



DEPARTMENT OF  
**HEALTH AND HUMAN SERVICES**

Promoting and protecting health, well-being, self-sufficiency, and safety of all in Marin County.

**PUBLIC HEALTH ADVISORY**

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DIRECTOR

Dear Colleagues:

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PUBLIC HEALTH OFFICER

**H5N1 Highly Pathogenic Avian Influenza (HPAI) in Marin County**

As of December 16, 0 human cases of H5N1 avian influenza have been reported in Marin County. There has been 1 suspect case of avian influenza linked to raw milk consumption and no cases linked to livestock exposure. While the risk to the general public remains low and human-to-human transmission remains rare, it is essential to remain vigilant and take necessary precautions.

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**Exposure**

Since spreading to North America in 2021, H5N1 viruses have rapidly evolved and developed mutations that enable easier transmission to mammalian species including cows, humans, and cats. Clinicians should consider the possibility of HPAI A (H5N1) virus infection in symptomatic persons who have [relevant exposure history as outlined by the Centers for Disease Control and Prevention \(CDC\)](#):

- Close exposure (within six feet) to animals with confirmed or suspected avian influenza A virus infection.
- Direct contact with contaminated surfaces, inhalation of infected materials, exposure to live animal markets, laboratory exposure, exposure to an individual with confirmed or suspected H5N1 influenza A.
- Preparing or consuming raw animal products, including *unpasteurized milk*, or consuming uncooked or undercooked food or related uncooked food products, from infected animals (CDC [Avian Influenza Case Definitions](#).)

**Clinical Presentations**

While the human respiratory tract is a major site of avian influenza A (H5N1) infection, humans infected with H5N1 can also present with gastrointestinal tract symptoms. Many farmworkers diagnosed with H5N1 presented with mild symptoms, including conjunctivitis and mild upper respiratory symptoms. Patients may present with:

- Mild illness: cough, sore throat, eye redness or eye discharge, fever, rhinorrhea, nausea, vomiting, fatigue, myalgia, arthralgia, and headache.
- Moderate to severe illness: shortness of breath or difficulty breathing, altered mental status, and seizures.

- **Complications:** pneumonia, respiratory failure, acute respiratory distress syndrome, multi-organ failure (respiratory and kidney failure), sepsis, and meningoencephalitis.

## Testing

For individuals that meet clinical and epidemiologic criteria for influenza A (H5N1) the following specimens should be collected:

- **Respiratory illness:** An anterior nare or nasopharyngeal swab **and** an oropharyngeal swab in separate containers of VTM, though they can be combined.
  - Additional respiratory specimens can be submitted if available: nasal aspirates, bronchoalveolar lavage, and tracheal aspirate in a sterile collection tube.
- **Conjunctivitis:** A conjunctival swab\*, and an NP\* swab.
- **Gastrointestinal illness after consuming raw milk:**
  - A nasopharyngeal (NP) **and** an oropharyngeal swab in separate containers of VTM, though they can be combined.
  - Two stool specimens: Gastrointestinal Pathogen Panel and flu testing by Public Health Laboratory.

\*Swab specimens: only swabs with a synthetic tip, such as nylon or Dacron and either aluminum or plastic shafts are acceptable for testing. No cotton swabs, no wooden shaft.

**Testing for H5N1 is only available through a Public Health Laboratory. To request testing, please contact Marin County Public Health at 415-473-4163.**

## Reporting

Immediately notify Marin County Public Health of any suspect cases by calling 415-473-4163 during office hours or calling 415-479-5305 after hours to reach the Health Officer on duty.

## Treatment

Initiation of antiviral treatment with oseltamivir is recommended as early as possible for symptomatic outpatients who are confirmed, probable, or suspected / cases under investigation of novel influenza A virus infection. For detailed guidance on dosing and treatment duration, please see [Interim Guidance on the Use of Antiviral Medications for Treatment of Human Infections with Novel Influenza A Viruses Associated with Severe Human Disease | Bird Flu | CDC](#)

## Chemoprophylaxis

Chemoprophylaxis with oseltamivir should be considered for close contacts and any person exposed to avian influenza based on degree of exposure and risk of disease. Dosing is the same as for treatment. More information: [Influenza Antiviral Medications: Summary for Clinicians | CDC](#)

## Infection Prevention and Control

### Isolation Guidelines

Persons with suspected, probable, or confirmed novel or avian influenza A virus infections should be instructed to isolate at home away from their household members and not go to work or school until it is determined they do not have avian influenza A(H5N1) virus infection.

If novel or avian influenza has been ruled out, isolation can be discontinued. If avian influenza is confirmed, isolation should be maintained until symptoms improve (at least 24 hours without fever), in consultation with Marin County Public Health.

### Infection Control in Healthcare Settings

Standard, contact, and airborne precautions are required for patients presenting for medical care or evaluation who have illness consistent with influenza and recent exposure to potentially infected animals or consumption of raw milk. For additional guidance on infection control precautions for patients who might be infected with novel or avian influenza virus, please refer to [Interim Guidance for Infection Control Within Healthcare Settings When Caring for Confirmed Cases, Probable Cases, and Cases Under Investigation for Infection with Novel Influenza A Viruses Associated with Severe Disease | Bird Flu | CDC](#)

### Resources

#### CDC

- [H5N1 Bird Flu: Current Situation Summary | Avian Influenza \(Flu\)](#)
- [Clinical Overview of Evaluating and Managing Patients Exposed to Birds Infected with Avian Influenza A Viruses of Public Health Concern](#)
- [Interim Guidance for Infection Control Within Healthcare Settings When Caring for Confirmed Cases, Probable Cases, and Cases Under Investigation for Infection with Novel Influenza A Viruses Associated with Severe Disease](#)
- [Highly Pathogenic Avian Influenza A\(H5N1\) Virus in Animals: Interim Recommendations for Prevention, Monitoring, and Public Health Investigations](#)
- [Health Alert Network \(HAN\) - 00506 | Highly Pathogenic Avian Influenza A\(H5N1\) Virus: Identification of Human Infection and Recommendations for Investigations and Response](#)

#### CDPH

- [Avian and Novel Influenza Quicksheet](#)

#### CDFA

- [Highly Pathogenic Avian Influenza \(HPAI\) H5N1 Virus in Livestock](#)
- [Avian Influenza](#)