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Department of Pathology

Laboratory Alert

November 11, 2015

Lab Alert – REMINDER: BioFire- FilmArray Respiratory Panel

The Molecular Pathology and Microbiology Sections of the Pathology Laboratory is continuing to utilize the BioFire respiratory panel using FilmArray instrumentation.

This is a FDA cleared test with a multiplex panel that detects the following targets:

Virus: Influenza A - H1, Influenza A - H3, Influenza A - 2009H1, Influenza B, RSV, Parainfluenza 1, Parainfluenza 2, Parainfluenza 3, Parainfluenza 4, human metapneumovirus, Adenovirus, Coronavirus 229E, Coronavirus HKU1, Coronavirus NL63, Coronavirus OC43, Rhinovirus/Enterovirus

Bacteria: Bordetella pertussis, Chlamydomphila pneumoniae, Mycoplasma pneumoniae

The test replaces the following:

- FluA/B/RSV PCR, parainfluenza PCR, hMPV PCR, Adenovirus/CMV culture and RSV antigen testing on respiratory samples. Adenovirus is included in the BioFire panel.
- CMV culture will be replaced by CMV real time PCR as the method to detect CMV in respiratory specimens. Please order separately if needed.

The Order Name in Cerner is: RESPIRATORY PCR PANEL

Alternate name is: Resp Panel (Flu A, Flu B, RSV, Para, hMPV, Adeno, Corona, +).

Where to find results: In Cerner, the name in Navigator under which the results will reside is:
MolPath-Virology/Bact.

Please note:

- **This assay does not detect the SARS virus or the MERS-CoV virus.**
 - The BioFire assay will co-detect Human Rhinovirus/Enterovirus and does not distinguish the two targets separately. Please contact the lab if specific detection of enterovirus is clinically necessary.
- The BioFire Respiratory panel does not replace the Bordetella PCR test. If clinically indicated, this should be ordered as a separate test.

Acceptable Specimens for the Respiratory PCR Panel test include:

- **Nasopharyngeal wash** -(sterile red top tube, sterile cup, wash added to viral transport media tube)
- **Nasopharyngeal aspirate**- (sterile red top tube, sterile cup, aspirate added to viral transport media tube)
- **Nasopharyngeal swab in viral transport media**- must be a fine, flexible metal shaft with a dacron or rayon tip. The swab must be placed in VTM (viral transport media), making sure that the cap is securely tightened. The shaft of the swab is flexible and the top must be pushed into the tube containing the VTM. Additionally, a flocced swab with long, flexible plastic shaft may be used. In this case, the shaft is scored and snapped off so that the top of the vial can be screwed on tightly.



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- **Bronchoalveolar lavage (BAL) specimens** – multiple BAL's (LUL, LLL, RUL, RML, RLL) on the same patient will be combined and the assay will be performed once, unless specifically requested to keep separate at time of request.

Storage/Transport: 2°C to 8°C

Stability: Ambient: 4 hours. Refrigerated: 3 days. Frozen: 30 days.

Rejected specimens:

- **Multiple sample types** –Testing will only be performed once on a patient from one source.
- **Follow-up samples-** The frequency of testing is once and repeated requests will be canceled as a duplicate.
- **VTM without swab, when nasopharyngeal swab collection is the source**
- **All rigid swabs**
- **Leaking container**

Turn- around time for results: Same day

For more information or if you have questions, please contact:

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INSTRUCTIONS FOR COLLECTING NASOPHARYNGEAL WASH / SWAB FOR RESPIRATORY VIRUS TESTING

NASOPHARYNGEAL WASH PROCEDURE

Materials for Nasopharyngeal Wash & Nasopharyngeal Swab Collection:

- Gloves (suggested gloves are latex-free)
 - Mask for covering nose and mouth of health worker
 - Biohazard bag for disposal of used tubing, syringe, saline container, swabs
 - Facial tissues (for patient use)
- Eye protection/goggles for health worker (to protect from coughs, sneezes, or splashes)

NASAL WASH COLLECTION

- Additional Materials for Nasal Wash Collection:
- 0.9% saline: 6 ml sterile, non-bacteriostatic
- Sterile specimen container, tight sealing, leak-proof (such as a sterile sputum or urine cup)
- Sharps container
- Sterile feeding tube #8 French, 16" length
- 5cc disposable syringe with disposable needle for drawing saline

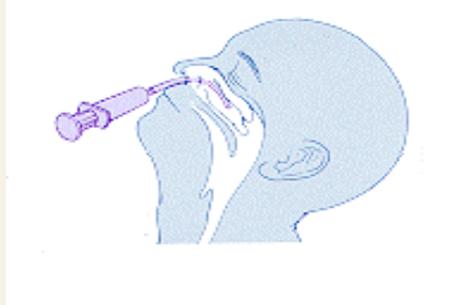
Procedure:

1. Attach the needle to the syringe and draw 3 ml of sterile, non-bacteriostatic saline into the barrel of the syringe. Remove needle and put it in the sharps container.
2. Attach a soft feeding tube to the syringe tip. Slowly push saline through the tube and let a drop or two come out of the tip for lubrication.
3. Put on your gloves and mask/goggles.
4. Patient may be seated or lying down for specimen collection. The patient's head should be tilted back with their neck extended to allow for the pooling of the aspirate in the nasopharynx.
5. Instruct the patient to hold their breath and not to swallow during the procedure if possible. Tell the patient the procedure will not hurt, but may tickle or cause them to tear or even sneeze.
6. Insert the feeding tube about 3-4" (less for a child) **straight back** (not upwards) along floor of the nasal passage until reaching the posterior wall of the nasopharynx. The distance from the nose to the ear gives an estimate of the distance the feeding tube should be inserted.
7. Using a smooth motion without moving the feeding tube, quickly push and then pull the syringe plunger to inject the saline and withdraw the fluid. This must be done quickly to prevent the fluid from draining down the patient's throat.



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8. Carefully remove the feeding tube from the nose.
9. Detach the feeding tube from the syringe.
10. Inject the contents of the syringe into the specimen container.
11. Offer the patient a tissue if necessary.
12. Place used equipment (feeding tube, syringe, saline bottle) in the biohazard bag for disposal.
13. Label the specimen and complete a requisition form
14. Send to the laboratory immediately

Note: Nasal wash is the preferred specimen; however, nasopharyngeal swab is acceptable.

NASOPHARYNGEAL SWAB COLLECTION PROCEDURE

Additional Materials for Nasopharyngeal Swab Collection

- Polyester (such as Dacron) or rayon fine-tipped nasopharyngeal swab with a **flexible** aluminum shaft* or a flocked swab with a long, flexible, plastic shaft.
- Sterile Viral Transport Media, 3ml, in a tube with a screw cap.

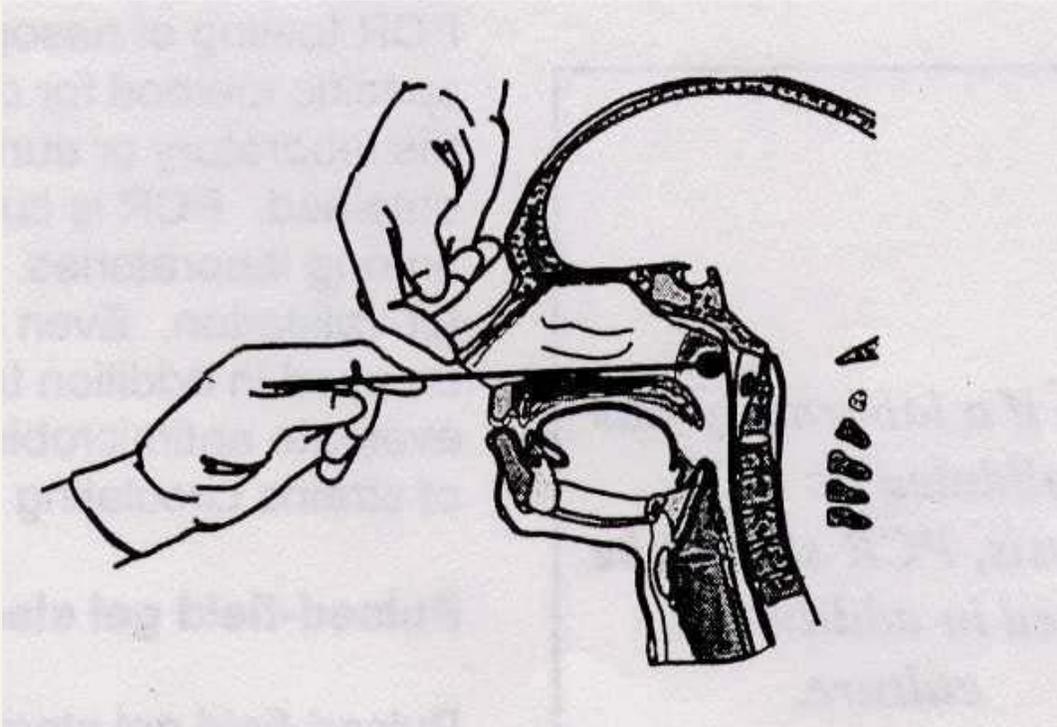
Cotton-tipped or calcium alginate swabs are **not** acceptable. Residues present in these materials may inhibit PCR assays. All rigid swabs are not acceptable.

Procedure:

1. Set aside 3ml of Viral Transport Media and proceed until step #5.
2. Gently insert swab into a nostril **straight back** (not upwards), along the floor of the nasal passage until reaching the posterior wall of the nasopharynx. The distance from the nose to the ear gives an estimate of the distance the swab should be inserted.
Note: Do not force swab - if an obstruction is encountered, try the other nostril.
3. Leave swab in place for up to 10 seconds.
4. Remove swab slowly.
5. Immediately place swab into the tube containing 3 ml of sterile Viral Transport Media. The aluminum shaft **must** be pushed completely into the tube to allow the cap to be screwed on tightly. The plastic shaft of the flocked swab can be snapped so that the cap can be screwed on tightly. The swab must remain in the Viral Transport Media.
6. Label the specimen and complete a requisition form.



7. Send specimen to the laboratory immediately



Tip: If patient is seated for the procedure, have patient sit with head against a wall as patients have a tendency to pull away during the procedure.