

# Avian Influenza (H5N1): Current Situational Update as of December 31, 2024

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# Avian Influenza (H5N1): Background on Flu

- There are many subtypes of flu viruses
  - Common human subtypes include H1N1 and H3N2
  - There are avian flu subtypes that primarily affect birds, but can sometimes infect people or other animal species like pigs
  - Some flu viruses are called highly pathogenic avian influenza (HPAI) because they are lethal to poultry
- All flu viruses are constantly mutating and changing; sometimes these mutations spark human pandemics such as the 2009 H1N1 swine flu pandemic

# Avian Influenza (H5N1): Timeline

- Highly pathogenic avian influenza A (H5N1) has circulated globally for decades, spread by migratory wild birds
  - 2021: A new strain becomes predominant globally and reaches North America
  - February 2022: Poultry outbreaks from this strain begin in the U.S.
  - March 2024: Dairy cow outbreaks begin in Texas and spread across the country
  - May 2024: During routine testing, H5N1 is detected in healthy chickens at a live bird market and in wastewater in San Francisco
    - However, no human cases detected to date in San Francisco
  - October 2024: First human cases in California announced in dairy workers in the Central Valley

# Avian Influenza (H5N1): Clinical Picture

- In people, signs and symptoms of H5N1 are similar to seasonal flu, but conjunctivitis has been a prominent symptom
- H5N1 is transmitted from infected dairy cows and birds to people through close contact
  - This has occurred mostly in dairy and poultry workers in close contact with infected animals
  - Drinking infected raw milk may also lead to infection
    - Pasteurized dairy products are safe
  - To date, the virus has not been able to spread easily from person to person
- Influenza antiviral medications are currently effective against H5N1
- Vaccines specific to H5N1 exist but have not been made available

# Avian Influenza (H5N1): Animal Detections

- Detections in Animals in the U.S.
  - >10,000 wild birds detected as of 12/23
  - >128 million poultry affected as of 12/30
  - 913 dairy herds affected as of 12/30
    - 16 states with outbreaks in dairy cows
- In California, at least 650 dairy herds have been affected
  - This represents three quarters of affected cattle herds in the U.S. and well over half of all dairy herds in California
  - Last month, the dairy herds affected expanded from the Central Valley to include Southern California

# Avian Influenza (H5N1): Current Situation

- As of December 31, there are 66 confirmed human cases in the U.S.
  - 37 in California (almost all in dairy workers); none in San Francisco
  - Thus far, almost all U.S. cases reported have had mild illness
- No person-to-person transmission has been shown to date
  - Therefore, the risk to the general public currently remains low
- On December 18, Governor Newsom declared a state of emergency
  - This was done to speed contracting and increase working flexibility for staff, especially those responding to dairy herd outbreaks
  - Not due to any increase in the risk to the public

# Avian Influenza (H5N1): Looking for H5N1 in San Francisco

## Providers

- DPH has been informing providers in SFHN and citywide about H5N1 and consulting on (and testing) patients who may have been exposed to H5N1
- No patients with H5N1 have been identified yet

## Disease Surveillance

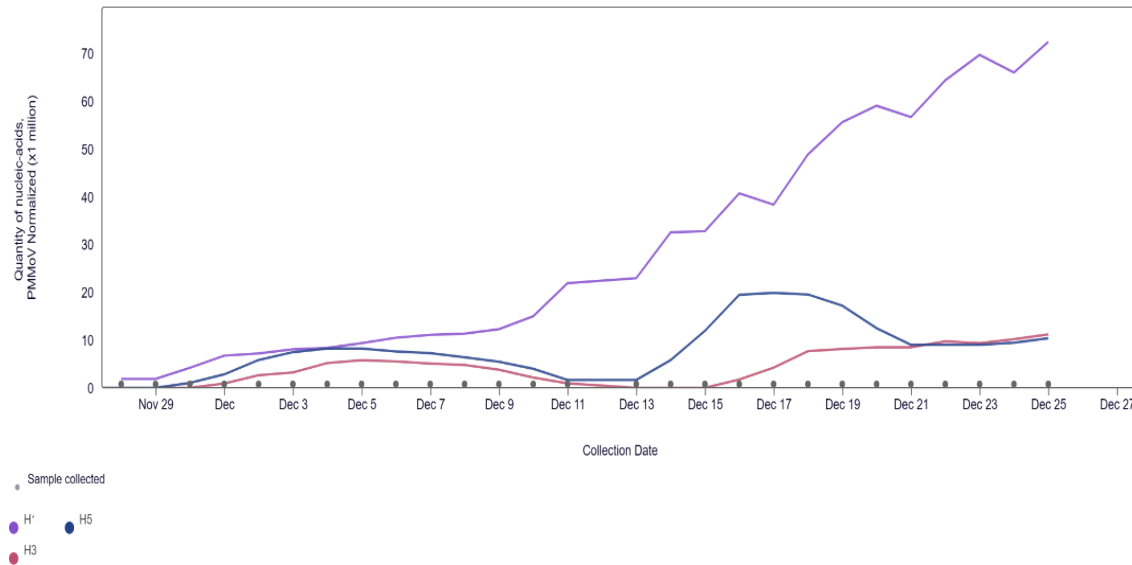
- DPH Public Health Lab is subtyping
  - all flu specimens that are not able to be subtyped from SF hospitals & clinics
  - at least 20 other influenza A positive specimens per week
- More than 300 flu specimens have been subtyped since June 2024

## Wastewater

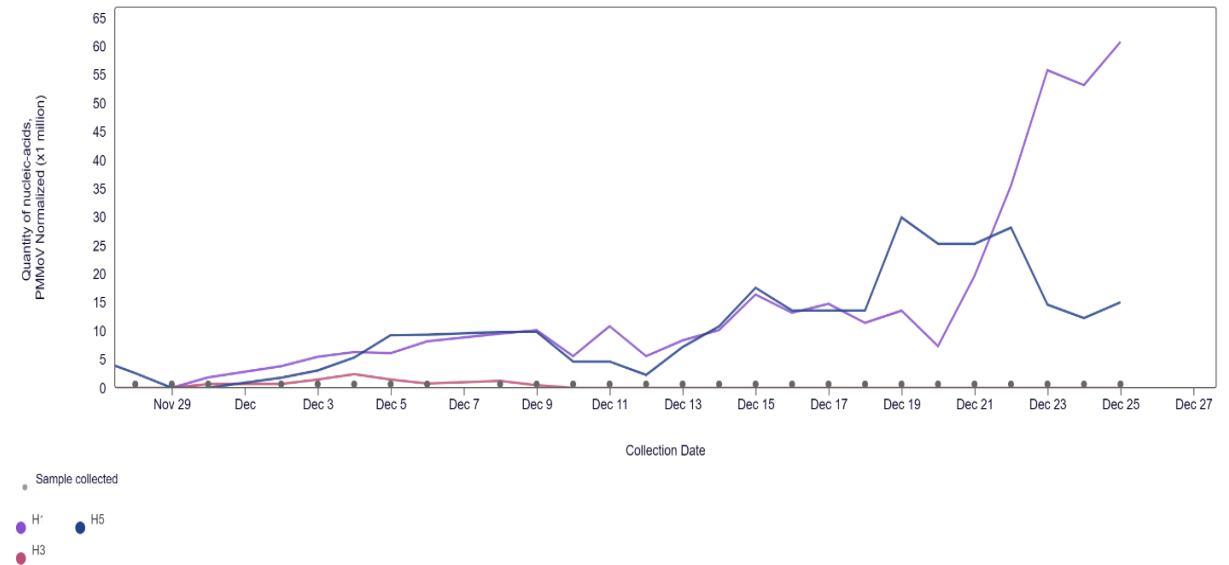
- Monitoring influenza trends in wastewater via WastewaterSCAN

# Avian Influenza (H5N1): SF Wastewater Testing

Multiple Targets, Oceanside, San Francisco, CA



Multiple Targets, Southeast San Francisco, CA



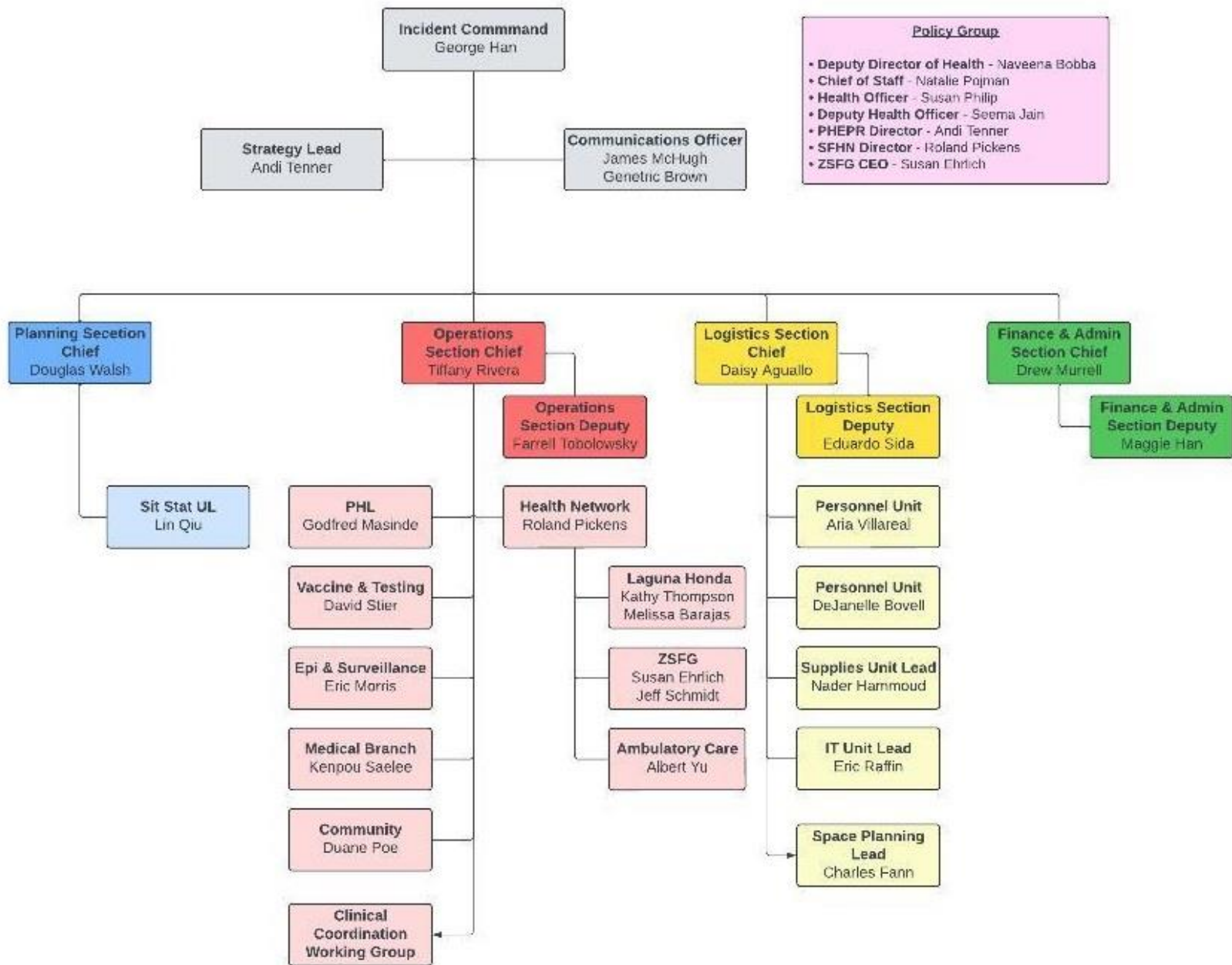


# Avian Influenza (H5N1): Incident Management Team (IMT)

- Using the National Incident Management System, IMTs are a way to organize resources to respond to emergencies.
- This Planning IMT structure is used to quickly organize our departmental subject matter experts to update and prepare our plans for a variety of scenarios
- If this turns into a response operation, this team can quickly pivot into a response IMT (similar to the organizational structure we used during COVID).

# H5N1 IMT ORG CHART

12/13/24



# Planning for 3 possible scenarios

1. An isolated human case of H5N1 in San Francisco
  - No public health threat, but coordinated messaging needed
2. H5N1 develops the ability to transmit from person to person
  - Moderate public health threat
3. H5N1 is transmitted from person to person and is spreading rapidly and/or has a high mortality rate
  - Significant public health threat



# Avian Influenza (H5N1): Planning steps

- Completed
  - Developed anticipated mitigation strategies by scenario
  - Subject matter experts reviewed and built out the plans for each strategy
  - Public has been informed to avoid touching dead birds and drinking raw milk
- Current
  - In-depth plans are being reviewed by leadership
- Future
  - Developing a tabletop exercise for late January to test the plans and address any gaps identified

# Avian Influenza (H5N1): Summary

- H5N1 outbreak is ongoing in California and the U.S., largely in dairy COWS
  - California dairy herds are heavily impacted
    - Targeted recalls of some raw milk
  - FDA bulk raw milk testing program began in December
- To date, the virus has not gained the ability to transmit easily from person to person, and the risk to the general public remains low
  - However, influenza viruses are known to mutate and thus require ongoing monitoring and planning
- SFDPH is preparing for multiple possible scenarios using a multi-disciplinary approach