LABORATORY

MICROBIOLOGY SPECIMEN COLLECTION

At St. Rita's Medical Center, we offer full service laboratory services including clinical and anatomic pathology through New Vision Medical Laboratories.

COLLECTION OF SPECIMENS FOR CULTURE: GENERAL INSTRUCTIONS

LABELING:

Appropriate information is critical to proper processing of test requests. Please provide the following:

- Patient's name.
- Source of specimen or collection site.
- Date and time of collection.
- Type of culture desired.
- Antibiotic therapy (within last 48 hrs. of collection).
- Any antibiotic therapy that will be initiated after culture is collected.
- Clinical information relevant to patient's condition.

OBTAIN SPECIMEN CORRECTLY:

The quality of the culture is directly dependent upon the quality of the specimen received.

- Explain collection process completely to the patient.
- Use sterile container.
- Label correctly and send the specimen to the laboratory promptly.
- Avoid contamination of the container.

TIMING OF COLLECTION:

- Sputum, urine, stool etc., are best collected in early morning and sent to the laboratory the same day.

  BLOOD CULTURE:

  - A blood culture requires two bottles of blood (10 ml blood each), one for aerobic organisms and the other for anaerobic. Each set of two culture bottles must be collected from a separate venipuncture.
    - For children less than 10yrs., collect only aerobic bottle (1 ml. per year of age).
    - Collect the blood specimens before treatment is initiated, if possible.
    - Collect two sets early in the illness.
      - Organisms are continuously shed during intravascular infections, such as endocarditis, but they are intermittently shed during occult infections. In some instances of occult infection, there is a predictable fever pattern. If this is the case, the blood for culture is best collected 30 minutes prior to the fever spike.
    - The yield beyond three cultures is minimal in most circumstances, and collection of more than this is discouraged.
    - In cases of suspected endocarditis it may be beneficial to collect an additional set of blood cultures if the initial sets are negative after 48 hours.

SPECIMEN COLLECTION, PREPARATION, AND HANDLING

UPPER RESPIRATORY TRACT:

- A nasopharyngeal culture is obtained by inserting a thin sterile swab gently through the nose to touch the pharynx. Rotate gently and remove.
- A throat culture is obtained by introducing a sterile swab into the mouth. Use a tongue blade to avoid contaminating the specimen with oral secretions. Firmly swab both tonsilar fossae, posterior pharynx, and any inflamed or ulcerated area.

LOWER RESPIRATORY TRACT: SPUTUM.

- Rinsing the mouth with saline or water (not mouthwash) may reduce contamination with normal oropharyngeal flora.
- Encourage deep cough with expectoration of the sputum into a sterile specimen collection cup that is labeled with the patient's name.

- Do not send saliva (spit) for culture. A small amount of sputum is all that is required, but it must be sputum and not oral secretions.
- When the patient is unable to cough productively, notify the physician. An alternative method may be ordered, such as:
    - Induced sputum collected by a respiratory therapist on the orders of the physician.
    - Tracheal aspiration.
    - Bronchial washings obtained by the physician during a bronchoscopic examination.

WOUND CULTURE ASPIRATE:

- Perform proper hand hygiene with either soap and water or alcohol hand gel and put on gloves.
- Disinfect intact skin with Povidine Iodine or ChloraPrep and allow to dry for one minute.
- Use a 10ml disposable syringe and a 22 gauge needle with 0.5cc of air in the syringe.
- Insert the needle through the intact skin adjacent to the wound and achieve suction by briskly withdrawing the plunger to the 10ml mark.
- Move the needle backward and forward at different angles for two to four explorations.
- Gently return the plunger to the 0.5ml mark and withdraw the needle. Do not insert drainage into the needle withdraw site.
- Remove the needle with hemostat and discard.
- Cap off syringe with a non-vented port protector (red cap).
- Label specimen and place into specimen collection bag.
- Wash hands with soap and water or use alcohol hand gel per protocol.
- Transport specimen (with requisition) to Lab.

URINE CULTURE:

- Instruct the patient in the method for midstream collection and the importance of collecting an uncontaminated specimen and proper handling of the specimen container to keep it sterile. Gender specific teaching sheets are available to assist in patient education.
- A clean-catch specimen is necessary to confirm the presence or absence of infecting organisms in urine. The specimen must be free of any contaminating matter that might be present on the genital organs; therefore patients should be urged to follow these instructions:

INSTRUCTIONS FOR THE FEMALE PATIENT:

- If menstruating, first insert a fresh tampon or use cotton to stop the flow.
- Separate the skin folds around the urinary opening.

- Wash the urinary opening and its surroundings from front to back with a sterile antiseptic pad.
- Begin urinating into the toilet, keeping the skin fold apart with the fingers of one hand.
- When the urine stream is well established, move the container into the path of the stream to catch the rest of the urine. Do not touch the container to the genital area.
- Label the container with patient name and time of collection and deliver it to the laboratory within 2 hours. Urine specimens that cannot be delivered to the lab immediately may be refrigerated. The specimen can be refrigerated for up to 8 hours if it is just a test for urinalysis. If the specimen will be cultured it can be refrigerated for up to 24 hours. If you are unable to deliver the specimen within this time frame contact the laboratory to obtain a specimen transport kit.
- ***NOTE: Do not collect urine specimens from a drainage bag.***

INSTRUCTIONS FOR THE MALE PATIENT:

- Pull back the foreskin if present.
- Wash the end of the penis well with soapy water. Let it dry.
- Begin urinating into the toilet. Wait until the urine stream is well-established before moving the container into the path of the stream to catch the rest of the urine. Do not touch the container to the genital area.
- Label the container with patient name and time of collection and deliver it to the laboratory within 2 hours. Urine specimens that cannot be delivered to the lab immediately may be refrigerated. The specimen can be refrigerated for up to 8 hours if it is just a test for urinalysis. If the specimen will be cultured it can be refrigerated for up to 24 hours. If you are unable to deliver the specimen within this time frame contact the laboratory to obtain a specimen transport kit.
- ***NOTE: Do not collect urine specimens from a drainage bag.***

STOOL CULTURE:

- If several different types of tests are requested, submit a walnut-sized sample of fecal sample for each. Place the specimen in transport medium (this medium can be obtained by calling the laboratory) or in a sterile leak proof container.
- When stool cultures are not readily obtainable, rectal swabs are acceptable; however, it must be indicated whether the specimen is a stool or a rectal swab.

SWAB COLLECTION OF THROATS, WOUNDS, ETC.

USE OF STERILE SWAB COLLECTION KIT- The swab system is guaranteed sterile until the seal is broken.

DIRECTIONS FOR USE:

- Peel open and remove the swab from the package.
- Remove the cap/swab stick from the tube.
- Collect the appropriate specimen and put the cap/swab into the tube. Push the cap to bring the swab into contact with the transport medium.
- Print the patient's name, the culture site, date & time of collection, and any antibiotic therapy (within last 48 hrs) on the specimen tube.
- Place the specimen in a zip-lock bag and put the completed test request form in the side pouch.
- Store at room temperature and transport to the laboratory as quickly as possible.

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