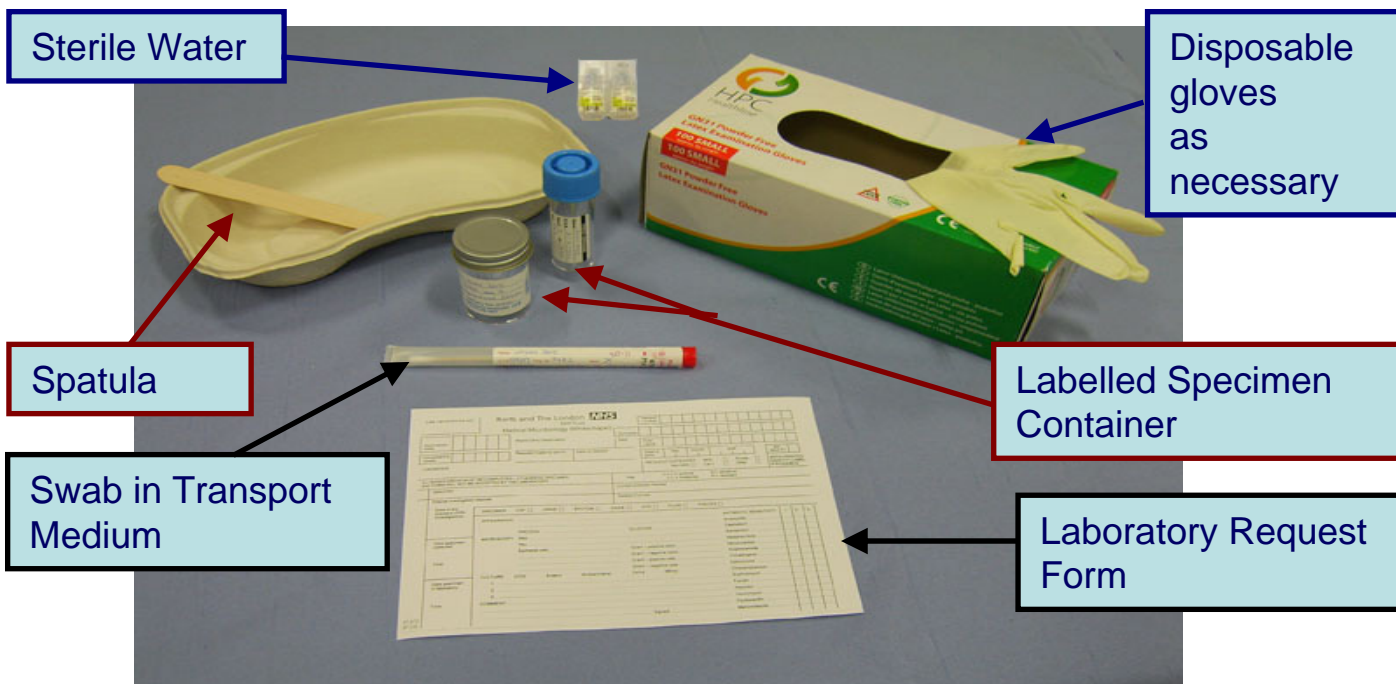
Types of investigation:

- Bacterial – culture and sensitivity
- Viral – culture; serology; ideally taken in hospital as viruses do not survive long outside the body
- Serological – antigens and antibodies
- Mycosis – fungal
- Protozoa – malaria

Check your knowledge on infection control and organisms that cause the infections:

<http://www.cetl.org.uk/learning/infection-control-output/quizmaker.html>

Generic equipment required



Collection of specimens/swabs

Documentation

The following information must be given when sending a specimen:

- Persons' name
- Address
- Date of birth
- Date of specimen collection
- Time specimen collected
- Diagnosis
- Relevant history eg recent travel abroad
- Type of specimen
- Any antibiotic therapy already being administered
- Name of requesting doctor

General procedure

Action	Rationale
Explain and discuss procedure with the person	To ensure the person understands the procedure and gives consent
Collect equipment and check all expiry dates	To prevent contamination
Wash hands	To prevent contamination
Wear gloves	To prevent cross infection
Take the swab using the correct technique	
Place the specimen/swab in the correct labelled container	To ensure the organisms for investigation are preserved
Send the specimen/swab to the laboratory with completed documentation	To ensure optimum conditions for laboratory examination
Dispose of equipment as per trust policy	

Collection of specimens/swabs



Nose swab

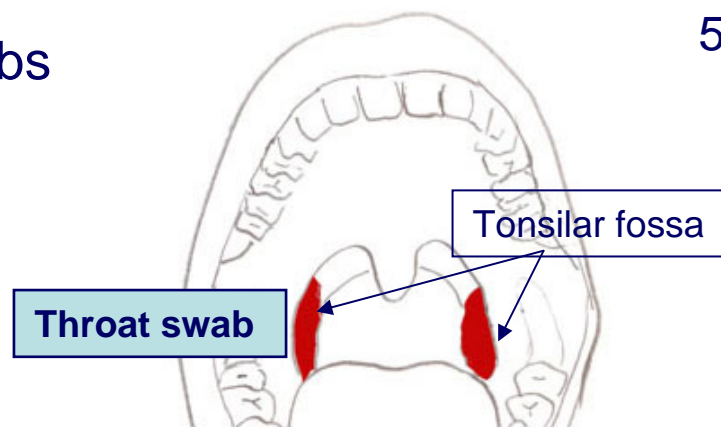
Action	Rationale
Moisten swab beforehand with sterile water	To prevent discomfort to the patient
Move swab from the anterior nares and direct upwards into the tip of the nose	To swab the correct site and obtain required sample
Gently rotate the swab once	



Sputum specimen

Action	Rationale
Use a clean, not necessarily sterile container	Sputum is never free from organisms due to passing through the pharynx and mouth
Ensure that the specimen is sputum NOT saliva	To obtain the required sample
Encourage the person to cough deeply or request the help of a physiotherapist	To facilitate expectoration

Collection of specimens/swabs



Action	Rationale
Sit the person facing a strong light and depress the their tongue with a spatula	To ensure you can see the area to be swabbed. The procedure is likely to make the individual gag – the tongue moving to the roof of the mouth will contaminate the specimen
Quickly but gently swab the tonsillar fossa or any area with a lesion or visible exudate	To obtain the required sample
Avoid touching any other area of the mouth or tongue	To prevent contamination



Ear swab

Action	Rationale
No drops should have been used 3 hours prior to taking the swab	To prevent collection of therapeutic material
Place the swab into the outer ear and rotate gently once	To avoid trauma to the ear and collect secretions

Collection of specimens/swabs



Wound swab

Action	Rationale
Take the swab before cleaning the wound	To collect the maximum number of organisms
Rotate the swab gently once	To collect the sample



Urine specimen – early morning

Action	Rationale
Early morning specimen required	The bladder will be full due to overnight accumulation of urine – later specimens may be diluted
Place the specimen in the correctly labelled container	To ensure the organisms for investigation are preserved

Collection of specimens/swabs



Urine specimen – mid-stream

Action	Rationale
Ask the person or assist the them to wash around the urethral area	To prevent other organisms contaminating the specimen
Ask the person to discard the first and last part of micturation and collect the middle stream	To avoid contamination with skin organisms



Urine specimen – catheter

Action	Rationale
Clean the access point on the tubing	To reduce cross infection
If there is no urine, clamp the tubing below the access point	To obtain an adequate specimen
Using a sterile needle and syringe aspirate urine through the access point	To prevent leakage
Re-clean the access point	To reduce contamination

Collection of specimens/swabs



Faeces specimen

Action	Rationale
Person to defaecate into a clean bedpan	To avoid unnecessary contamination
Scoop enough material to fill a third of the specimen pot	To obtain a usable amount of specimen
Record colour, consistency and odour	To maintain an accurate baseline record
Segments of tapeworm are easily seen – send to the laboratory	Laboratory confirmation of the head of the tape worm is required to prevent further growth

References

- Baillie L. (2005), **Developing Practical Nursing Skills** 2nd ed. Edward Arnold
- Dougherty L., Lister S. (2004), **The Royal Marsden Hospital Manual of Clinical Nursing Procedures** 6th ed. Blackwell Publishing
- Jamieson E.M., Whyte L.A., McCall J.M. (2007), **Clinical Nursing Practices** 5th ed. Churchill Livingstone Elsevier
- Johnson, R., Taylor, W. (2006), **Skills for Midwifery Practice 2nd Ed** Edinburgh Elsevier Churchill Livingstone