FOUNDATION HEALTH PARTNERS LABORATORIES

Laboratory

Fairbanks, Alaska 99701

TITLE: Microbiology Specimen Collection Manual for Nursing	
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I. Purpose/Expected Outcome:

A. The purpose of this procedure is to provide instructions for the collection of Microbiology specimens to the nursing staff.

II. Definitions:

A. Specimen acceptability guidelines for clinical staff responsible for specimen collection and transport to the laboratory.

III. Policy:

A. GENERAL INFORMATION

1. Obtain specimens for culture prior to antibiotic administration if possible.
2. If patient is already receiving anti-microbial therapy, list agents on the request slip.

B. HANDLING PRECAUTIONS

1. Observe Universal Precautions when collecting or handling specimens. See "Hospital-Wide Policy" for prevention of Blood Borne Diseases (Lab Safety Manual).
2. If a specimen is accidentally spilled, cover the contaminated area with paper towels. Wipe up gross contamination immediately with a gloved hand and dispose in a biohazard bag.
3. Call Environmental Services to decontaminate the affected area. If Environmental Services is not available, decontaminate area by saturating a paper towel with germicidal and clean the area.
4. If a specimen container has been externally contaminated by blood or body fluid, transfer to clean container if possible. If transfer to another container is not possible, clean container with germicidal and place in a clear plastic bag. Label **CONTAMINATED** before transporting to lab.

C. COLLECTION AND TRANSPORT

1. Use appropriate collection and transport containers for specimen collection. See individual procedures for preferred transport containers.
2. Seal containers before transporting to lab. Transport containers are available from Materials Management or Microbiology. Note expiration date.
3. Carefully follow directions on BBL Vacutainer Brand Anaerobic Specimen Collector. Do not remove the inner tube from the outer unit on BBL anaerobic transport tubes.
4. Transport sputum collection containers intact. Tape lid onto outer unit.
   NOTE: PLACE ALL SPECIMENS IN A ZIP-LOCK BAG BEFORE TRANSPORTING TO LABORATORY.
5. Transport Viral culture specimens in Universal Transport Media (UTM). UTM is available in the Laboratory. Store at room temperature. Media is stable until expiration date written on the tube. Submit filled out viral requisition form with all viral cultures. Forms are available in the Laboratory.

D. LABELING
1. Specimens received for culture from hospital or outpatients must contain the following Information:
   a. Patient's name, first and last
   b. Date and time of collection
   c. Medical Records number (inpatients) and date of birth.
   d. Source & test wanted

E. REQUEST FORMS
1. Inpatients: ORDER TESTS IN CERNER
2. Outpatient clinics: Complete forms with NAME (first, last, middle initial) DOB, SEX, DATE AND TIME of collection, INITIALS of person collecting specimen, DX., ANTIBIOTICS, PHYSICIAN's name and address, and SOURCE.
3. Viral cultures must be accompanied by a Northern Regional Lab (State Lab) Request Form that is completely filled out. State Lab Request Forms are available in Microbiology. **State Lab will not process specimens unless all forms are complete.**

F. DELIVERY TO LAB
1. Deliver specimens to lab immediately after collection.
2. See directions for specimen storage under each procedure.

G. CRITERIA FOR REJECTION OF SPECIMENS
1. Specimens accompanied by slips without DATE and TIME of collection will not be processed until that information is acquired.
2. Sputum:
   a. Routine and Fungal cultures:
      - Contaminated outer containers **ARE NOT** acceptable.
      - Specimens with many epithelial cells indicate gross contamination with saliva. Organisms isolated from these specimens are not indicative of infection.
      - Microbiology department evaluates specimens for acceptability: all specimens having more than 40 epithelial cells will not be cultured. Specimen will be rejected for culture and a repeat specimen will be requested by phone.
      - Delay in transport (greater than 2 hours at room temperature) is not acceptable.
   b. AFB Cultures:
      - Contaminated outer containers are not acceptable.
      - More than one specimen submitted per day. State Lab will accept samples collected on the same day if they meet the following criteria, at least one sample is collected as a first morning sample, all samples are collected at least 8 hours apart, with the dates and times clearly marked on the container and on the requisition.
        (i) Sputa for AFB cultures must be refrigerated if there is a delay in transport.
        (ii) Recovery of AFB is maximized by collecting an early A.M. specimen.
        (iii) **4-5 mL of specimen is preferred. The minimum volume is 4 mL.**
3. Urine:
   a. Delay in transport (greater than 2 hours unrefrigerated). Refrigerated urine specimens are acceptable up to 24 hours after collection. However, prompt delivery facilitates timely results. Specimens collected in Becton Dickinson (gray top tube) are acceptable for culture up to 48 hours after collection, without refrigeration.
   b. **FOLEY CATH TIPS ARE NOT ACCEPTABLE FOR CULTURE**.
   c. Specimens contaminated by fecal contents are not acceptable for culture.
4. Stool Specimens:

a. Routine Cultures:
- Contaminated outer container.
- Specimens in diapers.
- Specimen not in transport media for more than 2 hours.
- Transport media is used to deter the overgrowth of non-pathogens and to insure the survival of enteric pathogens.

b. Clostridium difficile:
- Contaminated outer container
- Delay in delivery to Lab (longer than l hour)

c. Ova and Parasites (O&P)
SEND OUT TO MAYO CLINIC
- Contaminated outer container
- Specimen not in transport media. (Transport media is available from Materials Management and the Microbiology Lab.)
- Stool from patients recently administered barium enemas, mineral oil, bismuth or magnesia cathartics.
- More than one specimen submitted per day.

5. Tissue Specimens
Specimens submitted in formalin are unacceptable.
6. Other Specimens:
   a. Improperly handled anaerobic transport tubes. Indicator shows anaerobic conditions have not been maintained.
   b. Specimens received in a syringe with attached needle **ARE NOT** acceptable. Please transfer specimens to appropriate containers prior to transport.
7. Unacceptable specimens:
New specimens will be requested. Original specimens will be held until a replacement arrives. Except in cases of gross contamination, requests for processing of unacceptable specimens by physicians will be honored. However, specimen condition will be noted under "Comments" on the report.

IV. Procedure/Interventions:

A. BIOPSY AND TISSUE

1. MATERIALS:
Sterile container without preservative.

2. PROCEDURE NOTES:
Tissue specimens are cultured both AEROBICALLY and ANAEROBICALLY.
3. PROCEDURE**:**
   a. Place specimen in a sterile jar or in a BD Anaerobic (glass) transport tube.
   b. If tissue is transported rapidly, it will protect anaerobes.
4. TRANSPORT AND STORAGE:
   a. Take specimen to lab IMMEDIATELY.
   b. Keep at room temperature.
5. ORDER TEST**:**
   a. Inpatients: Order in Cerner **"Culture Tissue" and specify source.**
   b. Outpatients: Specimens must be accompanied by a completed Microbiology Request Form.

B. BLOOD CULTURE

1. Guidelines for Blood Culture Collection**:**
   a. Studies at Mayo Clinic and elsewhere have shown that the detection of bacterial sepsis increases with the amount of blood drawn and that THREE blood cultures are optimal for

detection of septicemia. Therefore, three sets of blood cultures per day per patient are recommended. Some acceptable reasons for drawing more than three per day include:

- A new episode of suspected sepsis generated by a condition not present when first cultures were drawn.
- Suspected subacute bacterial endocarditis.
- An unusual clinical situation.

b. If the drawing intervals are specified by the physician, they will be respected. Otherwise if the order is for Blood cultures x3, collect two sets from two different sites successively, and the third set in 15 minutes

c. Blood culture set includes a FAN aerobic bottle plus an ANA anaerobic bottle. The FAN bottle contains 22 mL of complex media and 8 mL of a charcoal suspension, which removes antibiotics that may inhibit the growth of organisms.

d. Pediatric PF bottles are available for pediatric patients. Bottle contains 16 mL of complex media and 4 mL of a charcoal suspension.

2. MATERIALS:
   a. ChloraPrep One-Step sponge.
   b. Sterile 20cc Syringe
   c. Blood Culture Transfer device
   d. 2 Sterile needles
   e. 2 Blood Culture Bottles
   f. Tourniquet
3. PROCEDURE NOTES:
   Due to the increased risk of contamination of blood cultures, the lab encourages Nursing Services to request blood cultures to be drawn by Lab personnel.
4. PROCEDURE:
   a. Remove blood culture bottle caps. Cleanse top of blood culture bottle after cap removed and allow to air dry. Do not contaminate lid after it has been cleansed.
   b. Apply tourniquet to patient's arm showing the most promising veins. Palpate area to locate vein.
   c. Release tourniquet.
   d. Sterilize venipuncture site by cleaning with ChloraPrep One-Step applicator sponge in concentric circles. Allow to completely dry. Repeat if chloraprep shows visible soiling until site is sterile. Reapply tourniquet.
   e. Do not touch venipuncture site at this point unless sterile gloves are worn.
   f. Assemble the needle, syringe, tourniquet, and gauze pad near the patient's arm. Put on vinyl gloves.
   g. Immobilize the vein and perform venipuncture, drawing 16 to 20cc of blood.
   h. Recommended total volume of blood cultures:
      - Neonates to 1 year (<4 kg): 0.5 to 1.5 mL per tube (at least 1 mL is preferred); yellow PF PLUS bottle
      - 1-4 years: 1 mL per year of age; yellow PF PLUS bottle
      - Children weighing 30 to 80 lbs.: 5-10 mL per set or 2-5 mL per bottle; green FAN and purple ANA bottle.
      - Adults and children weighing >80 lbs.: 5-10 mL per bottle; green FAN bottle and purple ANA bottle.

        If only one bottle is able to be drawn, draw a purple ANA bottle or a yellow PF PLUS bottle with the max allowable volume per age group.

FAN and ANA bottles: max amount of blood per bottle is 10 mL per bottle
PF PLUS (pediatric bottle): max amount of blood is 4 mL per bottle

i. Inject blood into each bottle using transfer device without allowing air to enter the bottles. Label the bottles with patient name, date, time of collection, site of collection, and the initials of the person performing the procedure.
j. Should the vein be missed, start from beginning to obtain a new draw. Consult with provider or nurse manager if unable to obtain collection.
k. After completion of the venipuncture apply a bandage to the site and apply pressure until bleeding has stopped.

5. TRANSPORT AND STORAGE:
   a. Deliver blood culture bottles to lab IMMEDIATELY.
   b. Every effort should be made to deliver bottles so that appropriate incubation conditions can be met ASAP. If there is any delay, STORE at room temperature.
6. ORDER TEST:
   a. Inpatients: order in Cerner: Culture Blood, specify, line or peripheral.
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

C. **BODY FLUIDS (PERITONEAL, ASCITES, PARACENTESIS, JOINT FLUID)**

1. MATERIALS:
   a. Acu-dyne/alcohol
   b. Sterile syringe and needle
   c. Request slip
   d. BD Anaerobic Transport Tube* Do not transport specimen in a syringe with a needle.
2. PROCEDURE**:**
   a. Cleanse skin with antiseptic and collect via percutaneous aspiration. Body fluids often contain anaerobes which are not viable after exposure to oxygen.
   b. Place fluid in a sterile container or in BD anaerobic transport tube (discard swab), following directions on the package. Label specimen with Patient's NAME, DOB, DATE, and SOURCE of specimen.
3. TRANSPORT AND STORAGE**:**
   a. Transport specimen to lab IMMEDIATELY.
   b. Keep at room temperature.
4. ORDER TEST**:**
   a. Inpatients: Order in Cerner**: Culture Body fluid, specify source**.
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

D. **CONTINUOUS AMBULATORY PERITONEAL DIALYSIS FLUID**

1. Enclose dialysate bag in a larger plastic bag. Place this bag into a disposable plastic pan, and transport it to the laboratory.
2. TRANSPORT AND STORAGE
   a. For immediate delivery, transport at room temperature.
   b. For delayed delivery (>1 hour after collection), refrigerate, but do not freeze.
   c. Minimum requirement: Submit the original dialysis bag. If the bag is not submitted, a minimum of 1 cc is needed to inoculate the media.
   d.
3. ORDER TEST:
   a. Inpatients: Order in Cerner**: Culture Body Fluid, specify source.**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

E. **CEREBROSPINAL FLUID (CSF)**

1. MATERIALS:
   a. 3-4 CSF collection tubes
   b. Spinal needle and other materials needed for local anesthesia and for disinfecting the puncture site.
   c. Sterile gloves.
   d. Antiseptic – Betadine
2. NOTES:
   Several organisms, e.g., N. meningitides and H. influenzae, can be lost at refrigerator temperatures.
3. COLLECTION**:**
   a. CSF is collected by the physician. Care must be taken to disinfect the skin in the area to be sampled.
   b. Generally 10 mL is taken and divided into 3-4 tubes.
   c. Generally, specimens submitted for culture should be the **3rd tube** collected since residual skin contaminants are more likely to be present in the initial volume.
   d. Label Specimen.
4. TRANSPORT AND STORAGE:
   a. Transport specimen to lab IMMEDIATELY with appropriate request forms.
   b. Testing is usually a STAT procedure.
   c. Keep specimens at room temperature.
   d. The microbiology tests that are performed on CSF at FMH are:

Gram stain (STAT)
Routine culture
Fungal culture
AFB culture (Referred to state for testing)

5. ORDER TEST**:**
   a. Inpatients: Order in Cerner: **Culture Cerebrospinal Fluid**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

F. **DRAINAGE AND EXUDATES**
1. MATERIALS:
   a. BD Anaerobic Transport
   b. Sterile syringe and needle
2. PROCEDURE NOTES**:**
   Drainage and exudates should be cultured both AEROBICALLY and ANAEROBICALLY. All organisms survive in the BD ANAEROBIC Transport. Please take care to use proper techniques to preserve anaerobes.
3. PROCEDURE:
   a. If there is abundant exudate or drainage, discard the portion near the surface and collect material representative of the deepest portion or active margin of the site.
   b. Aspirate using a needle and syringe. Place aspirate into BD anaerobic transport (discard swab) following directions on the package.
   c. Specimens received in Aerobic Culture Swab are not acceptable for anaerobic cultures and will only be performed upon doctor's request. A comment will be added to these cultures that recovery of anaerobes might be compromised.
   d. Swab specimens are NOT recommended, because they are difficult to obtain without contaminating the specimen.
4. TRANSPORT AND STORAGE**:**
   a. Take specimen to lab IMMEDIATELY.

b. Keep at room temperature.

5. ORDER TEST:
   a. Inpatients: Order in Cerner: **Culture Body Fluid, specify source**.
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

G. **EAR CULTURE**

1. MATERIALS:
   a. Culturette (for outer ear)
   b. Needle and syringe (inner ear)
   c. BD Anaerobic Transport (if anaerobes are suspected or requested.)
2. PROCEDURE:
   a. EAR CANAL, OUTER EAR:
      - Collect specimen with swab from a culturette.
      - Sample the active margin or deepest portion of the infected area. As much as possible, avoid sampling areas of healing and non-infected tissue.
      - Place swab in culturette.
   b. MIDDLE EAR:
      - Specimen is obtained by physician.
      - If perforation of the eardrum has not occurred, aspirate through the tympanic membrane using a needle and syringe.
      - Place contents of syringe in BD anaerobic transport vial.
      - If perforation has occurred, use a swab to remove and aseptically discard the discharge in the upper ear canal and cerumen.
      - With a second swab, collect the discharge nearest the eardrum.
      - Place swab in culturette if only aerobic organisms are suspected. A BD Anaerobic Transport Tube can be used for **BOTH** aerobic and anaerobic organisms. However, an aerobic Culture Swab is not an acceptable transport for anaerobic organisms.
3. TRANSPORT AND STORAGE:
   a. Take labeled specimen to lab IMMEDIATELY.
   b. Keep specimen at room temperature.
4. ORDER TEST:
   a. Inpatients: Order in Cerner: Culture Ear, specify Left or Right.
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

H. **EYE CULTURES**

1. MATERIALS**:**
   a. Culturette
   b. Sterile rayon tipped applicator (SRTA)
   c. BD Anaerobic Transport (if anaerobes are suspected or requested.)
   d. Needle and syringe (for aspirate specimens)
2. PROCEDURE:
   a. CONJUNCTIVAL SPECIMENS
      - Collect specimens with a nasopharyngeal swab (Rayon swab).
      - Sample from the deepest part of the infected area.
      - Place swab in a culturette.
      - If an anaerobic culture is desired, physician should collect specimen with a needle and syringe. Place the specimen in a BD anaerobic transport tube.
   b. CORNEAL SCRAPINGS FOR KERATITIS
      - Collected by an ophthalmologist
      - Recommended anesthesia is 1-2 drops of proparacaine hydrochloride. This anesthetic is less inhibitory to bacteria than other compounds.

- CONTACT LAB PRIOR TO PROCEDURE. Media for culture and slides for gram stain for direct inoculation is required.
- Multiple scrapings with a platinum spatula are recommended. Each scraping should be placed directly on the media or on a slide for gram stain.

c. INNER EYE INFECTIONS
- Procedure is done in the OR.
- Requires procurement of intraocular fluid by an ophthalmologist.
- Needle and syringe aspiration is an acceptable method to collect specimens.
- Place contents in a BD anaerobic Transport tube.

3. TRANSPORT AND STORAGE
   a. Specimens must be taken to the lab IMMEDIATELY.
   b. Keep specimen at room temperature.
   c. Be sure specimen is properly labeled.
4. ORDER TEST:
   a. Inpatients: Order in Cerner: **Culture Eye, specify Left or Right.**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

I. FUNGAL CULTURES ROUTINE

1. MATERIALS:
   a. Sterile Petri dish (from Microbiology) or other sterile container.
   b. Microscope slide
   c. Scalpel
2. PROCEDURE NOTES:
   a. KOH will be done upon request.
   b. Fungal cultures are incubated for 4 weeks.
3. COLLECTION, TRANSPORT & STORAGE:
   a. HAIR
      - Select hair that is broken and/or fluoresces under Wood's light.
      - Send at least 6-10 affected hair strands in Petri dish or other sterile container. Label specimen.
      - Take to lab as soon as possible. Keep at room temperature.
   b. SKIN SCRAPINGS
      - Hold an open Petri dish under the lesion and scrape entire periphery of lesion using a microscope slide or scalpel.
      - Secure lid on Petri dish with tape. Label specimen.
      - Take to lab as soon as possible. Keep at room temperature.
   c. NAILS
      - Using a scalpel or microscope slide, place debris under infected nail and/or scrapings through the diseased portion in a Petri dish.
      - Secure lid on Petri dish with tape. Label specimen.
      - Take to Lab as soon as possible. Keep at room temperature.

4. ORDER TEST:
   a. Inpatients: Order in Cerner: **Culture Fungal, specify source**.
      Additional options in Cerner are:
      - Culture Fungal Blood,
      - Culture Fungal Hair
      - Culture Fungal Nail
      - Culture Fungal Skin
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

J. **FUNGAL CULTURES—SUSPECTED SPOROTRICHOTIC ULCER**
1. MATERIALS:
   a. 2-3 Culturettes
2. COLLECTION, TRANSPORT AND STORAGE:
   a. Collect 2-3 swabs of exudate
   b. Place in culturette.
   c. Label specimens. Take to lab as soon as possible. Keep at room temperature.

K. **FUNGAL CULTURES—BIOPSY OF SKIN ULCER**
1. MATERIALS:
   a. Sterile container for transport.
2. COLLECTION, TRANSPORT AND STORAGE:
   a. Biopsy lesion to include wall and base.
   b. Place specimen in container. Label.
   c. Take specimen to lab as soon as possible. Store at refrigerator temperature.

L. **FUNGAL CULTURES—SPUTUM**
1. MATERIALS:
   a. Sputum collection kit
   b. Glass of water
2. PROCEDURE NOTES:
   Sputum, Bronchial Brushes, and Bronchial Washes can be used to detect lung lesions caused by fungus or yeast.
3. PROCEDURE, TRANSPORT AND STORAGE:
   a. Have patient collect an early morning specimen, after washing mouth with water.
   b. Leave collection container intact.
   c. Seal with tape. Label specimen.
   d. Take to lab immediately.
   e. Keep at refrigerator temperature.

M. **FUNGAL CULTURES-PNEUMOCYSTIS**
1. PROCEDURE:
   a. Collect specimen as above.
   b. Fill out Microbiology Requisition.
   c. Send to Laboratory ASAP.
   d. **Specimen MUST be kept refrigerated**.

N. **FUNGAL CULTURES—BRONCHIAL BRUSHES, WASHINGS**
1. PROCEDURE:
   a. Specimen is obtained by the physician.
   b. Label specimen and take to lab IMMEDIATELY.
   c. Keep Bronch. brushes at room temperature.
   d. Keep Bronch. washings at refrigerator temperature.

O. **FUNGAL CULTURES—ABSCESSES**
1. MATERIALS:
   a. Syringe and needle
   b. Sterile tube
2. PROCEDURE NOTE:
   If specimen is for both BACTERIAL and FUNGAL cultures, follow directions for BACTERIAL COLLECTION.

3. PROCEDURE, TRANSPORT, AND STORAGE:
    a. Aspirate from non-draining lesion.
    b. Obtain pus plus a portion of the wall of the abscess, if possible.
    c. Place specimen in a sterile tube.
    d. Label specimen. Take to lab IMMEDIATELY.
    e. Keep at room temperature.

P. **FUNGAL CULTURE—TISSUE**
1. MATERIALS:
    a. Sterile container
2. PROCEDURE, TRANSPORT AND STORAGE:
    a. Obtain both wall and center of lesion.
    b. Place in sterile container.
    c. Label specimen and take to lab IMMEDIATELY.
    d. Keep at room temperature.

Q. **FUNGAL CULTURES—BLOOD**
1. MATERIALS:
    a. See method for routine blood culture collection.
2. PROCEDURE NOTES:
    Blood cultures for fungus are held for 10 days before being discarded as negative.
3. COLLECTION, TRANSPORT, AND STORAGE:
    a. Collect using the same techniques and media bottles as for routine blood bacterial blood culture.
    b. Label specimen. Transport to lab as soon as possible.
    c. Keep at room temperature.

R. **FUNGAL CULTURE—URINE**
1. MATERIALS:
    a. Sterile urine cup
    b. Equipment for clean catch urine
2. COLLECTION, TRANSPORT AND STORAGE:
    a. See routine bacterial urine collection procedure for instructions to patient.
    b. Label specimen. Take to lab immediately.
    c. Keep at refrigerator temperature.

S. **FUNGAL CULTURES—CEREBROSPINAL FLUID**
1. MATERIALS:
    a. Same as bacterial collection
2. PROCEDURE NOTE:
    Cryptococcal antigen test is no longer offered at FMH lab. Specimen will be sent to a reference laboratory for testing.
3. COLLECTION, TRANSPORT AND STORAGE:
    a. Obtain 1-3 mL CSF.
    b. Label specimen and take to lab IMMEDIATELY.
    c. Keep at room temperature.
4. ORDER TEST:
    a. Inpatients: In Cerner: C Fungal – specify source
    b. Outpatients: Specimen must be accompanied by a completed Microbiology request

T. **GENITAL TRACT ROUTINE CULTURES**

1. CT/NG is performed by PCR – See section Y
2. MATERIALS:
   a. Culturette
   b. Sterile Rayon Tipped Applicator
3. PROCEDURE NOTES:
   a. Routine cultures include detection of most common pathogens such as Yeast, N. gonorrhoeae, Staph aureus, Group B streptococci, Gardnerella vaginalis, and any other predominant organism not considered usual flora.
   b. Label specimen with patient's NAME, DATE and TIME.
   c. Since "ROUTINE" cultures include detection of gonococci, rapid transport to the lab is necessary to maintain viability.
   d. Time of collection is needed for QA purposes.
4. PROCEDURE:
   a. MALE:
      - Urethral specimens should not be collected until AT LEAST one hour AFTER urination.
      - Urethral discharge can be collected on a culturette swab. Place swab in culturette.
      - If no discharge is obtained, a Sterile Rayon Tipped Swab should be inserted into the distal urethra for approx. 2 cm. and gently rotated.
      - Place swab in a culturette.
   b. FEMALE:
      - Vaginal specimens for vaginitis:
        (i) Obtain specimen by collecting ample amounts of discharge from the vaginal wall.
        (ii) Place swab in a culturette.
      - Endocervical specimens:
        (i) Moisten speculum with warm water or saline. DO NOT use any other lubricant.
        (ii) Wipe cervix clean with cotton swabs to remove vaginal secretions.
        (iii) Collect discharge on a swab by using a ringing motion to help force exudate from the cervical glands.
        (iv) If no exudate is observed, insert swab into endocervical canal. Move from side to side and allow 30 seconds for absorption of organisms to swab.
        (v) Place swab in a culturette.
5. TRANSPORT AND STORAGE:
   a. Take culturette to lab IMMEDIATELY.
6. ORDER TEST**:**
   a. Inpatients: Order in Cerner: **Culture Genital, specify source**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

U. **VAG/RECTAL —GROUP B STREP SCREEN, DNA Amplification**

1. MATERIALS:
   a. Culturette
2. PROCEDURE NOTES:
   Culturettes will maintain Group B Strep for several hours. However, prompt delivery allows for earlier recovery of organisms.
3. PROCEDURE:
   a. Collect a vag/rec sample.
   b. Place swab in culturette.
4. TRANSPORT AND STORAGE:
   a. Transport to lab IMMEDIATELY.
   b. Keep at room temperature.
   c. Label with patient's NAME, DOB, DATE and source.
5. ORDER TEST:

a. Inpatients: Order in Cerner: Group B Strep Screen, DNA AMP
   - Select Group B Strep Screen w/Reflex to AST for patients with penicillin allergies that require sensitivity testing if detected.
   - Specify source vag/rectal.

b. Out patients: Specimen must be accompanied by a completed Microbiology request slip.

6. Vaginal/Rectal Swabs:
   a. One or two swabs may be used.
   b. Collect a vaginal swab as above.
   c. Use a second swab, or the same swab, and pass the tip app. 1 in. beyond the anal sphincter. Carefully rotate the swab to sample the anal crypts, and withdraw the swab.
   d. Send the swab, in the culturette, with the end crushed, to the lab as soon as possible.

Cervical, perianal, perirectal, or perineal specimens are not acceptable sample types. Submit vag/rec sample only. A speculum should not be used for sample collection.

V. BARTHOLIN GLAND ABSCESS AND OTHER GENITAL CULTURES THAT INCLUDE PUS, FLUID AND TISSUE

1. MATERIALS:
   a. Culturette
   b. BD Anaerobic Transport Tube (if anaerobes are suspected or requested).
2. PROCEDURE NOTES:
   Anaerobic Transport will keep anaerobes viable for several hours.
3. PROCEDURE:
   a. Collect draining pus from Bartholin duct with sterile swabs.
   b. If no pus can be expressed, aspirate with needle and syringe. Place specimen in BD anaerobic transport vial following the directions on the package.
4. TRANSPORT AND STORAGE:
   a. Transport specimen to lab IMMEDIATELY.
   b. Keep at room temperature.
5. ORDER TEST:
   a. Inpatients: Order in Cerner: **Culture genital, specify source**. If source is not available on the Cerner menu choose other and free text the source.
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

W. GENITAL CULTURES—IUD AND OTHER CULTURES FOR ACTINOMYCES

1. MATERIALS:
   a. Thioglycolate Broth for IUD
   b. BD Anaerobic Transport for other specimens. A sterile Petri dish or sterile container can be used for transporting an IUD. However, Thioglycolate Broth is preferred. Thioglycolate Broth is available from Microbiology Department.
2. PROCEDURE:
   a. Place IUD in Thioglycolate broth or in a sterile Petri dish.
   b. Place other specimens in Anaerobic transport following the directions on the package.
   c. Actinomyces cultures are held for l4 days before issuing a final report.
3. TRANSPORT AND STORAGE:
   a. If IUD is NOT transported in Thio, it must be taken to lab IMMEDIATELY.
   b. Transport Thio Broth or Anaerobic Transport to Lab ASAP.
   c. Store at room temperature.
4. ORDER TEST:
   a. Inpatients: Order in Cerner: **Culture genital, source IUD**.
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

X. **GENITAL CULTURES - HERPES PCR and Culture**
Testing for Herpes is referred to a reference laboratory.
Contact the laboratory for collection requirements.

TZANCK PREPS FOR HERPES (performed in CYTOLOGY. See Cytology Procedure Manual.

Y. **GONORRHEA/CHLAMYDIA PCR Test performed at FMH**
MATERIALS:
Cepheid collection kits available from the lab.
Acceptable specimen:
Urine, males and females
Vaginal/Endocervical
Specimen must be collected and tested before the expiration date of the transport medium.

ACCEPTABLE TRANSPORT MEDIA

1. Xpert CT/NG Vaginal/Endocervical Specimen Collection Kit

   Designed to collect, preserve and transport endocervical and vaginal specimens from symptomatic and asymptomatic individuals. Kit contains 1 large sterile cleaning swab, 1 flocked collection swab, 1 tube transport reagent –pink cap).

COLLECTION:

- Remove excess mucus from the cervical os using the large individually wrapped cleaning swab provide with the kit.
- Discard the cleaning swab.
- Use the provided collection swab to collect the sample. Gently rotate the swab clockwise for 10 to 30 seconds in the endocervical canal to insure adequate sampling.
- Insert the swab in to the Xpert Transport Reagent tube.
- Recap and invert or gently shake the tube 3-4 times.

Specimen	Xpert Assay	Transport and Storage Temperature (°C)	Storage Time
Endocervical or Vaginal swab in Xpert Swab Transport Reagent	CT/NG Assay	2-30° C	60 days

2. Xpert CT/NG Urine Specimen Collection Kit

   Design to preserve and transport CT and NG DNA in male and female urine specimens from symptomatic and asymptomatic individuals. Kit contains 1 urine transfer pipette, 1 tube urine transport reagent- yellow cap.

COLLECTION:
Urine (males and females)
- Patient should not have urinated for at least 1 hour prior to specimen collection.
- Female patient should not cleanse the labial area prior to collecting specimen.

- Male patient should NOT cleanse the tip of the penis.
- Collect about 20-50 ml of first-catch urine into a urine cup without preservatives.
- Mix well
- Insert the provided disposable transfer pipette into the urine cup so that the tip is near the bottom if the cup. Transfer approximately 7 ml of urine into the Xpert Urine Transport Reagent tube. The correct volume of urine has been added when the level reaches the black dashed line on the label of the Xpert CT/NG urine transport tube.
- Replace the cap.
- Mix by inverting the reagent tube 3-4 times.
- Label the tube with patient name, second identifier, and date of collection.

TRANSPORT AND STORAGE:

Unpreserved Urine Specimen

Specimen	Xpert Assay	Transport and Storage Temperature (°C)	Storage Time
Female Urine	CT/NG Assay	4° C	8 days
		15-30° C	24 hours
Male Urine	CT/NG Assay	4° C	8 days
		15-30° C	3 days

Preserved Urine Specimen in Xpert Urine Transport Reagent:

Specimen	Xpert Assay	Transport and Storage Temperature (°C)	Storage Time
Female Urine in Transport Reagent	CT/NG Assay	2-15° C	45 days
		2-30° C	3 days
Male Urine in Transport Reagent	CT/NG Assay	2-30° C	45 days

LIMITATIONS:

- Xpert CT/NG Assay performance has not been evaluated in patients less than 14 years of age. Specimen will be send to a reference lab, collect in APTIMA GenProbe, see below.
- Xpert CT/NG Assay performance has not been evaluated in patients with a history of hysterectomy. Specimen will be send to a reference lab, collect in APTIMA GenProbe, see below.
- The Xpert CT/NG Assay has not been evaluated with patients who are currently being treated with antimicrobial agents active against CT or NG.
- The Xpert CT/NG Assay should not be used for the evaluation of suspected sexual abuse or for other medico-legal indications.
- With urine specimens, assay interference may be observed in the presence of: blood (>0.3% v/v), mucin (>0.2% w/v), bilirubin (>0.2 mg/mL), or Vagisil feminine powder (>0.2% w/v)

ORDER TEST:
Inpatients: **CHLAM/GC PCR**
Outpatients: Specimen must be accompanied by a completed Microbiology request slip

CHLAMYDIA-MYCOPLASMA OR UREAPLASMA UREALYTICUM CULTURES SENT OUT TO A REFERENCE LABORATORY.

3. MATERIALS:
   a. Chlamydia/N. gonorrhoeae:
      - APTIMA GenProbe for Chlamydia trachomatis and Neisseria gonorrhoeae Amplified DNA Assay Collection Kits are available from the Send out department in the Laboratory.
      - UTM transport media can be used for Chlamydia from an Eye source. Deliver to Lab as soon as possible. Specimen will be frozen at – 70 °C.

   b. Mycoplasma and Ureaplasma:
      - UTM media available from the Send Out department in the Laboratory.
4. PROCEDURE NOTES:
   a. Specimen should be refrigerated immediately after collection and delivered to Lab ASAP.
   b. DO NOT use calcium alginate swabs or wooden shaft swabs, as they are toxic to many organisms.
   c. USE Polyester (Dacron) tipped swabs.
5. ORDER TEST:
   a. Inpatients: Order in Cerner: Chlamydia/N. gonorrhoeae or if eye, Chlamydia Trachomatis DNA Probe Conjunctive.
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

Z. **WET PREPS**

1. MATERIALS:
   a. Culturette
2. PROCEDURE NOTES:
   a. If specimen is also being submitted for culture, a separate specimen must be obtained using a culturette or appropriate transport as listed under GENITAL CULTURES.
   b. Label specimen with patient's NAME, DOB, and DATE.
   c. Wet preps are processed in Hematology.
3. PROCEDURE:
   a. Obtain specimen by collecting ample amounts of discharge from the vaginal wall.
   b. Place swab in culturette.
4. TRANSPORT AND STORAGE:
   a. Take specimen to lab IMMEDIATELY.
   b. Keep at room temperature.

AA. **AMNIOTIC FLUID, PERIVAGINAL OR DEEP PELVIC ABSCESSES, TISSUE FROM MALE OR FEMALE INTERNAL GENITALIA**

1. MATERIALS:
   a. Sterile syringe and needle for aspirates.
   b. BD Anaerobic Transport tube (if anaerobes are suspected or requested.)
   c. Sterile container for tissue specimens. These consist of tissue, fluid or purulent material.
2. PROCEDURE:
   a. Collect specimen by aspiration if possible. See method under WOUNDS.
   b. Place specimen in Anaerobic Transport following directions on the package.

c. Place tissue specimens in a sterile container.

3. TRANSPORT AND STORAGE:
   a. Take specimen to Lab IMMEDIATELY.
   b. Keep at room temperature.
4. ORDER TEST:
   In patients: Order in Cerner: **Culture Wound Aerobic and Anaerobic or Culture Abscess Aerobic and Anaerobic or Culture Tissue, specify source**

BB. **GASTRIC FOR AFB**

1. MATERIALS:
   a. Levine tube
   b. Syringe
   c. Normal Saline
   d. Sputum Collection System
2. PROCEDURE NOTES:
   a. Test is usually done for 3 consecutive days, unless the physician orders a single sample.
   b. Gastric for AFB is done to concentrate AFB organisms in the stomach that are swallowed from the respiratory tract.
3. PROCEDURE:
   a. Patient preparation: NO smoking, food, or liquids after the evening meal.
   b. Collect specimen in the morning
   c. Pass a Levine tube into the stomach and withdraw all fasting contents. Place contents in the Sputum Collection System.
   d. If no specimen is obtained, wash stomach by injecting and withdrawing 25-50 mL of Normal Saline 3-4 times. Withdraw and place in Sputum Collection System.
4. TRANSPORT AND STORAGE:
   a. Label specimen and deliver to Laboratory ASAP.
   b. If there is any delay, refrigerate specimen.

CC. **INTRAVENOUS CATHETERS**

1. MATERIALS:
   a. Sterile hemostat from SPD
   b. Sterile scissors from SPD
   c. 2 Culturettes
   d. Alcohol swabs or sponge
   e. Sterile forceps
   f. Sterile towel
   g. Band-Aid
   h. Extra culturette
2. PROCEDURE NOTES:
   a. One culturette is used to remove any pus that might be present after catheter removal.
   b. Be careful not to brush the tip of removed catheter against the surrounding skin or environment.
   c. Each specimen goes into separate culturette tube and should be properly identified.
   d. The cotton at the bottom of the culturette should be moist and the tip should be resting on it.
3. COLLECTION:
   a. Before removing the catheter, cleanse carefully around the insertion site with an alcohol swab to remove any residual antimicrobial ointment.
   b. After the alcohol dries, carefully remove the catheter using the following technique:

c. Short plastic catheters: Holding the hub of the catheter in one hand, carefully withdraw catheter. Clamp the sterile hemostat at the tip of the catheter and sever the catheter aseptically l/4-l/2 inch from the tip.
d. Butterfly needles: Carefully withdraw needle by holding on the plastic wings. Clamp the sterile hemostat at the tip of the steel needle and bend the hemostat back and forth until the needle snaps.
e. Long catheters (subclavian, Swan Ganz, CVP, etc.): Clamp catheter at junction where catheter enters skin and slowly remove catheter and put on sterile towel. With sterile scissors, cut 2 inches off the tip and 2 inches from the intracutaneous area just below the hemostat. (See diagram on next page)
f. Remove and discard the swab from one of the culturettes.
g. Aseptically place the catheter segment or needle into the culturette tube.
h. If pus can be expressed at the I.V. site after the removal of the needle or catheter, collect it and place in culturette as a separate culture.
i. Apply sterile Band-Aid over I.V. site.
j. Label specimens.

4. TRANSPORT AND STORAGE:
   a. Take specimens to laboratory IMMEDIATELY.
   b. Keep at room temperature.
5. ORDER TEST:
   a. In patients: In Cerner: Culture Catheter Tip
   b. Out patients: Specimen must be accompanied by a completed Microbiology request slip.

PNEUMOCYSTIS STAINS - See Cytology Procedure Manual

RESPIRATORY CULTURES

DD. **Strep A by PCR**

1. MATERIALS:
   a. Rapid Strep A test collection Kit with Transport tube
   b. Tongue Blade
   c. Light source to illuminate throat
2. PROCEDURE NOTES:
   a. Strep A by PCR is used to distinguish Group A streptococcal infections from viral infections.
   b. Label specimen
3. PROCEDURE:
   a. Using a swab, with the patient's tongue depressed and the throat well-illuminated, vigorously rub the swab firmly over the back of the throat, both tonsils and tonsillar fossae and any other area of inflammation, exudation or ulceration.
   b. Place swab in transport tube, label specimen and place in biohazard bag.
4. TRANSPORT AND STORAGE:
   a. Transport collection kit to lab within 6 hours.
   b. Keep at refrigerated if there is a delay in transport.
5. ORDER TEST:
   a. Inpatients: In Cerner : Strep A by PCR
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

EE. **THROAT AND NASOPHARYNGEAL SWAB FOR DIPHTHERIA**

1. MATERIALS:
   a. BD BBL Culture swab EZ –provided by the micro lab
   b. Tongue Blade

c. Light Source to illuminate throat

2. PROCEDURE NOTES:
   Cultures for DIPHTHERIA are sent to South Central Regional Lab in Anchorage.
3. PROCEDURE:
   a. Collect a throat culture from the area of the throat that is demonstrating a membrane-like covering (if present.) If membrane can be removed, collect beneath the membrane.
   b. Place swab in Culturette.
   c. Using the procedure described under Nasopharyngeal, collect a NP swab.
   d. Place NP swab in a second Culturette.
4. TRANSPORT AND STORAGE:
   a. Take both Culturettes to the lab IMMEDIATELY.
   b. Keep at room temperature
5. ORDER TEST:
   a. Inpatients: In Cerner: Culture C. diphtheria
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

FF. **THROAT: N.GONORRHOEA (GC)**

1. MATERIALS:
   a. Culturette
   b. Tongue Blade
   c. Thayer Martin/Chocolate Agar (TM/CA) or Thayer Martin plate plus a Chocolate plate\
   d. Light source to illuminate throat
2. PROCEDURE NOTES
   a. GC can die quickly. Immediate transport to lab to facilitate optimum recovery.
   b. Microbiology order form must include TIME OF COLLECTION and DATE OF BIRTH.
3. PROCEDURE:
   a. With tongue depressed and throat illuminated, swab the posterior pharynx and the region of the tonsillar crypts.
   b. Roll the swab directly onto both media making sure that all parts of the swab that might have inoculum touch the media.
   c. Label plate with patient's name.
4. TRANSPORT AND STORAGE:
   a. Place plate in a Biohazard bag and seal tightly.
   b. Take specimen to Lab **IMMEDIATELY.**
   c. Alert Lab Assistant that there is a culture for GC so that specimen can be promptly taken to Microbiology.
5. ORDER TEST:
   a. Inpatient: In Cerner: Culture GC only, specify source
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

GG. **NASOPHARYNX**

1. MATERIALS:
   a. Sterile Rayon Tipped Swab
   b. Culturette
2. PROCEDURE NOTES:
   a. Results of NP cultures must be carefully interpreted. Presence of potential pathogens does not always indicate an infection.
   b. Label specimen. Order in Cerner.
3. PROCEDURE:

a. The specimen may be collected through the mouth by passing a NP swab under and beyond the uvula to the posterior wall of the nasopharynx. To collect specimen through the nose, pass the wire swab along the floor of the nasal passage to the posterior wall.
b. Try to secure a bit of mucus by gently twirling swab while in place against the nasopharyngeal wall.
c. Place NP swab in Culturette.

4. TRANSPORT AND STORAGE
   a. Take specimen to Lab as soon as possible.
   b. Keep at room temperature <6 hours.
5. ORDER TEST:
   a. Inpatients: In Cerner: **Culture Nasal Aerobic and Anaerobic** or **Culture Nose**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

HH. **NOSE**

1. MATERIALS:
   a. Culturette
2. PROCEDURE NOTES:
   a. Potential pathogens in the nose can be part of the normal oral flora so that their presence does not always indicate an infection.
   b. Nose cultures can be used to detect the carrier state of a pathogen.
   c. If an anaerobic culture desired, please use the BD Anaerobic Transport Tube.
3. PROCEDURE:
   a. Swab the anterior nares only.
   b. Place swab in culturette.
   c. Label specimen.
4. TRANSPORT AND STORAGE:
   a. Take specimen to Lab ASAP.
   b. Keep at room temperature <6 hours.
5. ORDER TEST:
   a. Inpatients: In Cerner: **Culture Nasal Aerobic and Anaerobic** or **Culture Nose**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

II. **EPIGLOTTIS**

1. MATERIALS:
   See Nasopharyngeal Culture
2. PROCEDURE NOTES:
   a. After an airway has been assured NP and Blood Cultures should be taken.
   b. The epiglottis IS NOT recommended for culture in cases of acute epiglottitis because of the danger of causing an airway obstruction.
3. PROCEDURE:
   a. See procedure for NP culture.
   b. Blood cultures are recommended.

JJ. **MOUTH**

1. MATERIALS:
   a. Culturette
   b. Tongue blade
2. PROCEDURE NOTES:
   a. Mouth cultures ARE NOT recommended EXCEPT for YEAST.

b. If abscess is present, see procedure for Superficial Wound.

3. PROCEDURE:
   a. Swab the affected areas of the mouth.
   b. Place swab in Culturette.
4. ORDER TEST:
   a. Inpatients: In Cerner: **C Oropharyngeal**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

SPUTUM

KK. **ROUTINE CULTURE - FUNGAL CULTURE - TB**

1. MATERIALS:
   a. Sputum Collection System (Materials Management) or Sterile Sputum Traps (Materials Management and Suction Machine (Respiratory Therapy)
2. PROCEDURE NOTES:
   a. This collection procedure is used for routine sputum culture, fungal culture and TB (AFB) PCR, stain and culture.
   b. Tuberculosis:
      - For additional information on TB see facility TB Infection Prevention Control Plan.
      - First morning specimen is best because it takes advantage of secretions pooled overnight.
      - In order to maximize detection of ACID FAST BACILLUS for TB, collect 3 specimens on 3 different days. Collect early morning specimen from deep productive cough on three consecutive days, before the patient eats, drinks or takes medication. It is acceptable to collect a second sputum specimen on the same day, **but specimens must be at least 8 hours apart**. At least one out of the 3 collected sputa must be a morning sample.
      - 2 of 3 Specimens submitted for MTB testing will have a MTB/RIF PCR assay performed in house, in addition to all specimens having smear and culture performed at the State Lab in Anchorage.
      - Have patient rinse their mouth with water prior to collection. Collect **at least 4 mL sputum** in sterile 50 mL screw capped tubes.

      SPECIMENS FOR MTB MUST BE AT LEAST 4 ML IN VOLUME – Or will be rejected for testing.

   c. **Routine Sputum Cultures:**
      - Sputum specimens that have Routine Cultures ordered are evaluated microscopically for the presence of contaminating oral flora. The presence of >40 epithelial/hpf indicates that the specimen is grossly contaminated with saliva. This results in a REJECTED specimen. Lab will contact nursing unit to request a new specimen.
      - If the patient produces only saliva, repeat at a later time. If the patient consistently produces only saliva, notify the physician to see if she/he might order Respiratory Therapy to collect an induced specimen.
3. PROCEDURE:
   a. First, check collection timing. Must be a minimum of 8 hours prior to last collection for TB testing.
   b. Get sputum container out of package so that it is ready to use.
   c. As soon as patient awakens in the morning, have him clear his throat and discard superficial phlegm. Have the patient rinse his mouth with water.
   d. Have patient breathe as deeply as he can several times.
   e. Have patient cough as hard as he can from deep in the chest.
   f. IMMEDIATELY have the patient place the specimen produced in the container without unduly holding it in his mouth.
   g. Leave the entire sputum system intact. Tape lid closed.

h. All sputum specimens from Cystic Fibrosis patients will be automatically sent to Mayo Lab for testing, regardless of the stain report.
i. All other AFB specimens will be sent to the APHL in Anchorage for smear, culture, and susceptibilities as needed.

4. TRANSPORT AND STORAGE:
   a. Take specimen IMMEDIATELY to Lab.
   b. Keep refrigerated at 2-8°C up to 3 days.
   c. If the specimen has been collected in a "sputum trap," follow directions on the envelope. Label and take IMMEDIATELY to the Lab.
5. ORDER TEST:
   a. Inpatients: Order in Cerner:
      For a routine sputum culture: **Culture Sputum, specify source: Sputum expectorated, or Sputum induced or Sputum suction**
      For a Cystic fibrosis patient: **C Sputum Cystic fibrosis**
      For a Fungal culture: **Culture fungal, specify source**
      For an AFB culture: **C AFB** , specify expectorated/induced/suction (Culture and Smear performed by APHL)
      AFB by PCR –**This is for RAW Sputum only** (Performed In-house on 2 of 3 samples)
      All other sources order C Acid Fast Bacilli- state specimen type.
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip**.**

LL. **TRANSTRACHEAL ASPIRATES (TTA'S), BRONCHIAL BRUSHES, BRONCHIAL WASHINGS**

These specimens are collected by the Physician and nursing staff. Label specimen and IMMEDIATELY take to Lab. Bronchial Brushes can be used to isolate anaerobes. Therefore, prompt delivery (within 15 minutes) to the Lab is essential.

Bronch washing is not suitable specimen for MTB/RIF by PCR (TB PCR) testing.

MM. **MASTOID SINUS CULTURE**

1. MATERIALS:
   BD Anaerobic transport vial
2. PROCEDURE NOTES:
   a. Since there is a possibility that the infection could be caused by anaerobes, use the BD anaerobic transport tube.
   b. Anaerobic transport tube can be used for both aerobic and anaerobic cultures..
3. PROCEDURE:
   a. These specimens are usually collected by the physician in the OR.
   b. Place specimen in the BD anaerobic transport vial following package directions.
   c. Label specimen.
4. TRANSPORT AND STORAGE:
   a. Take specimen to the lab IMMEDIATELY.
   b. Keep at room temperature.
5. ORDER TEST:
   a. Inpatients: In Cerner: **C Sinus A&A**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

NN. **PARANASAL SINUS CULTURE**

1. MATERIALS:
   a. Needle and syringe for aspirates
   b. BD anaerobic transport vial

2. PROCEDURE NOTES:
   Anaerobic infections are possible in these sites.
3. PROCEDURE:
   a. The specimen is usually collected in OR by the physician. Care must be taken to use appropriate techniques to maintain viability of anaerobes.
   b. Place specimen in BD anaerobic transport vial.
   c. Label specimen.
4. TRANSPORT AND STORAGE:
   a. Take specimen to lab IMMEDIATELY.
   b. Keep at room temperature.
5. ORDER TEST:
   a. Inpatients: In Cerner: **C Sinus A&A**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

OO. **STOOL GASTROINTESTINAL PANEL - ADULTS AND OLDER CHILDREN**
RECOMMENDED GUIDELINES

1. MATERIALS:
   a. Clean container for collecting specimen such as a bedpan or wide cup. Saran wrap over the toilet can also be used for collection.
   b. Enteric pathogen transport media (Cary-Blair formula)
2. PROCEDURE NOTES:
   a. Collection should be made without contaminating with urine.
   b. Antibiotics and mineral oil are toxic to bacteria. DO NOT administer before collection.
   c. 2-3 specimens collected on different days are sufficient for bacterial exam. To detect the carrier state, collect 3 specimens on separate days.
   d. If diarrhea has commenced after the patient has been hospitalized 3 or more days, an Ova and Parasite examination is NOT recommended. Toxin assay for C. difficile may be indicated.
   e. Routine Gastrointestinal Panel include testing for the following pathogens:
      - Campylobacter (C. jejuni/ C. coli/ C. upsaliensis)
      - Clostridium difficile toxin A/B
      - Plesiomonas shigelloides
      - Salmonella
      - Vibrio (V. parahaemolyticus/ V. vulnificus/ V. cholera), including specific identification of Vibrio cholera
      - Yersinia enterocolitia
      - Enteroaggregative Escherichia (EAEC)
      - Enteropathogenic Escherichia coli (EPEC)
      - Enterotoxigenic Escherichia coli (ETEC) it/st
      - Shiga-like toxin-producing Escherichia coli (STEC) stx1/stx2 (including specific identification of the E. coli O157 serogroup within STEC)
      - Shigella/Enteroinvasive Escherichia coli (EIEC)
      - Cryptosporidium
      - Cyclospora cayetannsis
      - Entamoeba histolytica
      - Giardia lamblia (also known as G. intestinalis and G. duodenalis)
      - Adenovirus F 40/41
      - Astrovirus
      - Norovirus GI/GII – must be confirmed by reference laboratory
      - Rotavirus A
      - Sapovirus (Genogroups I/II/IV/ and V)
   f. Try to select portions that have blood or mucus.

g. Transport media will preserve specimen for several days. However, prompt delivery facilitates timely results.

3. PROCEDURE:
   a. Have patient collect specimen in a suitable container.
   b. IMMEDIATELY after patient has collected the specimen, transfer a portion to the Enteric pathogen transport media (Cary-Blair). Fill to line as directed on the vial.
   c. Cap securely and mix vigorously. Label.
4. TRANSPORT AND STORAGE:
   a. Take specimen to Lab ASAP.
   b. Keep specimens in transport media at refrigerator temperature.

PP. **STOOL: INFANTS IN DIAPERS**

1. MATERIALS:
   a. Diaper partially lined with non-permeable liner such as plastic wrap.
   b. Enteric pathogen transport media (Cary-Blair)
2. PROCEDURE NOTES:
   a. Diapers that are not lined tend to absorb most of a liquid or semiliquid stool. Powder, etc., may be toxic to bacteria. Therefore, if it is possible, try to maximize collection with a non-absorbent, non-permeable liner placed strategically in the diaper.
   b. Try to select portions that have mucus or blood.
   c. Specimens in diapers are NOT ACCEPTABLE.
   d. Transport media will preserve specimen for several days. However, prompt delivery facilitates timely results.
3. PROCEDURE:
   a. Place liner in diaper.
   b. As soon as there is a specimen, transfer a portion to the enteric pathogen transport media (Cary-Blair). Fill to line as directed on label.
4. TRANSPORT AND STORAGE:
   a. Take specimen to Lab ASAP
   b. Keep specimens in transport media at refrigerator temperature.

QQ. **STOOL FOR GRAM STAIN OR WBCs (POLYS)**

1. MATERIALS:
   a. Clean container for collecting specimen such as bedpan or wide cup. Saran wrap over the toilet can be used for collection.
   b. Specimen cup with tight lid for transport
2. NOTES:
   a. This IS NOT an acceptable specimen for Culture or for Ova and Parasites
   b. If possible, try to transfer any portion that contains mucus or blood.
   c. For GRAM STAIN, fill out Microbiology Request form.
   d. For WBCs, fill out ROUTINE Lab Request Form.
   e. Stool for WBCs is done in Hematology.
3. COLLECTION:
   a. Have patient collect specimen.
   b. Transfer a portion into specimen cup. Label specimen.
4. TRANSPORT AND STORAGE:
   a. Take specimen to Lab IMMEDIATELY.
   b. Place specimen in refrigerator upon arrival in lab.
5. ORDER TEST:
   a. Inpatients: In Cerner: **WBC Fecal** or **Gram Stain Only**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

RR. **STOOL FOR CLOSTRIDIUM DIFFICILE**

1. MATERIALS:
   a. Fresh stool in a clean cup
2. PROCEDURE NOTES:
   a. Toxin assays are preferred for detection of C. difficile. Culture is rarely requested. If both are requested, send at least a 15cc portion of stool.
   b. C. difficile PCR method for testing at FMH. If culture is requested, it is sent to a reference lab.
3. COLLECTION:
   a. Have patient collect specimen.
   b. Transfer a small portion to a gray container or a clean specimen cup. Label.
   c. Unpreserved stool in a clean container are acceptable for testing.
   d. Only liquid or soft stools that take the shape of the container are acceptable. Formed and hard stools will be rejected.
4. ORDER TEST:
   a. Inpatients: In Cerner: **C. diff toxin PCR**
   b. Outpatients: Specimen accompanied by a completed Microbiology request slip.

SS. **STOOL FOR OVA AND PARASITES**

Sent out to a reference lab.

1. MATERIALS:
   a. Clean container for collecting specimen
   b. O&P Transport Media -1 vial of Para-Pak EcoFix.
2. PROCEDURE NOTES:
   a. Patient can collect and transfer own specimen if able to do so. Instruct patient in collection and transfer procedure by using pamphlet insert that comes with the transport vial.
   b. Try to select portions that are bloody or have mucus.
   c. To maximize detection of parasites, ORDER O&P X 3. Since some organisms are shed in a variable pattern, it is recommended that specimens be collected every SECOND or THIRD DAY. In the hospital, one specimen each day for three days is acceptable.
   d. Transport media will preserve O & P specimen for weeks. However prompt delivery facilitates timely results.
3. COLLECTION:
   a. Have patient collect specimen in bedpan or clean cup.
   b. Transfer portion of stool to the vial. Fill to line as directed on label of vial.
   c. Mash or stir specimen in liquid until is well mixed with fluid.
   d. Replace cap TIGHTLY. Shake HARD until mixture looks like soup.
   e. Label specimen.
4. TRANSPORT AND STORAGE:
   a. Take to Lab as soon as possible.
   b. Keep at room temperature.
5. ORDER TEST:
   a. Inpatients: In Cerner: **O&P**
   b. Outpatients: Specimen accompanied by a completed Microbiology request slip.

TT. **PINWORM PREP**

1. MATERIALS:
   Sterile Pinworm Paddle (available in Microbiology Lab)
2. PROCEDURE NOTES:

Handle specimens very carefully. Pinworm eggs are easily transmissible.

3. PROCEDURE:
   a. Obtain the specimen early in the morning before the patient has arisen.
   b. Remove cap in which is inserted a clear polystyrene paddle with one side coated with a non-toxic mildly adhesive material. This side is marked "sticky side". Do not touch this surface with fingers.
   c. Press the sticky surface against the perianal skin with moderate pressure.
   d. Place cap back into container. Label specimen.
4. NOTES:
   Pinworm test is performed on day shift only.
5. ORDER TEST:
   a. Inpatients: In Cerner: **Pinworm exam**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

UU. **URINE**

1. PROCEDURE NOTES:
   a. First morning midstream clean-catch urine is best for culture.
   b. Since urine is an excellent medium for growth of bacteria, and the colony count is used for deciding whether a patient has a UTI, the urine must be taken to the laboratory immediately after collection. Refrigerate (2-8°C.) the specimen if there is a delay in transport. Refrigerated specimens can be cultured up to 24 hours after collection.
   c. Specimens preserved in Becton Dickinson Vacutainer System are acceptable for culture up to 48 hours after collection without refrigeration.
   d. Specimens that have been delayed in transport for more than 2 hours and have not been refrigerated are **NOT ACCEPTABLE** for culture.
   e. Specimens are to be collected in sterile containers. Specimens received in containers that are potentially contaminated are NOT ACCEPTABLE for culture. Generally, the plastic containers used for routine urinalysis collection are not contaminated and can be used if a sterile container is not available.
   f. FOLEY CATH TIPS ARE NOT PROCESSED—THEY ARE AN UNACCEPTABLE SPECIMEN FOR CULTURE.

URINE—ROUTINE CULTURE

VV. **URINE INFANTS**

1. PROCEDURE NOTES:
   a. Refrigerated specimens can be cultured up to 24 hours after collection.
   b. Be sure to label specimen. Place in a plastic urine cup for easier handling.
   c. Specimen must be accompanied by a properly filled out Microbiology Request Form.
2. MATERIALS:
   a. Pediatric Urine Collection Kit (from Materials Management)
   b. Wash cloth
   c. Soap and Water
3. PROCEDURE:
   a. Wash genital area using wash cloth with soap and water.
   b. Apply Pediatric urine collection bag.
   c. Check frequently to see if specimen has been collected.
4. TRANSPORT AND STORAGE:
   a. When specimen is obtained, take to Lab IMMEDIATELY.
   b. If there is any delay in transport, refrigerate specimen.
   c. Place specimen in refrigerator when delivering to lab.

5. ORDER TEST:
    a. Inpatients: In Cerner: **C Urine**; source **Cath** or **Clean catch** or **Suprapubic**
    b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

WW. **URINE - ADULT COLLECTION**

1. MATERIALS:
    a. Clean Catch Collection Kit (from Materials Management) containing:
        - 1 screw-cap specimen cup with sampling device
        - 1 red top Vacutainer conical tube for urinalysis
        - 1 gray top Vacutainer tube for culture
        - 2 cleansing Toweletts
    b. Chair or shelf in bathroom to place collection kit on.
2. PROCEDURE NOTES:
    a. Be careful NOT to touch the inside of the collection cup or the inside of the lid.
    b. After use, Towelettes are to be discarded into the toilet.
3. PROCEDURE—FEMALE:
    a. Have patient remove undergarments, wash hands with soap and water.
    b. Open collection kit. Unscrew cap of the urine specimen cup. Place cap on shelf with "straw" facing upward. DO NOT TOUCH INSIDE OF CUP, CAP OR STRAW. Have Towelettes within reach along with collection cup.
    c. With one hand, the patient is to separate her labia and wipe the inner folds front to back in a single motion.
    d. Using the Towelettes, the patient is to wipe along one side of the opening (meatus) from front to back. Take second Towelette and repeat down other side. Discard. Take third Towelette and wipe down the middle. Discard.
    e. Pass a small amount of urine into toilet (or bedpan), and without stopping stream, hold specimen cup a few inches from opening and catch remaining urine. DO NOT overflow cup.
    f. Place lid securely on specimen cup so that it does not leak.
4. PROCEDURE—MALE:
    a. Remove lid from specimen cup.
    b. Have Towelette ready.
    c. Pull back the foreskin to expose glans (if indicated). Wipe away from the opening (urinary meatus). Discard Towelette in toilet.
    d. Allow initial urinary flow to drain into urinal or toilet and without stopping stream, hold specimen cup a few inches from penis and catch remaining urine. DO NOT overflow cup.
    e. Place lid securely on specimen so that it does not leak.
5. TRANSPORT AND STORAGE:
    a. Take specimen to lab IMMEDIATELY.
    b. Keep at refrigerator temperature.
    c. Place specimen in refrigerator upon delivery to lab.
6. ORDER TEST:
    a. Inpatients: In Cerner: **C Urine**; source **Cath** or **Clean catch** or **Suprapubic**
    b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

XX. **URINE—FOLEY CATHETERS**
COLLECTION FOR INDWELLING FOLEY CATHETERS

1. MATERIALS:
    a. Foley clamp
    b. Sterile syringe and needle
    c. Sterile tube
    d. Alcohol sponge

2. PROCEDURE NOTES:
   a. If specimen is also needed for Urinalysis, a 10-20mL syringe is needed.
   b. If Urinalysis is requested, withdraw 10-20mL.
3. COLLECTION:
   a. Clamp off drainage tube below bifurcation of tubing for 15-20 minutes. DO NOT DISCONNECT.
   b. Cleanse Foley with alcohol. Withdraw a minimum of 2mL of urine for culture. Be sure to insert needle into Foley BELOW bifurcation, unless tubing has an area especially for this purpose, in which case, clamp off the drainage tube instead of the Foley.
   c. Place urine in sterile tube.
   d. Label specimen.
4. TRANSPORT AND STORAGE:
   a. Take specimen to lab IMMEDIATELY.
   b. Keep at refrigerator temperature.
   c. Place specimen in refrigerator upon delivery to lab.
5. ORDER TEST:
   a. Inpatients: In Cerner: **C Urine**; source **Cath**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

YY. **URINE—AFB**

1. MATERIALS:
   Clean container for collecting urine
2. PROCEDURE NOTES:
   a. 24 hour specimen is NOT acceptable.
   b. A direct smear for AFB is not done on urine specimens.
   c. Early morning specimen is preferred to take advantage of pooling of organisms.
3. PROCEDURE:
   a. See procedure under URINE CULTURE for Clean Catch Procedure.
   b. Send a minimum of 15 mL in a sterile cup.
   c. Testing performed at the State Lab in Anchorage.
4. TRANSPORT AND STORAGE:
   a. Transport to Lab ASAP.
   b. Refrigerate specimen if there is any delay.
5. ORDER TEST:
   a. Inpatients: In Cerner: **C Acid Fast Bacilli urine**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

URINE—ANTIGEN TESTING

Urine antigen testing is no longer performed at FMH. If requested, test will be send to a reference laboratory.

ZZ. **URINE—SUPRAPUBIC ASPIRATES (SPA)**

1. MATERIALS:
   a. Iodine and alcohol sponges
   b. 10 mL syringe, 22 gauge needle
   c. Sterile tube.
2. PROCEDURE NOTES:
   a. Suprapubic aspirates are done so that collection can be free of contaminating genital flora. It is also the only urine specimen that is acceptable for anaerobes.
   b. Infants may require a smaller syringe and needle.
   c. Deliver to Lab immediately and process ASAP.

3. PROCEDURE:
   a. Procedure is done by a physician.
   b. Set up routine urine culture plus an anaerobic plate.
   c. All suprapubic aspirates are set up for aerobes and anaerobes.
4. TRANSPORT AND STORAGE:
   Take specimen to lab IMMEDIATELY.
5. ORDER TEST:
   a. Inpatients: In Cerner: **C Urine**; source **Suprapubic aspirate**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

AAA. **VIRAL CULTURES**

1. GENERAL INFORMATION:
   a. Viral cultures are sent to the Mayo Clinic.
   b. Generally, viral specimens MUST BE collected within the acute phase of infection.
   c. A longer interval between illness and onset is acceptable for the following:
      - Rectal swab/feces for enteroviral culture
      - Urine culture for CMV, mumps, culture.
      - Vesicular fluid, CSF, biopsy specimens.
   d. Label specimens with patient's NAME, DOB, DATE, IDENTIFICATION NUMBER and source.
2. MATERIALS:
   a. Universal Transport Media (UTM) is available at the laboratory send out desk.
   b. Sterile Synthetic Swab (for throat, rectal, vesicle, lesion, or eye collection)
   c. Sterile Rayon Tipped Swab (for NP, eye collection). DO NOT USE WOODEN SHAFT OR COTTON SWABS.
   d. Tuberculin syringe with 26 or 27 gauge needle (for vesicle fluid collection)
   e. Isotonic salt solution PBS (for pharyngeal or NP washing)
   f. Sterile containers (for collection of urine, feces, or pharyngeal washing)
   g. Rubber bulb syringe (for NP washing)
3. PROCEDURE NOTES:
   a. Rapid RSV NAAT test (Respiratory syncytial virus) done at FMH.
   b. Rotavirus tests are **NOT** done at the State Lab. Samples are sent to the Mayo Clinic.
   c. Respiratory viruses, herpes virus and Varicella Zoster virus decrease in recovery rate after 5-6 days.
   d. UTM is good until the expiration date on the vial.
4. COLLECTION, STORAGE, AND TRANSPORT:
   a. **PHARYNGEAL WASHING**:
      - Introduce saline (PBS) into patient's mouth with a drinking glass or syringe (without a needle). With patient's head retracted, have patient gargle fluid. Collect fluid in a sterile container. Repeat procedure for at least 3 minutes. Place fluid in UTM. Take labeled specimen to Lab.
      - Total volume of PBS should not exceed 20 mL.
   b. **NASAL WASHING**:
      - Tilt the patient's head back an angle of about 70. Insert rubber bulb syringe (l oz. tapered containing 3-7mL of PBS) until it occludes the nostril. Collect specimen with one complete squeeze and release bulb. Place contents in UTM. Take labeled specimen to Lab.
      - Nasopharyngeal washings are superior for respiratory syncytial virus (RSV), influenza, and parainfluenza viruses.
      - Nasal washings or swabs are submitted for RSV NAAT tests done at FMH. Fill out routine Lab Slip and submit with specimen. See procedure under RSV.

c. **THROAT SWABS**:
- Material is obtained by rubbing the oropharynx vigorously with a synthetic (rayon) swab. Include material from the posterior pharynx, tonsils, faucial pillars and/or any inflamed erythematous areas or visible lesions. Place swab in UTM. Take labeled specimen to Lab.
- Throat swabs are adequate for recovery of entero and adenovirus isolation.

d. **NASAL SWABS**:
- Collect the specimen by inserting a flexible wire swab into the nasopharynx just posteriorly to the turbinate. Rotate the swab, remove, and place in UTM. Take labeled specimen to Lab.
- Nasal specimens are optimal for rhinovirus recovery.

e. **FECAL SPECIMENS**:
- Place l-2 (<1 tsp) sample into UTM. Take labeled specimen to Lab.
- Most cases of viral gastroenteritis are due to viruses that cannot grow in culture, e.g., rotavirus, Norwalk agents, and some adenoviruses, but demonstrated by enzyme immunoassay (EIA).

f. **CSF, PERICARDIAL OR PLEURAL FLUID**:
- 3 mL of fluid should be collected under aseptic conditions. Store in sterile tubes. Take labeled specimen to Lab. Keep refrigerated.
- If possible, collect specimens Sunday through Thursday. Because there is a delay in delivery to the Reference Lab for those specimens that are collected on Friday and Saturday, there may be some loss of viability of the virus.

g. **VESICLE FLUID**:
- The area around the lesion is cleaned with ether or acetone. Aspirate the fluid into a tuberculin syringe (about 0.2mL). Place aspirate into UTM. Rinse syringe with UTM and discharge fluid back into UTM vial.
- Alternatively, rupture vesicle and absorb fluid onto synthetic (rayon) swabs by gently rubbing the vesicle base with the swab. Place swab in UTM.
- Take labeled specimen to Lab.
- Fluid and cells from vesicles are superior to specimens recovered from ulcers for culture and for staining.

h. **DERMAL/GENITAL LESIONS**:
- The vesicle may be ruptured and/or the surface of the lesions scraped to obtain vesicle fluid and cells from the base of the lesion using a swab. Place specimen in UTM. Take labeled specimen to Lab.

i. **URINE**:
- First morning clean voided urine preferred. Collect at least l0 mL in a sterile container. Take labeled specimen to Lab. Keep refrigerated.
- Mumps, adenovirus, and CMV can be recovered from urine. Two or three specimens on successive days are suggested for maximum recovery of virus.

j. **EYE**:
- Conjunctiva:
  (i) Press a swab moistened with UTM firmly against the inflamed area of the conjunctiva. Place swab in UTM.
- Corneal lesions:
  (i) Corneal scrapings are collected by an ophthalmologist. Place material in UTM.
- Take labeled specimen to Lab. with Viral Request Form.
- An NP swab (Culturette or rayon) can be used to obtain secretions from the conjunctiva.
- Eye swabbing should be obtained by an ophthalmologist.

k. **TISSUE**:

- Take the biopsy sample from areas directly adjacent to affected tissue. Suspend tissue in UTM. Take specimen to Lab with Viral Report Form.
- Tissue and cells grown in cell culture subsequent to dispersal of the cells have resulted in higher virus recovery; e.g. lung (CMV, influenza, and adenoviruses), and brain (HSV). The cytological detection of CMV inclusions is 3-6x less sensitive than viral isolation; e.g., bronchial washing may contain inclusion-bearing cells in only 50% of specimens from which CMV is recovered.

l. **WHOLE BLOOD**:
- Draw a venous sample (heparinized for CMV, and clot for arbovirus) during the early acute phase of infection. Take labeled specimen to Lab with Viral Report Form. Keep refrigerated.
- Buffy coat cells from heparinized blood are occasionally useful for detection of CMV viremia in immunocompromised patients.

m. **BONE MARROW**
- Submit in UTM transport media.

5. ORDER TEST:
   a. Inpatients: In Cerner: **C Viral** Source: **genital**, **CSF**, **NP** etc.
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

BBB. **FLU A & B—INFLUENZAE A & B, RSV and COVID-19 by PCR**
Acceptable specimens: nasopharyngeal swabs.

Specimen must be placed in UTM immediately after collection. Swabs collected and not put in transport media until later time are not acceptable.

Specimen must be collected and tested before the expiration date of the UTM.

1. COLLECTION:
   UTM kit (Universal Transport Medium) available from Lab.
2. PROCEDURE:
   NOTE: The nylon flocked swab should not be bent prior to specimen collection.

- Collect the specimen with the swab.
- Aseptically remove the cap from the tube.
- Insert the swab into the tube with the transport medium.
- Break the swab shaft at the pre-scored line by bending it against the tube wall.
- Replace the cap onto the tube and close tightly.
- Label with appropriate patient information. At least 2 identifiers are required.
- Send to laboratory for testing.

3. TRANSPORT AND STORAGE:
   1. Specimen should be transported to the lab as soon as possible.
   2. Specimen in transport medium following collection can be stored:
      - up to 24 hours at 15° -30° C
      - up to seven days at 2-8° C prior to testing.

Proper sample collection, storage, and transport are essential for correct results.

4. ORDER TEST:
   a. Inpatients: In Cerner: **Infuenzae A/B and RSV PCR/Covid 19 Combo**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

CCC. **Respiratory Panel by PCR**

Acceptable specimens: nasopharyngeal swabs.

Specimen must be placed in UTM immediately after collection. Swabs collected and not put in transport media until later time are not acceptable.

Specimen must be collected and tested before the expiration date of the UTM.

1. COLLECTION:
   UTM kit (Universal Transport Medium) available from Lab.
2. PROCEDURE:
   NOTE: The nylon flocked swab should not be bent prior to specimen collection.

   - Collect the specimen with the swab.
   - Aseptically remove the cap from the tube.
   - Insert the swab into the tube with the transport medium.
   - Break the swab shaft at the pre-scored line by bending it against the tube wall.
   - Replace the cap onto the tube and close tightly.
   - Label with appropriate patient information. At least 2 identifiers are required.
   - Send to laboratory for testing.

3. TRANSPORT AND STORAGE:
   3. Specimen should be transported to the lab as soon as possible.
   4. Specimen in transport medium following collection can be stored:
      - up to 4 hours at 15° -30° C
      - up to three days at 2-8° C prior to testing.

Proper sample collection, storage, and transport are essential for correct results.

4. ORDER TEST:
   a. Inpatients: In Cerner: **Respiratory Panel PCR**
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

DDD. **WOUNDS**

1. MATERIALS
   a. Culturette (for AEROBIC CULTURE ONLY)
   b. BD Anaerobic tube (for AEROBIC and ANAEROBIC CULTURE)
   c. Sterile syringe, needle
   d. Sterile container (for curettage or biopsy)
   e. Antiseptic swabs
2. PROCEDURE NOTES:
   a. Superficial wound infections are caused by AEROBIC bacteria. Culturette tube is suitable for transport.
   b. Use BD Anaerobic Transport Tube for aerobic and anaerobic cultures.
   c. Please take care to collect and transport as specified to preserve anaerobes.
   d. Specimens received in Culturettes are NOT ACCEPTABLE for anaerobic culture.
3. COLLECTION-SUPERFICIAL WOUNDS
   a. Cleanse skin with antiseptic.
   b. Collect specimen on culturette swab, sampling the deepest portion or active margin of the wound. Avoid contact with skin. DO NOT sample areas of healing.
   c. Place swab in culturette.
4. COLLECTION FOR CHRONIC OPENED WOUNDS

a. Cleanse surface with antiseptic.
b. Preferred specimen: Collect by curettage or biopsy of the wall of the wound.
c. Place specimen in sterile container.

5. COLLECTION FOR DEEP WOUNDS: CLOSED deep wounds and abscesses.
   a. Clean surface with antiseptic.
   b. Aspirate with needle and syringe, being careful to sample deepest portion or active margin of the wound.
   c. If little fluid is present, inject sterile saline into the site and re-aspirate.
   d. Place aspirate into BD anaerobic tube following directions on the package.
6. OPEN DEEP WOUNDS:
   a. If there is enough liquid purulent material and the technique can be performed with minimal patient risk, aspirate the deepest portion or active margin of the site.
   b. Place aspirate in BD Anaerobic tube.
7. TRANSPORT AND STORAGE:
   a. Label specimen, take to Lab IMMEDIATELY.
   b. Keep at room temperature.
8. ORDER TEST:
   a. Inpatients: In Cerner: **C Wound aerobic and anaerobic (deep)**
      C Wound aerobic (surface)
   b. Outpatients: Specimen must be accompanied by a completed Microbiology request slip.

EEE. **ESBL, MRSA, VRE**

1. MATERIALS
   a. Culturette SP C88552-11
2. COLLECTION FOR ESBL
   a. Collect a culture from the original source (unless it was a CSF, Blood or it was a wound that already healed)
   b. Collect 72 hours after completion of antibiotics for 2 consecutive days.
3. COLLECTION FOR MRSA
   a. Collect a nasal, groin, and original site (unless it was a CSF, Blood or it was a wound that already healed).
   b. Collect 72 h after completion of antibiotics and for 2 consecutive days.
4. COLLECTION FOR VRE
   a. Collect fecal specimen or rectal swab, and original site (unless it was a CSF, Blood or it was a wound that already healed).
   b. Feces show greater yield than perirectal swab.
   c. Swabs of wounds or urine may also be submitted.
   d. Collect 72 h after completion of antibiotics, and for 2 consecutive days.
5. TRANSPORT AND STORAGE
   a. Place swab in a Culturette.
   b. Label with 2 identifiers, and immediately take to Lab with Microbiology requisition.
   c. Room temperature <6 hours.

FFF. **MRSA SCREEN by PCR**

1. MATERIALS:
   a. Dual rayon swab
2. PROCEDURE NOTES:
   a. Results will be reported within 2 hours.
3. COLLECTION:

a. When using the dual rayon swabs, keep both swabs attached to the red cap at all times. Holding the swab cap with both swabs attached, sample each nare one at a time. Place the dual swab specimens into the transport tube containing the Liquid Stuart Medium.

4. TRANSPORT AND STORAGE
   a. Take specimen to lab immediately
   b. Store at 15-30˚C for up to 24 hours
   c. Store at 2-8˚C for up to 7 days
5. ORDER TEST:
   a. Inpatients: In Cerner:
   b. Outpatients: Specimen accompanied by a completed Microbiology request slip.

V. Procedural Documentation:

A. N/A

VI. Additional Information:

A. N/A

VII. References:

A. James Jorgensen and Michael Pfaller. ,editors in chief, Manual of Clinical Microbiology, ASM Washington , D.C.11th edition, 2015
B. Amy L. Leber , editor in chief,Clinical Microbiology Procedure Handbook, ASM Washington, D.C. 4 rd edition 2016.
C. Principles and Procedures for Blood Cultures; Approved Guideline CLSI M47-A 2007
D. Alaska State Virology Lab; Laboratory Service Manual 2017.

VIII. Other Related Policies/Procedures:

A. N/A

IX. Keywords and Keyword Phrases:

A. Microbiology Collection Manual
B. Culture Collection Manual
C. Collection Manual Microbiology

X. Appendix:

A. N/A

Annual Review:

Signature	Date	Signature	Date