Conjunctival Swab Specimen Collection for Detection of Avian Influenza A(H5) Viruses

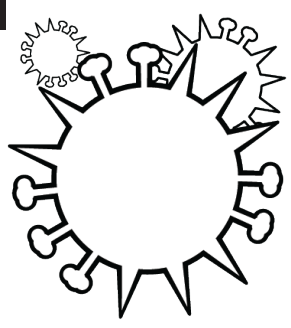
This graphic describes the procedure for collecting, storing, and transporting conjunctival swab specimens for testing by the avian influenza A(H5) assay. This procedure is to assist staff at clinics or hospitals and for public health department staff collecting conjunctival specimens to test for the presence of avian influenza A(H5) virus.

Note that for patients who only have conjunctivitis, CDC recommends collection of both conjunctival swab and nasopharyngeal swab specimens placed in separate tubes of sterile Viral Transport Media. For patients with both conjunctivitis and respiratory symptoms, CDC recommends collection of three clinical specimens: (1) a conjunctival swab, (2) a nasopharyngeal swab, and (3) a combined nasal swab and an oropharyngeal swab; each is placed into a separate tube of sterile viral transport media. Additional instructions are available for collecting respiratory specimens at www.cdc.gov/flu/pdf/professionals/flu-specimen-collection-poster.pdf.

Materials Needed:

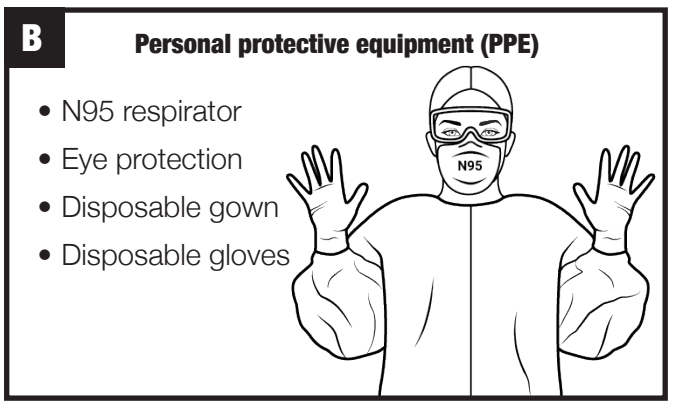
- Personal protective equipment (PPE), including N95 respirator, eye protection, disposable gowns, and disposable gloves
- Sterile Dacron or nylon flocked swab (Note: swabs with cotton tips and wooden shafts are not recommended.)
- Sterile Viral Transport Medium (VTM)
- Specimen transport container with ice packs
- Specimen label, pen, marker
- Biohazard waste disposal bags
- Soap and water/hand sanitizer
- Disinfectant

A



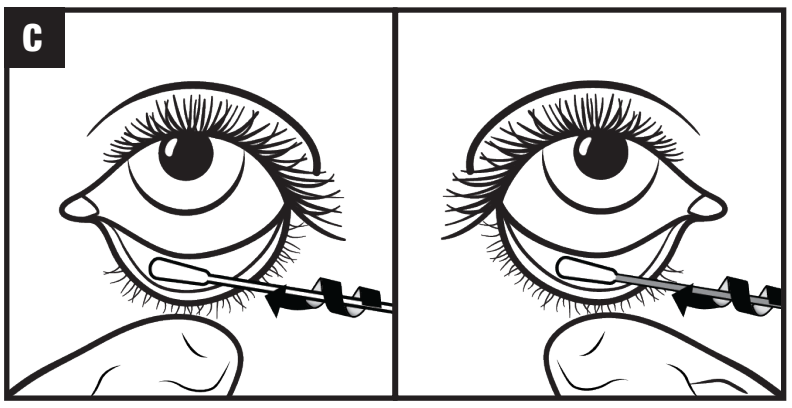
Avian influenza A(H5N1) virus can infect conjunctivae tissues and cause eye symptoms such as discomfort, irritation, redness, and drainage (referred to as conjunctivitis).

B



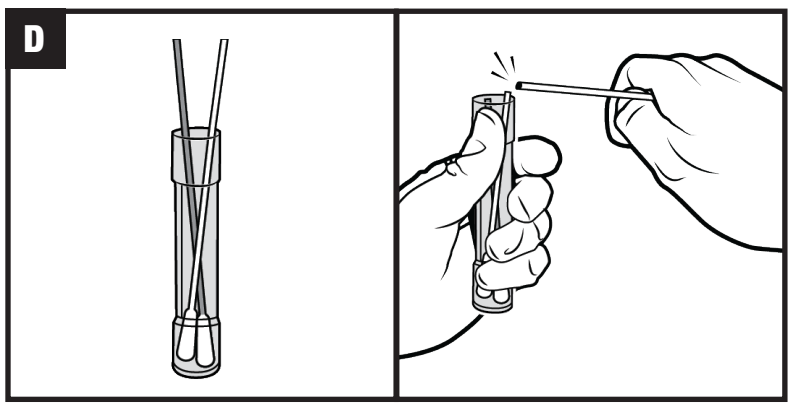
Wear recommended personal protective equipment (PPE) before collecting conjunctival swab specimens from patients with conjunctivitis who are suspected to have avian influenza A(H5N1) virus infection. The patient should also wear a facemask to the extent feasible (or except when respiratory specimens are collected).

C



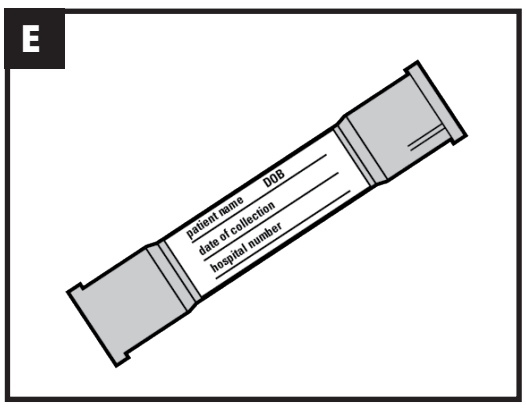
Gently pull down the lower eyelid of the patient's affected eye to expose the conjunctival tissues that line the inside of the eyelid and cover the white part of the eye. Gently swab the conjunctiva by rotating the swab over the infected area 2-3 times (avoid touching the cornea - surface of the eye). If both eyes are affected, repeat these procedures on the other eyelid, using a separate new swab.

D



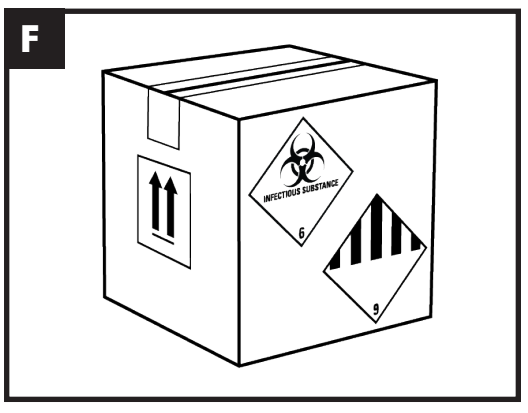
Place the conjunctival swab specimens (or both swabs, one for each eye), into the same virus-specific tube containing Sterile Viral Transport Medium (VTM). Cut the excess swab handle to fit the VTM vial and reattach the cap security.

E



Label the sample appropriately with a unique identifier (e.g., name, DOB, date of collection, and Medical Record or hospital number).

F



Properly package the virus-specific tube and ship or deliver it to the laboratory for analysis (Learn more in the "sample storage and transportation" and "shipping instructions" sections below).

Safety Precautions:

- Always wear recommended PPE (respirator, eye protection, disposable gowns, disposable gloves).
- Always perform hand hygiene before and after the procedure by washing hands thoroughly with soap and water or using hand sanitizer with at least 70% alcohol.
- Dispose of all contaminated waste (gloves, swab handles, etc.) into biohazard waste disposal bags for disposal.
- Clean and disinfect any equipment used during the procedure.

Sample Storage and Transportation:

Transporting specimens

- The specimen should be transported to the laboratory in triple packaging as soon as possible maintaining the cold chain (2-4 °C) throughout.
- Ensure that specimen transporters have the necessary knowledge and skills in safe handling practices and spill decontamination procedures.

Storing Specimens

- Specimens received cold should be stored refrigerated (2-8°C) for up to 72 hours before processing. Store any residual specimens at ≤ -70°C.
- Although optimal performance is met when testing fresh specimens within 72 hours of collection, performance has been demonstrated with frozen specimens. If testing of a fresh specimen is not possible within 72 hours storage at 2-8°C, the specimen may be frozen at ≤ -70°C and tested at a later time.
- Specimens received frozen should be stored at ≤ -70°C until processing. Store any residual specimens at ≤ -70°C.

Storing Purified Nucleic Acid

- Store purified nucleic acids at ≤ -70°C.

Shipping Instructions:

Please contact your local and state public health department laboratory staff to obtain shipping instructions and coordinate shipment of conjunctival and respiratory specimens to a public health laboratory for RT-PCR testing of influenza A and avian influenza A(H5) viruses. Public health laboratories can reach out to flusupport@cdc.gov with any questions regarding confirmatory testing and shipping guidelines.

U.S. Centers for Disease Control and Prevention