How CDC is monitoring influenza data among people to better understand the current avian influenza A (H5N1) situation

Weekly Snapshot for Week Ending June 22, 2024

AT A GLANCE

CDC influenza (flu) surveillance systems show no indicators of unusual influenza activity in people, including avian influenza A(H5N1).

Overview

This page provides information on how CDC systems that monitor national, state, and local level influenza data are being used during the current avian influenza A(H5N1) situation.

- Influenza virus and illness activity are monitored year-round through a collaborative effort between CDC and many partners, including state, local, and territorial health departments; public health and clinical laboratories; clinics; and emergency departments.

- Human cases of novel influenza, which are human infections with non-human influenza A viruses that are different from currently spreading seasonal human influenza viruses, are nationally notifiable. Every identified case is investigated and reported to CDC.

- CDC is actively looking at multiple flu indicators during the current situation to monitor for influenza A(H5N1) viruses, including looking for spread of the virus to, or among people, in jurisdictions where the virus has been identified in people or animals.

Monitoring of Persons Exposed to Infected Animals*

February 2022 – Present

CDC and state and local health departments monitor people exposed to infected birds, poultry or other animals for 10 days after exposure. Between February 2022 and now, there have been

- At least 10,000 people monitored and

- At least 350 people tested for novel influenza A

Current HPAI in Cattle Outbreak (2024)

CDC and state and local health departments monitor people exposed to infected cattle for 10 days after exposure. Between March 2024 and now, there have been

- At least 780 people monitored

- At least 53 persons tested for novel influenza A

- Three cases of avian influenza A(H5N1) identified

*CDC numbers are based on state reports and CDC defers to states for updated information on people being monitored and tested.

Main Findings from Surveillance Systems

CDC has multiple surveillance systems that are used year-round to monitor key flu indicators. These data are reviewed comprehensively each week. Taken together, as of June 28, 2024, these systems currently show no indicators of unusual flu activity in people, including avian influenza A(H5N1) viruses.

Case Reporting

In 2024, three human cases of influenza A(H5N1) virus infection have been reported by two states (Texas, Michigan), following exposure to dairy cattle. A total of 4 human cases of A(H5N1) have been reported in the United States ever, with the first case occurring in 2022, following exposure to presumably infected poultry.

Public Health Laboratory Monitoring

No novel influenza A positive test results, including for influenza A(H5N1) virus, were reported by public health laboratories for the week ending June 22, 2024. Since February 25, 2024, 31,223 specimens have been tested using a protocol that would have detected A(H5N1) and other novel viruses.

Clinical Laboratory Trends

CDC has not identified any unusual trends in reported clinical laboratory data at the national, state, or local levels.

Emergency Departments

CDC has not identified any unusual trends in emergency department visits associated with influenza or potentially related symptoms at the national, state, or local levels.

Wastewater Surveillance

During the two most recent weeks, (June 9, 2024–June 22, 2024), a total of 337 of 737 sites reported data meeting criteria for analysis for influenza A virus for both weeks or for either week, and 4 (1%) sites from 3 states were at a high level (>80th percentile compared to levels recorded at that site between October 1, 2023 and March 2, 2024).

Monitoring for Novel Influenza A virus infections among people, including Influenza A (H5N1)

Rapid detection and reporting of human infections with novel influenza A viruses, including influenza A(H5N1), is important to facilitate prompt awareness and an effective public health response. For confirmed cases, the reporting jurisdiction completes a case report form, which is submitted to CDC. The information includes patient demographics, symptoms, the clinical course of illness, and exposure history. The reporting jurisdiction for influenza A(H5N1) cases reported in 2024 are summarized below.
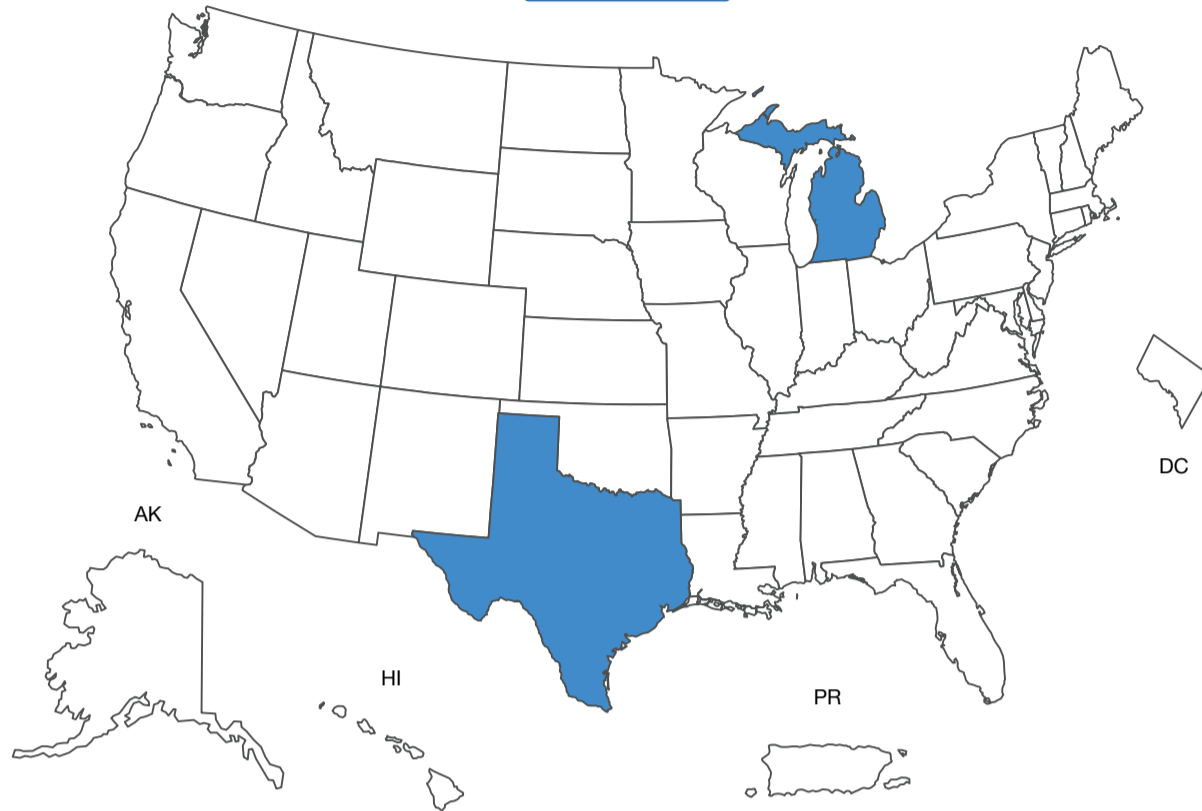
Novel Influenza A Virus Infections

2010-11   2012-13   2014-15   2016-17   2018-19   2020-21   2023-24

<<   >>

Seasons

H5N1 ▼

AK

HI

DC

PR

Map Legend

☐ 0 cases   ☐ 1 - 5 cases   ☐ 6 - 10 cases   ☐ > 10 cases

◉ By Season   ○ Aggregate All Selected

View FluView Interactive (https://gis.cdc.gov/grasp/fluview/Novel_Influenza.html) | Download Map Data | Download PowerPoint Presentation

Data presented through: 06/22/2024; Data as of: 06/27/2024

Resource

Additional virologic surveillance information for current and past seasons:

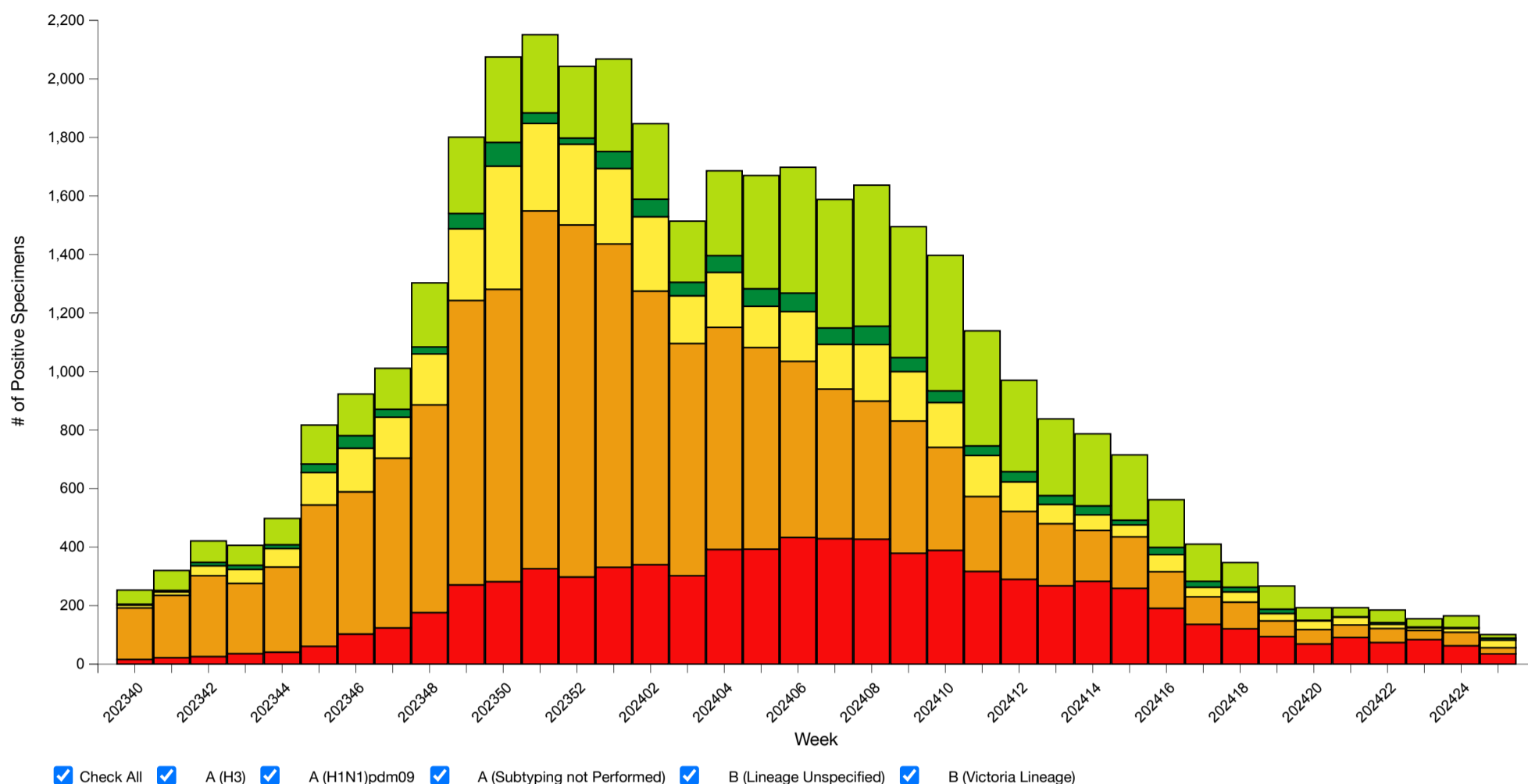Surveillance Methods | FluView Interactive: National, Regional, and State Data or Age Data

Public health laboratory reporting

Public health laboratories use CDC's diagnostic tools to detect both seasonal influenza viruses and novel influenza A viruses including influenza A(H5N1). These diagnostic tools are used at more than 100 public health laboratories in all 50 U.S. states. The results of tests performed by these public health laboratories nationwide are summarized below.

**Influenza Positive Tests Reported to CDC by Public Health Laboratories,
National Summary, 2023-24 Season, week ending Jun 22, 2024**

☑ Check All ☑ A (H3) ☑ A (H1N1)pdm09 ☑ A (Subtyping not Performed) ☑ B (Lineage Unspecified) ☑ B (Victoria Lineage)

View Additional Graphs and Data (http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html) | Download Chart Data | Download PowerPoint Presentation

*Influenza A(H5) presumptive positive results from public health labs will be suppressed until a minimum of 5 positives have been reported by public health labs.

Data presented through: 06/22/2024; Data as of: 06/27/2024

Resource

Additional virologic surveillance information for current and past seasons:
Surveillance Methods | FluView Interactive: National, Regional, and State Data or Age Data
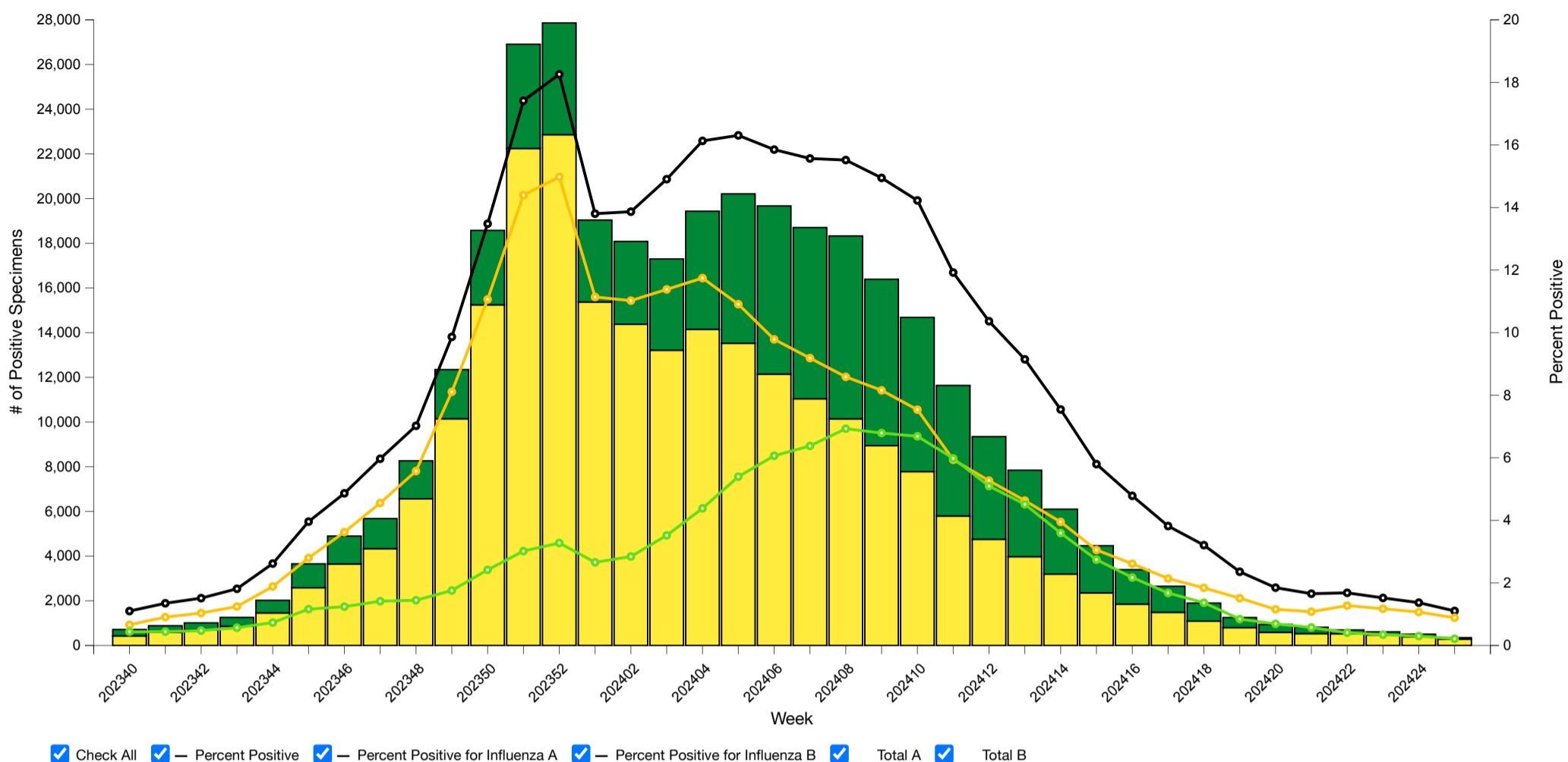
Systems used to monitor influenza activity

Influenza activity is monitored year-round using multiple systems. These systems are used for monitoring seasonal influenza and, because influenza viruses are constantly changing in small, and occasionally more significant ways, these systems are also useful for monitoring signals and trends from novel influenza virus infections. Some examples are provided below.

Monitoring for changes in tests positive for influenza in clinical settings

Approximately 300 clinical laboratories located throughout all 50 states, Puerto Rico, Guam, and the District of Columbia report the results of clinical testing for influenza through either the U.S. WHO Collaborating Laboratories System or the National Respiratory and Enteric Virus Surveillance System (NREVSS). The results of tests performed by clinical laboratories nationwide are summarized below. While these laboratories don't test specifically for influenza A(H5N1) virus, by tracking the percentage of specimens tested that are positive for influenza A viruses, we can monitor for unusual increases in influenza activity that may be an early sign of spread of novel influenza A viruses, including H5N1.

Season: [2023-24 ▼]   **Surveillance Area:** [National ▼]

Influenza Positive Tests Reported to CDC by Clinical Laboratories, National Summary, 2023-24 Season, week ending Jun 22, 2024

☑ Check All   ☑ — Percent Positive   ☑ — Percent Positive for Influenza A   ☑ — Percent Positive for Influenza B   ☑ Total A   ☑ Total B

View Additional Graphs and Data (http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html) | Download Chart Data | Download PowerPoint Presentation

Data presented through: 06/22/2024; Data as of: 06/27/2024

Resource

Additional emergency department surveillance information for current and past seasons:

Surveillance Methods | Data.CDC.gov: NSSP Emergency Department Visit Trajectories

Monitoring for changes in emergency department visits for influenza   EXPAND ALL +

The National Syndromic Surveillance Program (NSSP) collects, analyzes, and shares electronic data received from multiple health care settings, including emergency departments (ED). CDC uses syndromic surveillance in partnership with participating state and local health departments to capture data quickly, monitor for unusual trends, improve situational awareness, and inform decision making.

Data from NSSP on the weekly percentage of total emergency department visits associated with influenza-related diagnoses are summarized below and are closely monitored by the NSSP team. **It's important to note that these visits are among persons with any influenza diagnosis and are not specific to avian influenza A(H5N1) viruses.** However, by tracking all influenza diagnoses, as well as symptoms potentially related to influenza virus infections, among patients in EDs, the chance of detecting unusual levels of influenza is improved, including in jurisdictions where A(H5N1) viruses have been identified in animals or in the one person.

State   County
[United States ▼]   [All ▼]   [Reset]

Selection:	Counties included in this area	More Info
United States		
	All	

Weekly percent of total emergency department visits associated with influenza

Percent of Emergency Department Visits
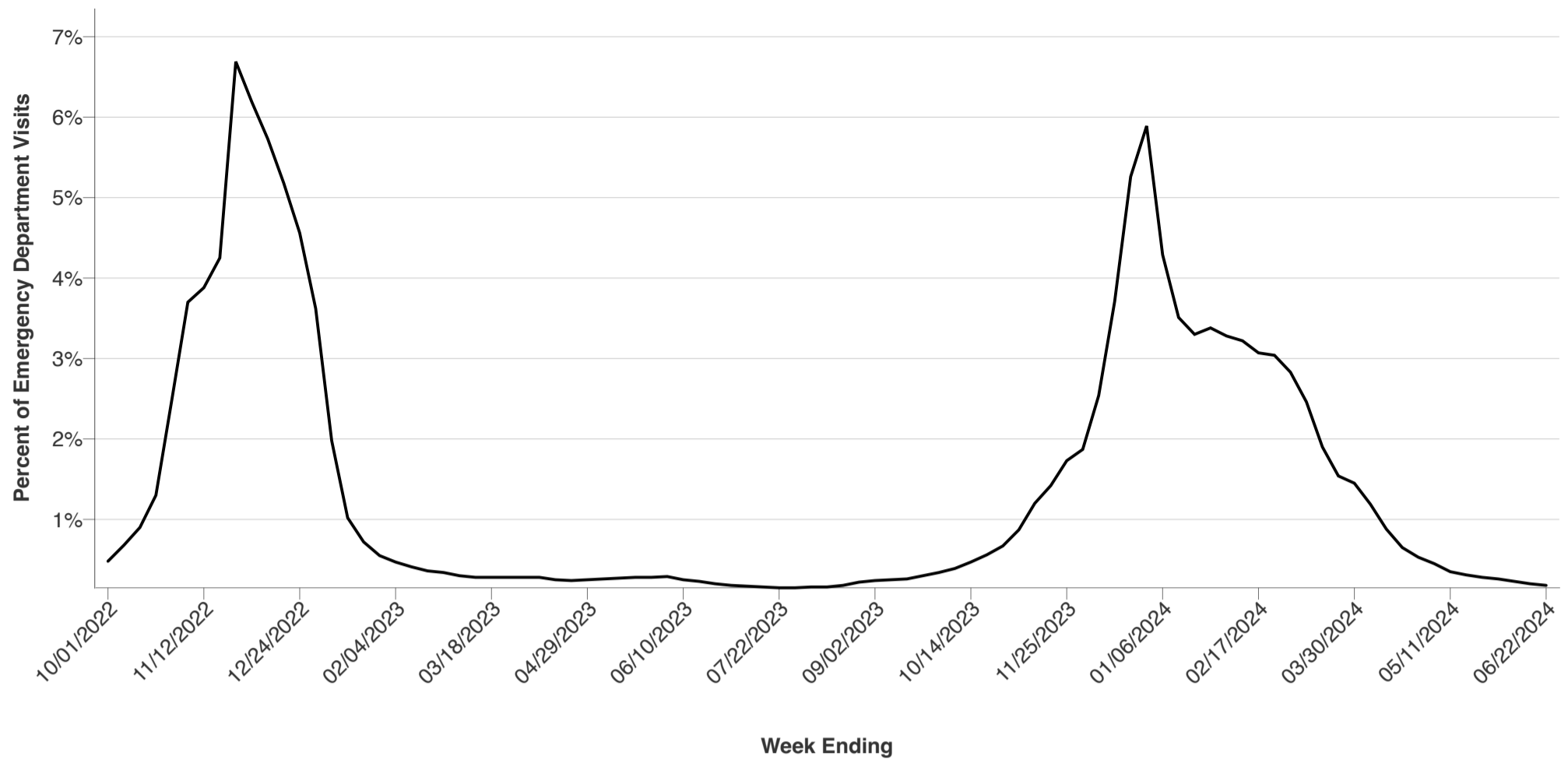
Week Ending

Data presented through: 06/22/2024; Data as of: 06/26/2024

Data Table

Week Ending	Influenza
10/01/2022	0.5%
10/08/2022	0.7%
10/15/2022	0.9%
10/22/2022	1.3%
10/29/2022	2.5%
11/05/2022	3.7%
11/12/2022	3.9%
11/19/2022	4.3%
11/26/2022	6.7%
12/03/2022	6.2%
12/10/2022	5.7%
12/17/2022	5.2%
12/24/2022	4.6%
12/31/2022	3.6%
01/07/2023	2.0%
01/14/2023	1.0%
01/21/2023	0.7%
01/28/2023	0.6%
02/04/2023	0.5%
02/11/2023	0.4%
02/18/2023	0.4%
02/25/2023	0.3%
03/04/2023	0.3%
03/11/2023	0.3%
03/18/2023	0.3%
03/25/2023	0.3%
04/01/2023	0.3%
04/08/2023	0.3%
04/15/2023	0.3%
04/22/2023	0.2%
04/29/2023	0.3%

Week Ending	Influenza
05/06/2023	0.3%
05/13/2023	0.3%
05/20/2023	0.3%
05/27/2023	0.3%
06/03/2023	0.3%
06/10/2023	0.3%
06/17/2023	0.2%
06/24/2023	0.2%
07/01/2023	0.2%
07/08/2023	0.2%
07/15/2023	0.2%
07/22/2023	0.2%
07/29/2023	0.2%
08/05/2023	0.2%
08/12/2023	0.2%
08/19/2023	0.2%
08/26/2023	0.2%
09/02/2023	0.2%
09/09/2023	0.3%
09/16/2023	0.3%
09/23/2023	0.3%
09/30/2023	0.3%
10/07/2023	0.4%
10/14/2023	0.5%
10/21/2023	0.6%
10/28/2023	0.7%
11/04/2023	0.9%
11/11/2023	1.2%
11/18/2023	1.4%
11/25/2023	1.7%
12/02/2023	1.9%
12/09/2023	2.5%
12/16/2023	3.7%
12/23/2023	5.3%
12/30/2023	5.9%
01/06/2024	4.3%
01/13/2024	3.5%
01/20/2024	3.3%
01/27/2024	3.4%
02/03/2024	3.3%
02/10/2024	3.2%
02/17/2024	3.1%
02/24/2024	3.0%
03/02/2024	2.8%
03/09/2024	2.5%
03/16/2024	1.9%
03/23/2024	1.5%
03/30/2024	1.5%
04/06/2024	1.2%
04/13/2024	0.9%
04/20/2024	0.7%
04/27/2024	0.5%
05/04/2024	0.5%
05/11/2024	0.4%

Week Ending	Influenza
05/18/2024	0.3%
05/25/2024	0.3%
06/01/2024	0.3%
06/08/2024	0.2%
06/15/2024	0.2%
06/22/2024	0.2%

Resource

Additional emergency department surveillance information for current and past seasons:
Surveillance Methods | Data.CDC.gov: NSSP Emergency Department Visit Trajectories

About the Data: —

- **Source**: National Syndromic Surveillance Program: https://www.cdc.gov/nssp/index.html

- There are no data available for the following states/territories: Guam, Missouri, New Hampshire, and South Dakota.

- Additional information available at: Companion Guide: NSSP Emergency Department Data on Respiratory Illness

Monitoring for influenza in wastewater   COLLAPSE ALL —

Wastewater surveillance complements other existing human influenza surveillance systems to monitor influenza trends. CDC's National Wastewater Surveillance System (NWSS) has more than 600 sites with a variety of partners reporting influenza A virus data to CDC. Current wastewater monitoring methods detect influenza A viruses but do not distinguish the subtype. **This means that avian influenza A(H5N1) viruses are detected but cannot be distinguished from other influenza A virus subtypes. Wastewater data also cannot determine the source of the influenza A virus. It could come from a human or from an animal (like a bird) or an animal product (like milk from an infected cow).** Efforts to monitor influenza A virus activity using wastewater data are likely to evolve as the methodologies and interpretation are evaluated and refined.For monitoring influenza A virus in wastewater, CDC compares the most recent weeks of influenza A virus levels recorded at a wastewater site to levels reported between October 1, 2023 and March 2, 2024 for that same wastewater site, and those at ≥80th percentile are categorized as high (Data Methods).

- For the week ending June 22, 2024, 293 wastewater sampling sites reported data meeting criteria for analysis for influenza A viruses, and 2 (<1%) sites in 2 states were at the high influenza A virus level.

- For the week ending June 15, 2024, 333 wastewater sampling sites reported data meeting criteria for analysis for influenza A viruses, and 2 (<1%) sites in 1 state were at the high influenza A virus level.

- Across these two most recent weeks, a total of 337 sites from 38 states reported data meeting criteria for analysis for influenza A viruses in both weeks or in either week and 4 (1%) sites in 3 states were at the high influenza A virus level.

The data from these sites are being closely monitored by CDC and its partners to identify potential contributing factors, including assessing whether any of the high levels are related to any human illness, and looking more closely at available state or local level data from other human seasonal surveillance systems.

This interactive map shows current site-level data for influenza A virus levels in wastewater. Each dot on the map represents a wastewater sampling site. Sites are categorized based on current influenza A levels compared to past levels at the same site during the 2023-2024 influenza season. When influenza A virus levels are at the 80th percentile or higher, CDC will work with relevant partners to better understand the factors that could be contributing to these levels.
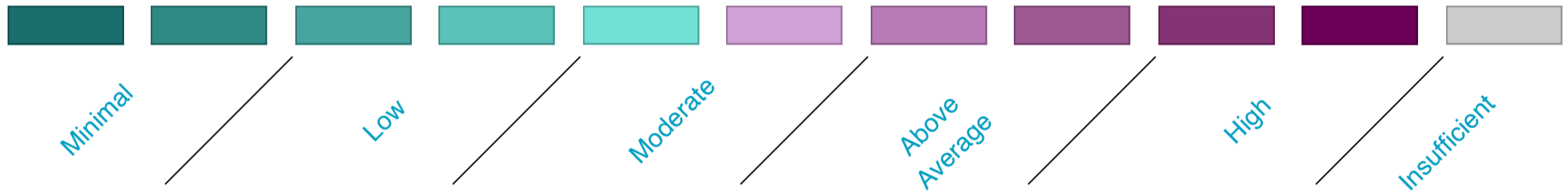
Data for the past two weeks can be viewed using the drop-down menu below.

Week

Two-Week Maximum ▼
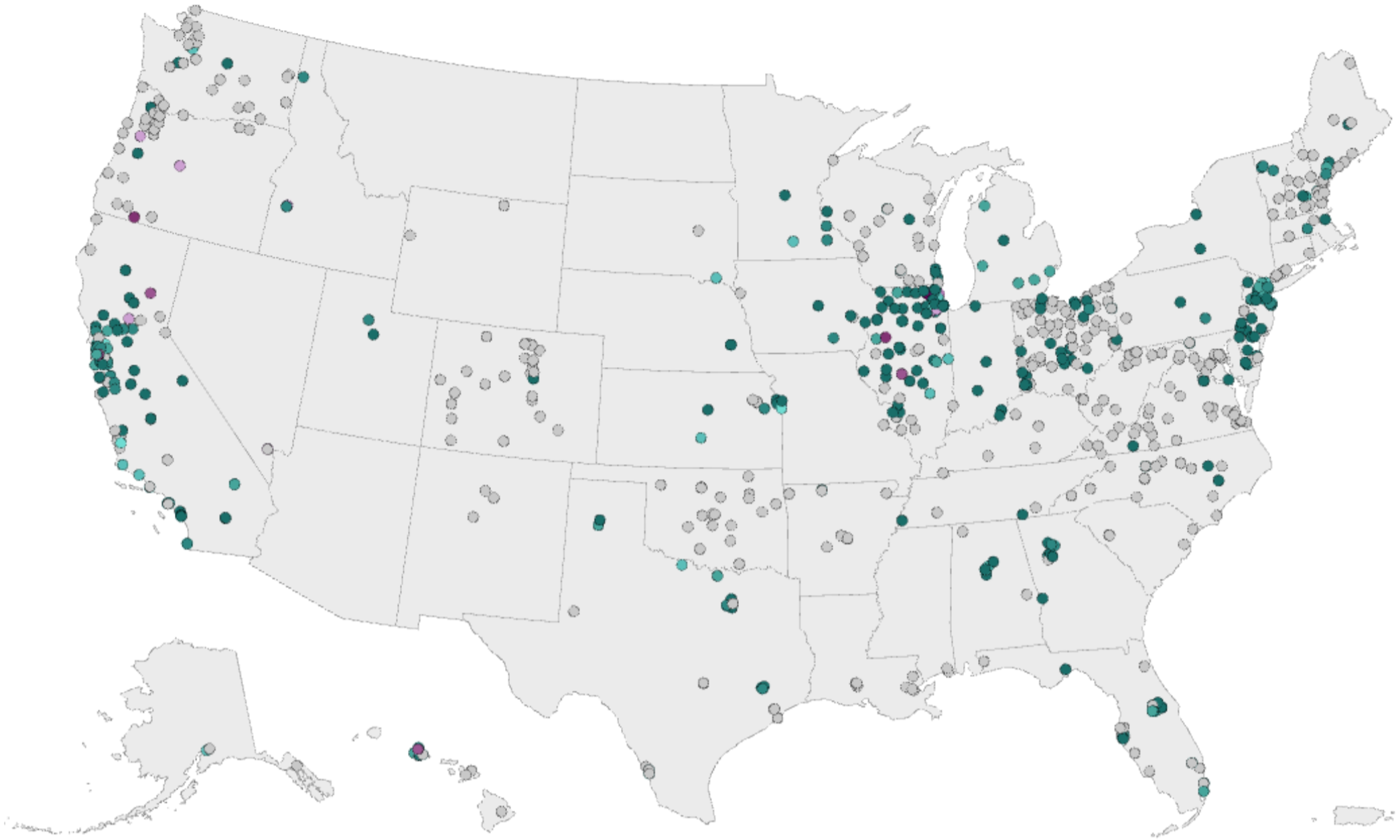
Select a color from the legend to add or remove it from the map.

Minimal / Low / Moderate / Above Average / High / Insufficient

All data are preliminary and may change as more reports are received. Wastewater data does not distinguish between human and animal waste or by-products.

[Download Data (CSV)](#)

Data Table ▬

Sewershed ID ▲	Detection Classification	Jurisdiction	County	Detection Category	Percentile	Display Week	Sewershed Population	First Sampling Date
⬤ Id:100	0	California	Del Norte	Insufficient Data	Insufficient Data	Two-Week Maximum	20,000	2023-10-04
⬤ Id:1003	2	Minnesota	Goodhue	Minimal	17.78	Two-Week Maximum	20,000	2023-05-08
⬤ Id:101	0	California	El Dorado	Insufficient Data	Insufficient Data	Two-Week Maximum	30,000	2024-01-29
⬤ Id:1017	2	Minnesota	Olmsted	Minimal	10.42	Two-Week Maximum	120,000	2022-11-04
⬤ Id:1028	1	Minnesota	Sherburne, Benton, Stearns	Minimal	0.0	Two-Week Maximum	120,000	2023-04-03
⬤ Id:103	0	California	Humboldt	Insufficient Data	Insufficient Data	Two-Week Maximum	50,000	2023-07-30
⬤ Id:1033	0	Mississippi	Jackson	Insufficient Data	Insufficient Data	Two-Week Maximum	20,000	2023-11-14
⬤ Id:1034	0	Mississippi	Jackson	Insufficient Data	Insufficient Data	Two-Week Maximum	30,000	2023-11-12

Sewershed ID ▲	Detection Classification	Jurisdiction	County	Detection Category	Percentile	Display Week	Sewershed Population	First Sampling Date

About the Data —

The influenza A virus level metric describes how current influenza A virus wastewater levels at a site compare to past levels at the same site during the 2023-2024 influenza season, October 1, 2023 to March 2, 2024. This metric is represented both categorically and as a percentile.The percentile represents the position of the current level within the historical range. A value of 0 indicates that the current level is the lowest recorded at the site, while a value of 100 indicates that it is the highest.The wastewater level for influenza A is categorized as follows:

- **Minimal** = The site's current influenza A virus level is **minimal** compared to data collected from the last influenza season. The current level is within the lowest 0-<20th percentile of influenza A virus levels recorded at that site or influenza A viruses were not detected in the most recent sample.

- **Low** = The site's current influenza A virus level is **low** compared to data collected from the last influenza season. Its current level is within the 20-<40th percentile of influenza A virus levels recorded at that site.

- **Moderate** = The site's current influenza A virus level is **moderate** compared to data collected from the last influenza season. Its current level is within the 40-<60th percentile of influenza A virus levels recorded at that site.

- **Above Average** = The site's current influenza A virus level is **above average** compared to data collected from the last influenza season. Its current level is within the 60-<80th percentile of influenza A virus levels recorded at that site.

- **High** = The site's influenza A virus level is **high** compared to data collected from the last influenza season. Its current level is at 80th percentile or higher for influenza A virus levels recorded at that site.

- **Insufficient Data =** Site is testing for influenza A but does not have sufficient data for a comparison with the 2023-2024 influenza season or a site that has not submitted data in the last two weeks. For more information on these criteria, review Data Methods.

Wastewater sampling sites can encompass populations of varying sizes (also known as a sewershed population) that may extend across county or state boundaries.

What CDC is Doing with Influenza A Wastewater Data —

Wastewater surveillance complements other existing influenza virus surveillance systems to monitor influenza trends. Sites with high influenza A virus levels (80-100th percentile) detected in wastewater are being closely monitored by CDC and its partners to identify potential contributing factors. This involves analyzing routine influenza virus and syndromic surveillance data to understand human influenza A infections and following up with the relevant jurisdiction to better understand the factors that could be contributing to these levels. Additionally, this could include reviewing other potential contributors of virus into wastewater. For instance, some states have identified non-human sources such as milk processing waste that contribute to wastewater sites.

Wastewater surveillance is an evolving science. Efforts to monitor influenza A virus activity using wastewater data are likely to evolve as the methodologies and interpretation are evaluated and refined.

Data Limitations —

- Current wastewater monitoring methods detect influenza A viruses but do not distinguish the subtype. This means that avian influenza A(H5N1) viruses can be detected but cannot be distinguished from other influenza A virus subtypes.

- Wastewater testing cannot determine the source of the influenza A virus. It could come from a human or from an animal (like a bird) or an animal product (like milk from an infected cow).

Data Source −

[CDC's National Wastewater Surveillance System (NWSS)](#) has over 600 sites from a variety of partners reporting influenza A virus data to CDC.

Keep Reading: [Data Methods](#)

Keep Reading: [Influenza A Virus Wastewater Data](#)

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