



HAWAII STATE DEPARTMENT OF HEALTH DISEASE OUTBREAK CONTROL DIVISION

Influenza/Respiratory Disease Surveillance Report Morbidity and Mortality Weekly Report (MMWR)¹

WEEK 17: APRIL 21, 2024– APRIL 27, 2024

OVERVIEW: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens, including COVID-19, throughout the state of Hawaii. Influenza surveillance in the state of Hawaii relies upon selected sentinel health practitioners, the State Laboratories Division (SLD), private laboratories, and the Office of Health Status Monitoring (OHSM). For detailed information concerning influenza, please visit the HDOH Disease Outbreak Control Division (HDOH DOCD) website ([here](#)). **All data and information are conditional and may change as more reports are received.** The data in this report reflect the 2023–2024 influenza season which began the week ending October 7, 2023 (week 40¹ 2023) and will end the week ending on September 28, 2024 (week 39 2024).

REPORT SNAPSHOT FOR WEEK 17

Surveillance for Influenza-like Illness (ILI)		
Metric	Value	Comment
Outpatient visits related to influenza-like illness (ILI) from ILINet Sentinel Providers	2.8%	Higher than the previous week. Comparable to Hawaii's historical baseline, higher than the national ILI rate, and lower than the national baseline.
Number of ILI clusters reported to HDOH	0	There have been 24 clusters this season.

Laboratory Surveillance		
Percent of all respiratory specimens positive for influenza this week	5.2%	Lower than the previous week. This number means that many, if not all, of the 94.8% who tested negative for influenza had illness from another respiratory etiology.
Percent of all respiratory specimens positive for influenza this season to date	11.8%	

Surveillance for Severe Outcomes		
Pneumonia, influenza and COVID-19 (PIC) mortality rate	2.5%	Lower than Hawaii's historical baseline, lower than the national epidemic threshold and lower than the NCHS average.
Number of influenza-associated pediatric deaths reported nationwide	158	1 influenza-associated pediatric death has been reported from Hawaii this season to date.

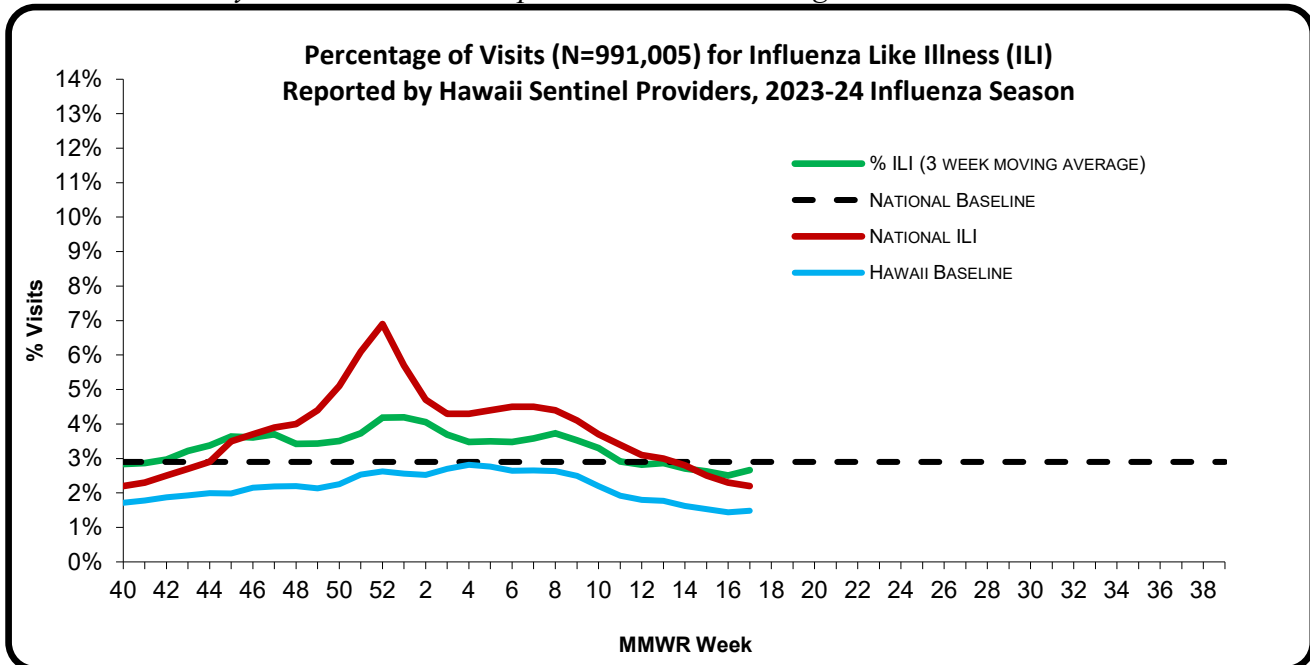
¹ MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 2 for interpretation of MMWR weeks. Data reported will begin on week 40, the traditional start date of flu season.

INFLUENZA SURVEILLANCE

I. INFLUENZA-LIKE ILLNESS (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits for ILI as well as the total number of patients who complained of symptoms consistent with an ILI. A patient with ILI must have the following: a fever (temperature of 100°F [37.8°C] or greater) AND a cough and/or a sore throat. ILI is based on reported symptoms and not laboratory confirmed tests; thus, ILI may represent other respiratory pathogens and not solely influenza. Further, sentinel providers report these numbers on a weekly basis; therefore, data are preliminary and may change depending on additional reporting. In combination with laboratory testing and other surveillance systems, ILI surveillance helps monitor influenza and other respiratory pathogen activity. For more information concerning ILINet and sentinel requirements, please visit the CDC website ([here](#)).

For week 17 of the current influenza season:

- **2.8%** (season to date: **3.3%**) of the outpatient visits recorded by Hawaii sentinel providers were for ILI.
- ILI visits were comparable to the historical baseline in Hawaii^{2,3} (i.e., inside the 95% confidence interval).
- Hawaii's ILI outpatient visits were lower than the national baseline (**2.9%**)⁴ (i.e., outside the 95% confidence interval) and higher than the national ILI rate (**2.2%**) (i.e. outside the 95% confidence interval).
- ILI activity level: Low⁵
- Geographic Spread: Sporadic Activity⁶.
- ILI Cluster Activity: No clusters were reported to HDOH during week 17.



² The Hawaii historical baseline (%ILI) is the average of 3-week moving averages over the preceding 10 flu seasons of historical data (2013–2014, 2014–2015, 2015–2016, 2016–2017, 2017–2018, 2018–2019, 2019–2020, 2020–2021, 2021–2022 and 2022–2023).

³ This value is based upon comparison of actual outpatient ILI with the historical baseline, which only captures outpatient ILI. The chart above represents a 3-week moving average and not the actual ILI by week.

⁴ The National Baseline is calculated by CDC as the mean percentage of visits for ILI during weeks 21–39 with two standard deviations. Because of large variability in regional ILI, comparison of the national baseline with local ILI may not be appropriate. It is provided in this report because no meaningful regional baselines are available for comparison. The national baseline combines all data reported by states to CDC, including ILI in outpatient, ER, urgent care, and inpatient settings.

⁵ There are 10 activity levels classified as minimal (levels 1–3), low (levels 4–5), moderate (levels 6–7), and high (levels 8–10).

⁶ The influenza activity reported by state and territorial epidemiologists indicates geographic spread of influenza viruses but does not measure the severity of influenza activity. Sporadic: no clusters reported to HDOH, Local: one or more clusters reported in one county, Regional: clusters reported two to three counties, Widespread: clusters reported in all counties. Hawaii does not report No Activity, as flu circulates year-round in Hawaii.

II. LABORATORY SURVEILLANCE: State Laboratories Division (SLD; the HDOH public health laboratory) and Hawaii's major private laboratories (DLS, CLH) report results of RT-PCR, which can be considered confirmatory (SLD may perform viral culture on select specimens). Specimens meeting priority criteria⁷ are forwarded to SLD for sub-typing. Additionally, specimens meeting case definition from requesting sentinel providers are sent directly to SLD for sub-typing. Due to resource constraints, not all submitted specimens undergo sub-typing. Sub-typing at the commercial laboratories is only conducted on a case-by-case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories do not meet criteria and are not subtyped. For more information on influenza tests and types, please visit the CDC website ([here](#)).

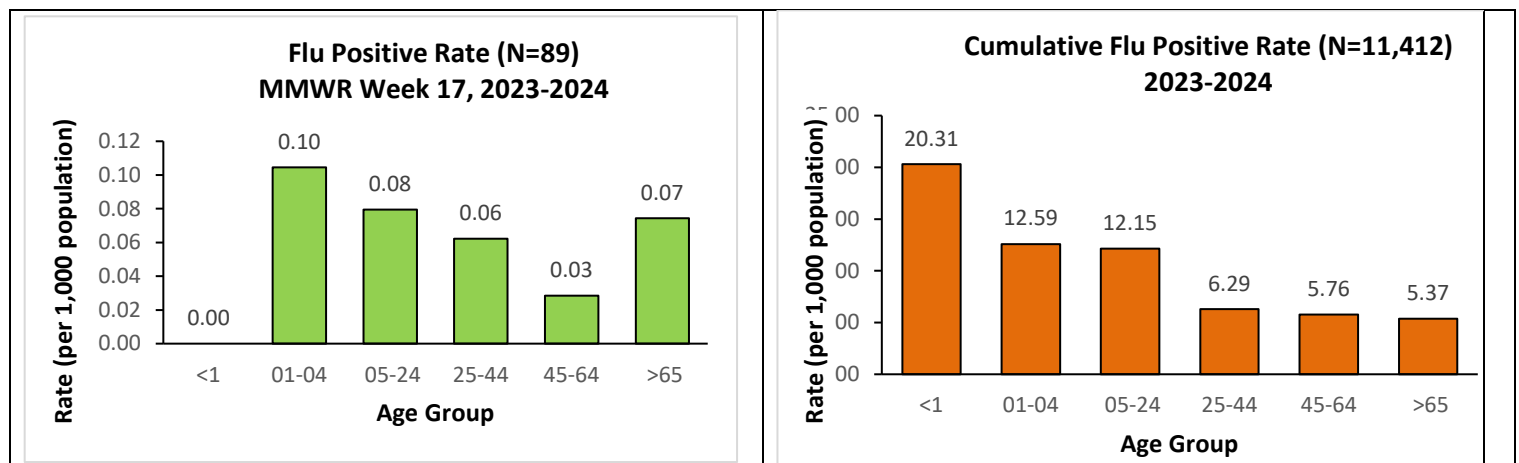
A. INFLUENZA:

- The following reflects laboratory findings for week 17 of the 2023–24 influenza season:
 - A total of **1,701** specimens have been tested statewide for influenza viruses (positive: 89 [5.2%]). (Season to date: 96,730 tested (11.8% positive))
 - 238 (14.0%) were screened only by rapid antigen tests with no confirmatory testing.
 - 1,463 (86.0%) underwent confirmatory testing (either RT-PCR or viral culture).
 - 1,612 (94.8%) were negative.

Influenza type	Current week 17 (%)	Season to date (%) ⁸
Influenza A (H1) ⁹	1 (1.1)	360 (3.2)
Influenza A (H3)	0 (0.0)	155 (1.4)
Influenza A no subtyping	67 (75.3)	9,121 (80.0)
Influenza B (Yamagata)	0 (0.0)	0 (0.0)
Influenza B (Victoria)	0 (0.0)	88 (0.8)
Influenza B no genotyping	21 (23.6)	1,688 (14.8)

1. AGE DISTRIBUTION

The charts below indicate the population-based rates of positive influenza cases in Hawaii by age group during the 2023–24 influenza season.¹⁰



⁷ Priority criteria include: hospitalized patients with acute respiratory distress syndrome [ARDS] or x-ray confirmed pneumonia; travelers with international travel history within 10 days of onset; specimens submitted by sentinel providers; specimens collected from healthcare workers, pregnant women, or women up to 6 weeks' post-partum; those with underlying medical conditions; and patients presenting with unusual or severe manifestations of influenza infection.

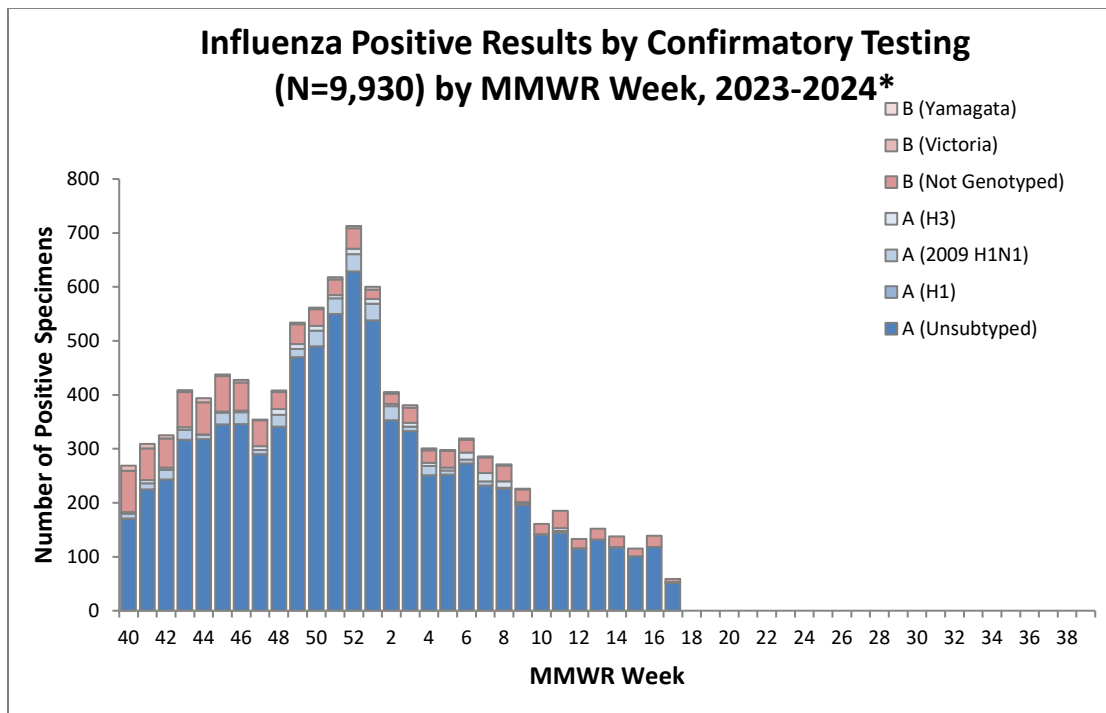
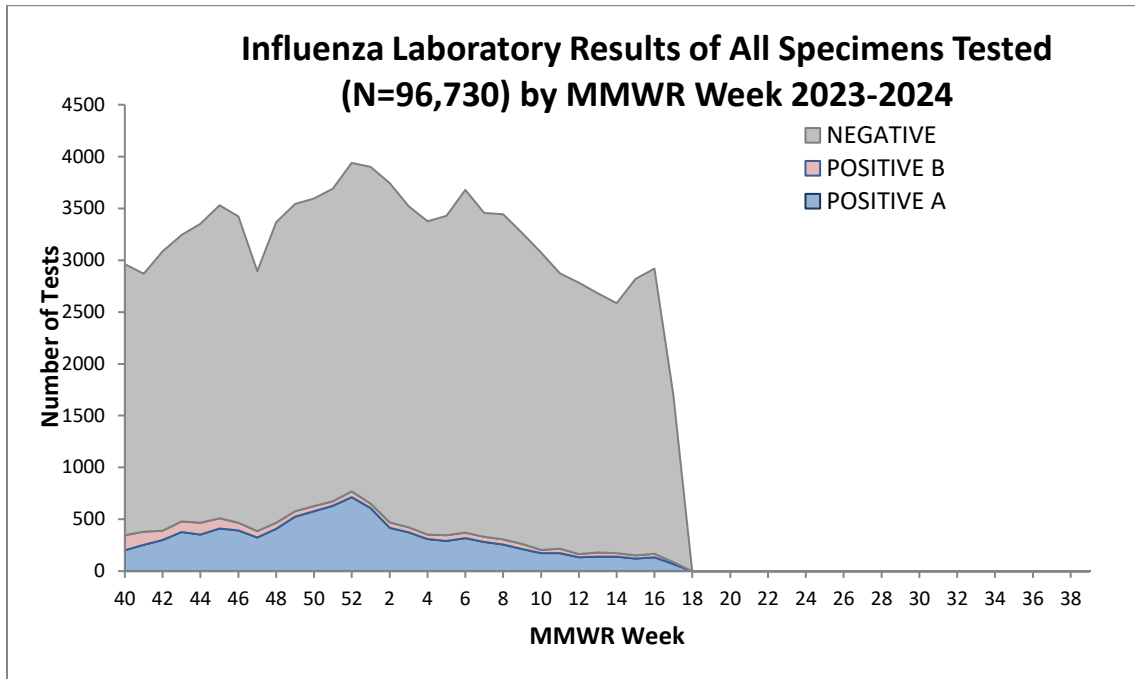
⁸ Influenza coding were updated to reflect a more accurate count.

⁹ All influenza A H1 viruses detected this season have been 2009 H1N1.

¹⁰ This represents an estimate of population-based rates based on available data.

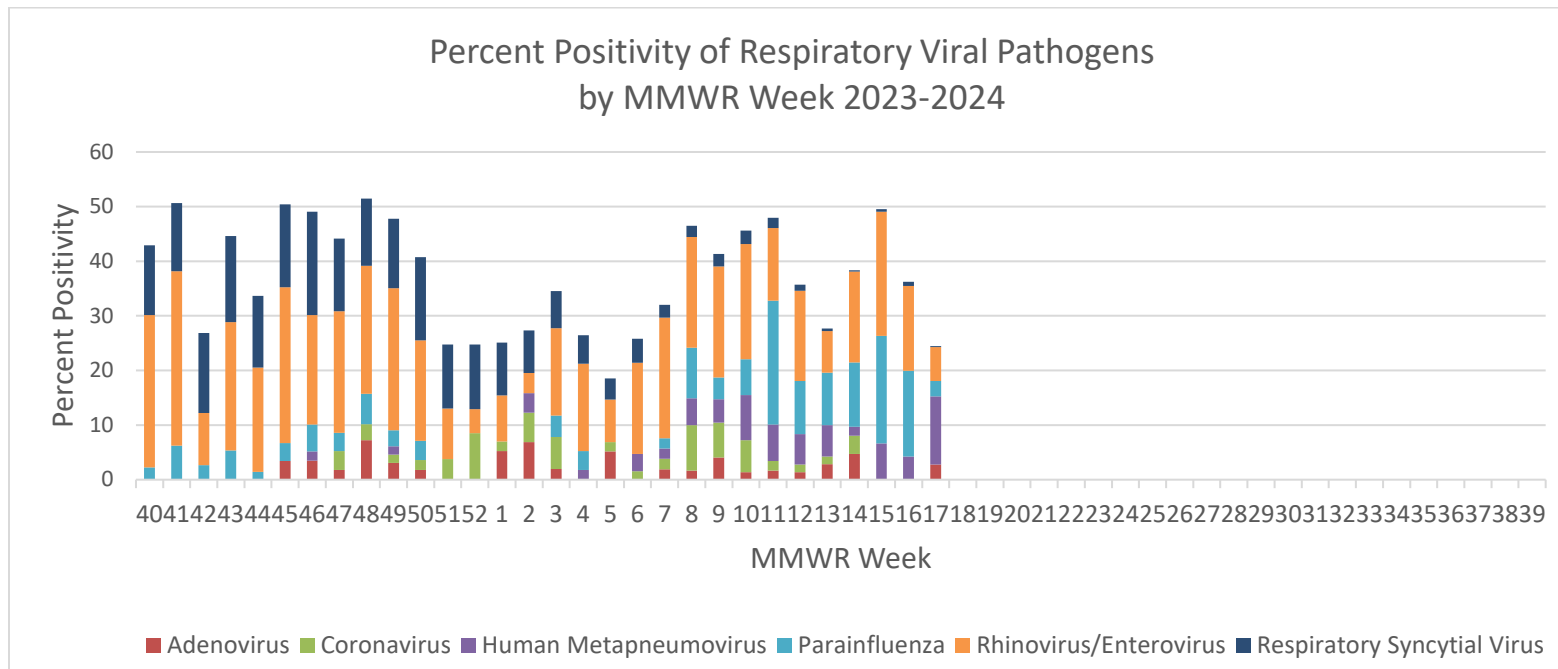
2. LABORATORY TESTING

The charts below show the laboratory results of all specimens tested for influenza by MMWR week during the 2023–2024 influenza season as well as the type and subtype of positive results for influenza. Again, sub-typing is only performed on selected specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



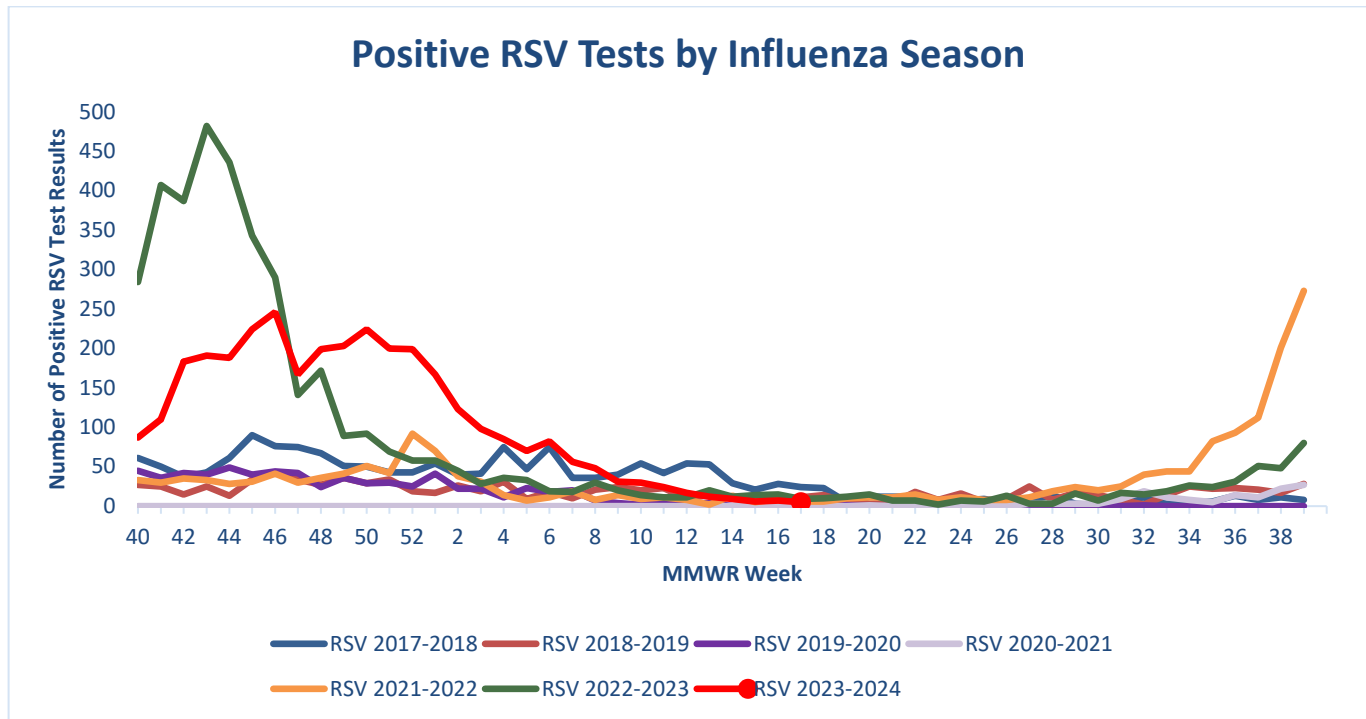
* A total of 86,434 specimens underwent confirmatory testing but not all positive influenza specimens receive confirmatory testing that are circulating in Hawaii.

B. OTHER RESPIRATORY PATHOGENS: The major clinical and commercial laboratories throughout the state of Hawaii have the testing capacity for non-influenza respiratory pathogens and report these to HDOH. However, such testing is performed as needed and when sufficient resources are available because of the high costs associated with respiratory panel tests. **Therefore, available data represent only the presence of circulating pathogens and cannot be used to determine specific trends.**

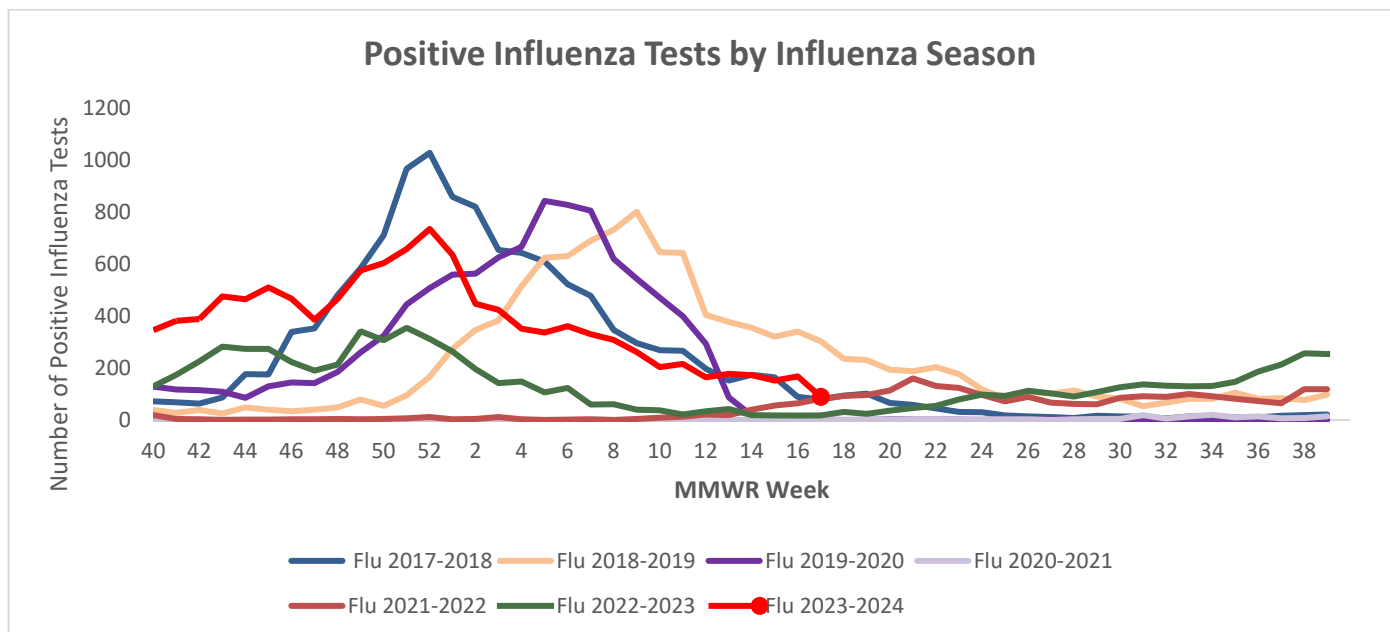


* The coronavirus presented on this table does not indicate Severe Acute Respiratory Coronavirus-2 (i.e., COVID-19).

RESPIRATORY SYNCYTIAL VIRUS (RSV) POSITIVE TEST RESULTS BY INFLUENZA SEASON: RSV case counts are lower than the previous season and may have already reached a peak for the 2023-2024 season. Of note, significantly more tests for RSV are being performed than in pre-COVID-19 seasons.



INFLUENZA POSITIVE TEST RESULTS BY INFLUENZA SEASON: Influenza cases appear to be on a steady decline and may have already reached a peak for the 2023-2024 season.



C. COVID-19 SENTINEL SURVEILLANCE: Due to the low volume of samples currently available through the influenza surveillance system, the COVID-19 sentinel surveillance data may not be accurately portraying COVID-19 activity in our communities. Reporting of the COVID-19 Sentinel Surveillance data will be paused while HODH re-evaluates the program to ensure that the reported data are accurate and representative.

HDOH is continuing to monitor COVID-19 activity throughout the state. To learn more, please visit the Hawaii's COVID-19 data website ([here](#)). For more information on surveillance of COVID-19 activity in the United States please visit the CDC COVIDView website ([here](#)).

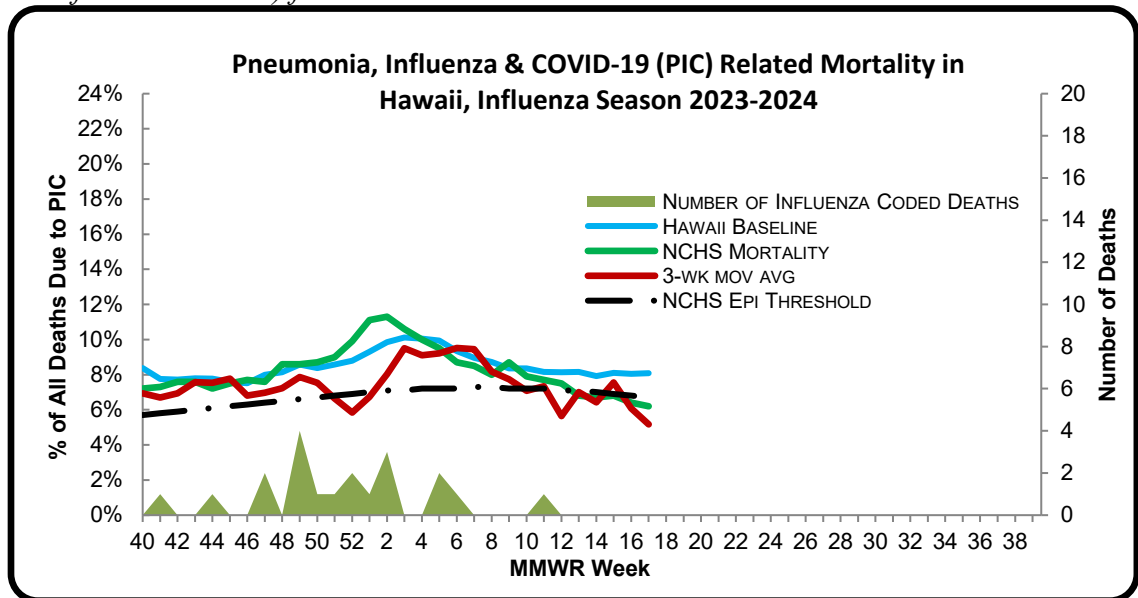
III. PNEUMONIA, INFLUENZA, AND COVID-19 (PIC) RELATED MORTALITY:

P&I mortality surveillance is collected by CDC through the National Center for Health Statistics (NCHS) using death certificate data. Each week the HDOH OHSM reports specific data from Honolulu to the CDC. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Due to the ongoing COVID-19 pandemic, CDC included total deaths from COVID-19 by age group to the death data. Previous studies had suggested that P&I is a good indicator of influenza-related deaths; however, data has shown that pneumonia deaths associated with influenza is now being impacted by COVID-19 related pneumonia. Due to this, CDC had added COVID-19 deaths into P&I to create the PIC (pneumonia, influenza, and/or COVID-19) classification.

To standardize Hawaii's influenza surveillance with CDC influenza surveillance guidelines, PIC deaths will be reported in lieu of P&I. Hawaii's baseline will begin to include PIC deaths starting from 2019-2020 flu season.

For week 17 of the current influenza season:

- *2.5% of all deaths that occurred in Hawaii during week 17 were related to pneumonia, influenza or COVID-19 (PIC)¹¹. For the current season (season to date: 7.5%) there have been 7,684 deaths from any cause, 574 of which were due to PIC¹².*
- *The PIC rate was lower than the historical baseline in Hawaii¹³ (i.e., outside the 95% confidence interval). The Hawaii PIC rate was lower than the CDC's National Center for Health Statistics (NCHS) PIC mortality¹⁴ (6.2%) (i.e., outside the 95% confidence interval) and lower than the national epidemic threshold (6.7%) (i.e., outside the 95% confidence interval) for week 17.*



¹¹ The percent of deaths due to PIC displayed on the graph is the 3-week moving averages.

¹² PIC data reflect 60.9% of the data reported for the MMWR week. Changes to data are expected when PIC data reaches 100% completion.

¹³ The Hawaii historical baseline (%PIC) is the average of 3-week moving averages over the preceding 10 flu seasons of historical data (2013–2014, 2014–2015, 2015–2016, 2016–2017, 2017–2018, 2018–2019, 2019–2020, 2020–2021, 2021–2022, and 2022–2023).

¹⁴ Each week, the vital statistics offices of 122 cities across the United States report the total number of death certificates processed and the number of those for which pneumonia, influenza, or COVID-19 was listed as the underlying or contributing cause of death by age group (Under 28 days, 28 days–1 year, 1–14 years, 15–24 years, 25–44 years, 45–64 years, 65–74 years, 75–84 years, and ≥85 years). The COVID-19 death counts reported by NCHS are provisional and will not match counts in other sources, such as media reports or numbers from health departments. COVID-19 deaths may be classified or defined differently in various reporting and surveillance systems. The percentage of deaths due to pneumonia, influenza, and COVID-19 (PIC) are compared with a seasonal baseline and epidemic threshold value calculated for each week.

INFLUENZA-ASSOCIATED PEDIATRIC DEATHS¹⁵:

- No new influenza-associated pediatric death was reported to Hawaii. There has been one influenza-associated pediatric death reported in Hawaii during the 2023–2024 season.
- Nationally, ten new influenza-associated pediatric deaths were reported to CDC during week 17 (2023–2024 season total: 158).

IV. INFLUENZA WATCH: As part of a comprehensive influenza surveillance system and to prevent the spread of contagious respiratory diseases in humans, it is important to monitor all circulating influenza types. Several animal-origin influenza A subtypes are currently of interest: influenza A variant virus (H3N2v, H1N2v, and H1N1v) and Avian flu (H5N1 and H7N9). These types of influenza viruses may cause zoonotic (animal-associated) disease and are a public health concern.

A. VARIANT VIRUSES:

Influenza viruses that normally circulate in pigs are called “variant” viruses when they are found in people. These viruses were first identified in U.S. pigs in 2010. In 2011, 12 cases of H3N2v infection were detected in the United States. In 2012, 309 such cases (resulting in 16 hospitalizations and one death) across 12 states were detected, including one Hawaii case who recovered. Illness associated with H3N2v infection has been mostly mild with symptoms similar to those of seasonal flu. However, serious illness, resulting in hospitalization and death, has occurred in some cases. Most of these infections have been associated with prolonged exposure to pigs at agricultural fairs or similar settings. Limited human-to-human spread of this virus has been detected in the past, but no sustained community spread of H3N2v has been identified. More information regarding H3N2v, H1N1v, and H1N2v viruses may be found on the CDC website ([here](#)) and ([here](#)).

- *No variant or novel influenza infections have been reported to HDOH during the 2023–2024 influenza season.*
- *Two new human infection with novel influenza A virus, H1N1v (0), H3N2v (0), and H1N2v (2), have been reported to CDC during the 2023–2024 influenza season.*
 - *One new human infection with influenza A(H1N1v) virus has been reported to WHO from Netherlands during the 2023–2024 influenza season.*
 - *One new human infection with influenza A(H1N1v) virus has been reported to WHO from Switzerland during the 2023–2024 influenza season.*
 - *One new human infection with influenza A(H1N1v) virus has been reported to WHO from Brazil during the 2023–2024 influenza season.*
 - *One new human infection with influenza A(H1N1v) virus has been reported to WHO from Spain during the 2023–2024 influenza season.*
 - *One new human infection with influenza A(H1N2v) virus has been reported to WHO from Great Britain and Northern Ireland during the 2023–2024 influenza season.*

AVIAN (OR BIRD) INFLUENZA: These types of influenza viruses cause zoonotic (animal-associated) disease of public health concern and are therefore monitored globally by the WHO. Most avian influenza viruses do not cause disease in humans and are generally not easily transmissible between person to person, but a few subtypes may cross the species barrier and cause disease in humans. Avian influenza viruses may be of various subtypes, including H5N1, H5N2, H5N8, H7N3, H7N7, H7N8, H7N9, and H9N2. On January 15th, 2016, the USDA and APHIS reported detection of HPAI H7N8 in a commercial turkey flock in Indiana. There have been no associated human infections. This is the first detection of HPAI H7N8 in wild bird surveillance in the United States. More information, the risk

¹⁵ Influenza-associated deaths are considered pediatric in persons aged less than 18 years. It was made a nationally notifiable condition in October, 2004. All pediatric influenza-associated deaths are laboratory confirmed.

assessment and recommendations for HPAI H7N8 can be found ([here](#)). The WHO, CDC, and other public health agencies have also been monitoring influenza H7N9, which represents a public health concern because of its high pandemic potential. Although H7N9 has not been detected in the United States, it remains a global concern given continuing epidemics in endemic countries. Since 2013, a total of 1,568 laboratory-confirmed cases of human infection with H7N9 viruses, including at least 613 deaths, have been reported to WHO. More information on H7N9 virus infections can be found ([here](#)). For more information regarding avian influenza, please visit the CDC ([here](#)) or the WHO ([here](#)) websites. WHO reports total number of cases and deaths related to laboratory-confirmed avian influenza viruses and posts current avian influenza case counts ([here](#)), which were last updated on **March 28, 2024**.

V. INFLUENZA Vaccine: Annual influenza vaccination is recommended for all persons aged 6 months and older and is the most effective way to reduce the risk of getting sick with seasonal flu and spreading it to others. Influenza vaccination can reduce illnesses, visits to the doctor, influenza-related hospitalizations, and missed work and school days. Influenza vaccines become available by the end of October. It takes at least two weeks after vaccination to confer immunity against influenza virus infection. More information regarding influenza vaccination can be found ([here](#)).

A. Composition of the 2023–2024 Influenza Vaccine:

The composition of the 2023–2024 influenza vaccine has been updated to better match circulating influenza viruses. The Advisory Committee on Immunization Practices (ACIP) has recommended that the 2023–2024 influenza trivalent vaccine contain an influenza A/Wisconsin/67/2022 (H1N1)pdm09-like virus, influenza A/Darwin/6/2021 (H3N2)-like virus, and influenza B/Austria/1359417/2021-like virus (B/Victoria lineage). Quadrivalent vaccines, which contain two influenza A and two influenza B viruses, are recommended to contain a B/Phuket/3073/2013-like (B/Yamagata lineage) virus in addition to the same viruses recommended for the trivalent vaccines. United States cell culture–based inactivated (ccIIV4) and recombinant (RIV4) influenza vaccines will contain HA derived from an influenza A/Wisconsin/67/2022 (H1N1)pdm09-like virus, an influenza A/Darwin/6/2021 (H3N2)-like virus, an influenza B/Austria/1359417/2021-like virus (B/Victoria lineage), and an influenza B/Phuket/3073/2013 (Yamagata lineage)-like virus. These vaccine recommendations were based on several factors, including global influenza virologic and epidemiologic surveillance, genetic and antigenic characterization, human serology studies, antiviral susceptibility, and the availability of candidate influenza viruses.

APPENDIX 1: ADDITIONAL INFORMATION

For more information regarding local and national influenza surveillance programs, visit the following sites.

Centers for Disease Control and Prevention	General Influenza National ILI and P&I Data Vaccine Virus Selection CDC Web Tool for Respiratory Viruses
Flu.gov	General Influenza Information
HDOH Flu and Pneumonia	General Influenza Surveillance To find out more information or join the sentinel physician program, email the Influenza Surveillance Coordinator
World Health Organization	General Global and Local Influenza Avian Influenza

APPENDIX 2: MMWR WEEK DATES

Please refer to the table below to interpret data presented by MMWR week. Week 40 is considered the traditional start for the flu season for the Northern Hemisphere.

MMWR WEEK	2020	2021	2022	2023	2024
1	1/4/2020	1/9/2021	1/8/2022	1/7/2023	1/6/2024
2	1/11/2020	1/16/2021	1/15/2022	1/14/2023	1/13/2024
3	1/18/2020	1/23/2021	1/22/2022	1/21/2023	1/20/2024
4	1/25/2020	1/30/2021	1/29/2022	1/28/2023	1/27/2024
5	2/1/2020	2/6/2021	2/5/2022	2/4/2023	2/3/2024
6	2/8/2020	2/13/2021	2/12/2022	2/11/2023	2/10/2024
7	2/15/2020	2/20/2021	2/19/2022	2/18/2023	2/17/2024
8	2/22/2020	2/27/2021	2/26/2022	2/25/2023	2/24/2024
9	2/29/2020	3/6/2021	3/5/2022	3/4/2023	3/2/2024
10	3/7/2020	3/13/2021	3/12/2022	3/11/2023	3/9/2024
11	3/14/2020	3/20/2021	3/19/2022	3/18/2023	3/16/2024
12	3/21/2020	3/27/2021	3/26/2022	3/25/2023	3/23/2024
13	3/28/2020	4/3/2021	4/2/2022	4/1/2023	3/30/2024
14	4/4/2020	4/10/2021	4/9/2022	4/8/2023	4/6/2024
15	4/11/2020	4/17/2021	4/16/2022	4/15/2023	4/13/2024
16	4/18/2020	4/24/2021	4/23/2022	4/22/2023	4/20/2024
17	4/25/2020	5/1/2021	4/30/2022	4/29/2023	4/27/2024
18	5/2/2020	5/8/2021	5/7/2022	5/6/2023	5/4/2024
19	5/9/2020	5/15/2021	5/14/2022	5/13/2023	5/11/2024
20	5/16/2020	5/22/2021	5/21/2022	5/20/2023	5/18/2024
21	5/23/2020	5/29/2021	5/28/2022	5/27/2023	5/25/2024
22	5/30/2020	6/5/2021	6/4/2022	6/3/2023	6/1/2024
23	6/6/2020	6/12/2021	6/11/2022	6/10/2023	6/8/2024
24	6/13/2020	6/19/2021	6/18/2022	6/17/2023	6/15/2024
25	6/20/2020	6/26/2021	6/25/2022	6/24/2023	6/22/2024
26	6/27/2020	7/3/2021	7/2/2022	7/1/2023	6/29/2024
27	7/4/2020	7/10/2021	7/9/2022	7/8/2023	7/6/2024
28	7/11/2020	7/17/2021	7/16/2022	7/15/2023	7/13/2024
29	7/18/2020	7/24/2021	7/23/2022	7/22/2023	7/20/2024
30	7/25/2020	7/31/2021	7/30/2022	7/29/2023	7/27/2024
31	8/1/2020	8/7/2021	8/6/2022	8/5/2023	8/3/2024
32	8/8/2020	8/14/2021	8/13/2022	8/12/2023	8/10/2024
33	8/15/2020	8/21/2021	8/20/2022	8/19/2023	8/17/2024
34	8/22/2020	8/28/2021	8/27/2022	8/26/2023	8/24/2024
35	8/29/2020	9/4/2021	9/3/2022	9/2/2023	8/31/2024
36	9/5/2020	9/11/2021	9/10/2022	9/9/2023	9/7/2024
37	9/12/2020	9/18/2021	9/17/2022	9/16/2023	9/14/2024
38	9/19/2020	9/25/2021	9/24/2022	9/23/2023	9/21/2024
39	9/26/2020	10/2/2021	10/1/2022	9/30/2023	9/28/2024
40	10/3/2020	10/9/2021	10/8/2022	10/7/2023	10/5/2024
41	10/10/2020	10/16/2021	10/15/2022	10/14/2023	10/12/2024
42	10/17/2020	10/23/2021	10/22/2022	10/21/2023	10/19/2024
43	10/24/2020	10/30/2021	10/29/2022	10/28/2023	10/26/2024
44	10/31/2020	11/6/2021	11/5/2022	11/4/2023	11/2/2024
45	11/7/2020	11/13/2021	11/12/2022	11/11/2023	11/9/2024
46	11/14/2020	11/20/2021	11/19/2022	11/18/2023	11/16/2024
47	11/21/2020	11/27/2021	11/26/2022	11/25/2023	11/23/2024
48	11/28/2020	12/4/2021	12/3/2022	12/2/2023	11/30/2024
49	12/5/2020	12/11/2021	12/10/2022	12/9/2023	12/7/2024
50	12/12/2020	12/18/2021	12/17/2022	12/16/2023	12/14/2024
51	12/19/2020	12/25/2021	12/24/2022	12/23/2023	12/21/2024
52	12/26/2020	1/1/2022	12/31/2022	12/30/2023	12/28/2024
53	01/02/2021				