The following document contains all of the weekly surveillance reports for

Influenza for the 2012 Calendar year (Weeks 1 - 52) for the

Hawaii State Department of Health Disease Investigation Branch[1]

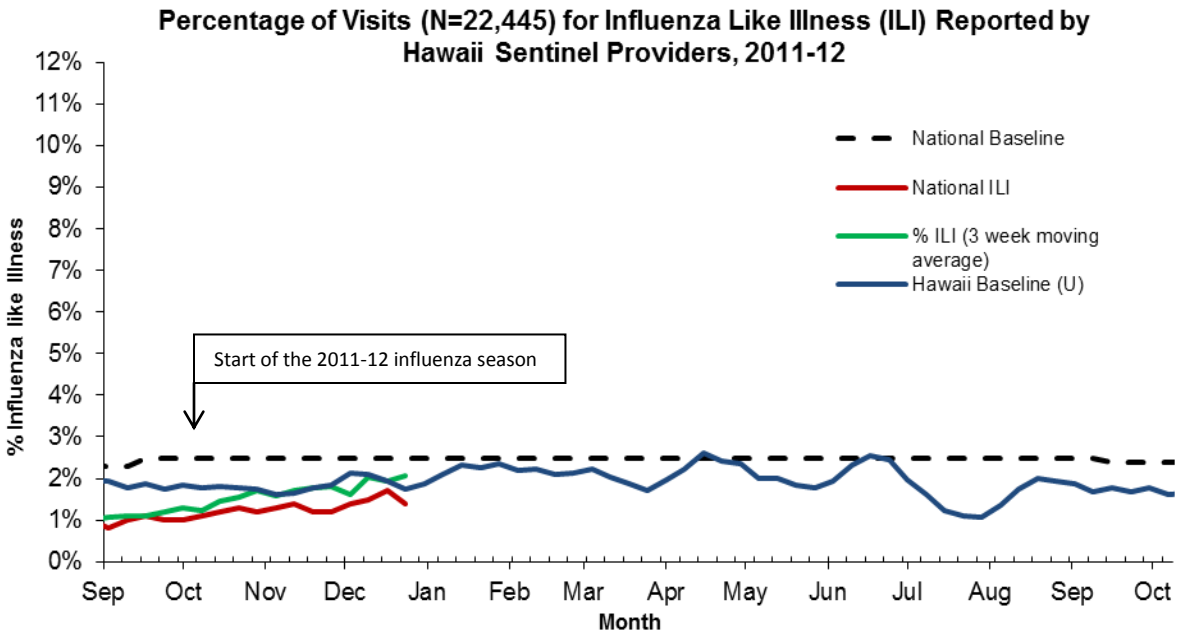
[1] Weeks not reported: 12, 21, 44, 52

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

January 1–7, 2012: MMWR[1] Week 1, 2012

I. Surveillance of Influenza-like Illness (ILI):



During week 1 of the 2011–12 influenza year, 1.2% (95% CI 0.5–1.9%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 1 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] as well as the national ILI (1.4%) and the national baseline[4] (2.4%).

II. Pneumonia and Influenza (P&I) Related Mortality:

During week 1 of the 2011–12 influenza season, 4.3% (95% CI 0.0–9.0%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 1 was comparable to the epidemic threshold (7.5%) and national P&I mortality (7.0%).

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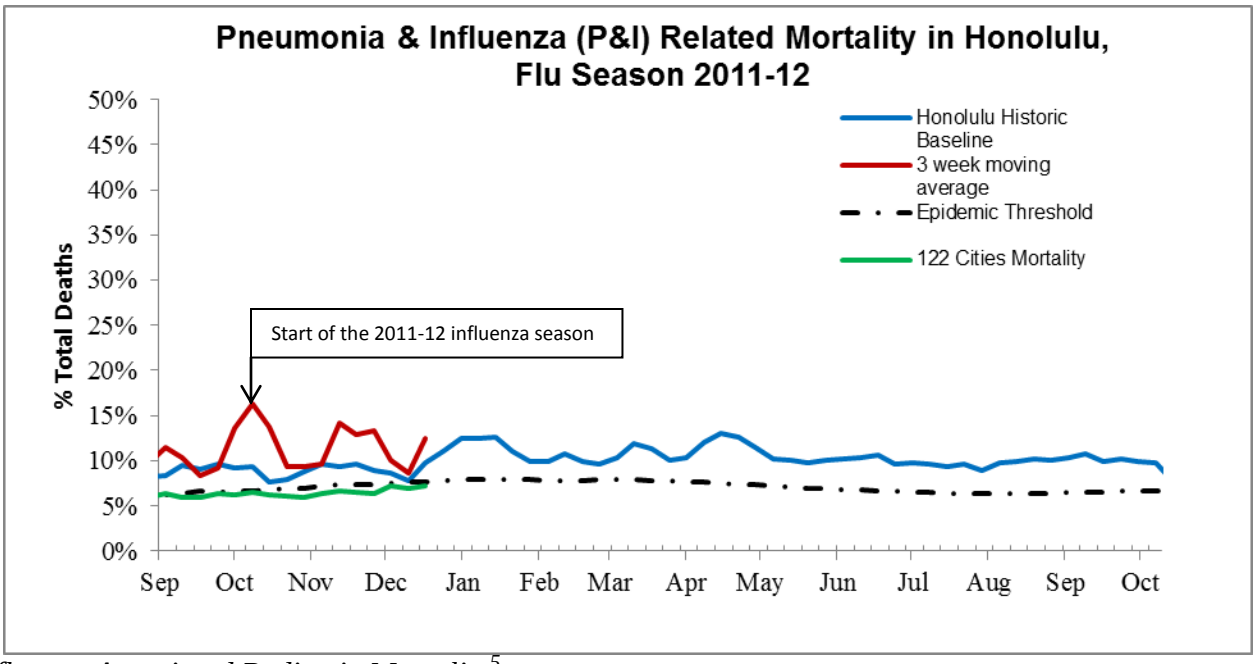
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were no influenza-associated pediatric deaths reported during week 1.

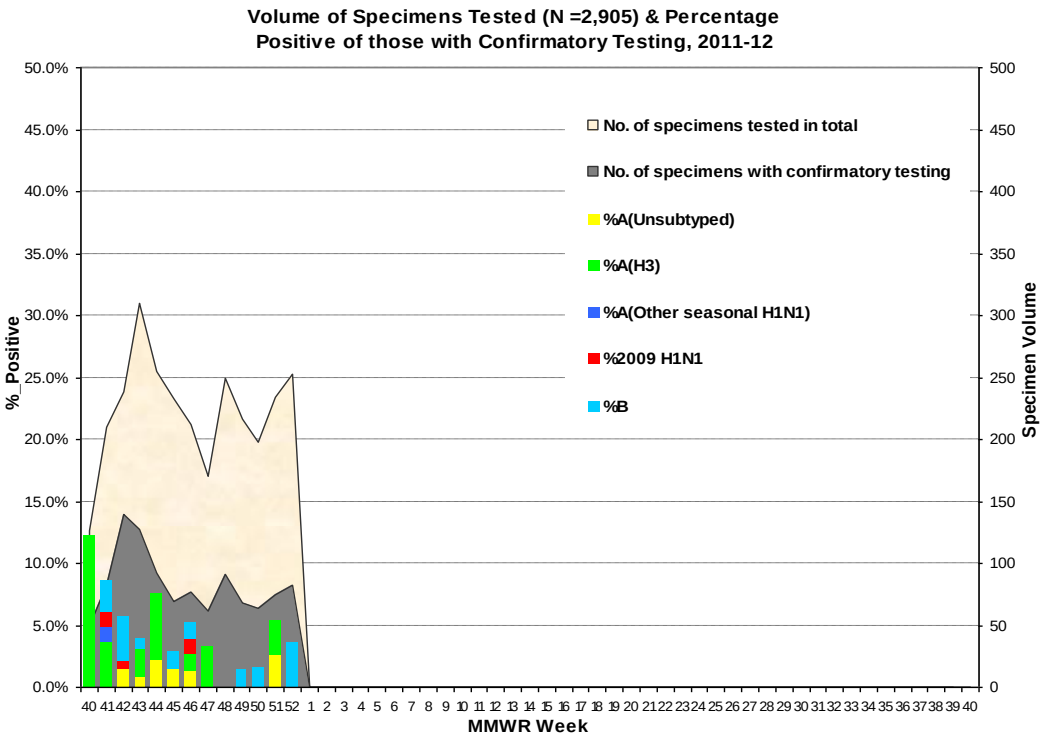
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 2,905 specimens have been tested statewide for influenza viruses. Of these, 1,827 (62.9%) were screened only by rapid antigen tests whereas the remaining 1,078 (37.1%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 55 (1.9%) cases of influenza A and 20 (0.7%) cases of influenza B were detected using any method. Of the influenza A cases detected, 3 (5.5%) were 2009 H1N1, 22 (40.0%) were influenza A (H3), 1 (1.8%) was seasonal influenza A (H1), and the remaining (n = 29, 52.7%) were influenza A of unknown subtype.[6]

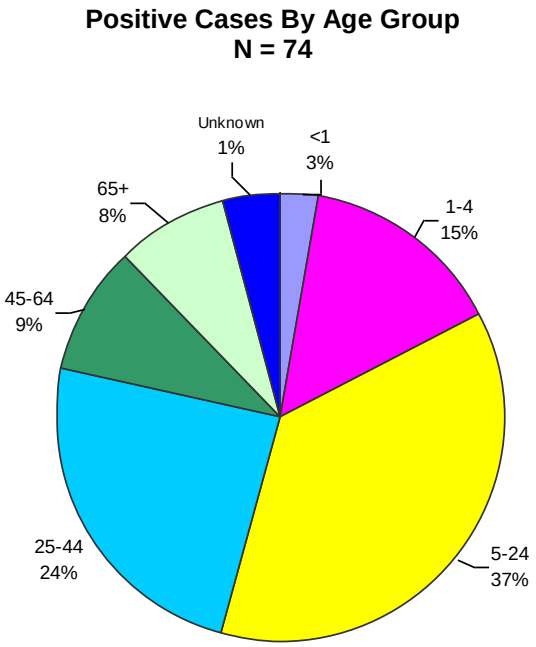
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

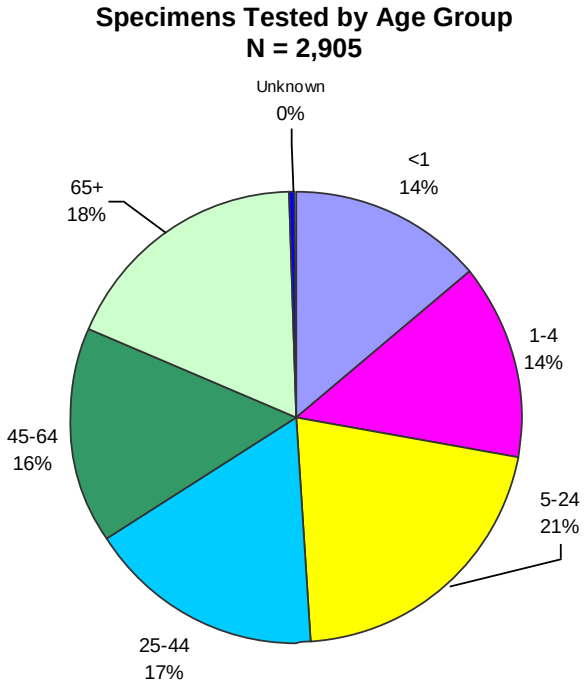
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 2.6% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X																																						
Parainfluenza Virus				X						X	X	X																																									
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																																						
Rhinovirus														X	X	X																																						
Varicella Zoster Virus																																																						
Influenza 2009 H1N1		X	X				X																																															
Influenza A (H3)	X	X		X	X		X	X				X																																										
Influenza A (Other seasonal H1N1)		x																																																				
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X																																									
Influenza B		X	X	X	X	X	X			X	X		X																																									

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

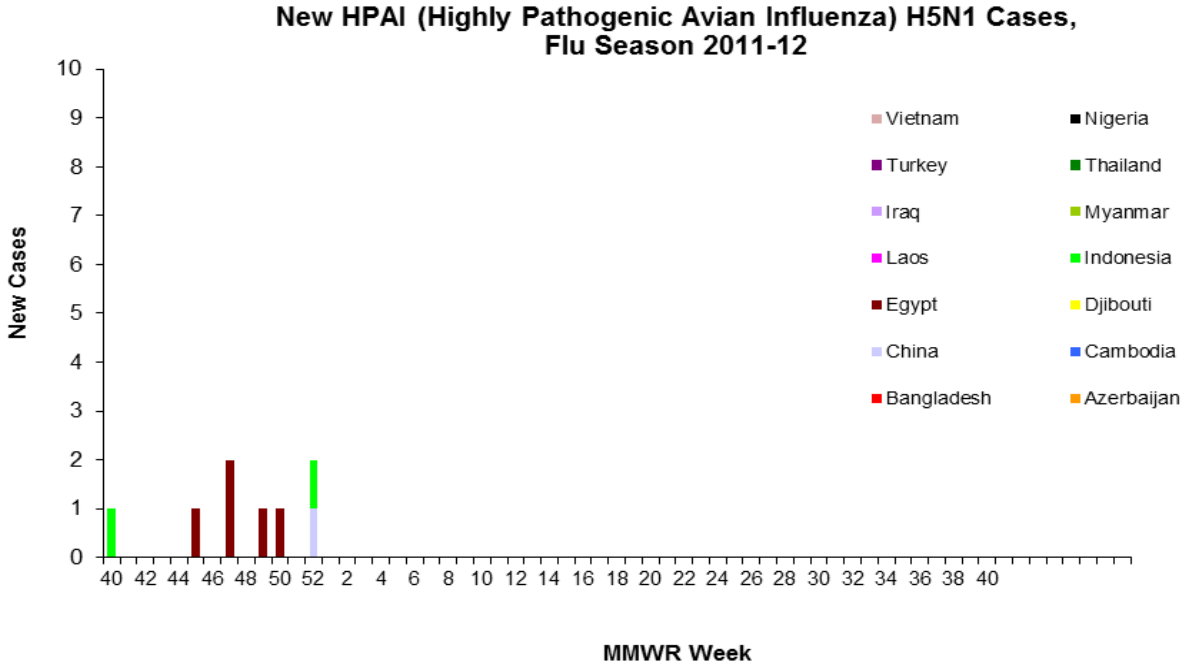
IV. Clustered ILI Activity

There were no clustered ILI activities reported during week 1.

VIII. Avian Influenza – Last Updated January 11, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	18	16
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	41	27
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	38	15	157	55
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	11	10	182	151
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	119	59
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	60	34	**576**	**340**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

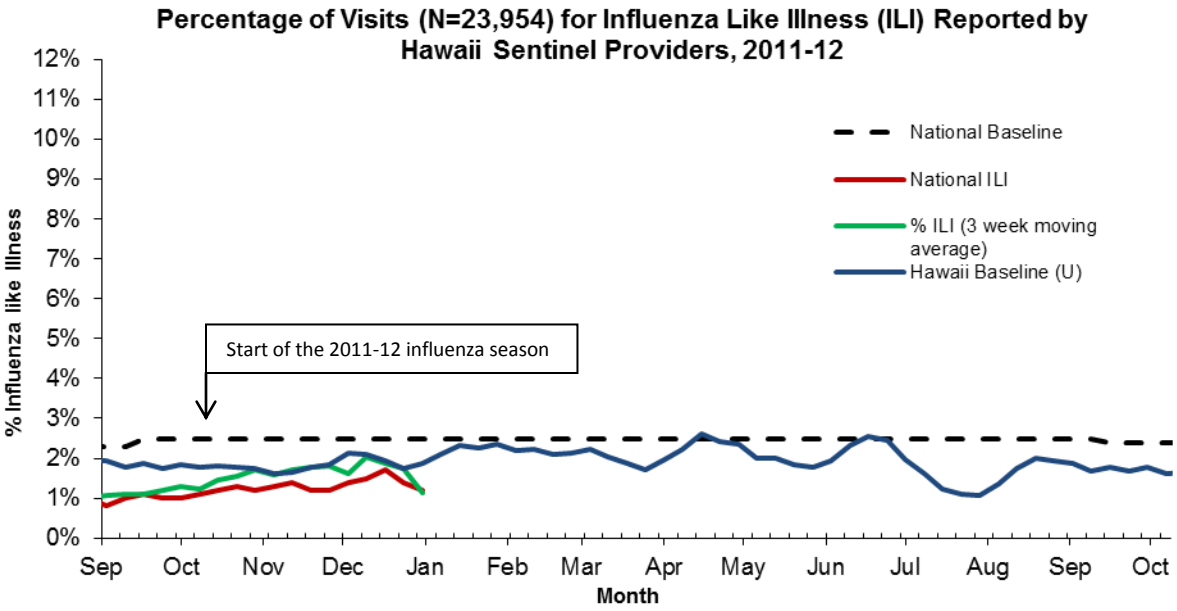
MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

January 8–14, 2012: MMWR[1] Week 2, 2012

I. Surveillance of Influenza-like Illness (ILI):



During week 2 of the 2011–12 influenza year, 1.1% (95% CI 0.6–1.7%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 2 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] as well as the national baseline[4] (2.4%) but was comparable to the national ILI (1.2%).

II. Pneumonia and Influenza (P&I) Related Mortality:

During week 2 of the 2011–12 influenza season, 21.7% (95% CI 12.8–30.6%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was higher than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 2 was higher than the epidemic threshold (7.7%) and national P&I mortality (7.6%).

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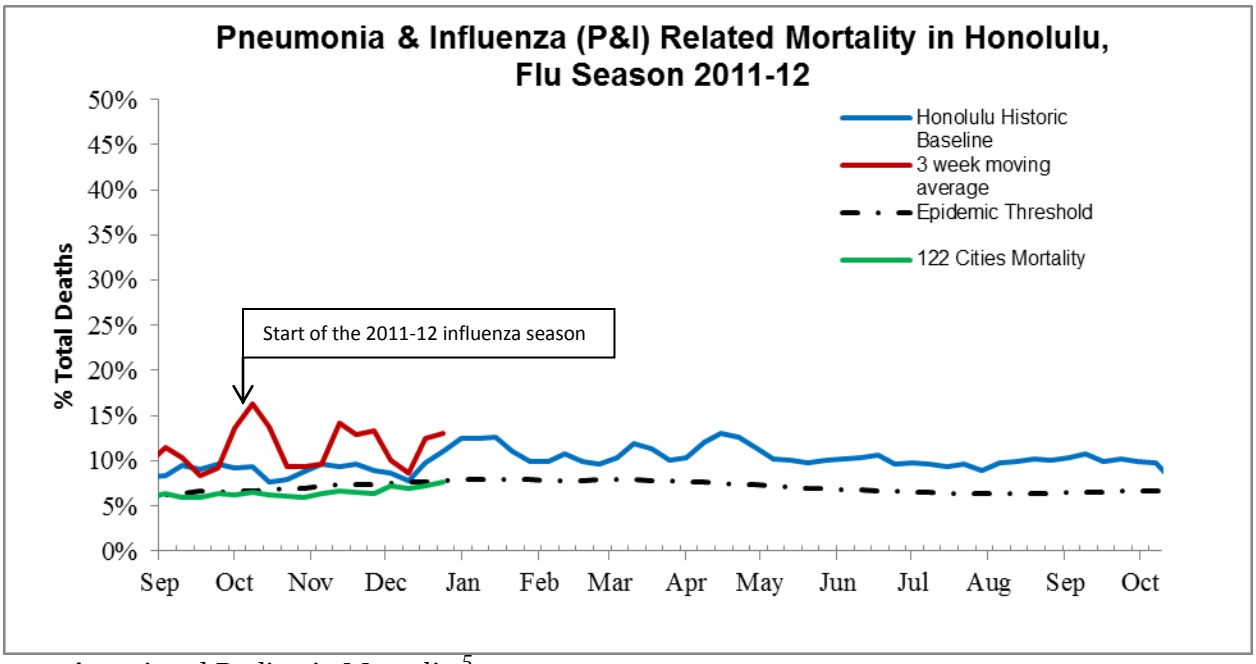
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were no influenza-associated pediatric deaths reported during week 2.

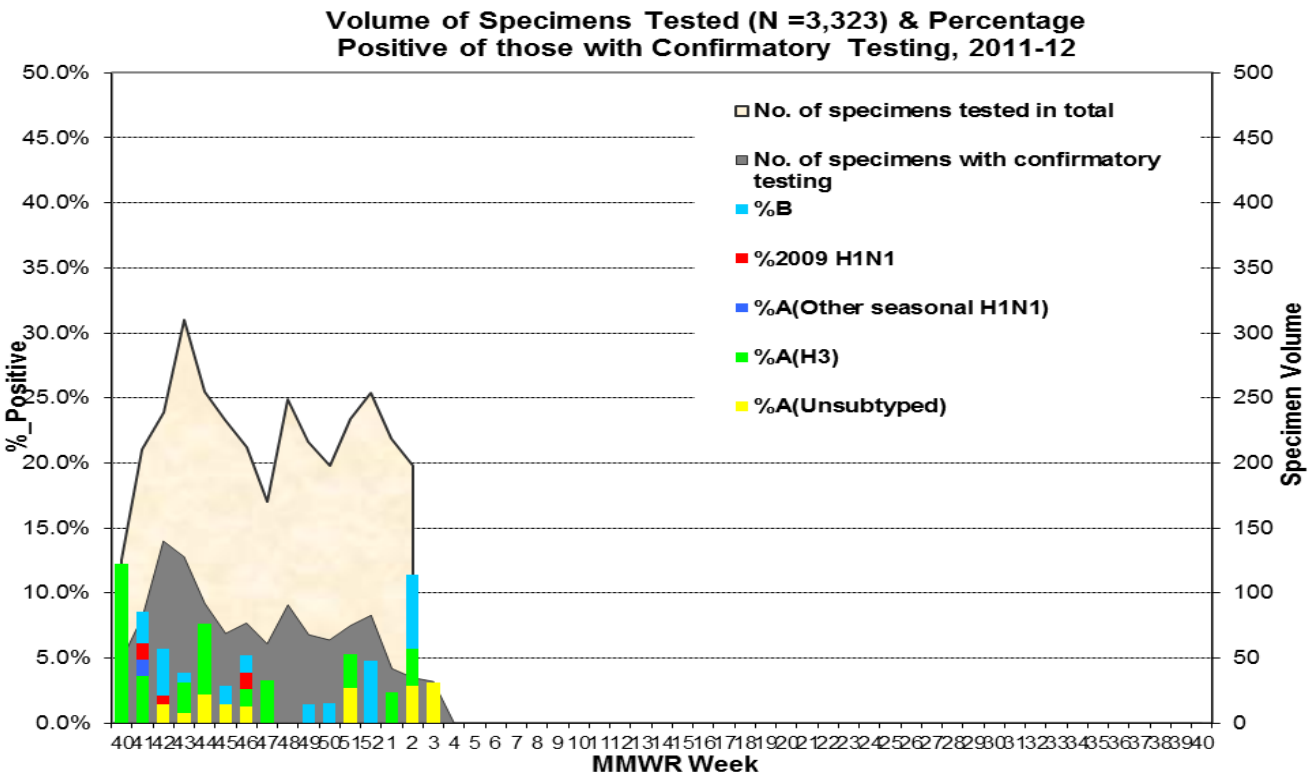
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 3,323 specimens have been tested statewide for influenza viruses. Of these, 2,167 (65.2%) were screened only by rapid antigen tests whereas the remaining 1,156 (34.8%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 72 (2.2%) cases of influenza A and 28 (0.8%) cases of influenza B were detected using any method. Of the influenza A cases detected, 3 (4.2%) were 2009 H1N1, 24 (33.3%) were influenza A (H3), 1 (1.4%) was seasonal influenza A (H1), and the remaining (n = 44, 61.1%) were influenza A of unknown subtype.[6]

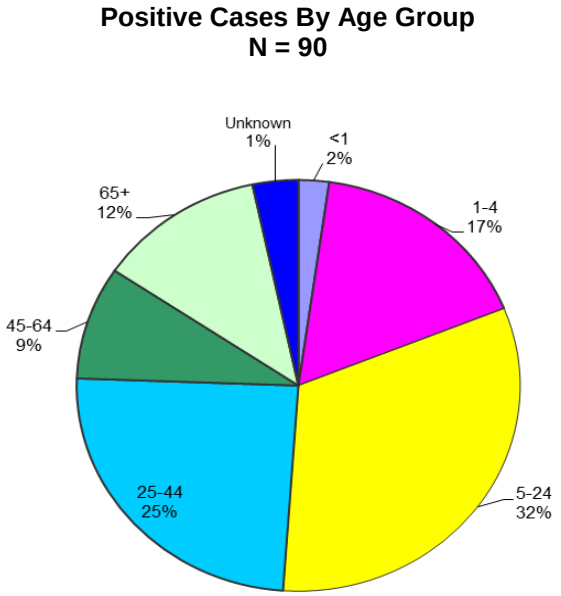
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

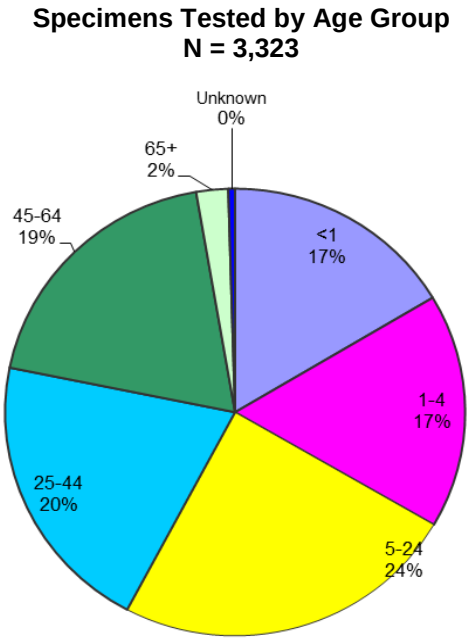
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 3.3% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X																																						
Parainfluenza Virus				X						X	X	X																																									
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																																						
Rhinovirus														X	X	X																																						
Varicella Zoster Virus																																																						
Influenza 2009 H1N1		X	X				X																																															
Influenza A (H3)	X	X		X	X		X	X				X		X	X																																							
Influenza A (Other seasonal H1N1)		x																																																				
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X																																									
Influenza B		X	X	X	X	X	X			X	X		X		X																																							

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

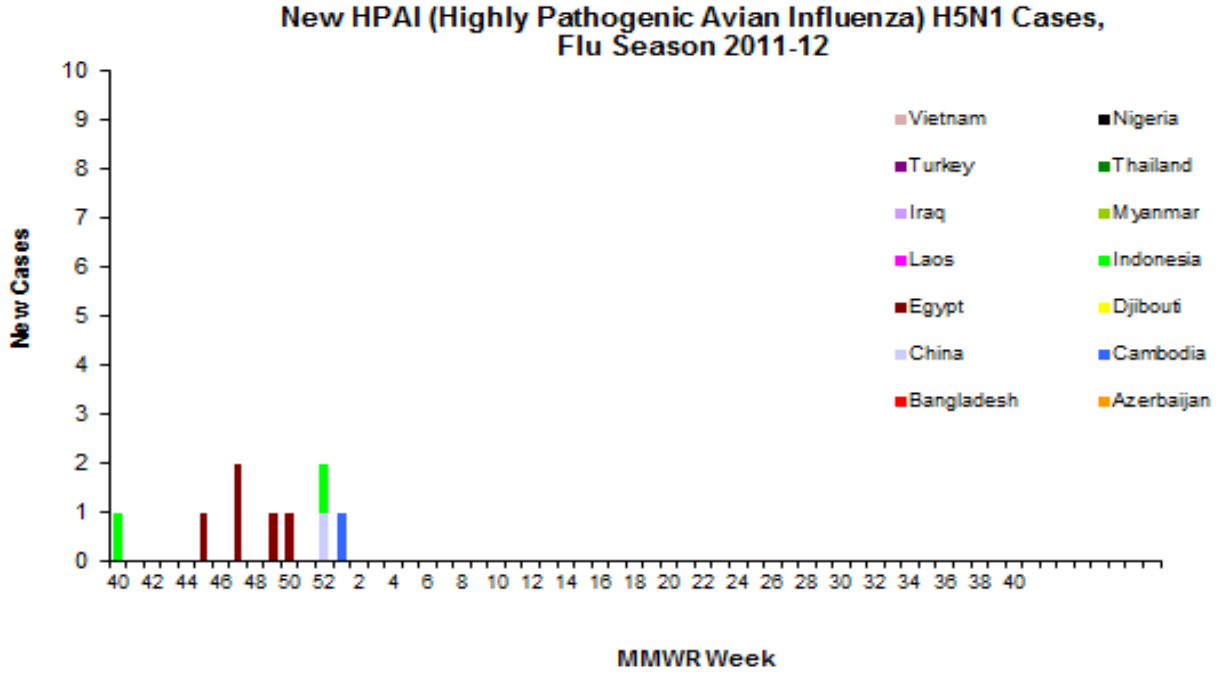
IV. Clustered ILI Activity

There were no clustered ILI activities reported during week 2.

VIII. Avian Influenza – Last Updated January 19, 2012

	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
Country	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	3	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	0	0	41	27
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	1	0	159	55
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	1	1	184	152
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	0	0	119	59
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	3	2	**581**	**342**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
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7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
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14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
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16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
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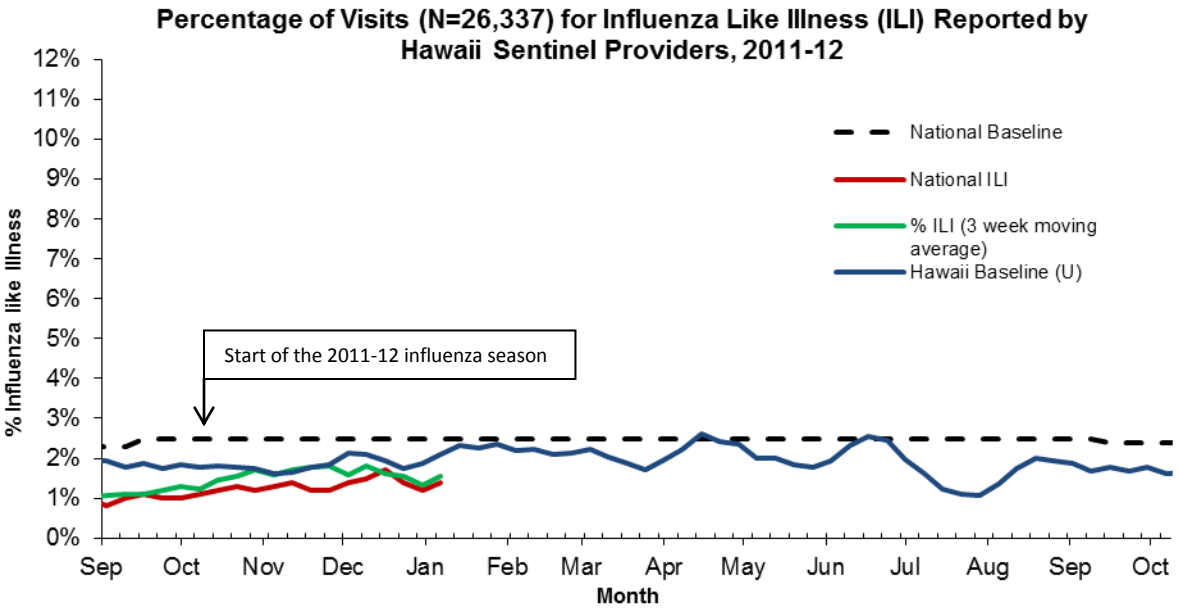
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

January 15–21, 2012: MMWR[1] Week 3, 2012

I. Surveillance of Influenza-like Illness (ILI):



During week 3 of the 2011–12 influenza year, 1.9% (95% CI 1.1–2.6%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 3 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to the national ILI (1.4%) and the national baseline[4] (2.4%).

II. Pneumonia and Influenza (P&I) Related Mortality:

During week 3 of the 2011–12 influenza season, 12.0% (95% CI 4.7–19.4%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was comparable to the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 3 was comparable to both the epidemic threshold (7.7%) and national P&I mortality (7.8%).

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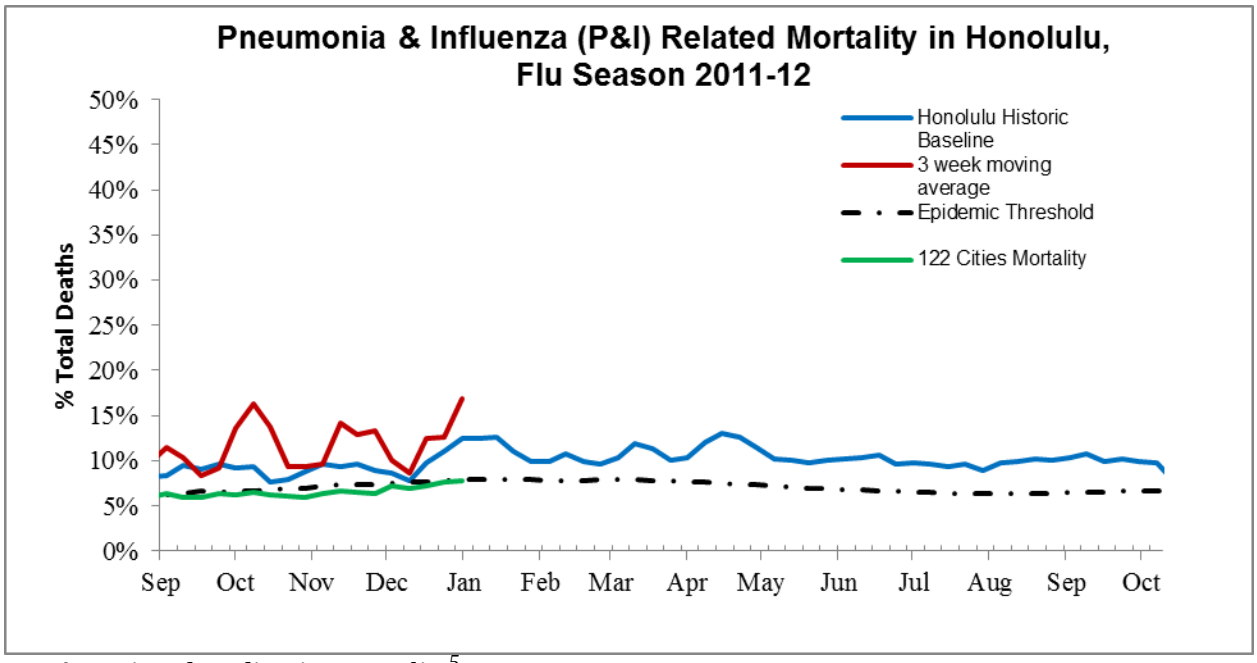
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There was one influenza-associated pediatric deaths reported to the CDC during week 3. The pediatric death occurred during week 43 (week ending October 29, 2011) and was associated with an influenza B virus.

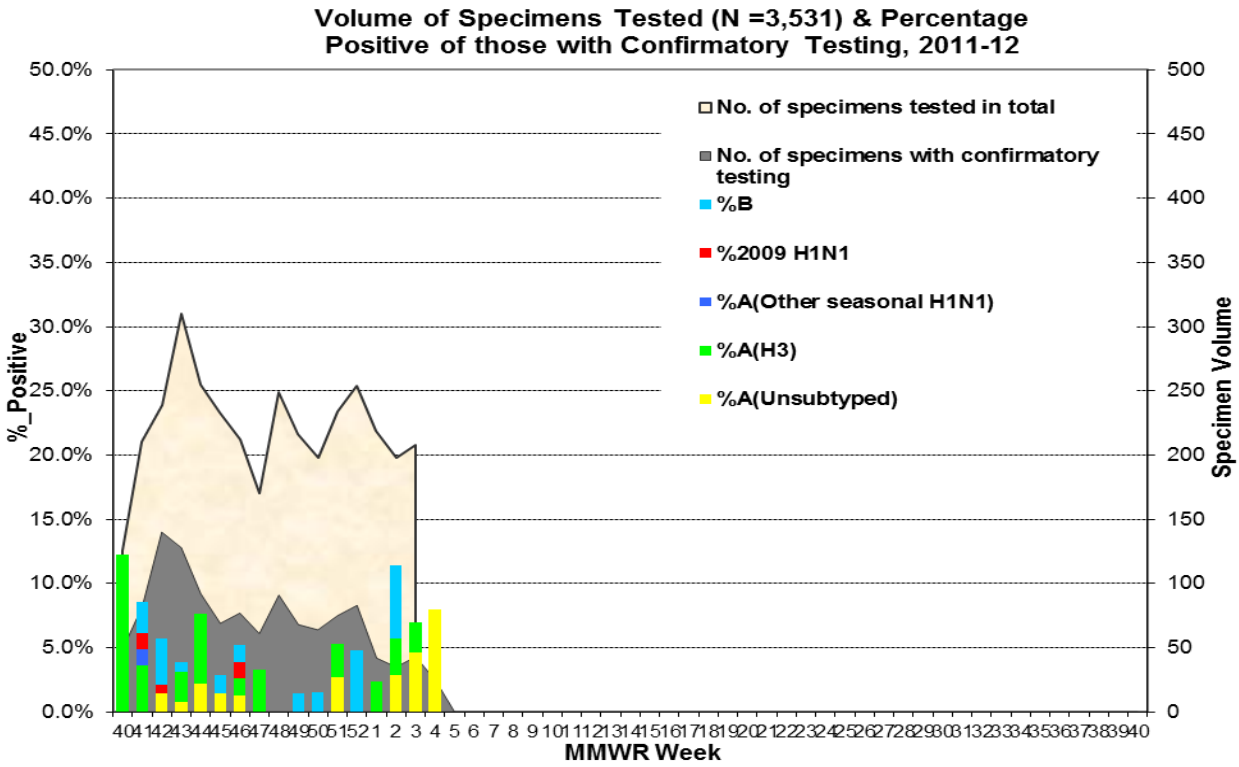
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 3,531 specimens have been tested statewide for influenza viruses. Of these, 2,332 (66.0%) were screened only by rapid antigen tests whereas the remaining 1,199 (34.0%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 82 (2.3%) cases of influenza A and 28 (0.8%) cases of influenza B were detected using any method. Of the influenza A cases detected, 3 (3.7%) were 2009 seasonal H1N1, 1 (1.2%) was non-2009 influenza A (H1), 25 (30.5%) were influenza A (H3), and the remaining (n = 53, 64.6%) were influenza A of unknown subtype.[6]

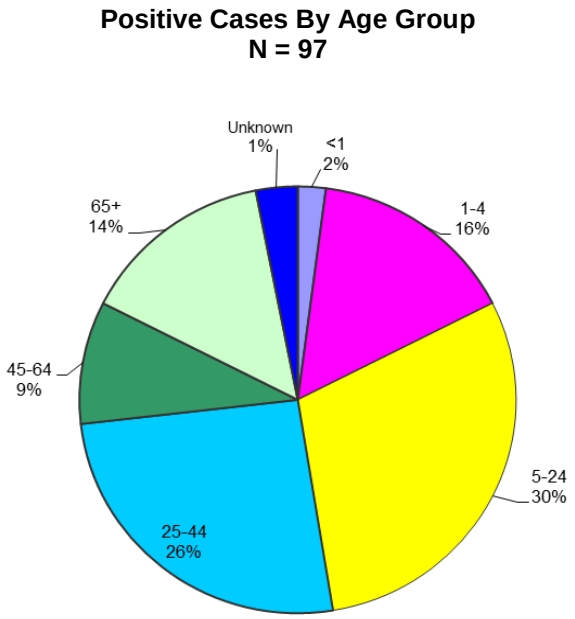
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

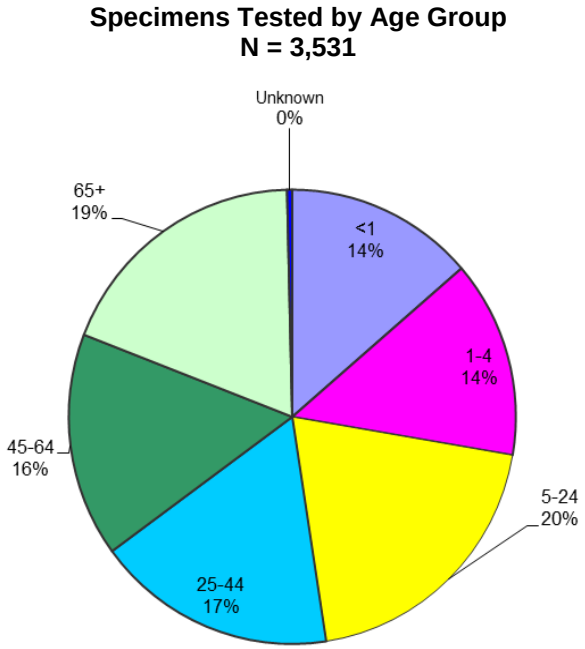
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 2.8% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X																																						
Parainfluenza Virus				X						X	X	X																																									
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																																					
Rhinovirus														X	X	X	X																																					
Varicella Zoster Virus																																																						
Influenza 2009 H1N1		X	X				X																																															
Influenza A (H3)	X	X		X	X		X	X				X		X	X																																							
Influenza A (Other seasonal H1N1)		x																																																				
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X																																									
Influenza B		X	X	X	X	X	X			X	X		X		X																																							

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

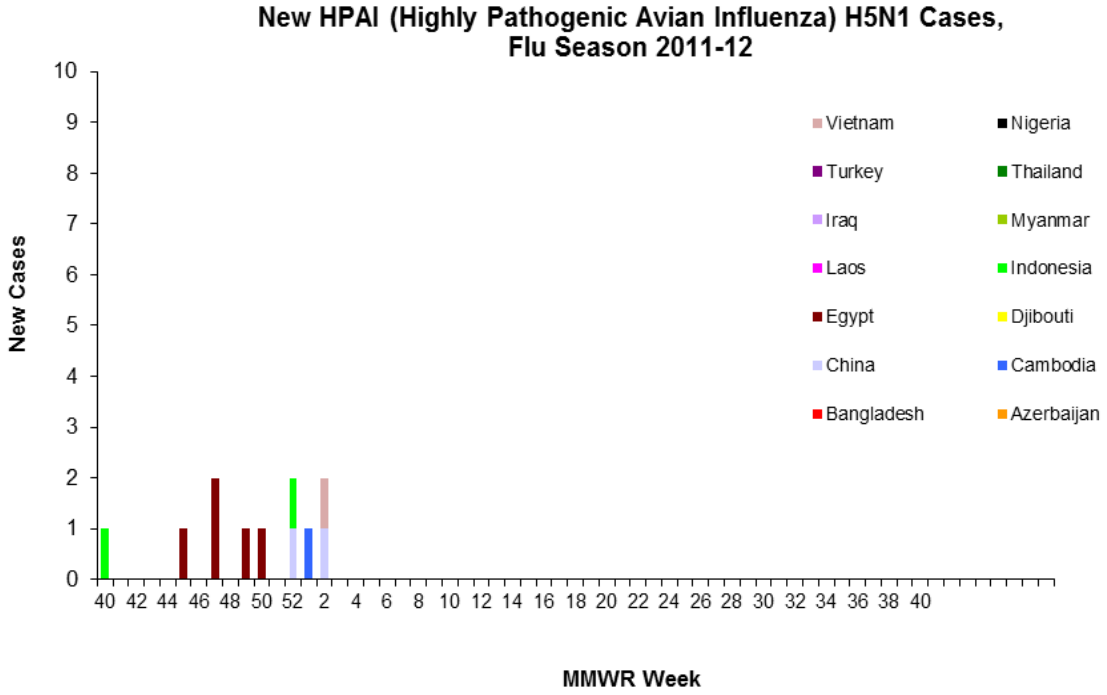
IV. Clustered ILI Activity

There were no clustered ILI activities reported during week 3.

VIII. Avian Influenza – Last Updated January 24, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	3	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	1	0	159	55
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	1	1	184	152
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	0	0	120	60
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	5	4	583	344

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
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50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
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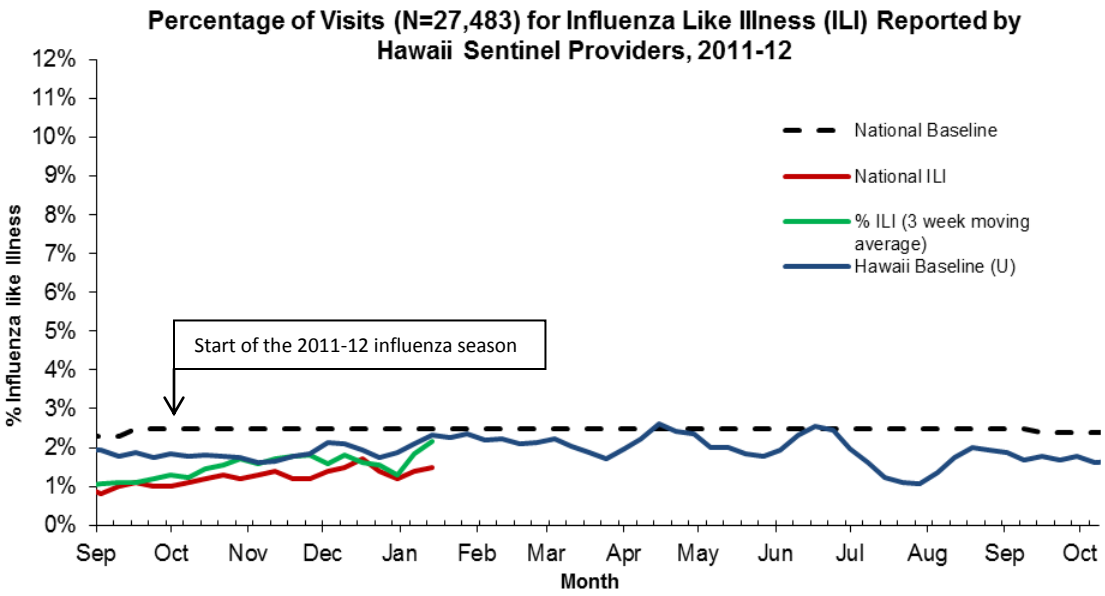
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

January 22–28, 2012: MMWR[1] Week 4, 2012

I. Surveillance of Influenza-like Illness (ILI):



During week 4 of the 2011–12 influenza year, 2.5% (95% CI 1.5–3.5%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 4 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to the national ILI (1.5%) and the national baseline[4] (2.4%).

II. Pneumonia and Influenza (P&I) Related Mortality:

During week 4 of the 2011–12 influenza season, 2.4% (95% CI 0–5.8%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 4 was also lower than both the epidemic threshold (7.8%) and national P&I mortality (7.5%).

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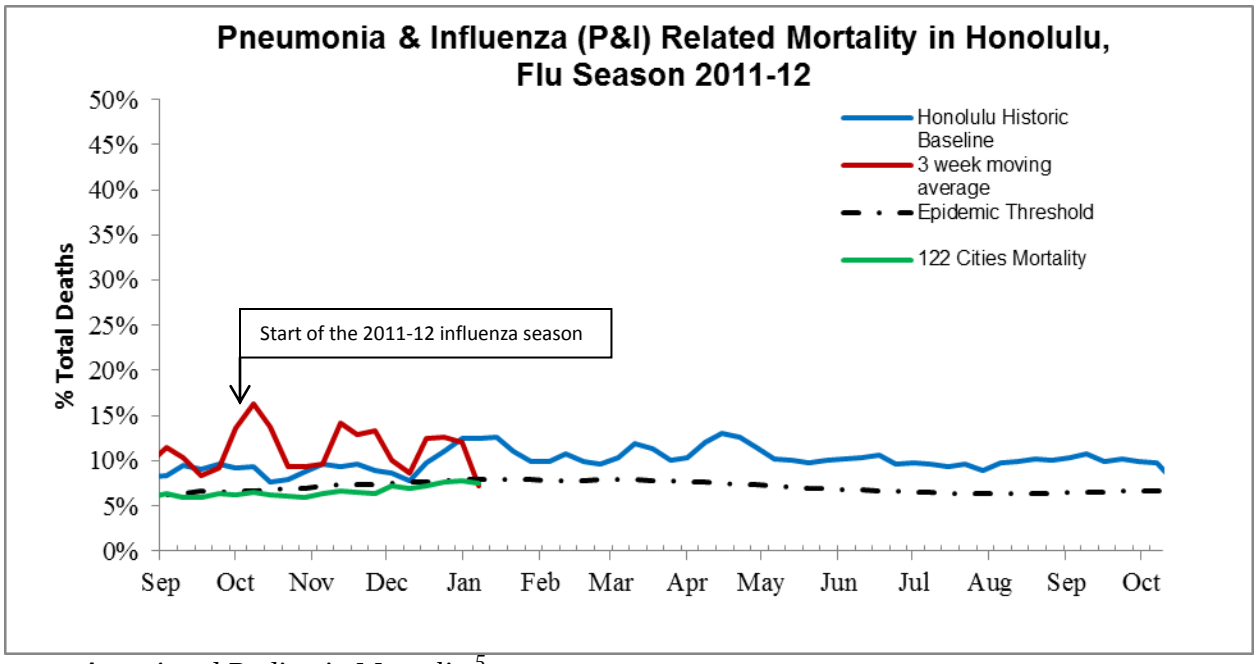
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were no influenza-associated pediatric deaths reported to the CDC during week 4.

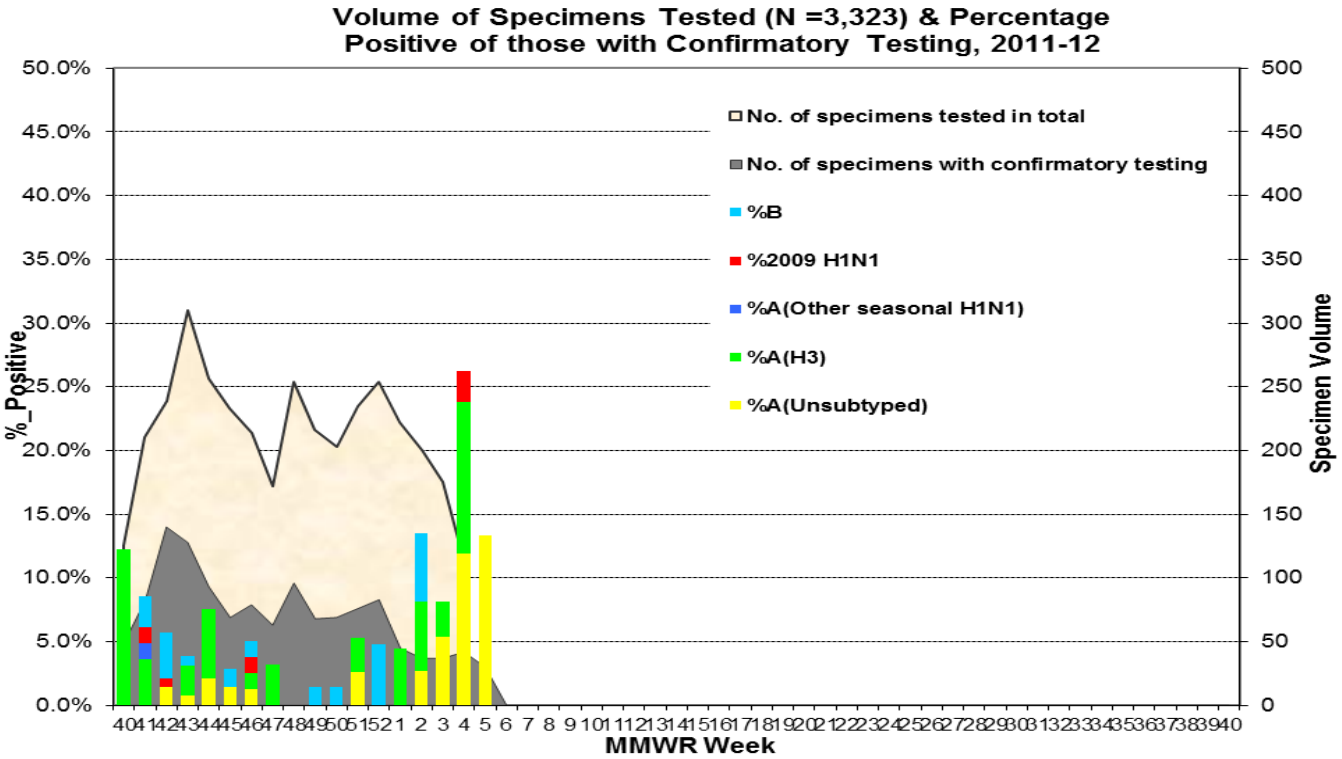
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 3,633 specimens have been tested statewide for influenza viruses. Of these, 2,377 (65.4%) were screened only by rapid antigen tests whereas the remaining 1,256 (34.6%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 102 (2.8%) cases of influenza A and 31 (0.9%) cases of influenza B were detected using any method. Of the influenza A cases detected, 4 (3.7%) were 2009 H1N1, 1 (1.0%) was other seasonal influenza A (H1), 32 (63.7%) were influenza A (H3), and the remaining (n = 65, 63.7%) were influenza A of unknown subtype.[6]

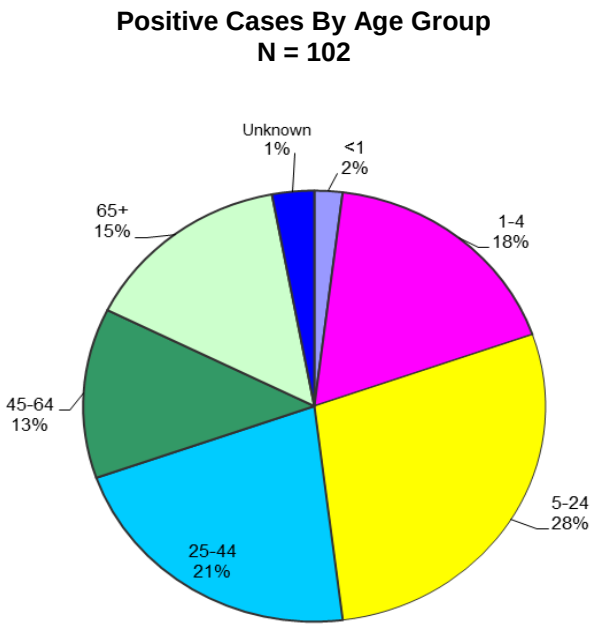
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

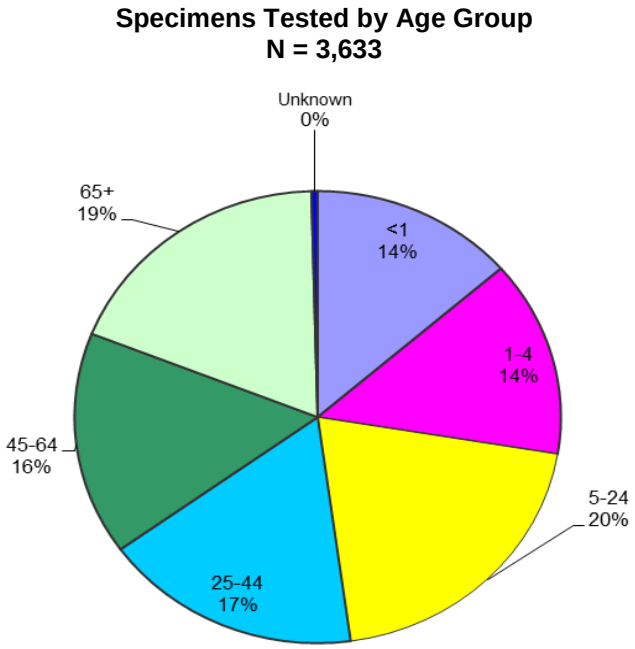
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 2.8% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X																																			
Parainfluenza Virus				X						X	X	X						X																																			
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																																				
Rhinovirus														X	X	X		X																																				
Varicella Zoster Virus																																																						
Influenza 2009 H1N1		X	X				X										X																																				
Influenza A (H3)	X	X		X	X		X	X				X		X	X																																						
Influenza A (Other seasonal H1N1)		x															X																																				
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X																																			
Influenza B		X	X	X	X	X	X			X	X		X		X																																						

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

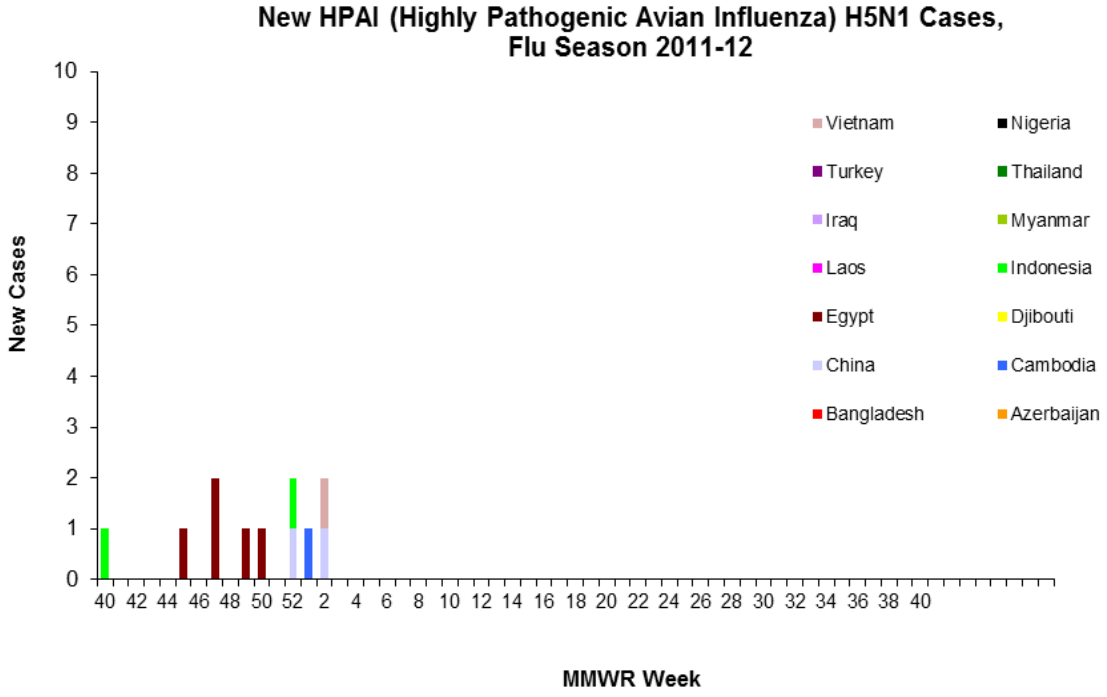
IV. Clustered ILI Activity

There were no clustered ILI activities reported during week 4.

VIII. Avian Influenza – Last Updated January 24, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	3	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	1	0	159	55
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	1	1	184	152
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	0	0	120	60
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	5	4	583	344

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

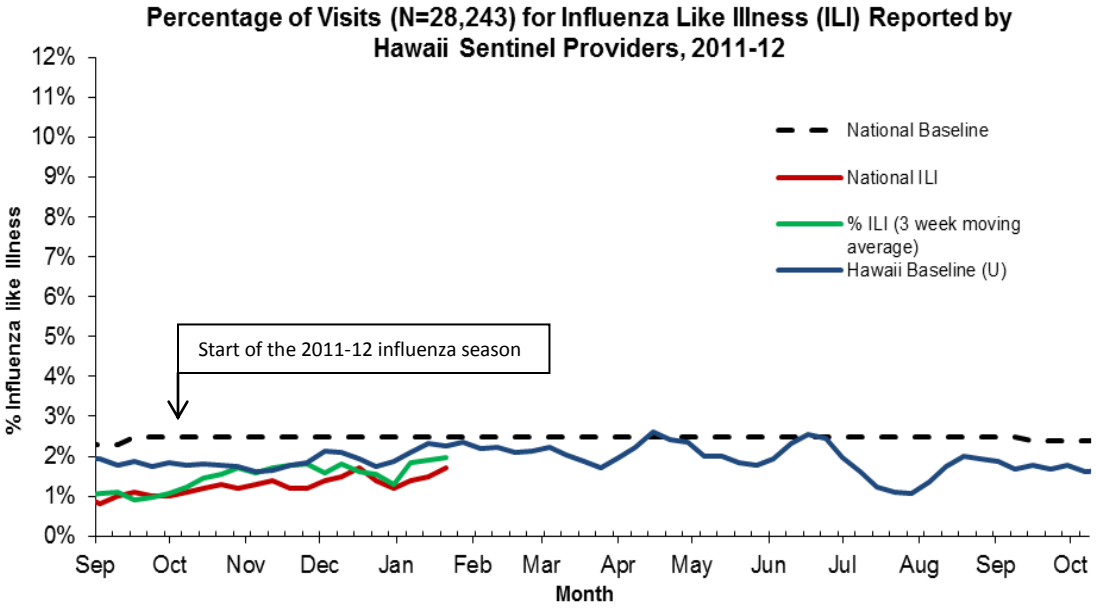
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

January 29–February 4, 2012: MMWR[1] Week 5, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 5 of the 2011–12 influenza year, 1.4% (95% CI 0.6–2.3%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 5 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to the national ILI (1.7%) and lower than the national baseline[4] (2.4%).



II. Pneumonia and Influenza (P&I) Related Mortality:

During week 5 of the 2011–12 influenza season, 12.8% (95% CI 5.4–20.2%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 5 was comparable to both the epidemic threshold (7.8%) and national P&I mortality (7.3%).

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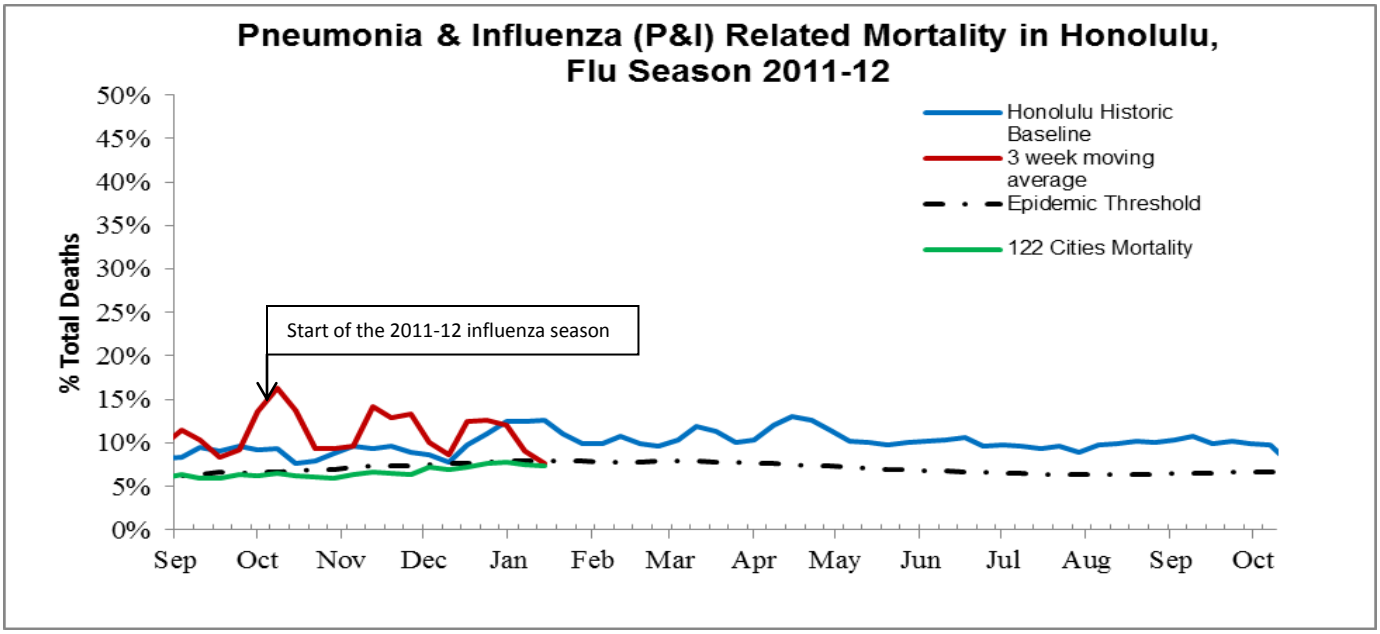
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There was one influenza-associated pediatric deaths reported to the CDC during week 5. The death was associated with an influenza A virus in which no subtype was determined. The death occurred during week 3 (week ending January 21, 2012) of the current influenza season. Currently, there have been a total of two influenza-associated pediatric death during the 2011–12 season.

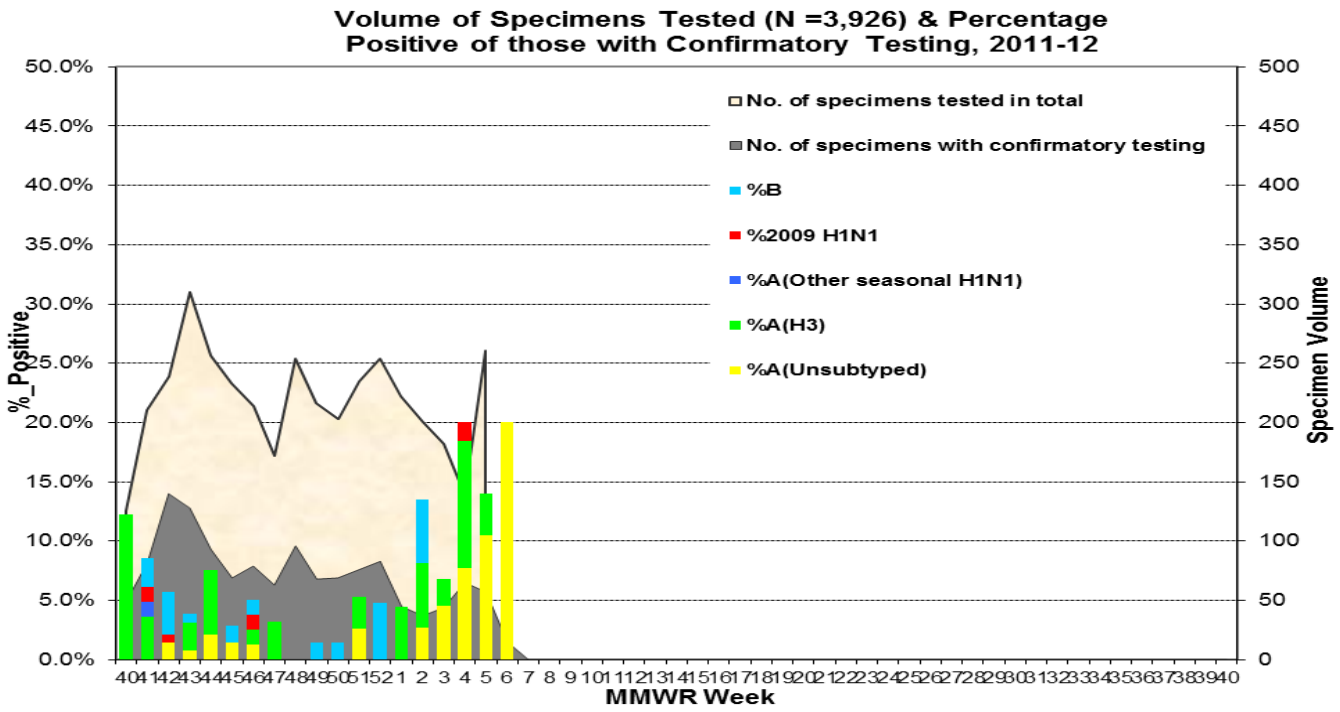
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 3,926 specimens have been tested statewide for influenza viruses. Of these, 2,583 (65.8%) were screened only by rapid antigen tests whereas the remaining 1,343 (34.2%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 120 (3.1%) cases of influenza A and 33 (0.8%) cases of influenza B were detected using any method. Of the influenza A cases detected, 4 (3.3%) were 2009 H1N1, 1 (0.8%) was other seasonal influenza A (H1), 36 (30.0%) were influenza A (H3), and the remaining (n = 79, 65.8%) were influenza A of unknown subtype.[6]

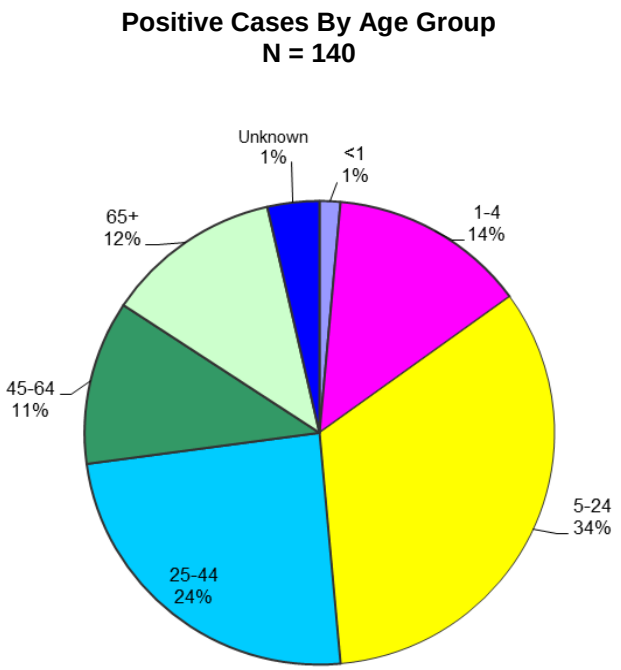
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

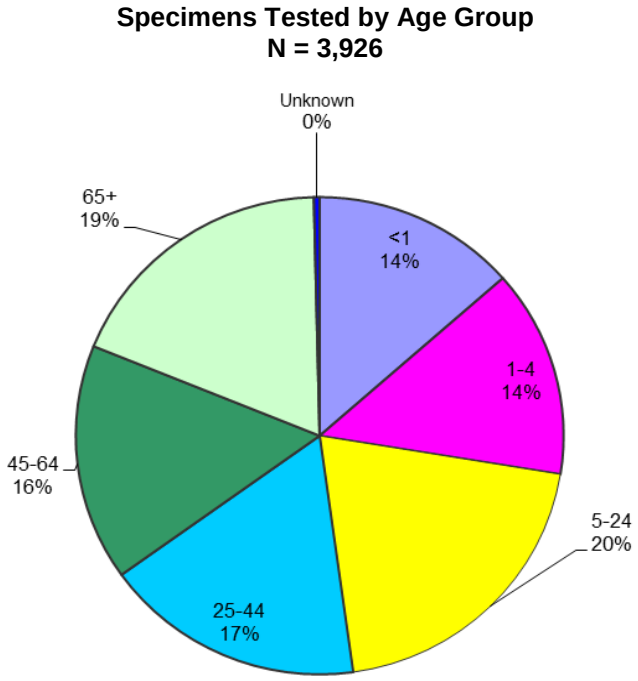
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 3.6% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
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Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X																																			
Parainfluenza Virus				X						X	X	X						X																																			
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																																				
Rhinovirus														X	X	X		X																																				
Varicella Zoster Virus																																																						
Influenza 2009 H1N1		X	X				X										X																																				
Influenza A (H3)	X	X		X	X		X	X				X		X	X																																						
Influenza A (Other seasonal H1N1)		x															X																																				
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X																																			
Influenza B		X	X	X	X	X	X			X	X		X		X																																						

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

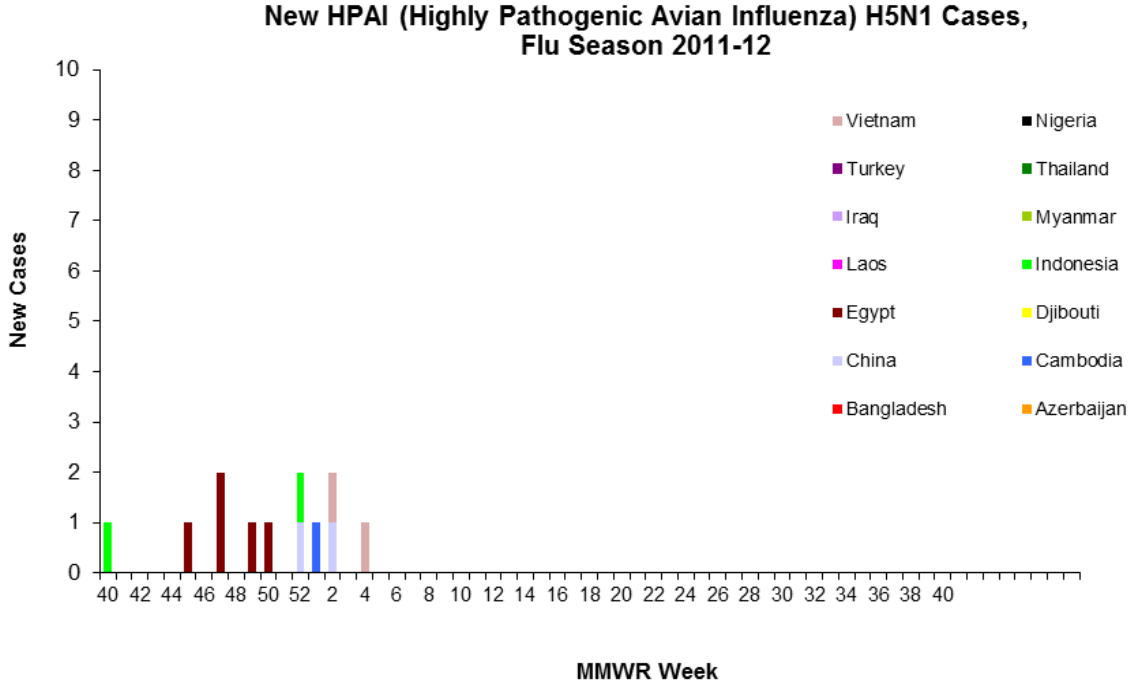
IV. Clustered ILI Activity

There were no clustered ILI activities reported during week 5.

VIII. Avian Influenza – Last Updated February 8, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	3	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	1	0	159	55
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	1	1	184	152
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	2	2	121	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	6	5	**584**	**345**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
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10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
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13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
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18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
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44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
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50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

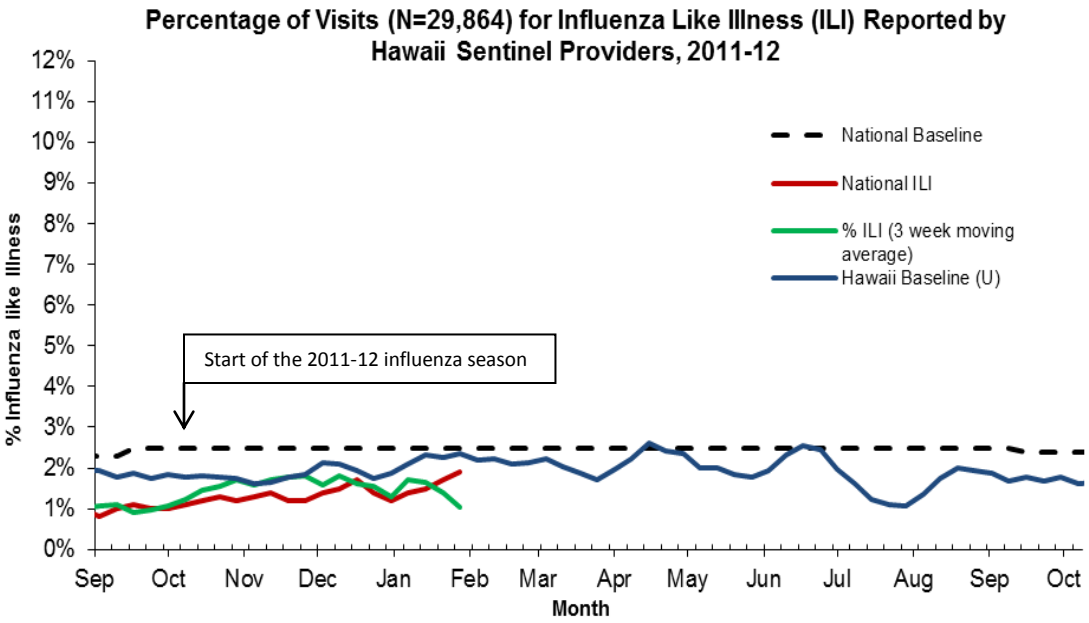
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

February 5–11, 2012: MMWR[1] Week 6, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 6 of the 2011–12 influenza year, 1.0% (95% CI 0.4–1.6%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 6 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] as well as the national ILI (1.9%) and the national baseline[4] (2.4%).



II. Pneumonia and Influenza (P&I) Related Mortality:

During week 6 of the 2011–12 influenza season, 13.6% (95% CI 6.5–20.8%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 6 was comparable to both the epidemic threshold (7.9%) and national P&I mortality (6.7%).

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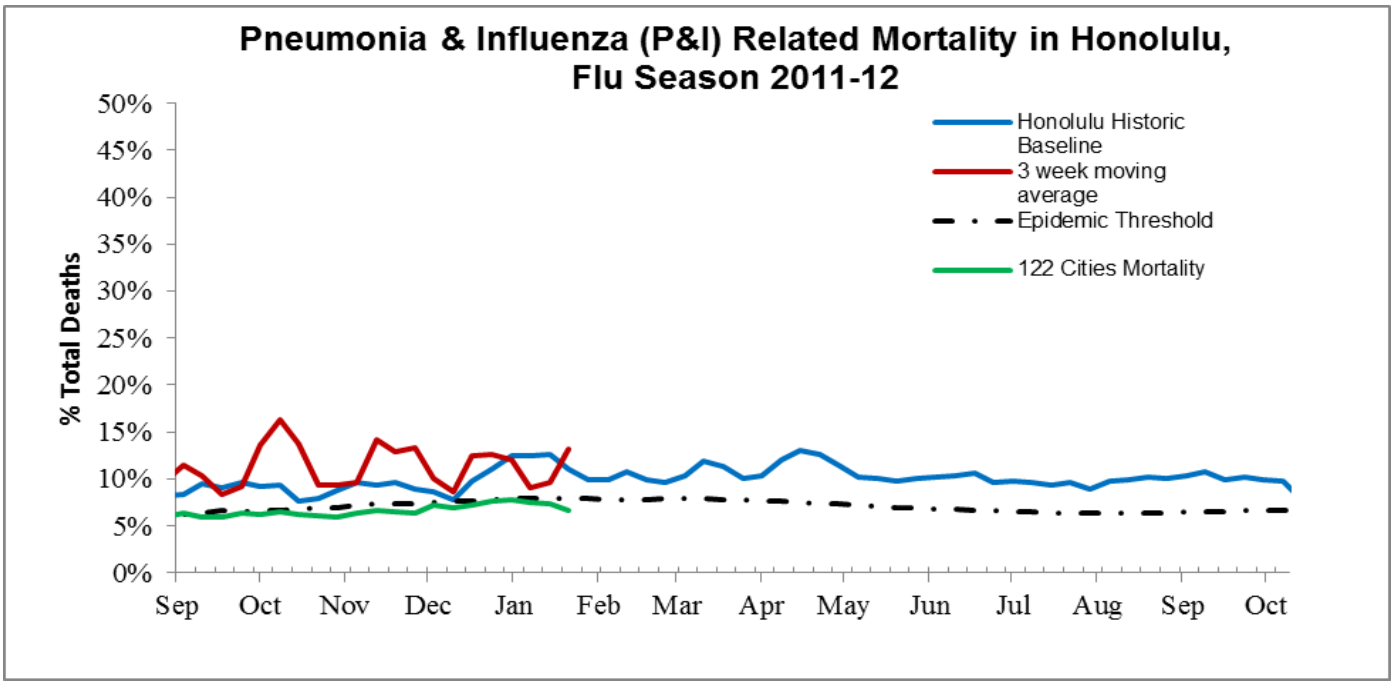
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There was one influenza-associated pediatric deaths reported to the CDC during week 6 which was associated with an influenza B virus. The pediatric death occurred during week three (week ending January 21, 2012). This brings the total influenza-associated pediatric deaths for the 2011–12 season to three.

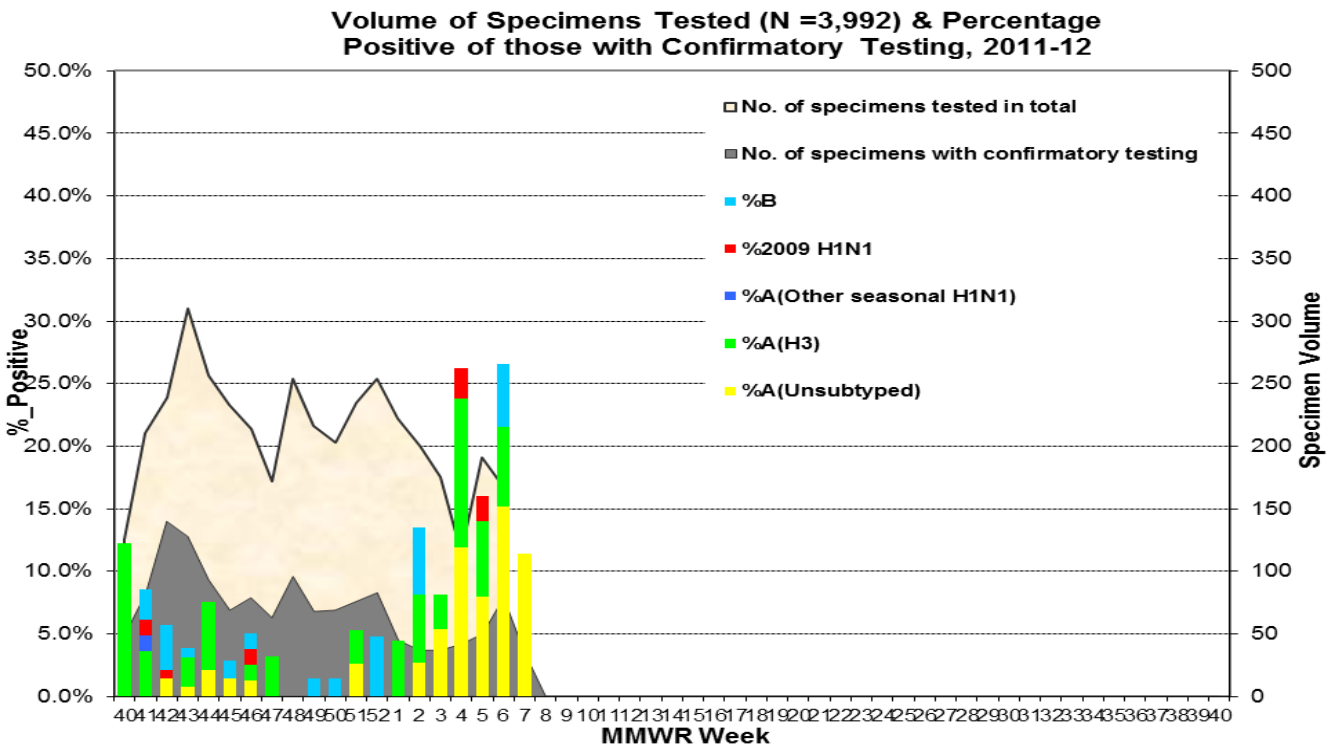
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 3,992 specimens have been tested statewide for influenza viruses. Of these, 2,607 (65.3%) were screened only by rapid antigen tests whereas the remaining 1,385 (34.7%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 141 (3.5%) cases of influenza A and 40 (1.0%) cases of influenza B were detected using any method. Of the influenza A cases detected, 5 (3.5%) were 2009 H1N1, 1 (0.7%) was other seasonal influenza A (H1), 40 (28.4%) were influenza A (H3), and the remaining (n = 95, 67.4%) were influenza A of unknown subtype.[6]

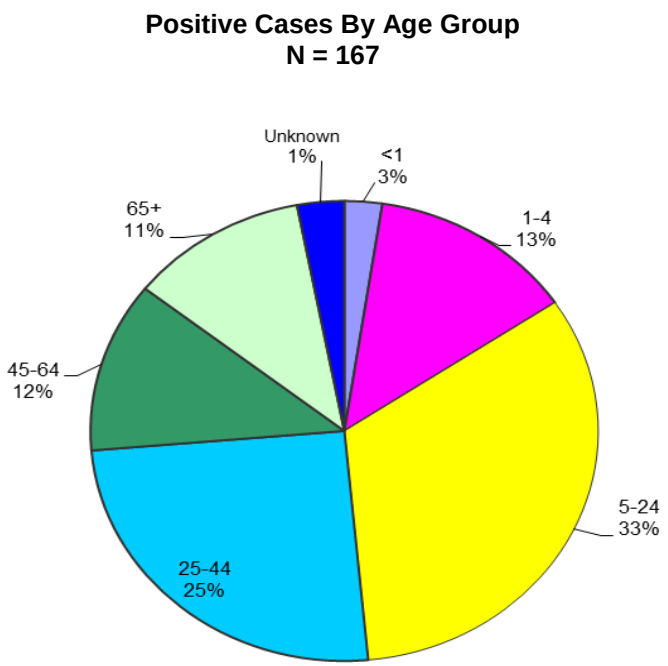
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

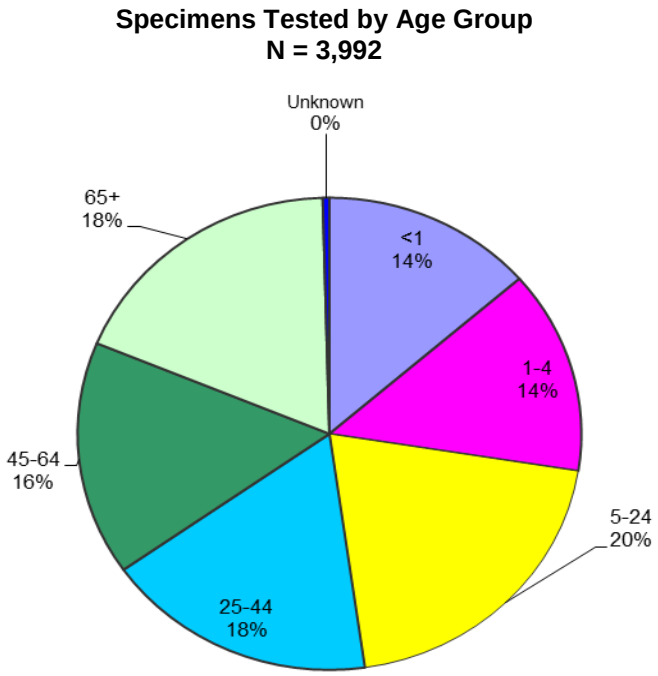
[5] These data were reported by the Hawai'i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 4.2% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X																																	
Parainfluenza Virus				X						X	X	X						X		X																																	
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																																	
Rhinovirus														X	X	X		X	X	X	X																																	
Varicella Zoster Virus																																																						
Influenza 2009 H1N1		X	X				X										X	X																																			
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X																																		
Influenza A (Other seasonal H1N1)		x															X																																				
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X																																	
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X																																	

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

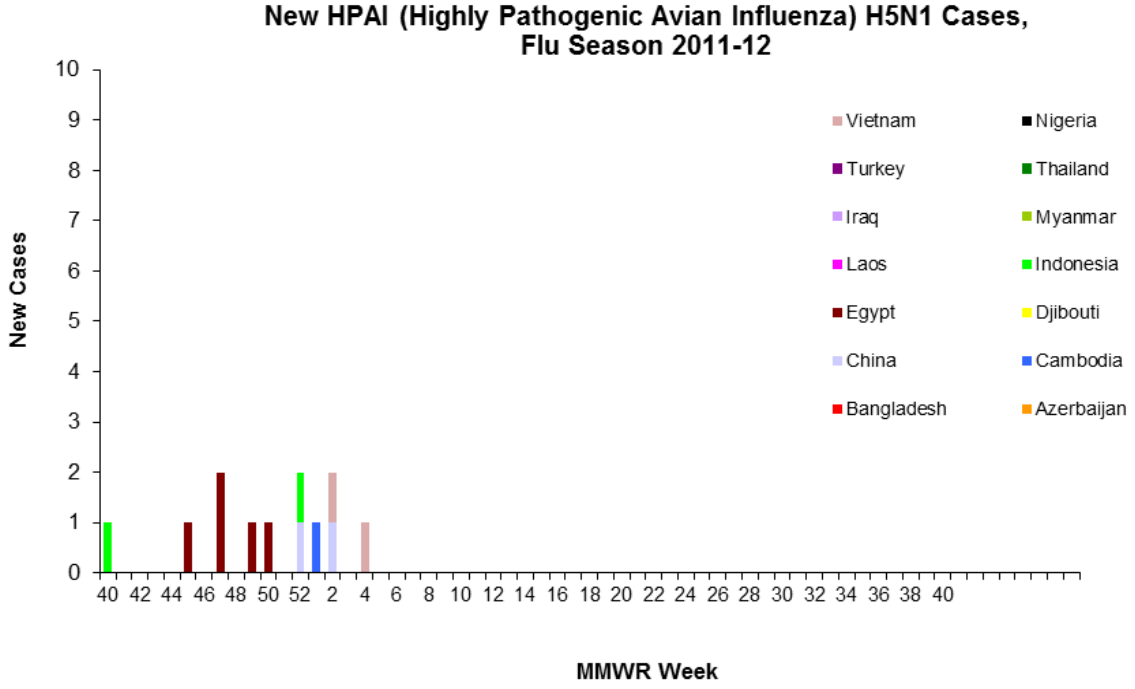
IV. Clustered ILI Activity

There were no clustered ILI activities reported during week 6.

VIII. Avian Influenza – Last Updated February 8, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	3	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	1	0	159	55
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	1	1	184	152
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	2	2	121	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	6	5	**584**	**345**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
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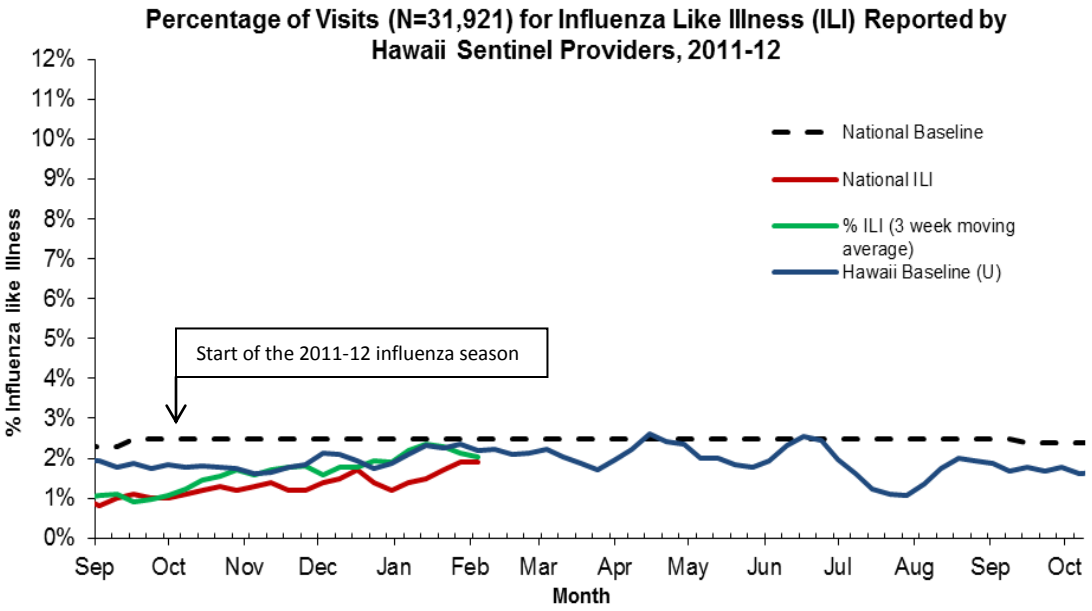
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

February 12–18, 2012: MMWR[1] Week 7, 2012

I. Surveillance of Influenza-like Illness (ILI):



During week 7 of the 2011–12 influenza year, 2.0% (95% CI 1.1–2.9%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 7 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to both the national ILI (1.9%) and the national baseline[4] (2.4%).

II. Pneumonia and Influenza (P&I) Related Mortality:

During week 7 of the 2011–12 influenza season, 18.1% (95% CI 9.2–26.9%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 7 was higher than both the epidemic threshold (7.9%) and national P&I mortality (7.3%).

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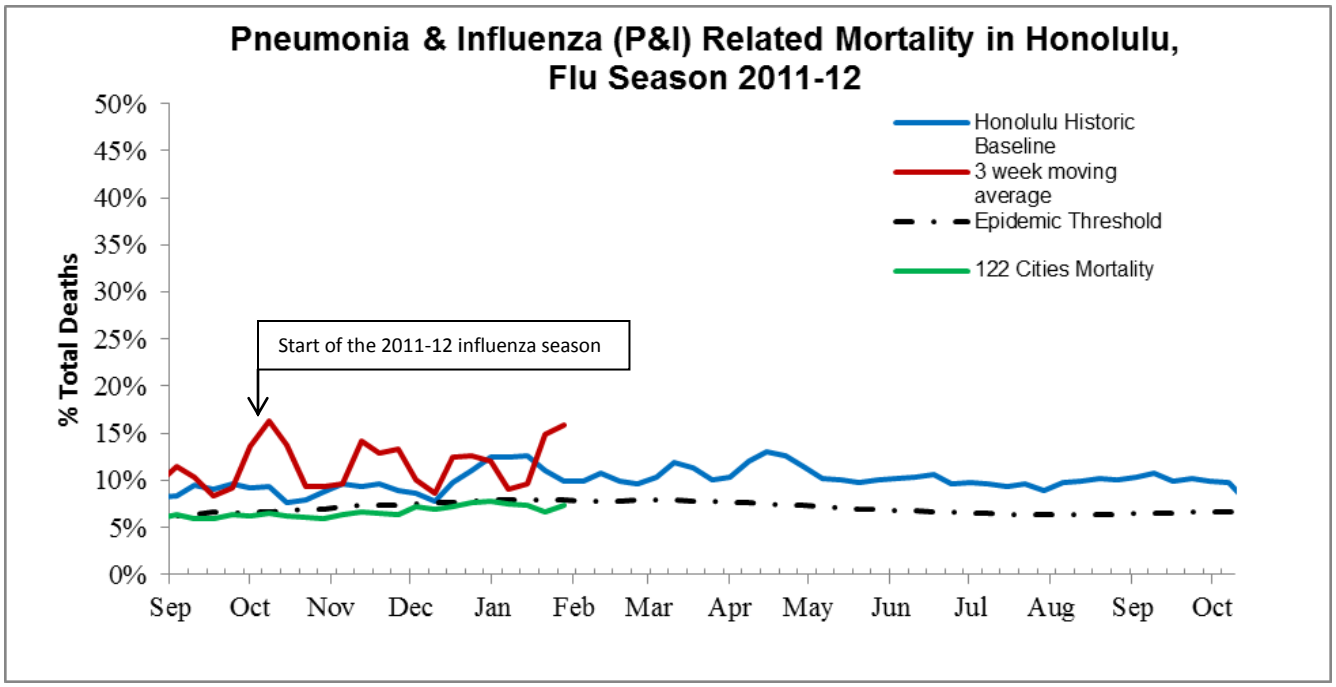
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were no influenza-associated pediatric deaths reported to the CDC during week 7.

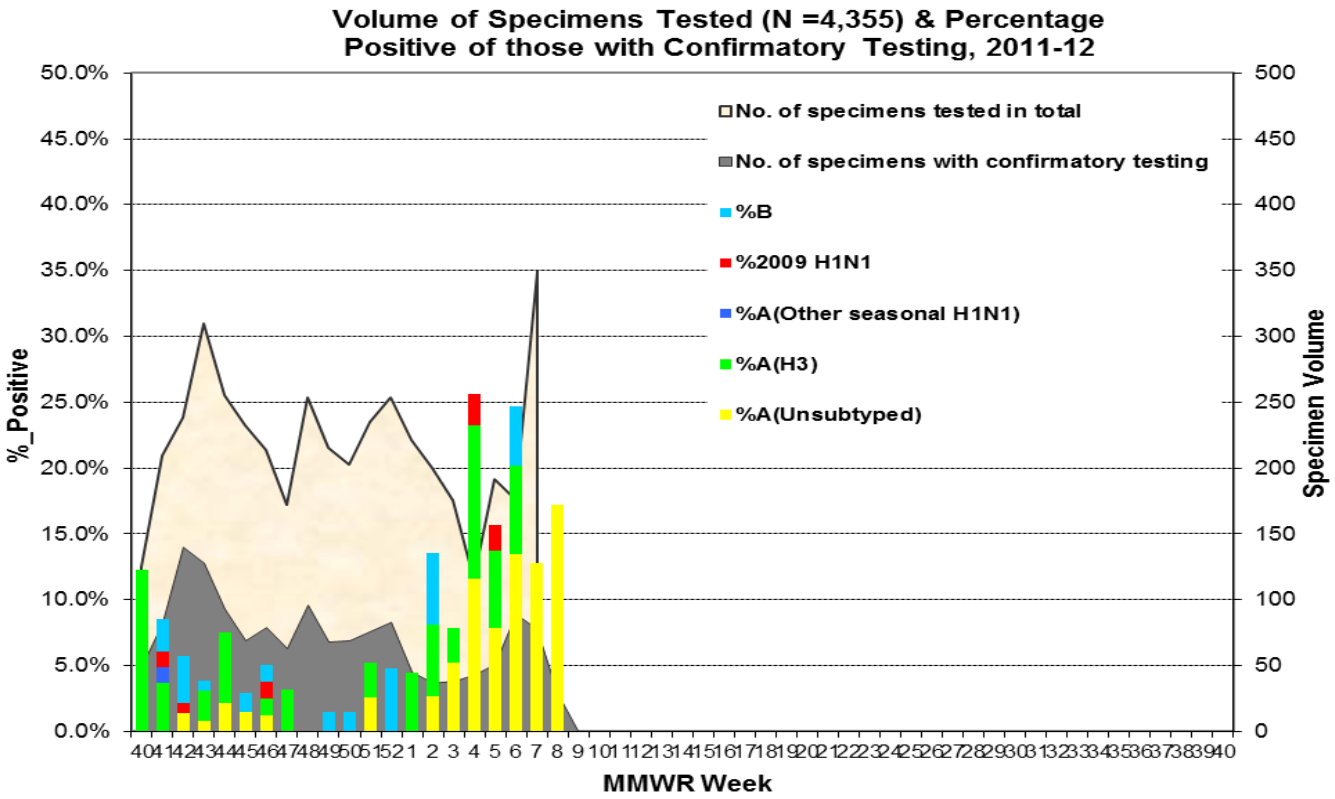
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 4,355 specimens have been tested statewide for influenza viruses. Of these, 2,879 (66.1%) were screened only by rapid antigen tests whereas the remaining 1,476 (33.9%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 192 (4.4%) cases of influenza A and 43 (1.0%) cases of influenza B were detected using any method. Of the influenza A cases detected, 5 (2.6%) were 2009 H1N1, 1 (0.5%) was other seasonal influenza A (H1), 41 (21.4%) were influenza A (H3), and the remaining (n = 145, 75.5%) were influenza A of unknown subtype.[6]

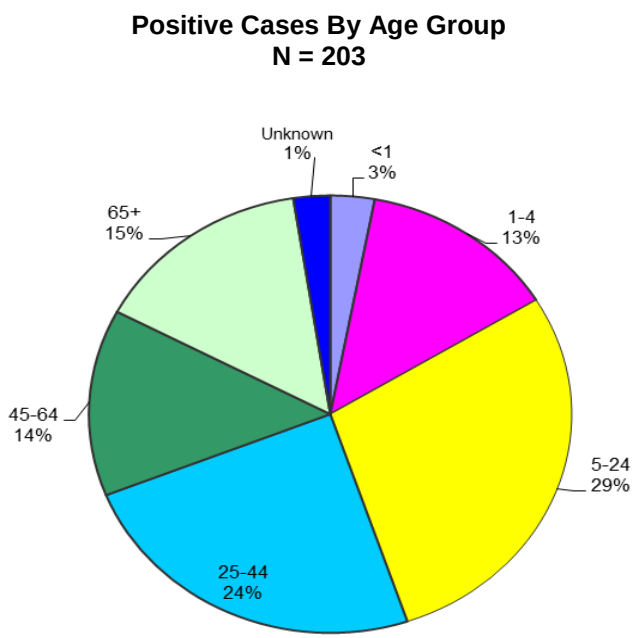
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

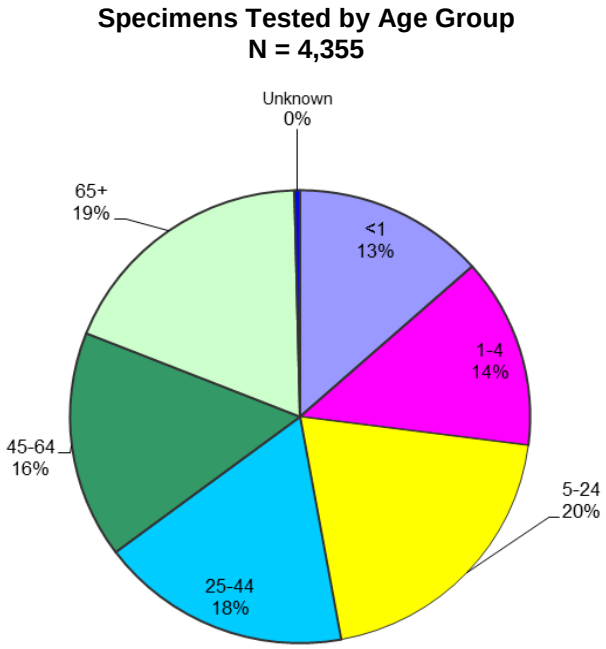
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 4.7% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X																																	
Parainfluenza Virus				X						X	X	X						X		X	X																																
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																																
Rhinovirus														X	X	X		X	X	X	X																																
Varicella Zoster Virus																																																					
Influenza 2009 H1N1		X	X				X										X	X																																		
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X																																		
Influenza A (Other seasonal H1N1)		x															X																																				
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X																																
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X																																	

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

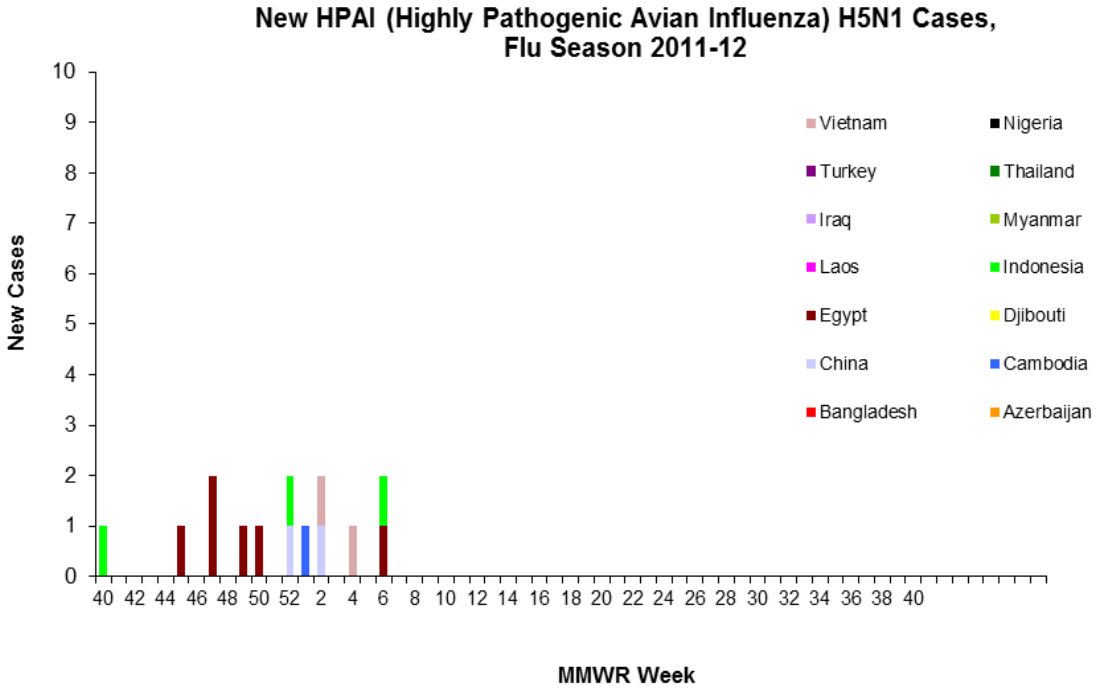
IV. Clustered ILI Activity

There were no clustered ILI activities reported during week 7.

VIII. Avian Influenza – Last Updated February 22, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	3	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	1	0	160	55
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	1	1	185	153
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	2	2	121	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	6	5	**586**	**346**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

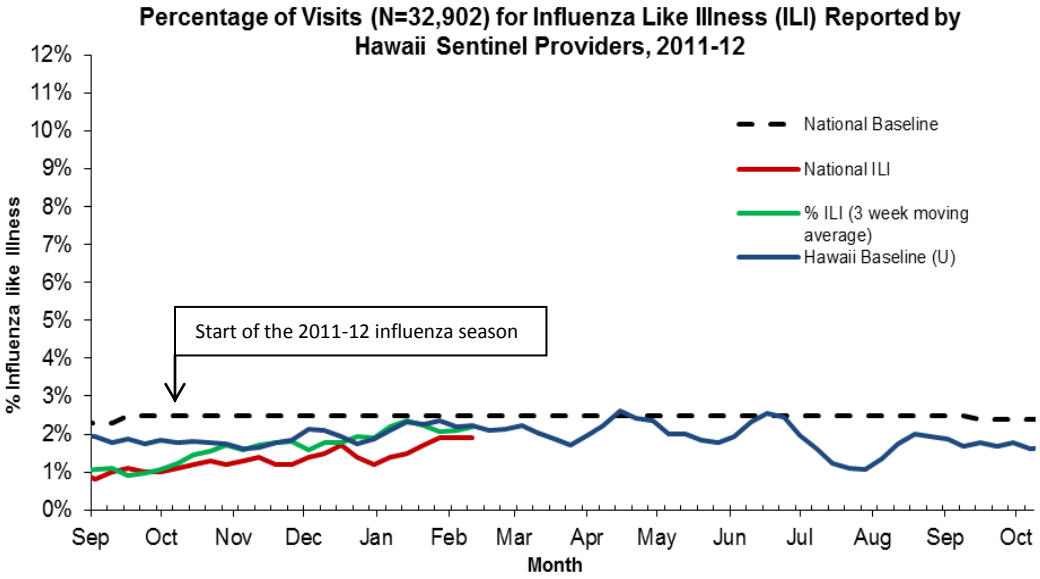
MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

February 19–25, 2012: MMWR[1] Week 8, 2012

I. Surveillance of Influenza-like Illness (ILI):



During week 8 of the 2011–12 influenza year, 2.4% (95% CI 1.3–3.5%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 8 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to both the national ILI (1.9%) and the national baseline[4] (2.4%).

II. Pneumonia and Influenza (P&I) Related Mortality:

During week 8 of the 2011–12 influenza season, 12.8% (95% CI 5.7–19.9%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 8 was higher than both the epidemic threshold (7.9%) and national P&I mortality (7.3%).

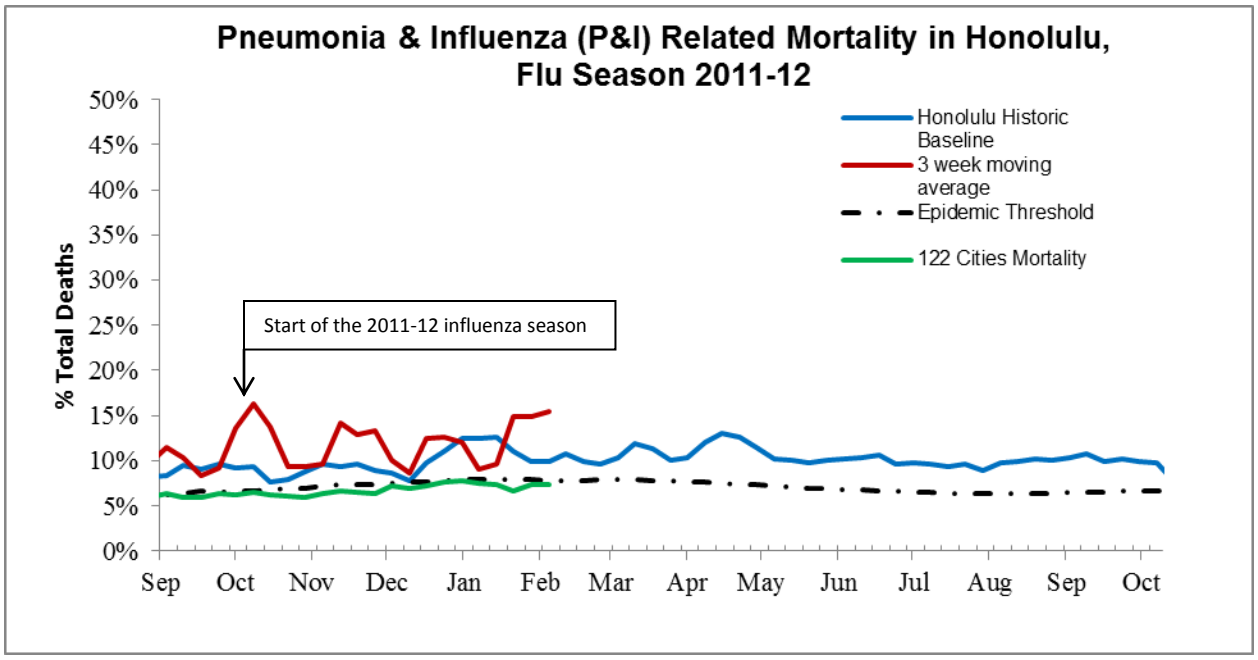
---

[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 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There was one influenza-associated pediatric deaths reported to the CDC during week 8. The death was associated with an influenza virus for which no type was determined. The death occurred during week 5 (week ending February 4, 2012) which brings the total number of influenza-associated pediatric death to four for the current influenza season.

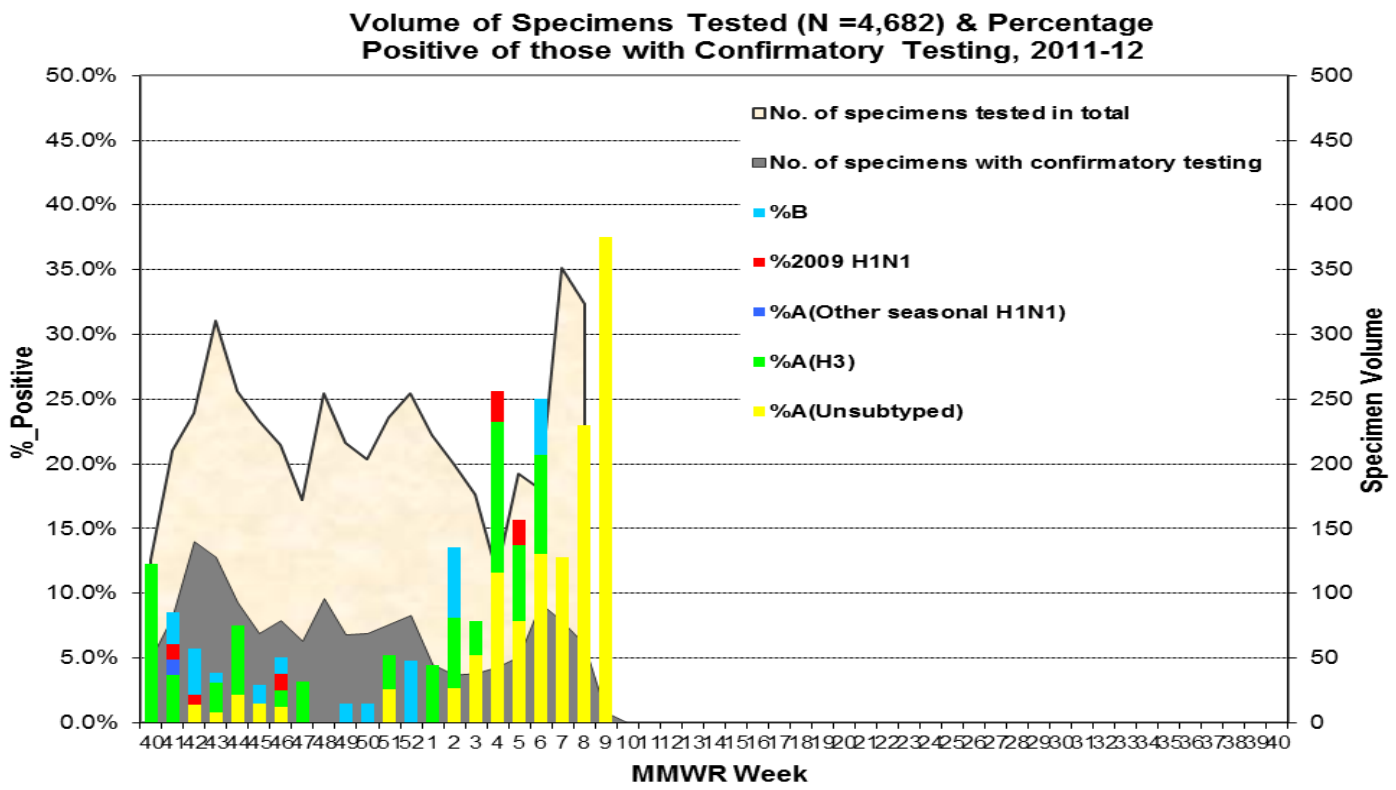
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 4,682 specimens have been tested statewide for influenza viruses. Of these, 3,142 (67.1%) were screened only by rapid antigen tests whereas the remaining 1,540 (32.9%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 253 (5.4%) cases of influenza A and 44 (.9%) cases of influenza B were detected using any method. Of the influenza A cases detected, 5 (2.0%) were 2009 H1N1, 1 (0.4%) was other seasonal influenza A (H1), 42 (16.6%) were influenza A (H3), and the remaining (n = 205, 81.0%) were influenza A of unknown subtype.[6]

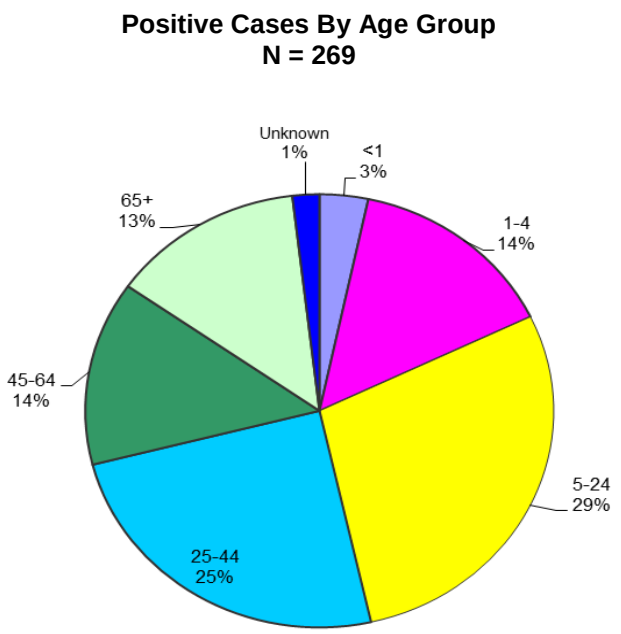
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

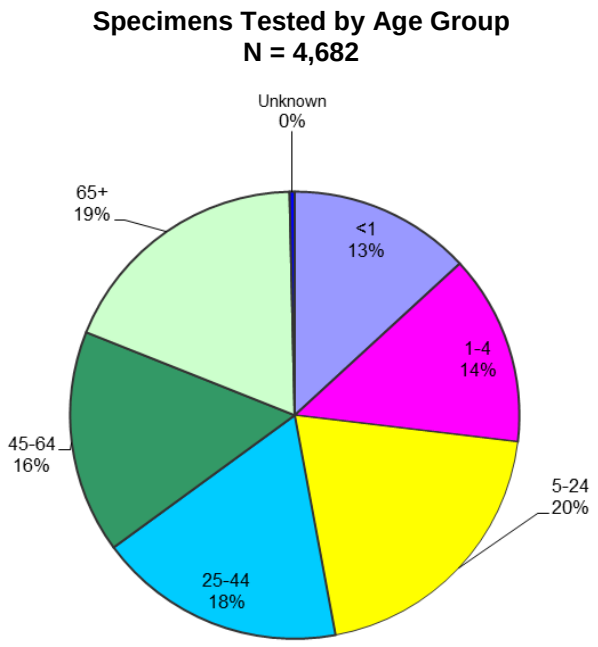
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 5.8% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
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Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X																																	
Parainfluenza Virus				X						X	X	X						X		X	X																																
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																																
Rhinovirus														X	X	X		X	X	X	X																																
Varicella Zoster Virus																																																					
Influenza 2009 H1N1		X	X				X										X	X																																		
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X																																		
Influenza A (Other seasonal H1N1)		x															X																																				
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X																																
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X																																	

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

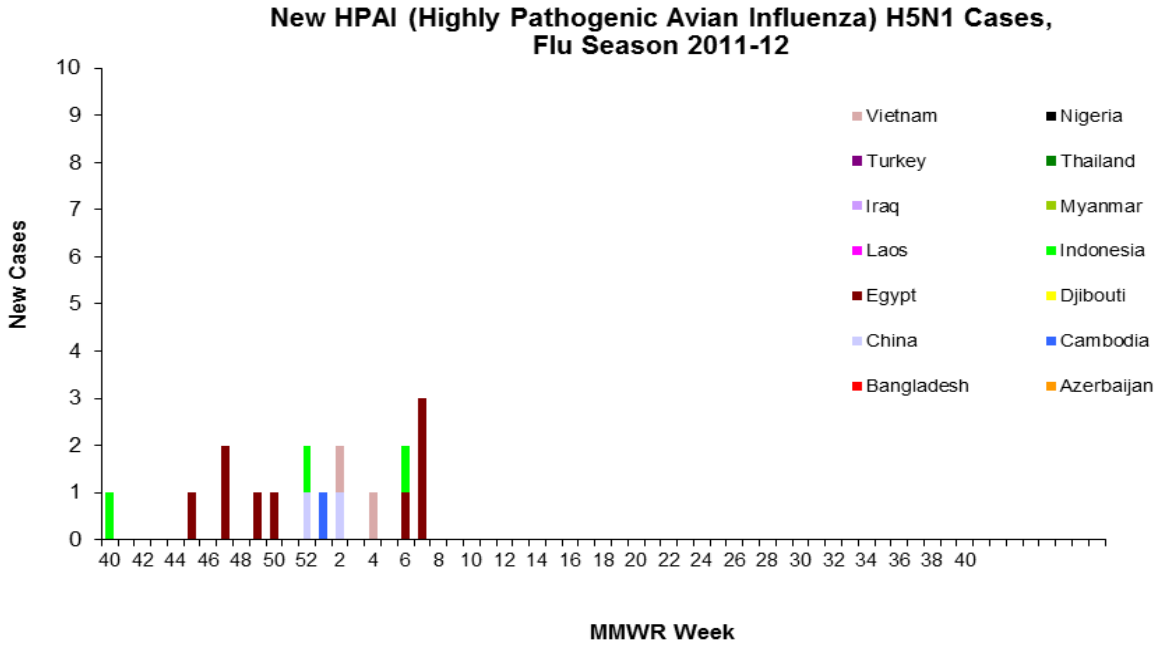
IV. Clustered ILI Activity

There were no clustered ILI activities reported during week 8.

VIII. Avian Influenza – Last Updated February 28, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	3	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	5	2	163	57
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	2	2	185	153
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	2	2	121	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	11	8	**589**	**348**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
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9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
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13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
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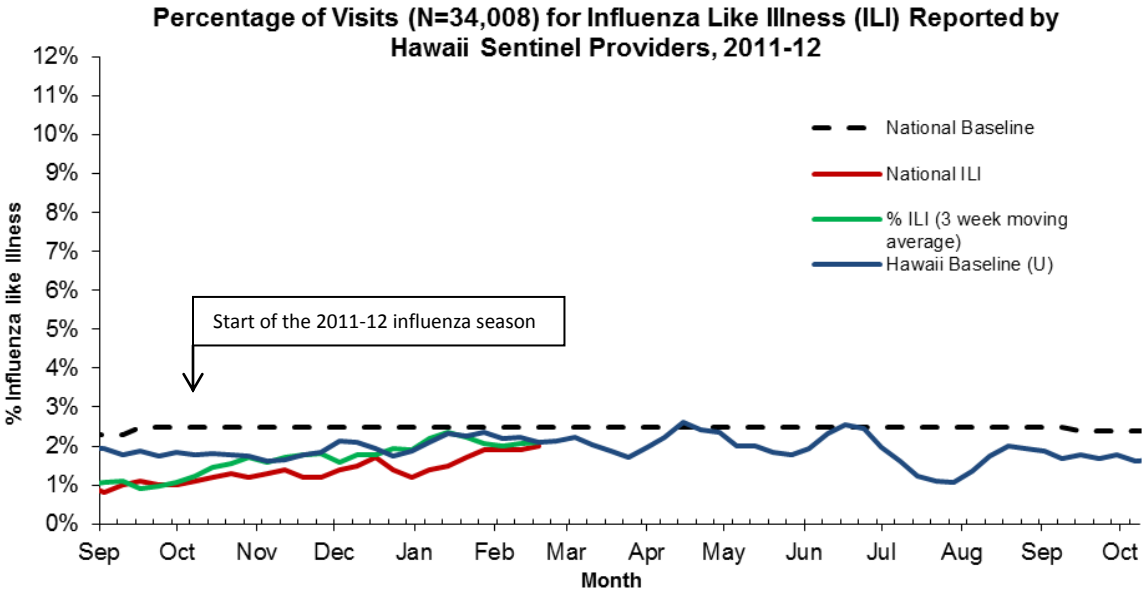
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

February 26–March 3, 2012: MMWR[1] Week 9, 2012

I. Surveillance of Influenza-like Illness (ILI):



During week 9 of the 2011–12 influenza year, 2.0% (95% CI 1.2–2.9%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 9 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to both the national ILI (2.0%) and the national baseline[4] (2.4%).

II. Pneumonia and Influenza (P&I) Related Mortality:

During week 9 of the 2011–12 influenza season, 11.1% (95% CI 3.9–18.4%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 9 was comparable to both the epidemic threshold (7.9%) and national P&I mortality (7.6%).

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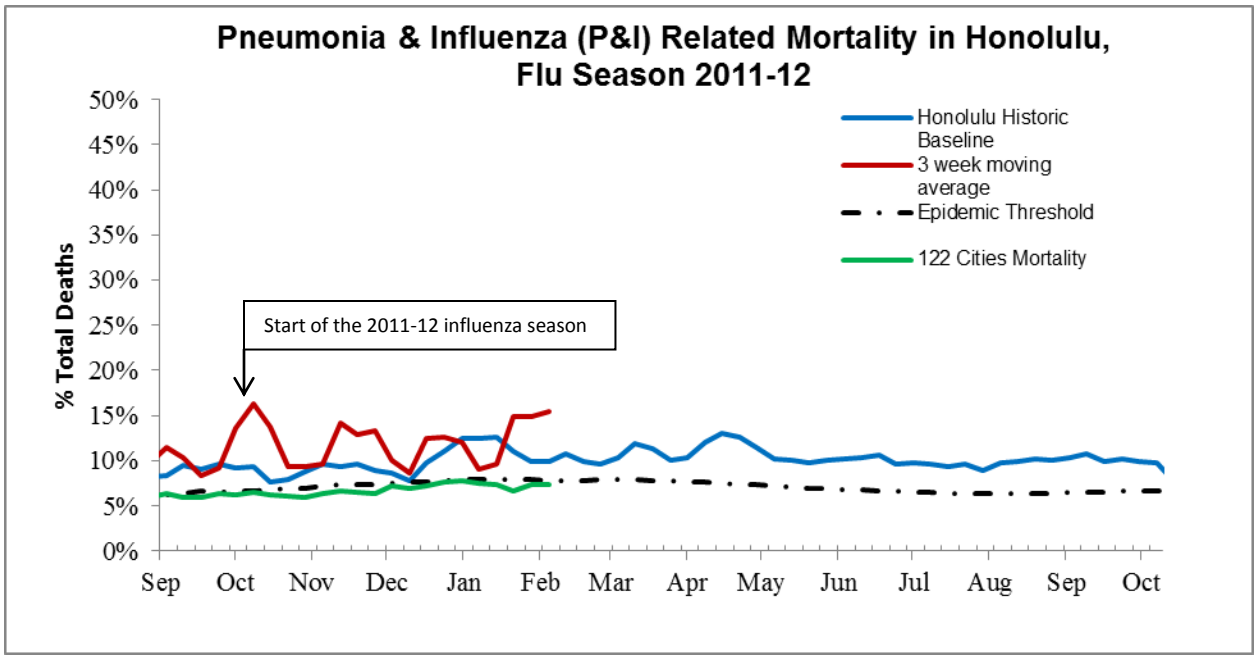
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There was one influenza-associated pediatric deaths reported to the CDC during week 9 and was associated with a seasonal influenza A (H3). The death occurred during week 6 (week ending February 11, 2012. This brings the total number of pediatric deaths associated with influenza to five for the 2011–12.

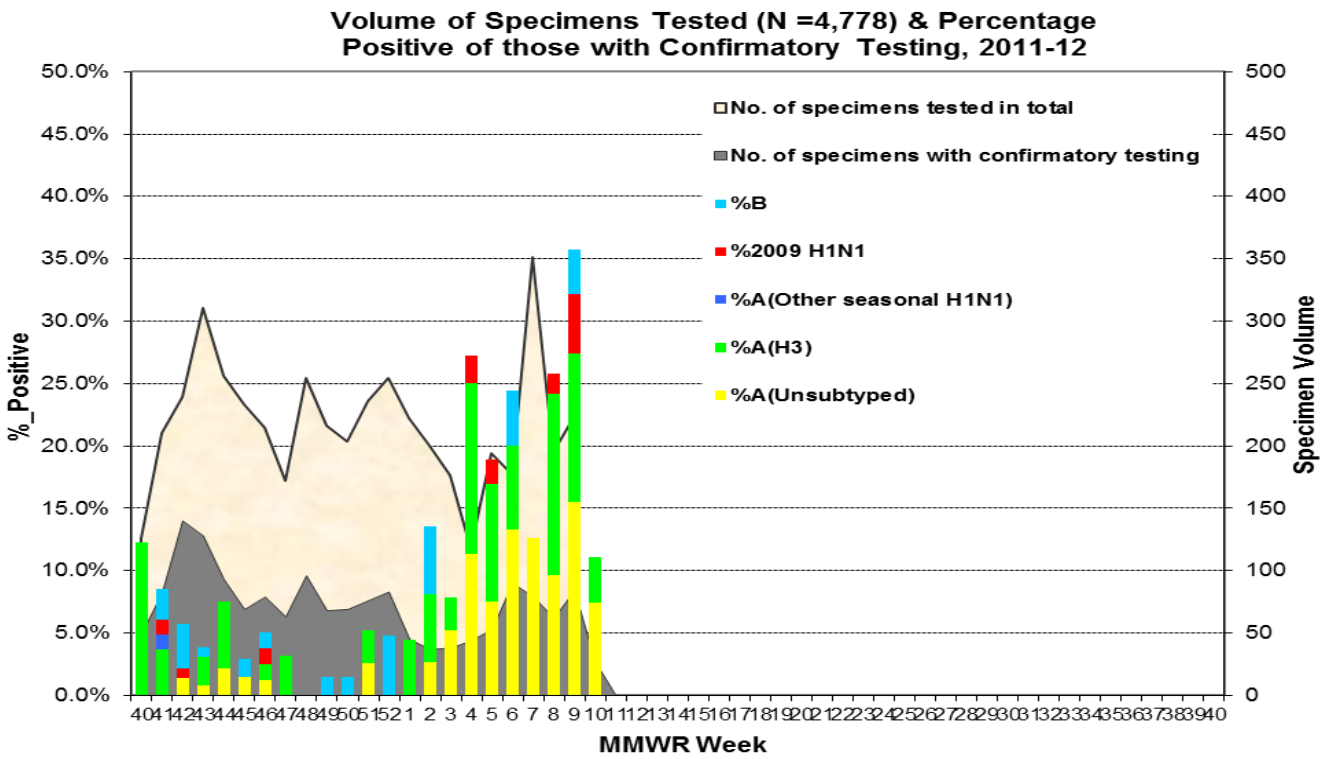
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 4,778 specimens have been tested statewide for influenza viruses. Of these, 3,152 (66.0%) were screened only by rapid antigen tests whereas the remaining 1,626 (34.0%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 280 (5.9%) cases of influenza A and 51 (1.1%) cases of influenza B were detected using any method. Of the influenza A cases detected, 10 (3.5%) were 2009 H1N1, 1 (0.4%) was other seasonal influenza A (H1), 64 (22.9%) were influenza A (H3), and the remaining (n = 205, 73.2%) were influenza A of unknown subtype.[6]

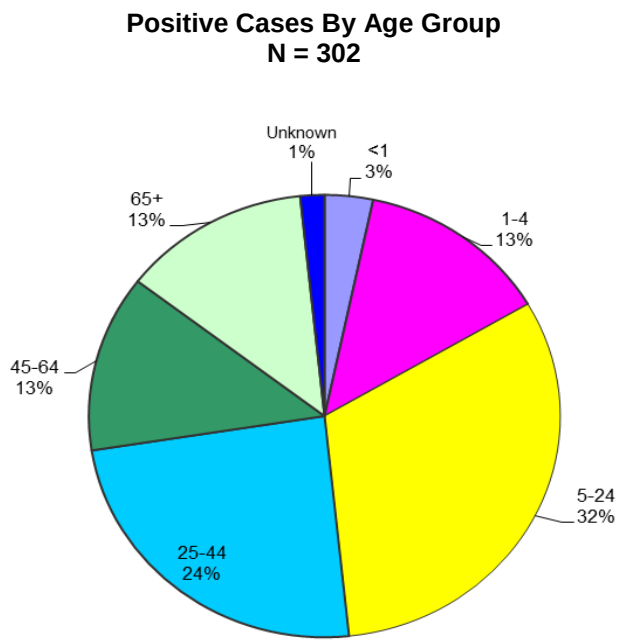
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

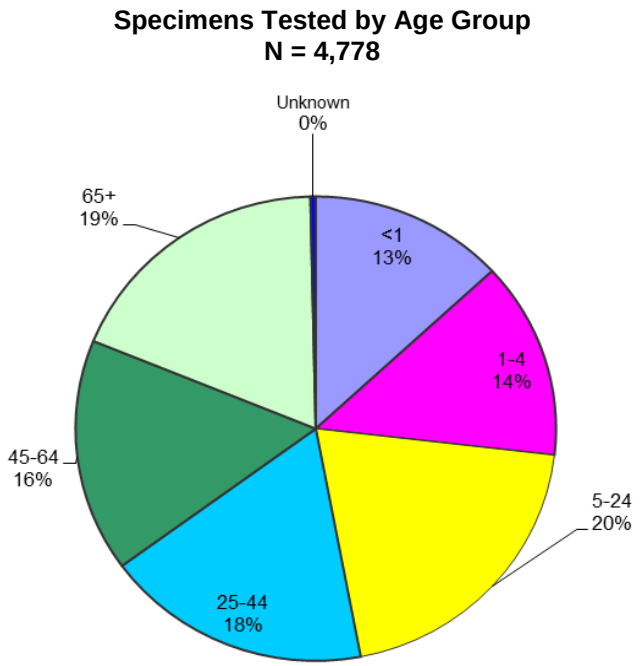
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 6.3% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X																																	
Parainfluenza Virus				X						X	X	X						X		X	X																																
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																															
Rhinovirus														X	X	X		X	X	X	X	X																															
Varicella Zoster Virus																																																					
Influenza 2009 H1N1		X	X				X										X	X				X																															
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X																																		
Influenza A (Other seasonal H1N1)		x															X					X																															
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X																															
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X																															

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

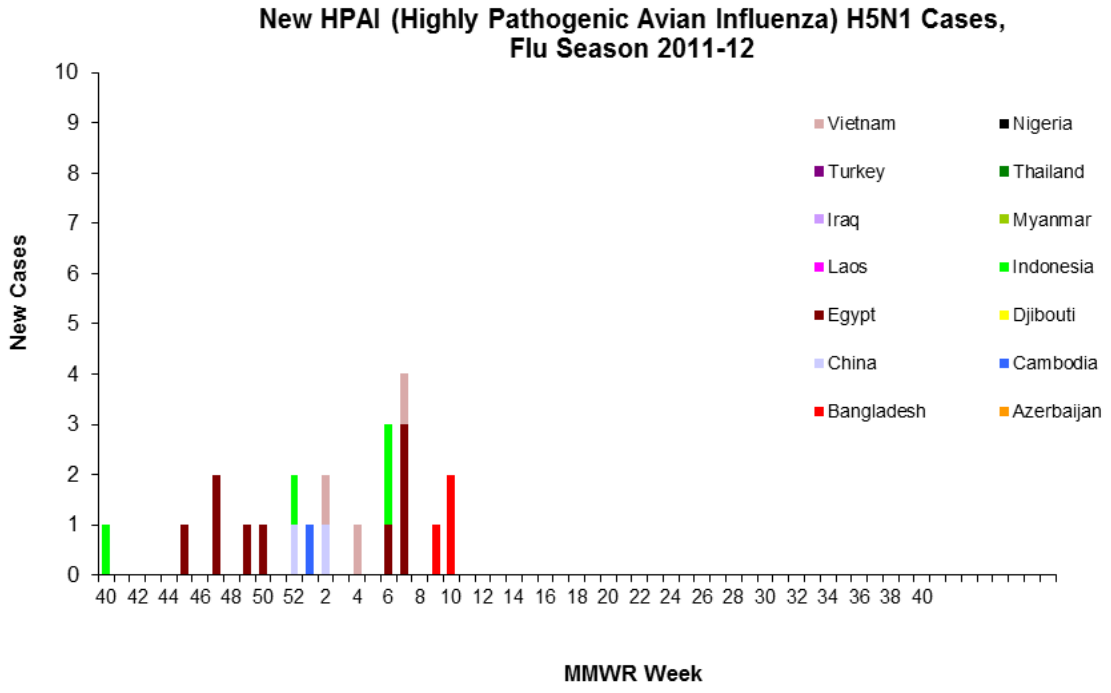
IV. Clustered ILI Activity

There were no clustered ILI activities reported during week 9.

VIII. Avian Influenza – Last Updated March 7, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	5	2	163	57
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	3	3	186	154
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	3	2	122	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	16	9	**594**	**349**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
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49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
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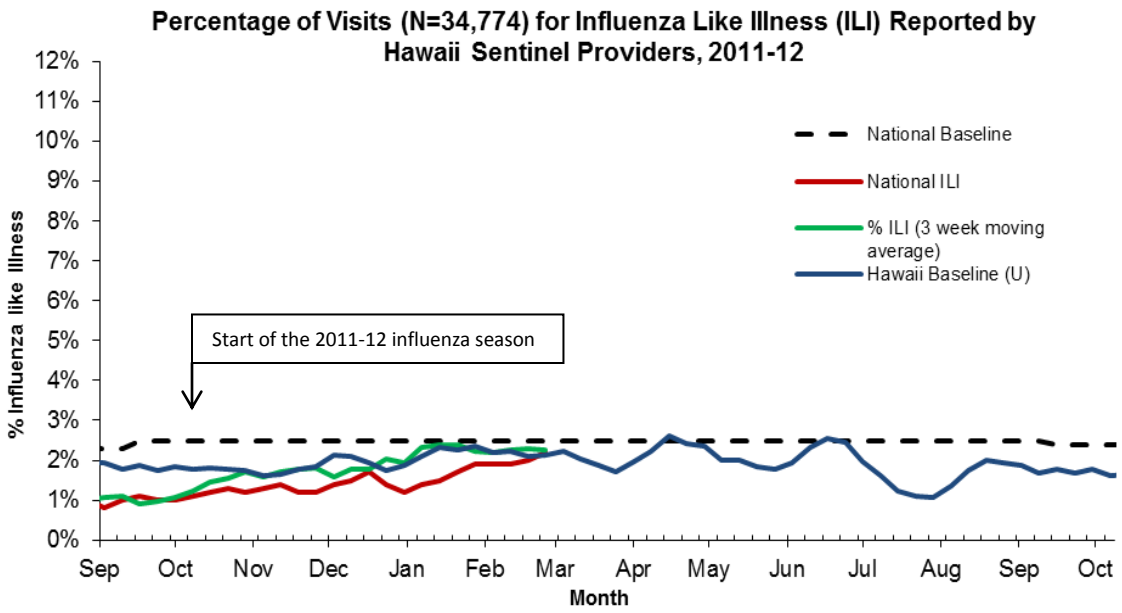
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

March 4–10, 2012: MMWR[1] Week 10, 2012

I. Surveillance of Influenza-like Illness (ILI):



During week 10 of the 2011–12 influenza year, 2.2% (95% CI 1.1–3.4%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 10 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to both the national ILI (2.2%) and the national baseline[4] (2.4%).

II. Pneumonia and Influenza (P&I) Related Mortality:

During week 10 of the 2011–12 influenza season, 14.1% (95% CI 6.3–21.8%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 10 was comparable to both the epidemic threshold (7.9%) and national P&I mortality (7.3%).

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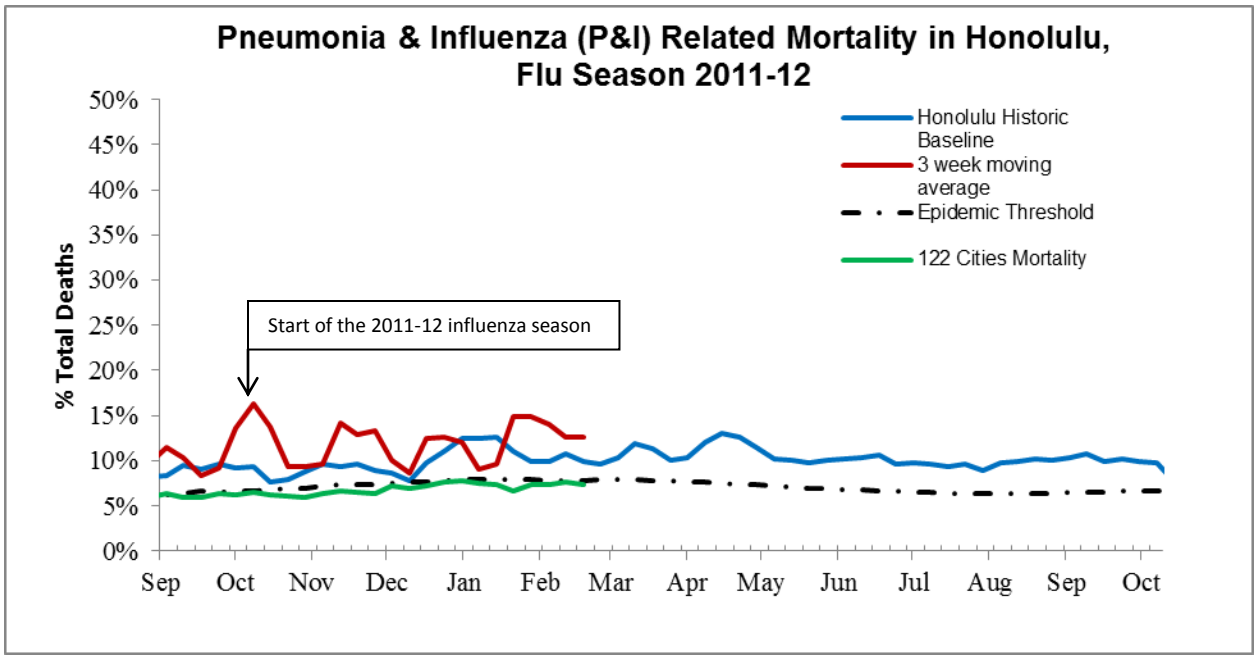
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were no influenza-associated pediatric deaths reported to the CDC during week 10.

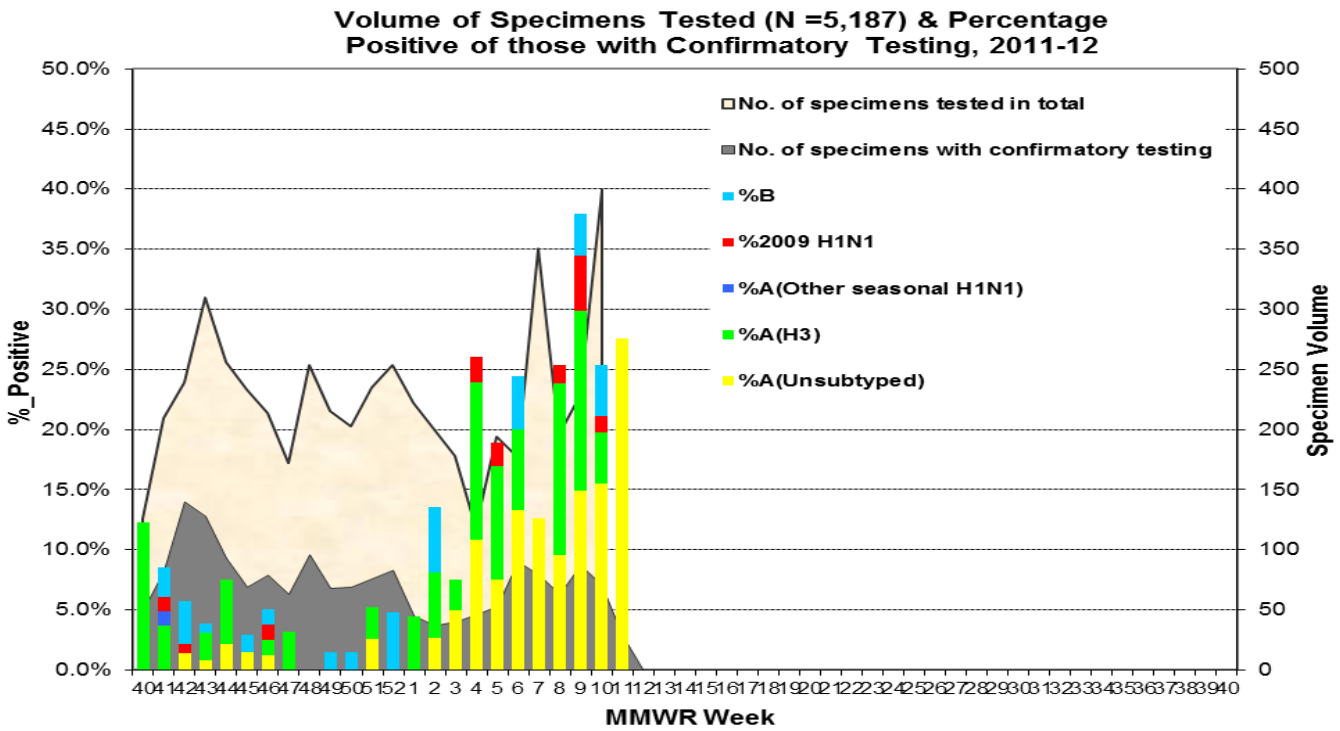
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 5,187 specimens have been tested statewide for influenza viruses. Of these, 3,482 (67.1%) were screened only by rapid antigen tests whereas the remaining 1,705 (32.9%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 374 (7.29%) cases of influenza A and 57 (1.1%) cases of influenza B were detected using any method. Of the influenza A cases detected, 11 (2.9%) were 2009 H1N1, 1 (0.3%) was other seasonal influenza A (H1), 69 (18.4%) were influenza A (H3), and the remaining (n = 293, 78.3%) were influenza A of unknown subtype.[6]

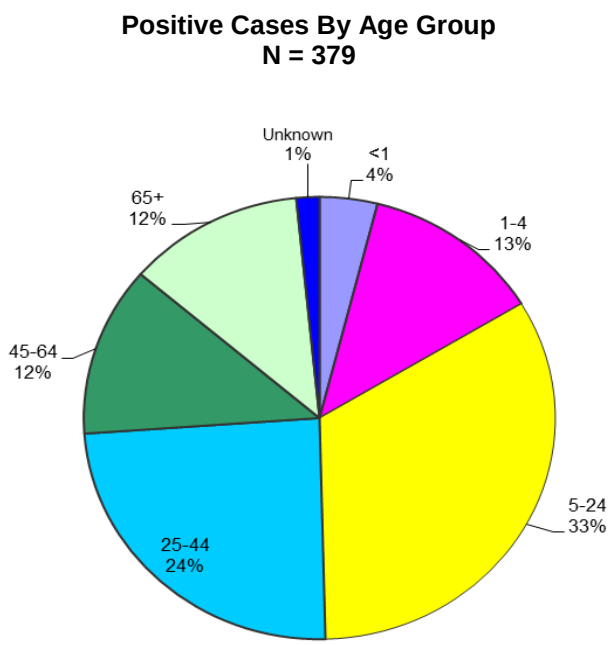
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

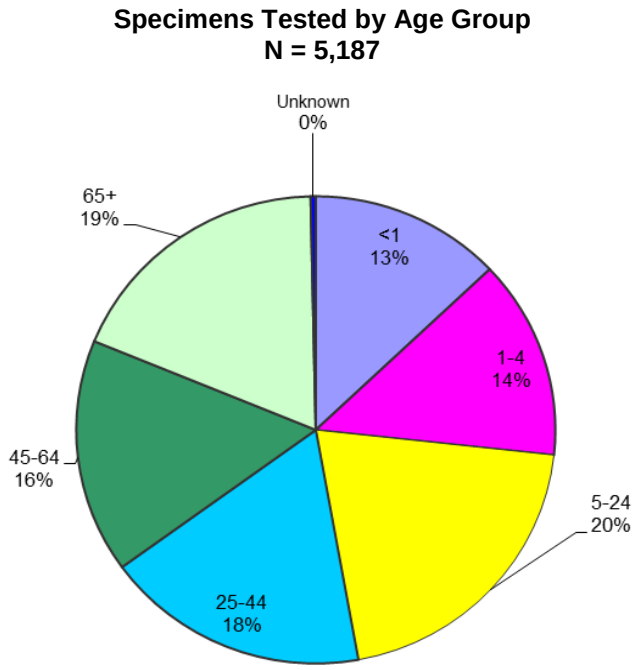
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 7.3% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X																												
Parainfluenza Virus				X						X	X	X						X		X	X																																
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																												
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X																												
Varicella Zoster Virus																																																					
Influenza 2009 H1N1		X	X				X										X	X				X																															
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X																														
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X																													
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X																													

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

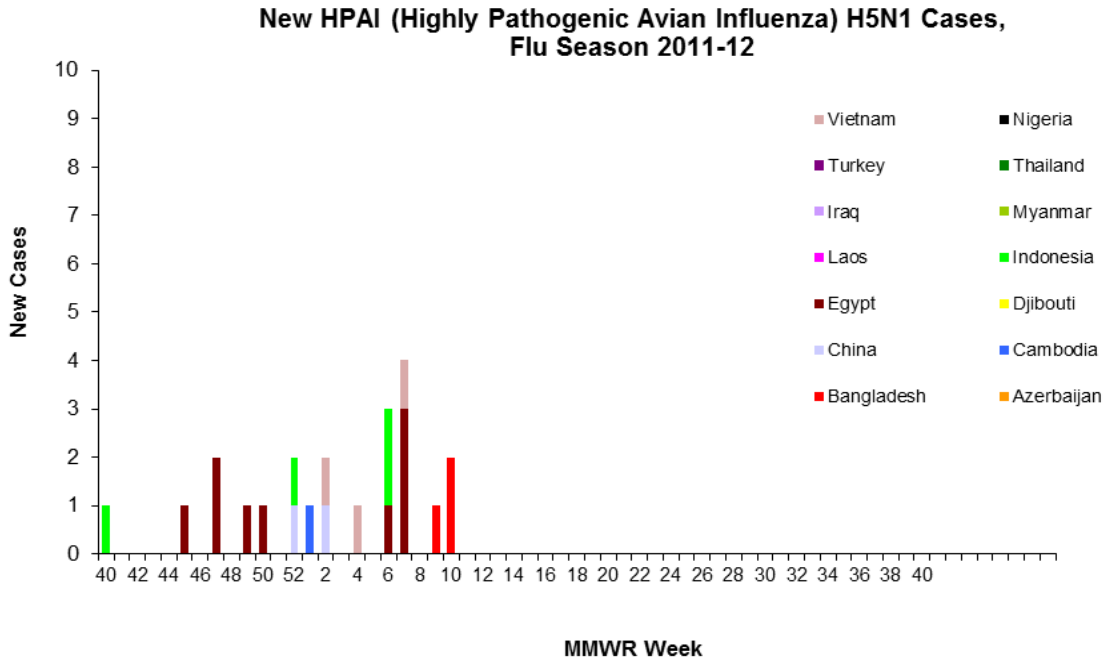
IV. Clustered ILI Activity

There were no clustered ILI activities reported during week 10.

VIII. Avian Influenza – Last Updated March 14, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	5	2	163	57
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	4	4	187	155
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	18	10	**596**	**350**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

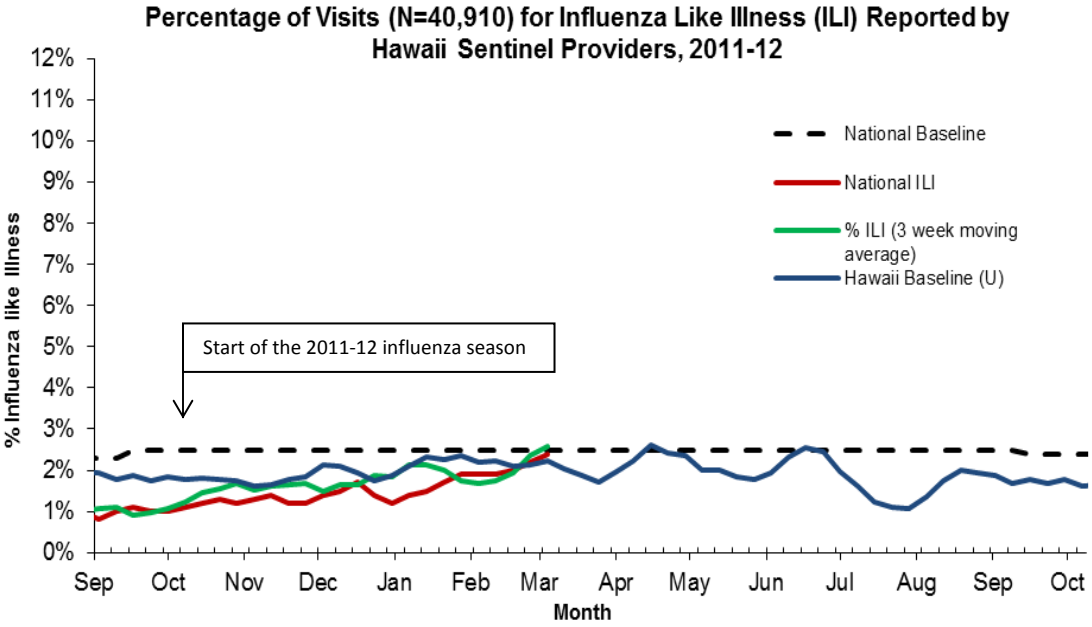
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

March 11–17, 2012: MMWR[1] Week 11, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 11 of the 2011–12 influenza year, 3.0% (95% CI 2.2–3.8%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 11 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to both the national ILI (2.4%) and the national baseline[4] (2.4%).



II. Pneumonia and Influenza (P&I) Related Mortality:

During week 11 of the 2011–12 influenza season, 12.5% (95% CI 5.3–19.8%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 11 was comparable to both the epidemic threshold (7.9%) and national P&I mortality (7.6%).

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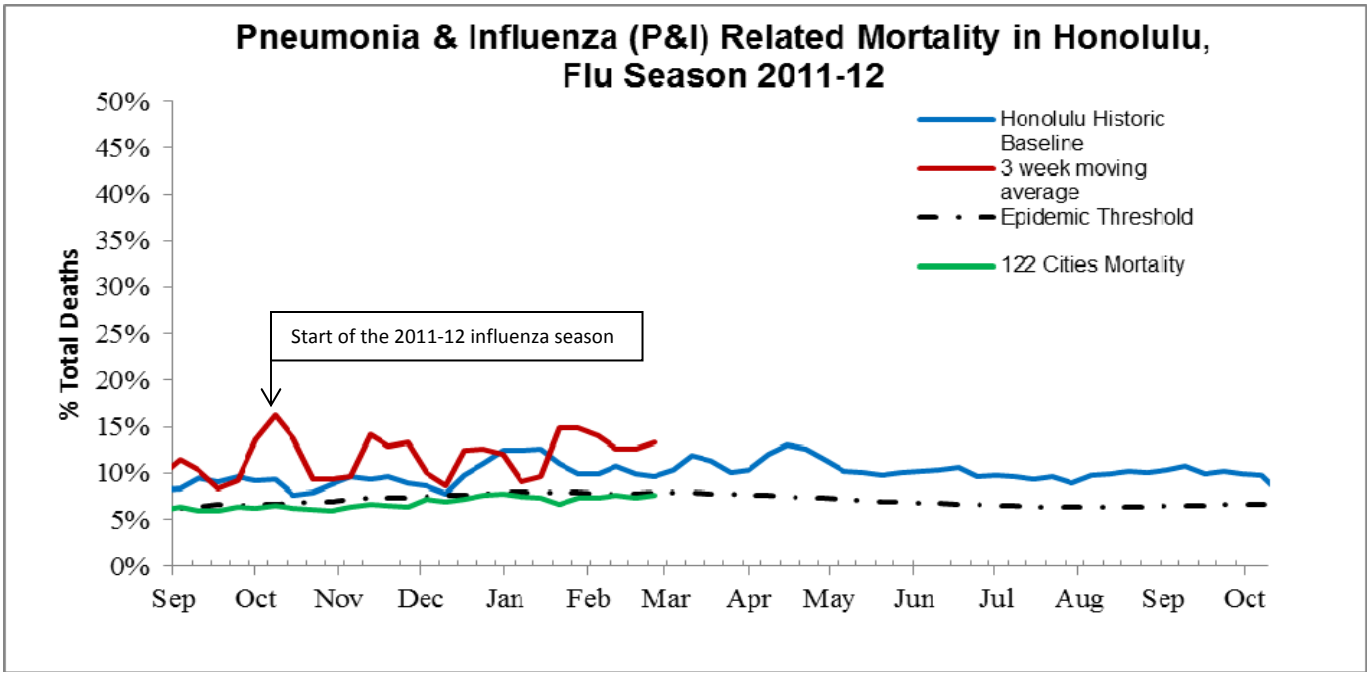
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were three influenza-associated pediatric deaths reported to the CDC during week 11. Two of the deaths were associated with 2009 H1N1 while the third was associated with an influenza B virus. The deaths occurred during weeks 5 (week ending February 4, 2012), week 9 (week ending March 3, 2012), and week 11 (week ending March 17, 2012). The total influenza-associated pediatric deaths for the 2011–12 season is now eight.

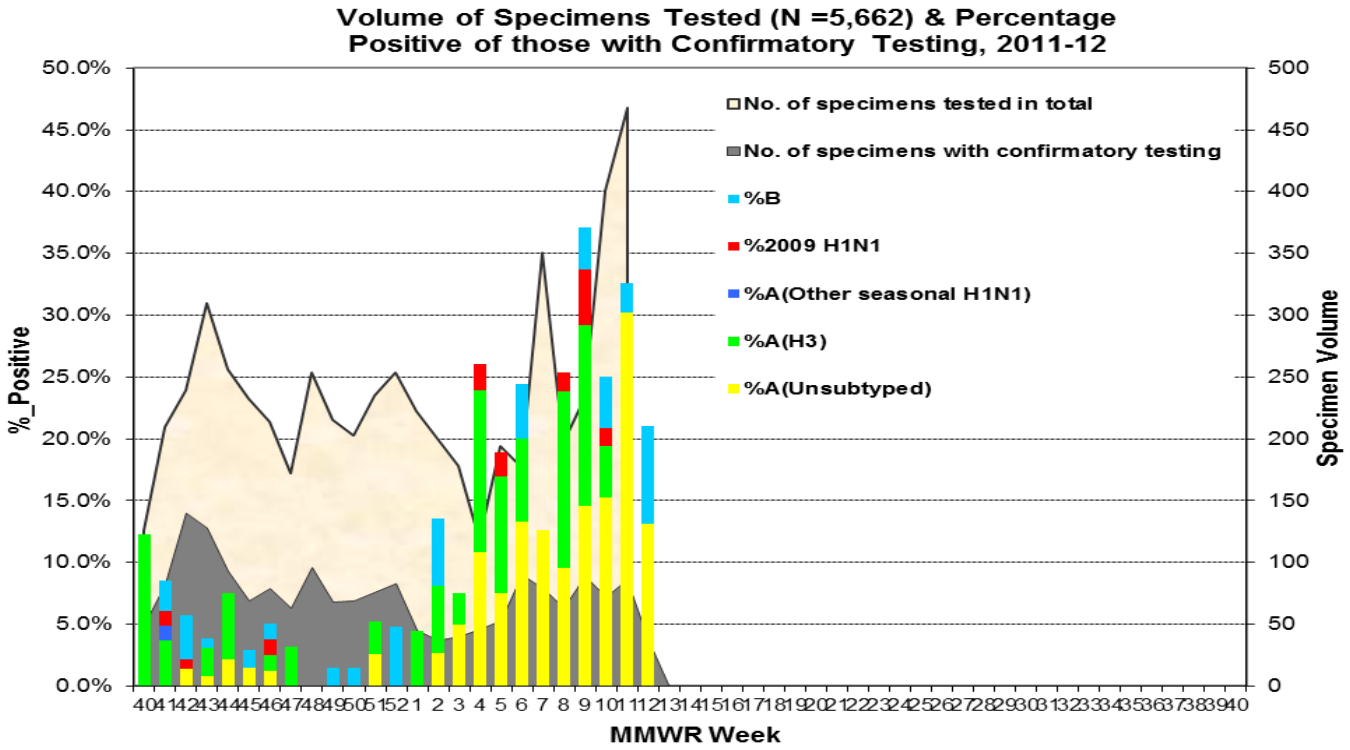
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 5,662 specimens have been tested statewide for influenza viruses. Of these, 3,868 (68.3%) were screened only by rapid antigen tests whereas the remaining 1,794 (31.7%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 480 (8.5%) cases of influenza A and 71 (1.3%) cases of influenza B were detected using any method. Of the influenza A cases detected, 11 (2.3%) were 2009 H1N1, 1 (0.2%) was other seasonal influenza A (H1), 69 (14.4%) were influenza A (H3), and the remaining (n = 399, 83.1%) were influenza A of unknown subtype.[6]

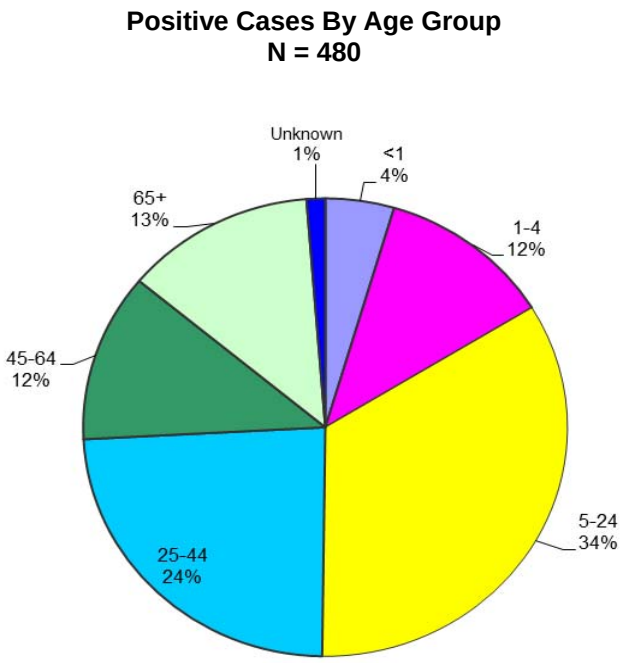
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

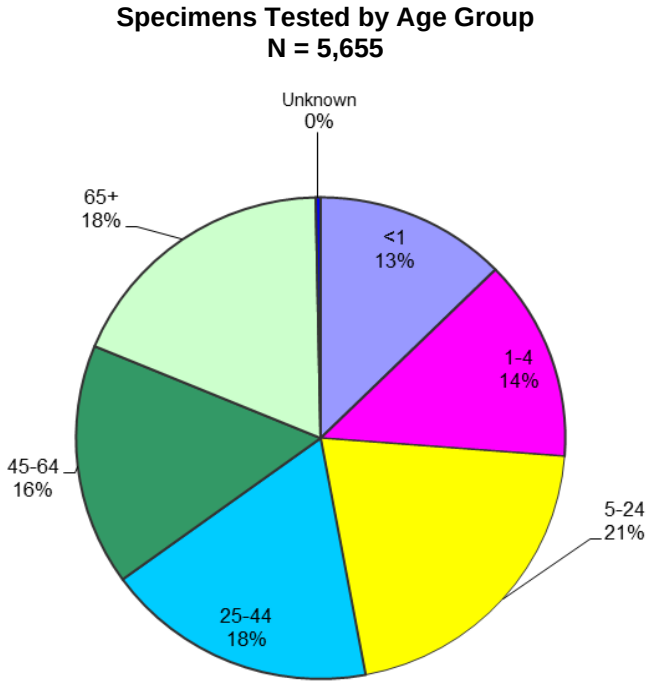
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 8.5% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
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Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X																												
Parainfluenza Virus				X						X	X	X						X		X	X																																
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																												
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X																												
Varicella Zoster Virus																																																					
Influenza 2009 H1N1		X	X				X										X	X				X																															
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X																														
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X																													
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X																													

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

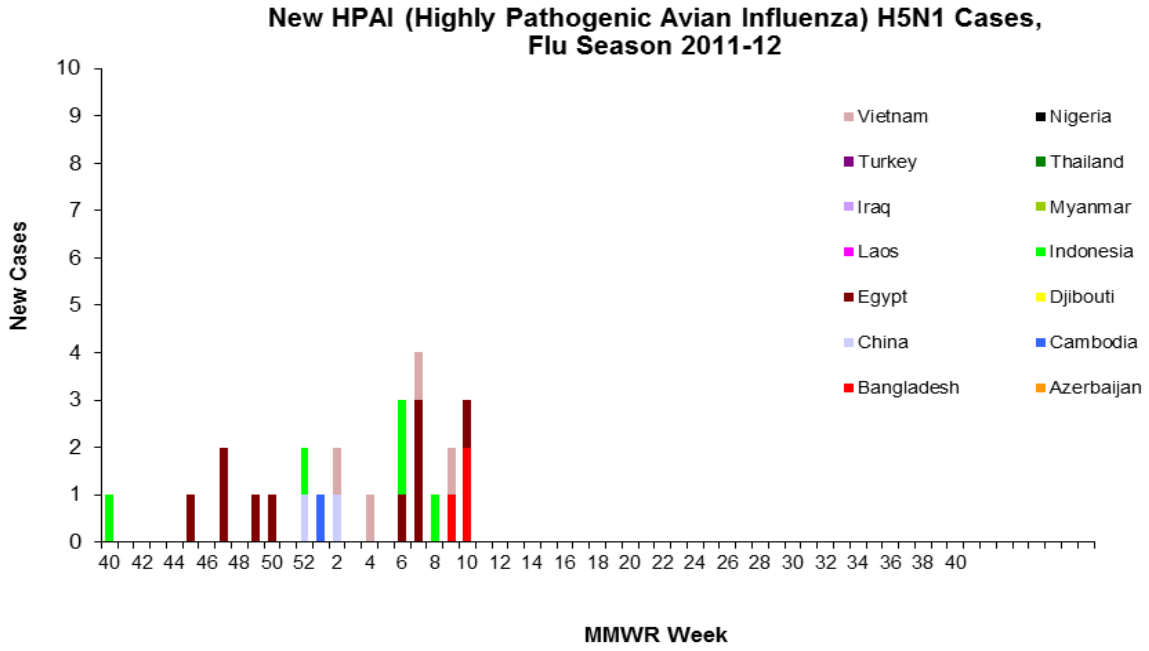
IV. Clustered ILI Activity

There was one possible ILI-related long-term healthcare cluster that was reported to DOH during week 11. Three residents tested positive by rapid antigen for influenza A. Specimens have been sent to SLD for further characterization. One specimen tested positive for influenza A (H3) and the other two are still being processed.

VIII. Avian Influenza – Last Updated March 19, 2012

	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
Country	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	1	1	19	17
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	6	3	164	58
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	4	4	187	155
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	19	11	**597**	**351**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For mor ; from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
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7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
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12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
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29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
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34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
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41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

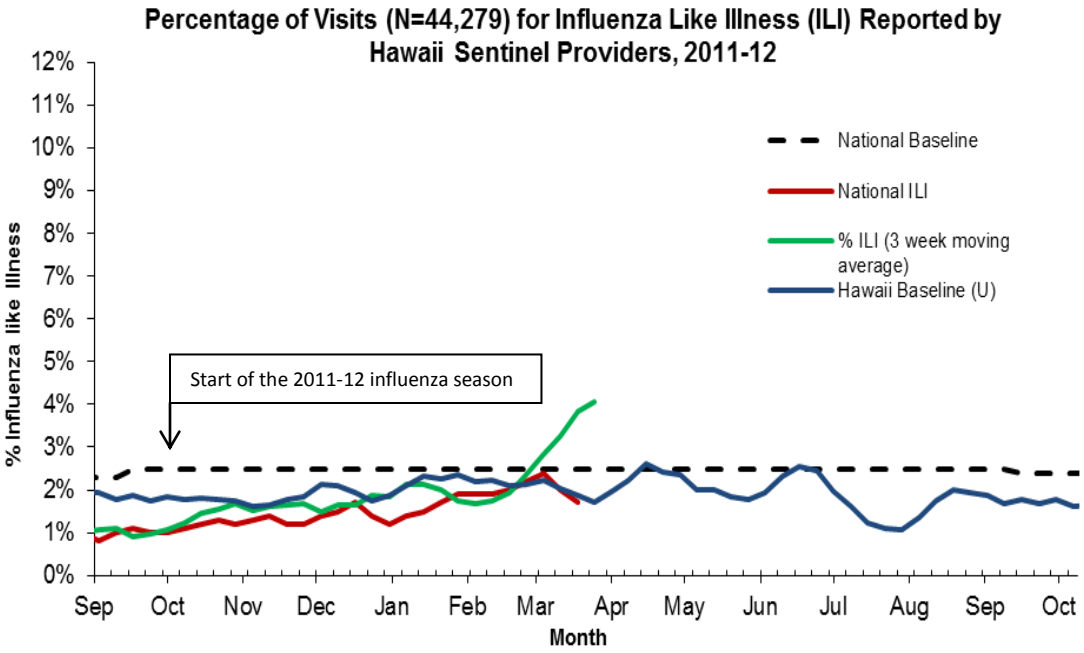
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

March 25–31, 2012: MMWR[1] Week 13, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 13 of the 2011–12 influenza year, 3.4% (95% CI 2.3–4.4%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 13 of 2012 was highr than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to national baseline[4] (2.4%) and higher than the national ILI (1.7%).



II. Pneumonia and Influenza (P&I) Related Mortality:

During week 13 of the 2011–12 influenza season, 11.1% (95% CI 3.9–18.4%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 13 was comparable to both the epidemic threshold (7.8%) and national P&I mortality (7.2%).

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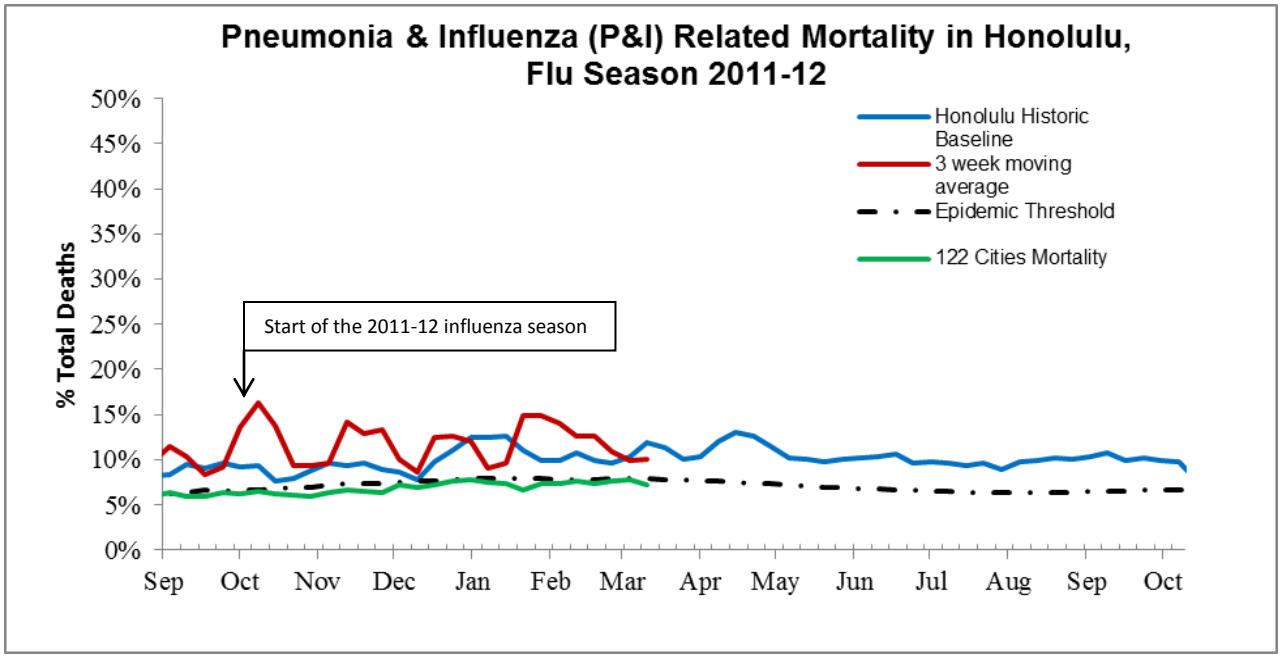
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There was one influenza-associated pediatric death reported to the CDC during week 13. The death occurred during week 9 (week ending March 2, 2012) and was associated with an undetermined influenza A virus. The total influenza-associated pediatric deaths for the 2011–12 season is now thirteen.

III. Laboratory Surveillance

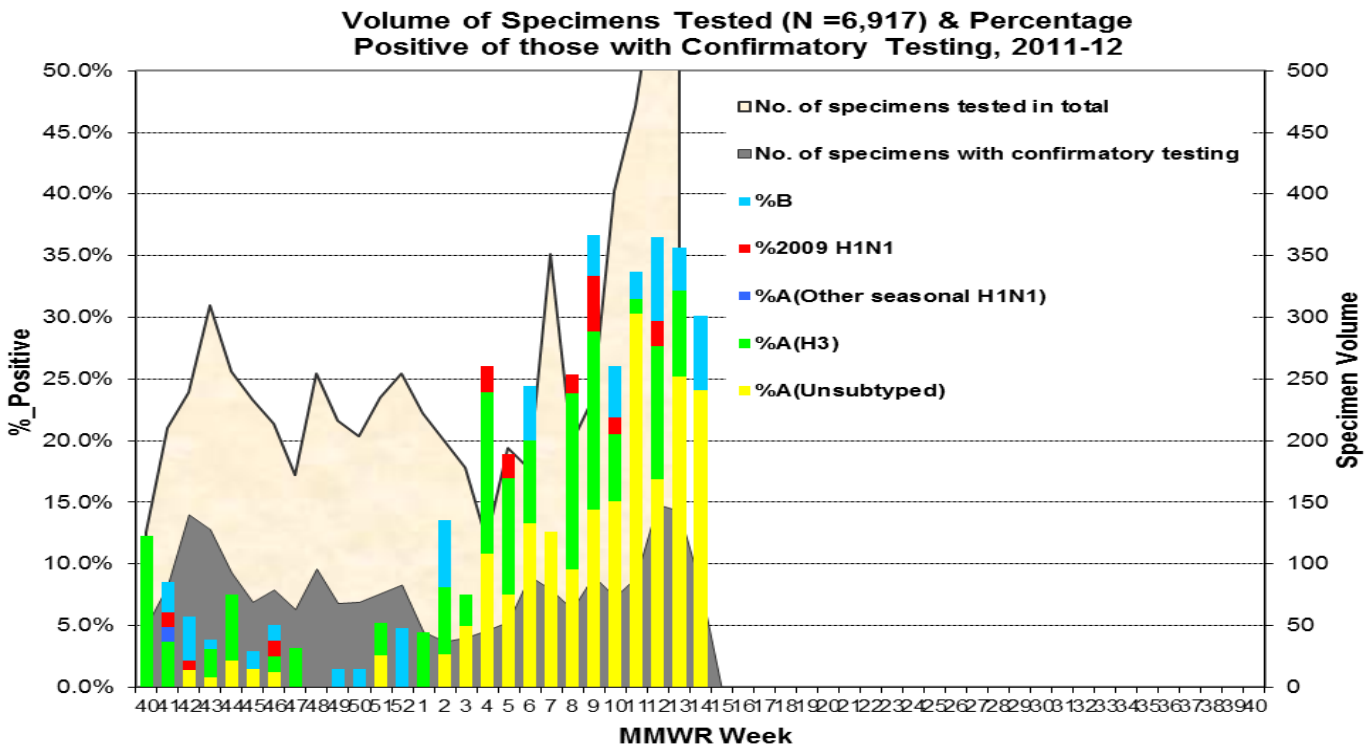
Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 6,917 specimens have been tested statewide for influenza viruses. Of these, 4,827 (69.8%) were screened only by rapid antigen tests whereas the remaining 2,090 (30.2%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 804 (11.6%) cases of influenza A and 132 (1.9%) cases of influenza B were detected using any method. Of the influenza A cases detected, 14 (1.7%) were 2009 H1N1, 1 (0.2%) was other seasonal influenza A (H1), 97 (12.1%) were influenza A (H3), and the remaining (n = 692, 86.1%) were influenza A of unknown subtype.[6]

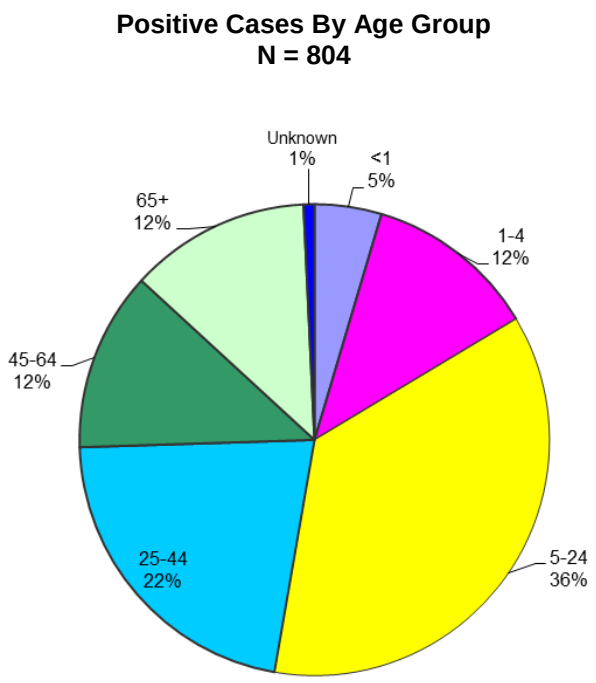
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

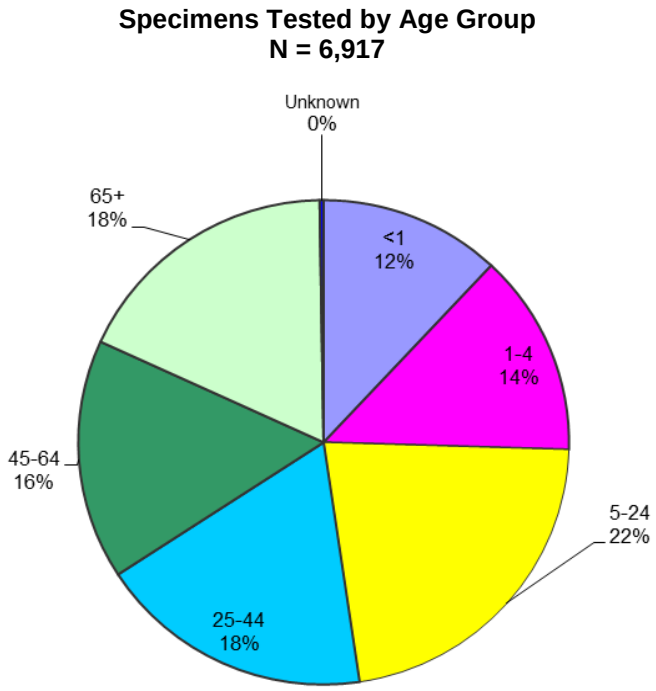
The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 11.6% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.

[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.


Volume of Specimens Tested (N =6,917) & Percentage Positive of those with Confirmatory Testing, 2011-12
No. of specimens tested in total
No. of specimens with confirmatory testing
%B
%2009 H1N1
%A(Other seasonal H1N1)
%A(H3)
%A(Unsubtyped)
%_Positive
Specimen Volume
MMWR Week


Positive Cases By Age Group
N = 804
Unknown 1%
<1 5%
1-4 12%
5-24 36%
25-44 22%
45-64 12%
65+ 12%


Specimens Tested by Age Group
N = 6,917
Unknown 0%
<1 12%
1-4 14%
5-24 22%
25-44 18%
45-64 16%
65+ 18%

All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X																										
Parainfluenza Virus				X						X	X	X						X		X	X					X																											
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																										
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X																										
Varicella Zoster Virus																									X																												
Influenza 2009 H1N1		X	X				X										X	X				X			X																											
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X																										
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X																										
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X																										

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

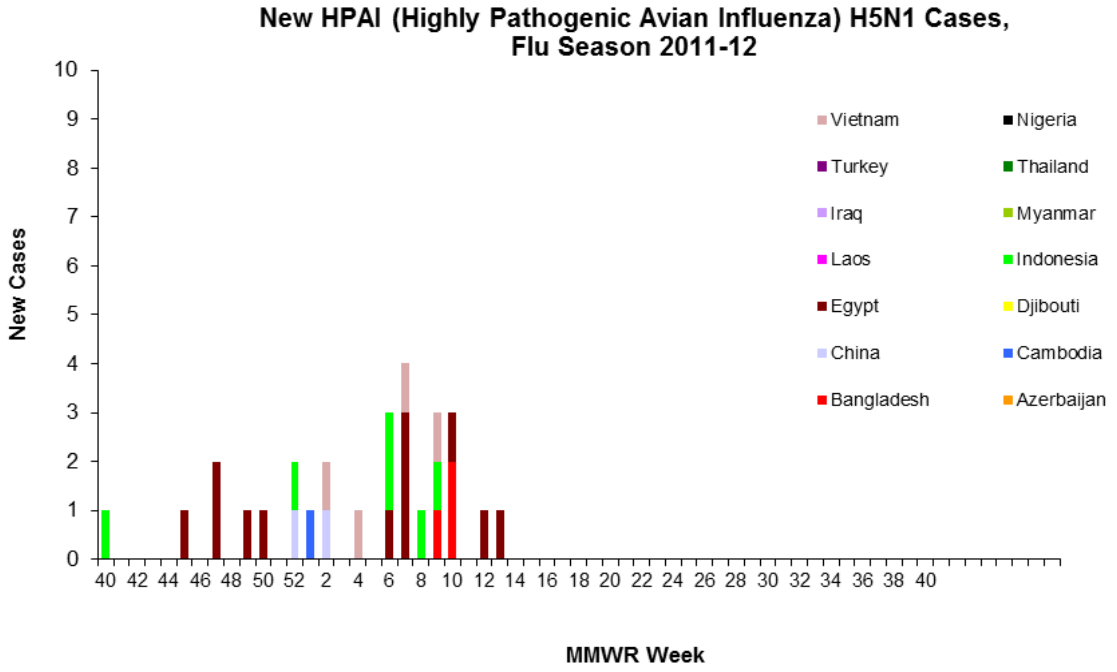
IV. Clustered ILI Activity

There were no ILI clusters reported during week 13.

VIII. Avian Influenza – Last Updated April 5, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	2	2	20	18
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	7	3	165	58
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	5	5	188	156
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	22	13	**600**	**353**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
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6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
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8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
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32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
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37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
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43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

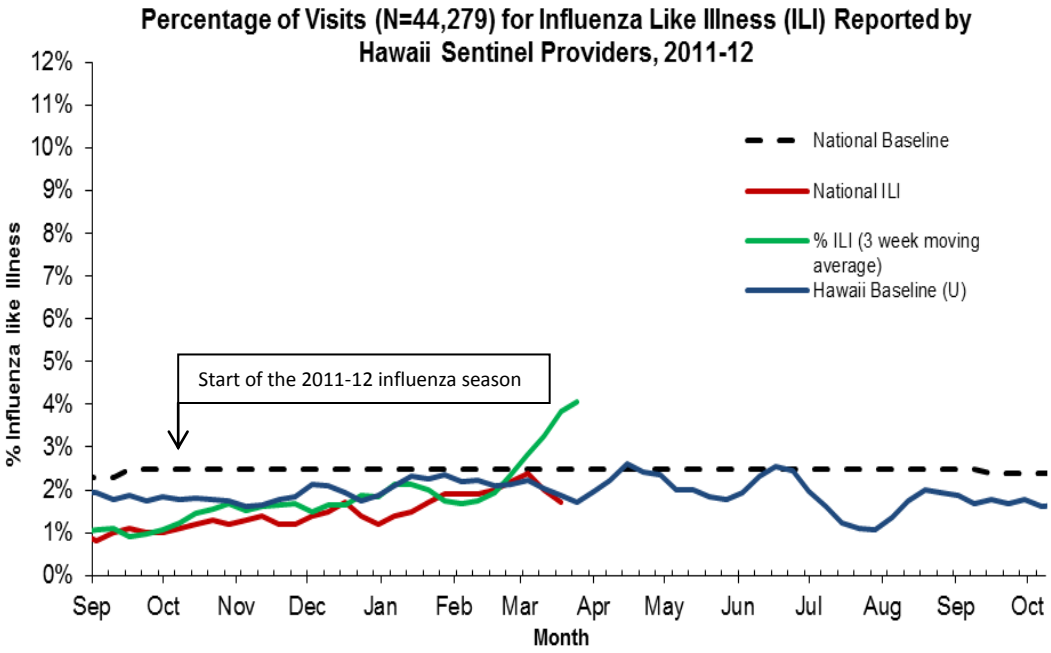
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

April 1–7, 2012: MMWR[1] Week 14, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 14 of the 2011–12 influenza year, 4.8% (95% CI 3.1–6.4%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 14 of 2012 was higher than the historical baseline in Hawaii ($p<0.05$)[2,3] and also higher than the national baseline[4] (2.4%) and higher than the national ILI (1.5%).



II. Pneumonia and Influenza (P&I) Related Mortality:

During week 14 of the 2011–12 influenza season, 13.3% (95% CI 4.7–21.9%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 14 was comparable to both the epidemic threshold (7.8%) and national P&I mortality (7.5%).

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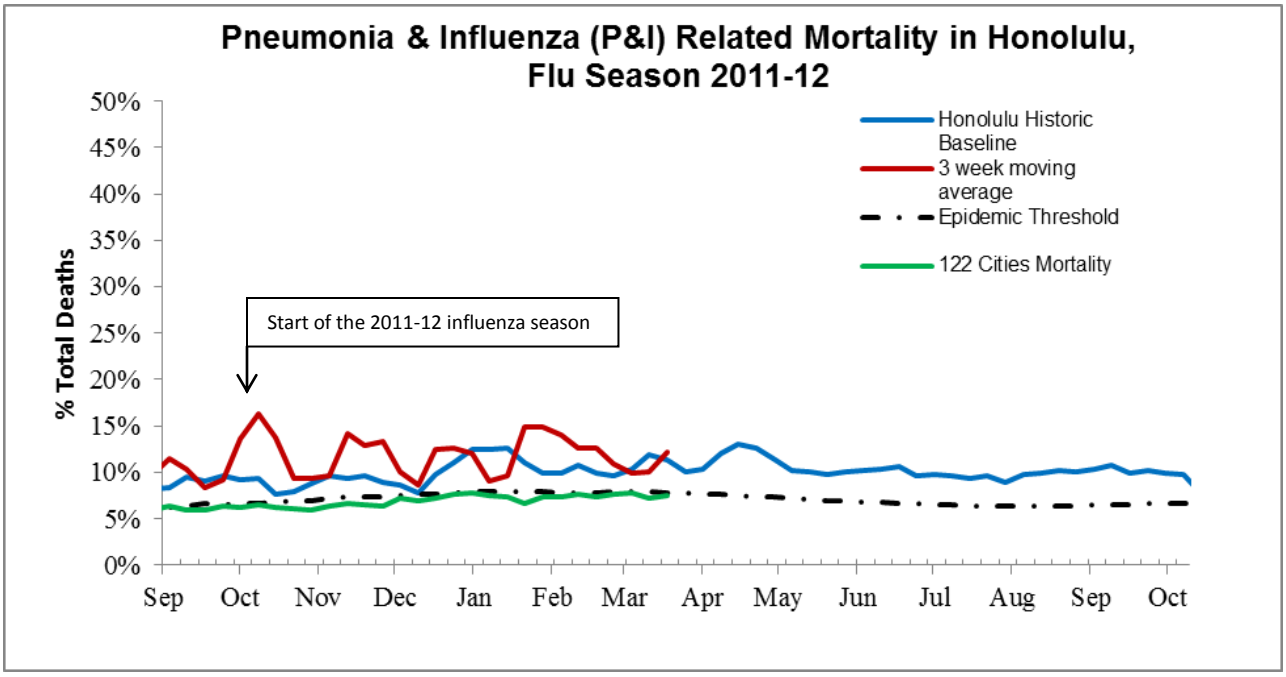
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were no influenza-associated pediatric deaths reported to the CDC during week 14. Total influenza-associated pediatric deaths for the 2011–12 season is currently thirteen.

III. Laboratory Surveillance

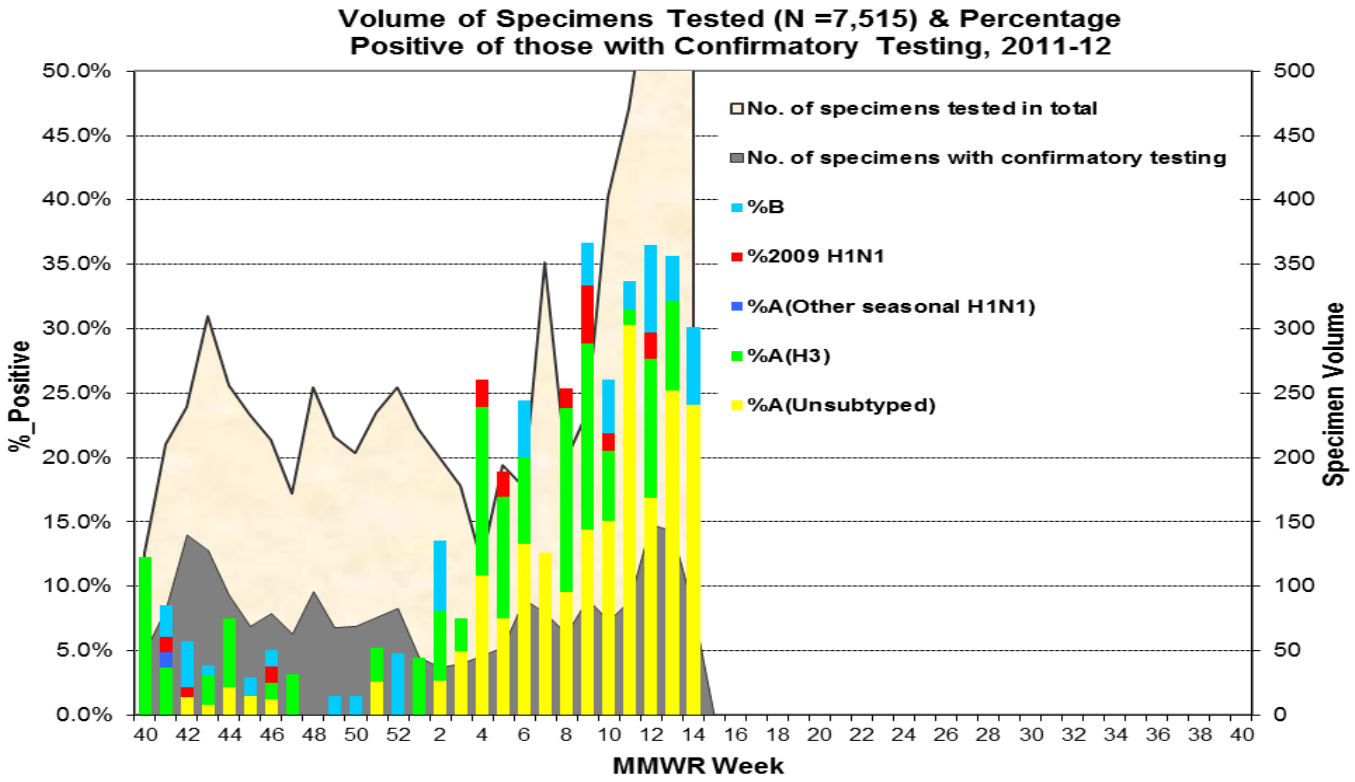
Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 7,515 specimens have been tested statewide for influenza viruses. Of these, 5,342 (71.1%) were screened only by rapid antigen tests whereas the remaining 2,173 (28.9%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 804 (10.7%) cases of influenza A and 132 (1.8%) cases of influenza B were detected using any method. Of the influenza A cases detected, 14 (1.7%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 97 (12.1%) were influenza A (H3), and the remaining (n = 692, 86.1%) were influenza A of unknown subtype.[6]

The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

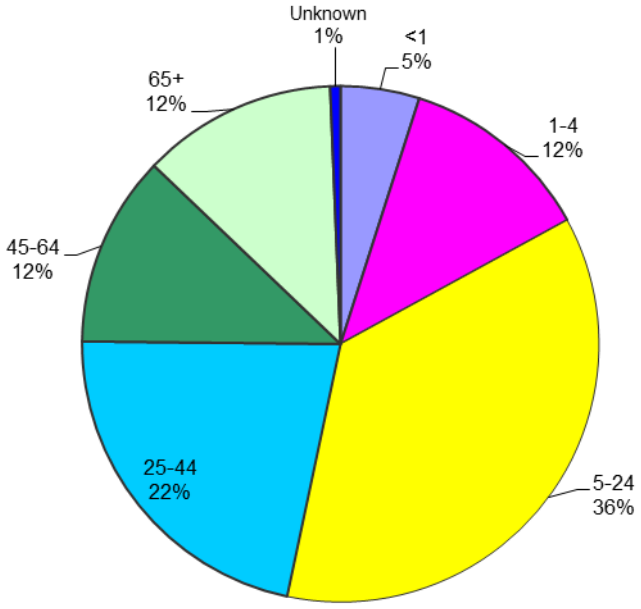
The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 11.6% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.

[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

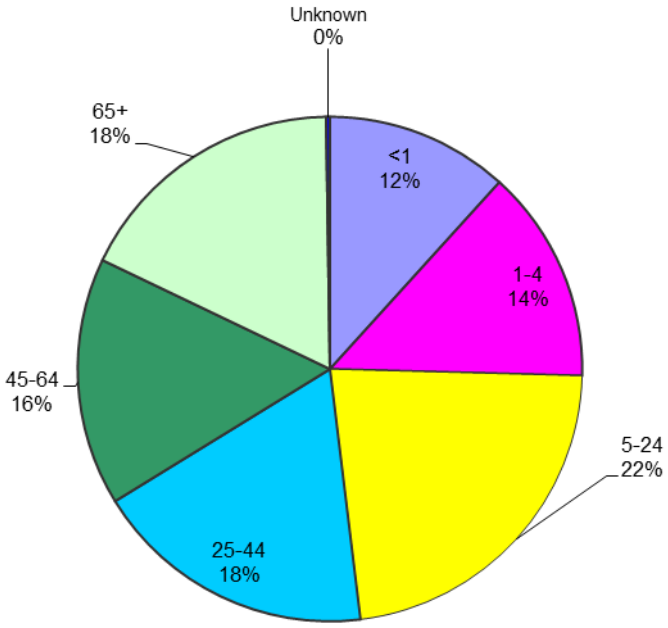
[6] Only specimens meeting priority criteria (those from hospitalized patients with ARDS or x-ray confirmed pneumonia, travelers with international travel history within 10 days of onset, specimens submitted by sentinel providers, specimens collected from healthcare workers, pregnant women or women up to 6 weeks post-partum, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



Positive Cases By Age Group
N = 934



Specimens Tested by Age Group
N = 7,515



All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X																										
Parainfluenza Virus				X						X	X	X						X		X	X					X																											
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																										
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X																										
Varicella Zoster Virus																									X																												
Influenza 2009 H1N1		X	X				X										X	X				X			X																											
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X																										
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X																										
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X																										

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

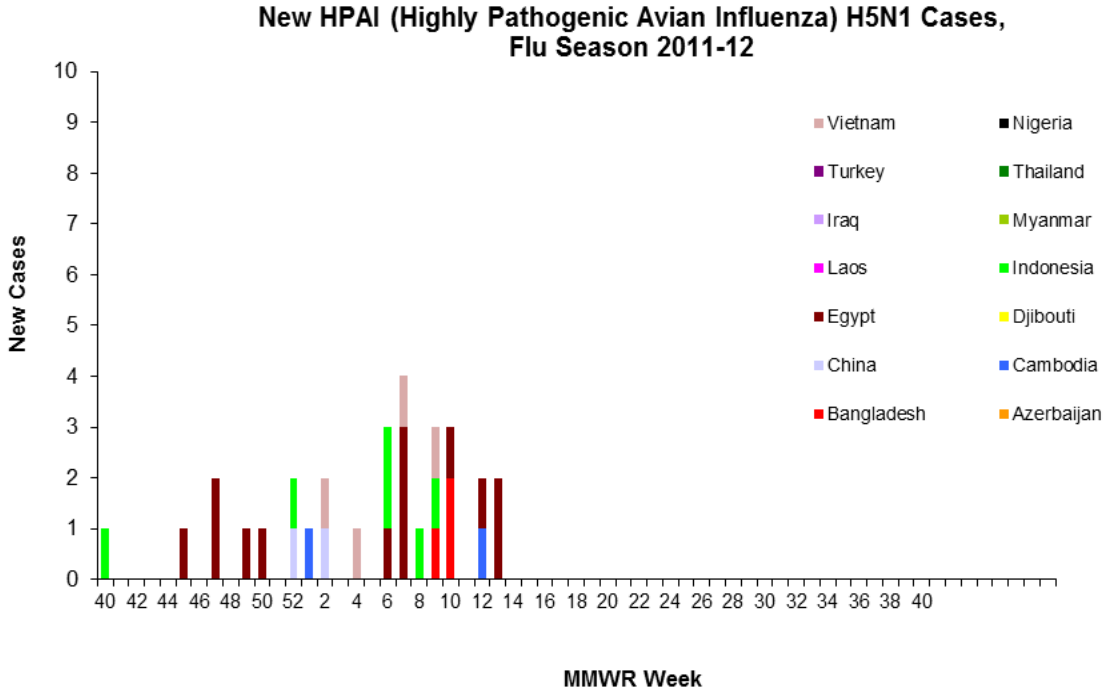
IV. Clustered ILI Activity

There were no ILI clusters reported during week 14.

VIII. Avian Influenza – Last Updated April 12, 2012

	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
Country	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	2	2	20	18
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	9	5	167	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	5	5	188	156
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	24	15	**602**	**355**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

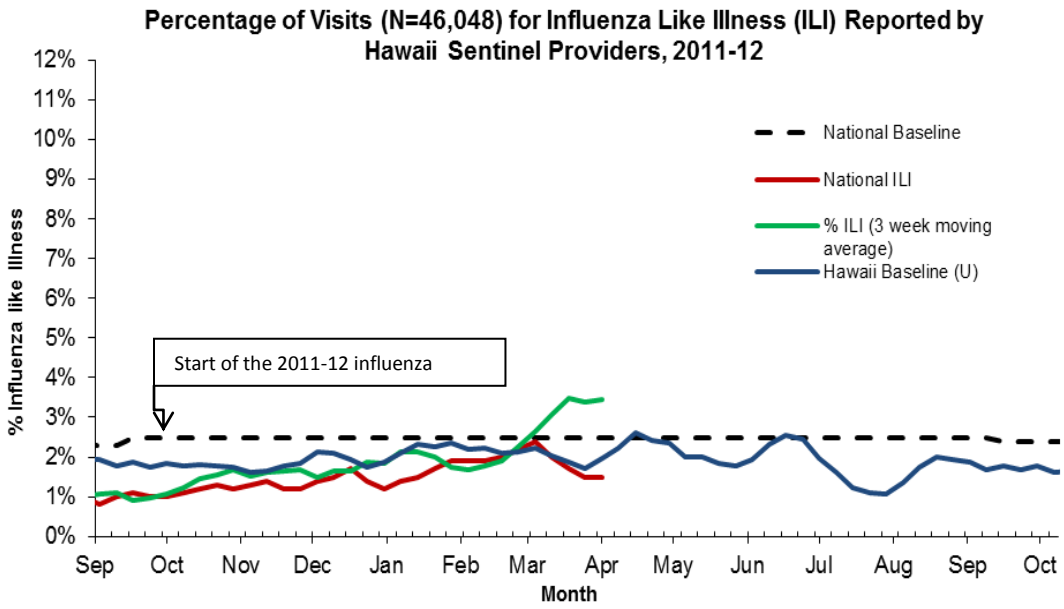
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

April 8–14, 2012: MMWR[1] Week 15, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 15 of the 2011–12 influenza year, 3.0% (95% CI 1.9–4.0%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 15 of 2012 was higher than the historical baseline in Hawaii ($p<0.05$)[2,3] but comparable to the national baseline[4] (2.4%) and higher than the national ILI (1.5%).



II. Pneumonia and Influenza (P&I) Related Mortality:

During week 15 of the 2011–12 influenza season, 14.3% (95% CI 6.8–21.8%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 15 was comparable to both the epidemic threshold (7.7%) and national P&I mortality (7.0%).

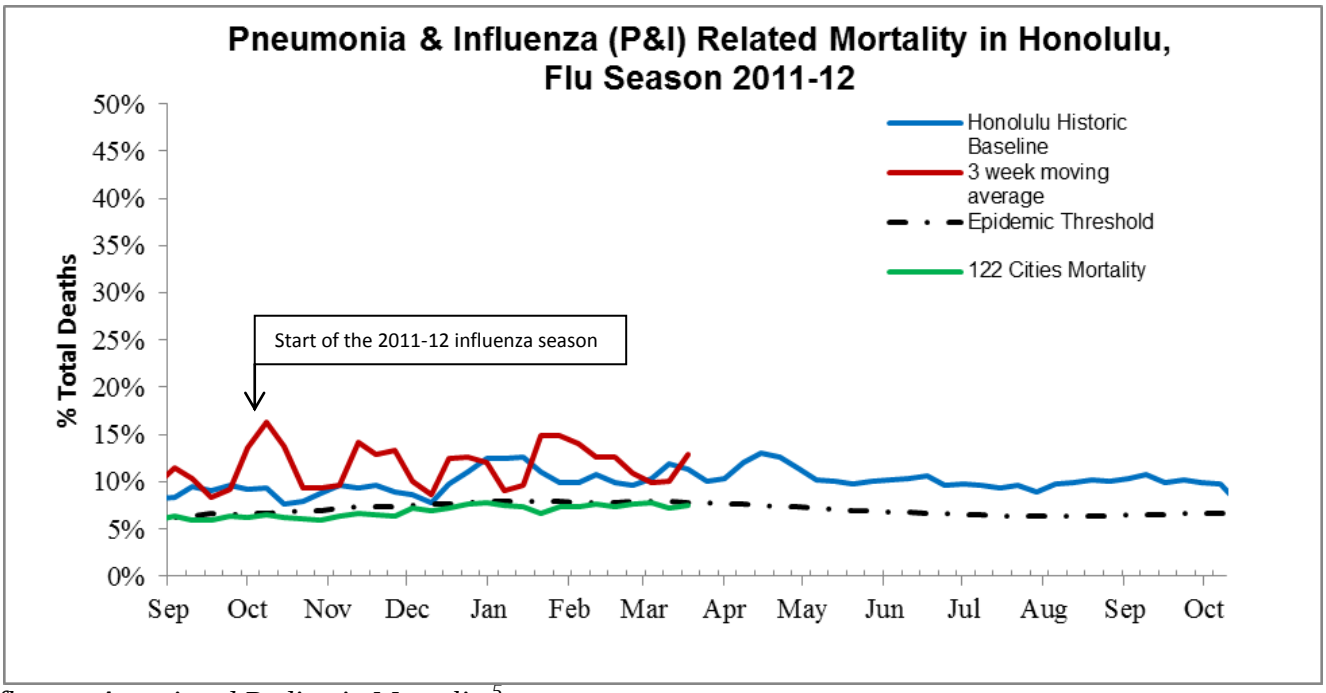
---

[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 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were two influenza-associated pediatric deaths reported to the CDC during week 15. Both deaths occurred during week 14 (week ending March 31, 2012). One death was associated with a 2009 H1N1 virus and the other was associated with a seasonal influenza A (H3) virus. Total influenza-associated pediatric deaths for the 2011–12 season is currently fifteen.

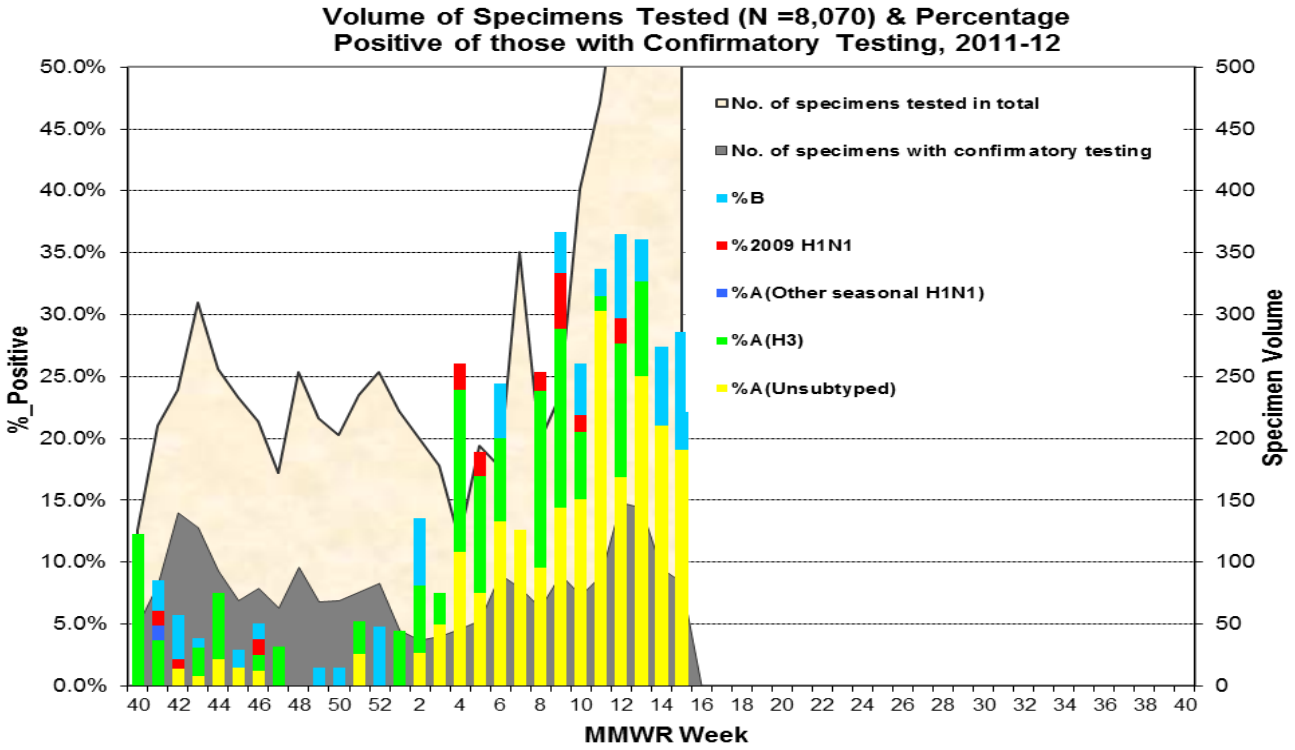
III. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 8,070 specimens have been tested statewide for influenza viruses. Of these, 5,800 (71.9%) were screened only by rapid antigen tests whereas the remaining 2,270 (28.1%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 905 (11.2%) cases of influenza A and 163 (2.0%) cases of influenza B were detected using any method. Of the influenza A cases detected, 14 (1.5%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 98 (10.8%) were influenza A (H3), and the remaining (n = 792, 87.5%) were influenza A of unknown subtype.[6]

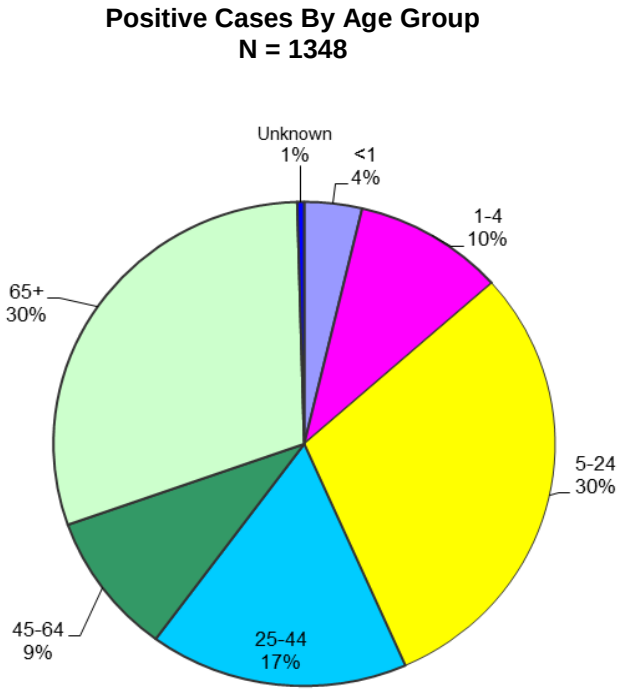
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

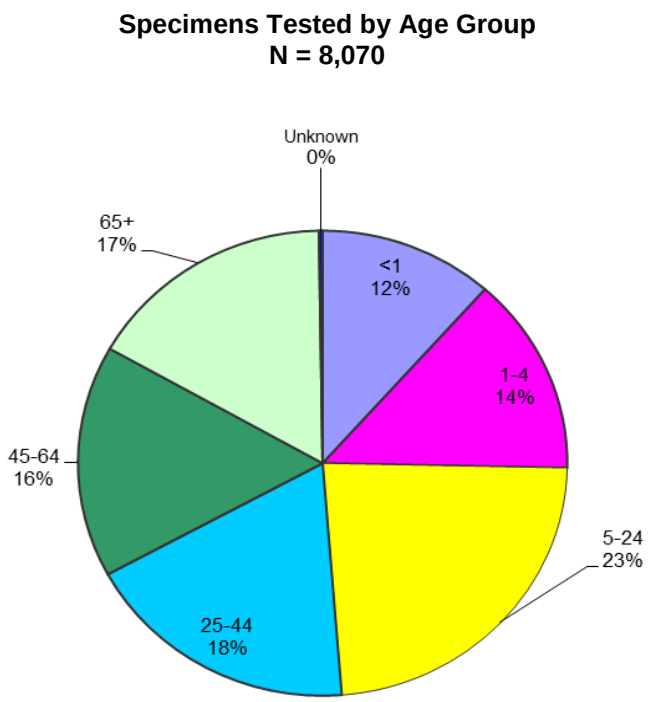
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 16.9% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Flu Season 2011-2012*

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X																								
Parainfluenza Virus				X						X	X	X						X		X	X					X																											
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																									
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X																									
Varicella Zoster Virus																									X																												
Influenza 2009 H1N1		X	X				X										X	X				X			X																											
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X																									
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X																										
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X																									

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

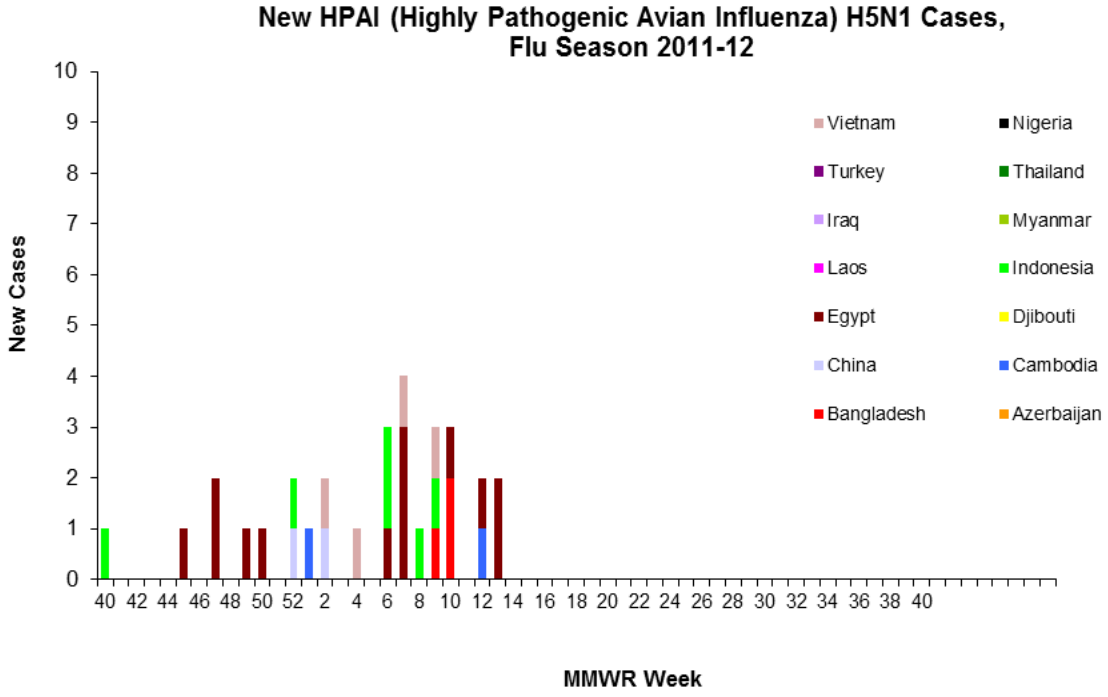
IV. Clustered ILI Activity

There were no ILI clusters reported during week 15.

VIII. Avian Influenza – Last Updated April 12, 2012

	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
Country	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	2	2	20	18
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	9	5	167	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	5	5	188	156
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	24	15	**602**	**355**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
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9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
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13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
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44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

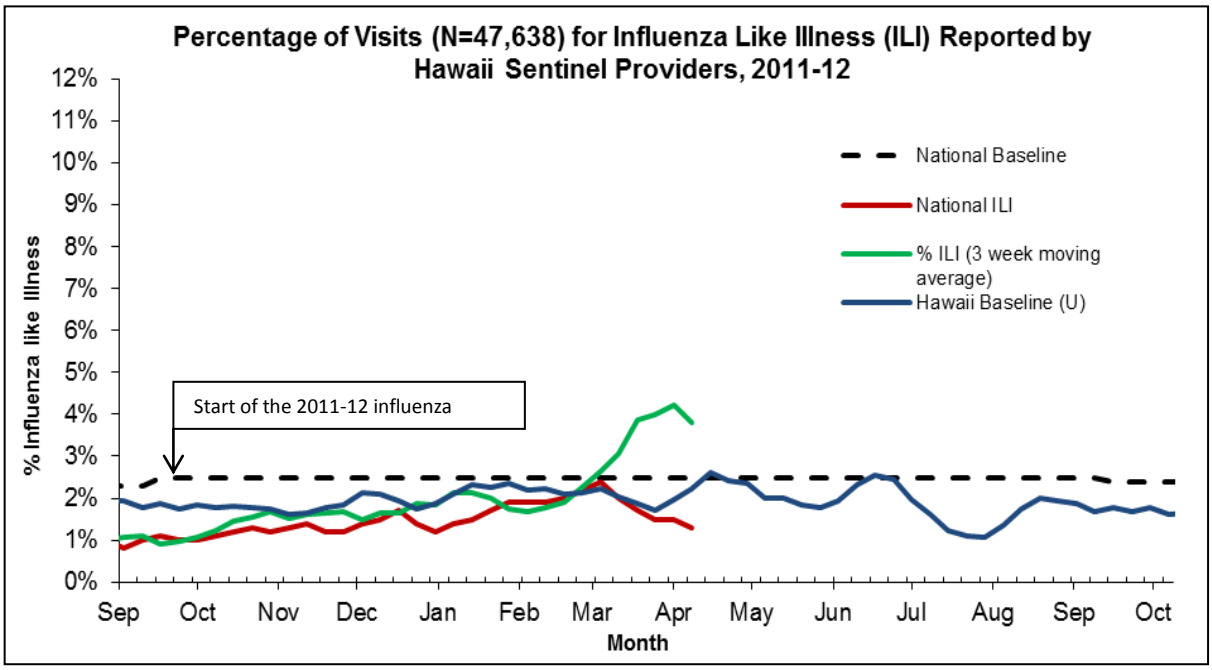
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

April 15–21, 2012: MMWR[1] Week 16, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 16 of the 2011–12 influenza year, 4.0% (95% CI 2.8–5.1%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 15 of 2012 was higher than the historical baseline in Hawaii ($p<0.05$)[2,3] as well as the national baseline[4] (2.4%) and the national ILI (1.3%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 16 of the 2011–12 influenza season, 12.0% (95% CI 3.7–20.5%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 16 was comparable to both the epidemic threshold (7.7%) and national P&I mortality (7.0%).

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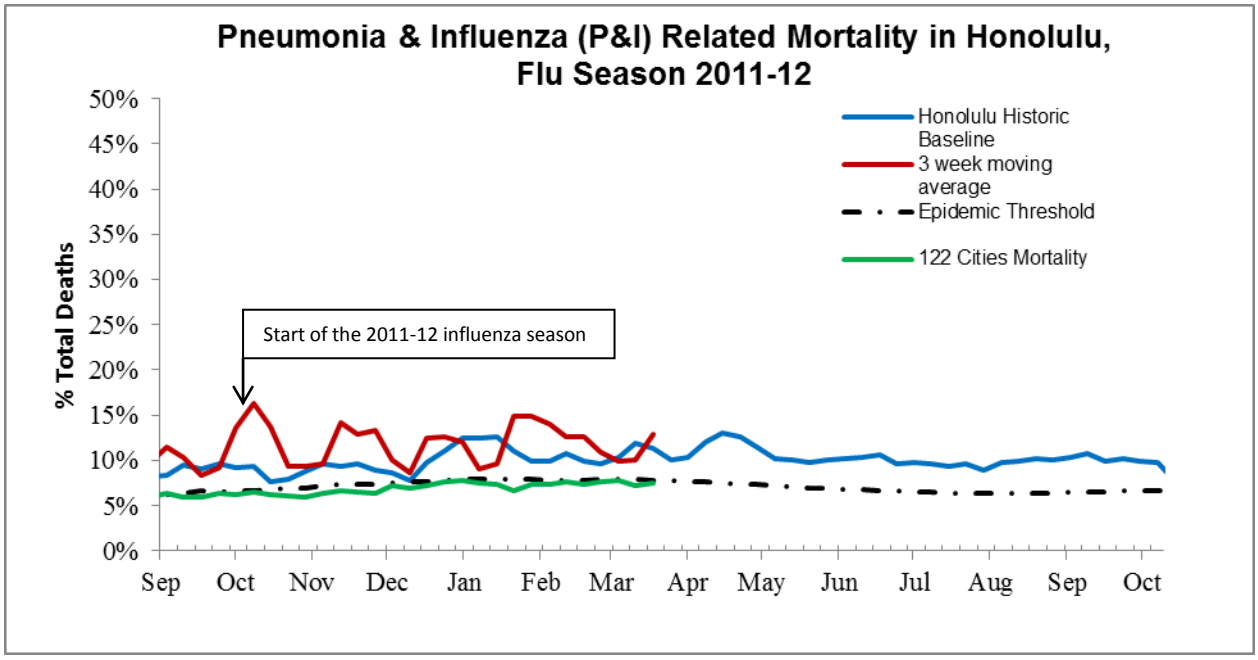
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were three influenza-associated pediatric deaths reported to the CDC during week 16. The deaths occurred during week 10 (week ending March 10, 2012), week 13 (week ending March 31, 2012), and week 14 (week ending April 7, 2012. One death was associated with a 2009 H1N1 virus, one was associated with a seasonal influenza A (H3) virus, and the third was associated with an undetermined influenza A virus. Total influenza-associated pediatric deaths for the 2011–12 season is currently eighteen.

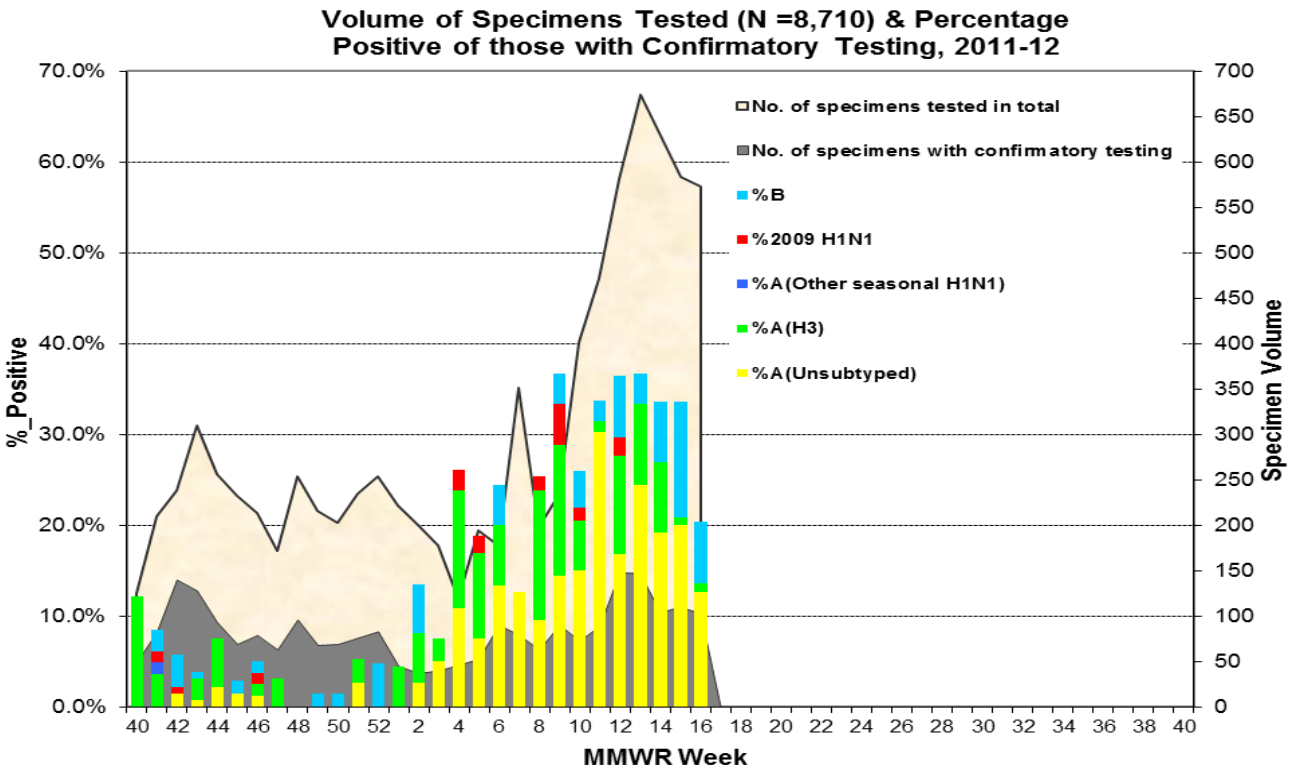
II. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 8,710 specimens have been tested statewide for influenza viruses. Of these, 6,297 (72.3%) were screened only by rapid antigen tests whereas the remaining 2,413 (27.7%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 1,013 (11.6%) cases of influenza A and 207 (2.0%) cases of influenza B were detected using any method. Of the influenza A cases detected, 14 (1.4%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 110 (10.9%) were influenza A (H3), and the remaining (n = 888, 87.7%) were influenza A of unknown subtype.[6]

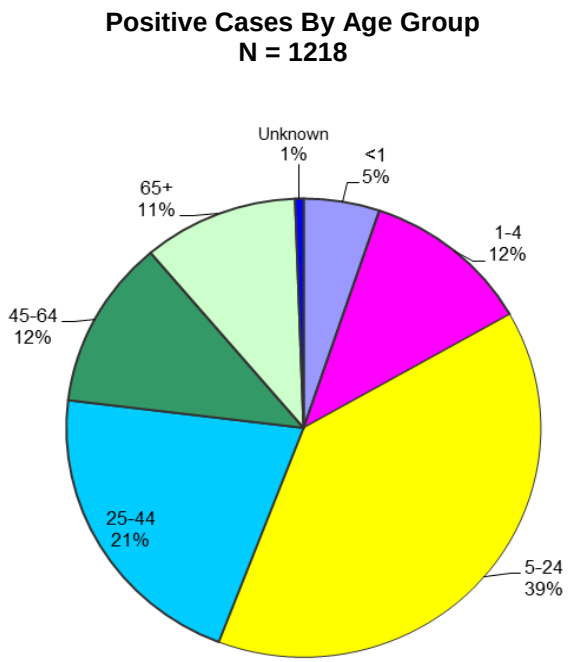
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

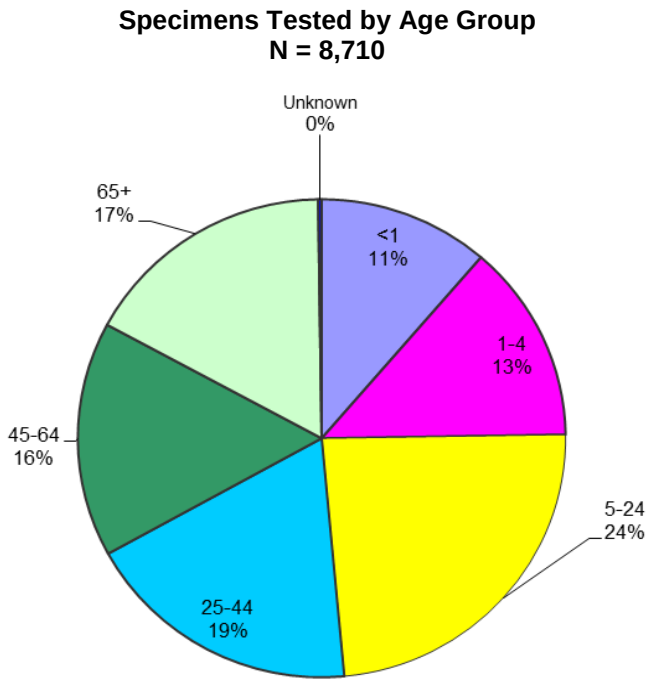
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 15.2% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X																								
Parainfluenza Virus				X						X	X	X						X		X	X					X				X																							
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																							
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X																							
Varicella Zoster Virus																									X																													
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																							
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X		X	X																							
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X		X																						

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

IV. Clustered ILI Activity

There were two ILI clusters reported during week 16. Both occurred in long-term healthcare facilities. Both facilities are still under investigation but rapid tests were negative for influenza.

VIII. Avian Influenza – Last Updated April 12, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	2	2	20	18
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
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Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
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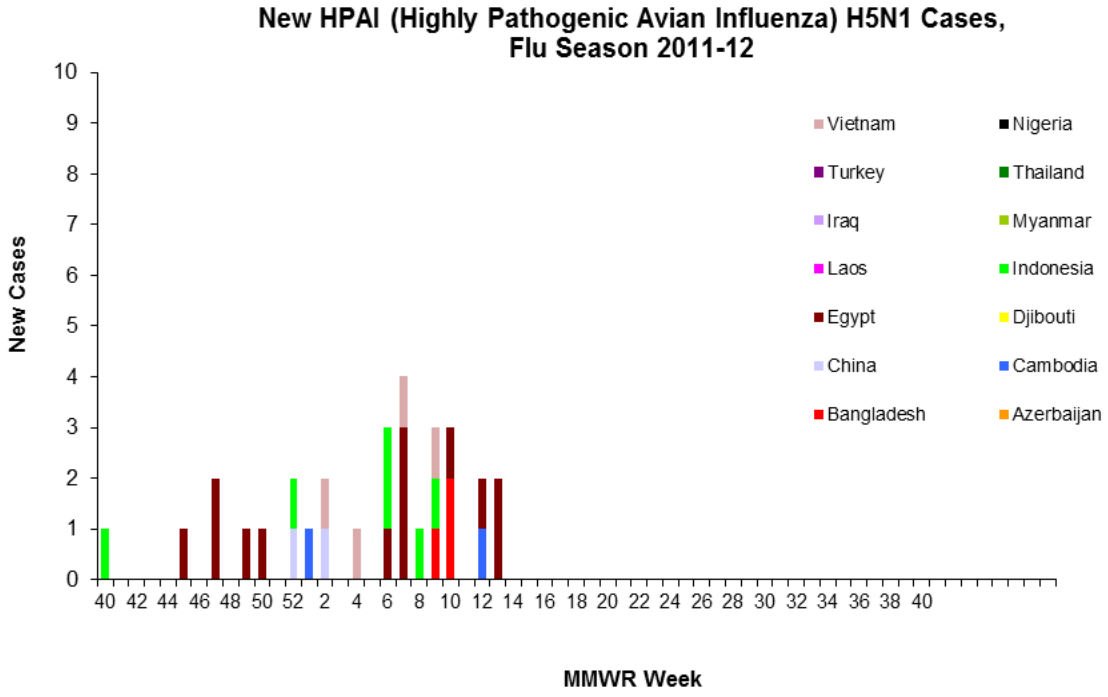

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Ending Dates for MMWR

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45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

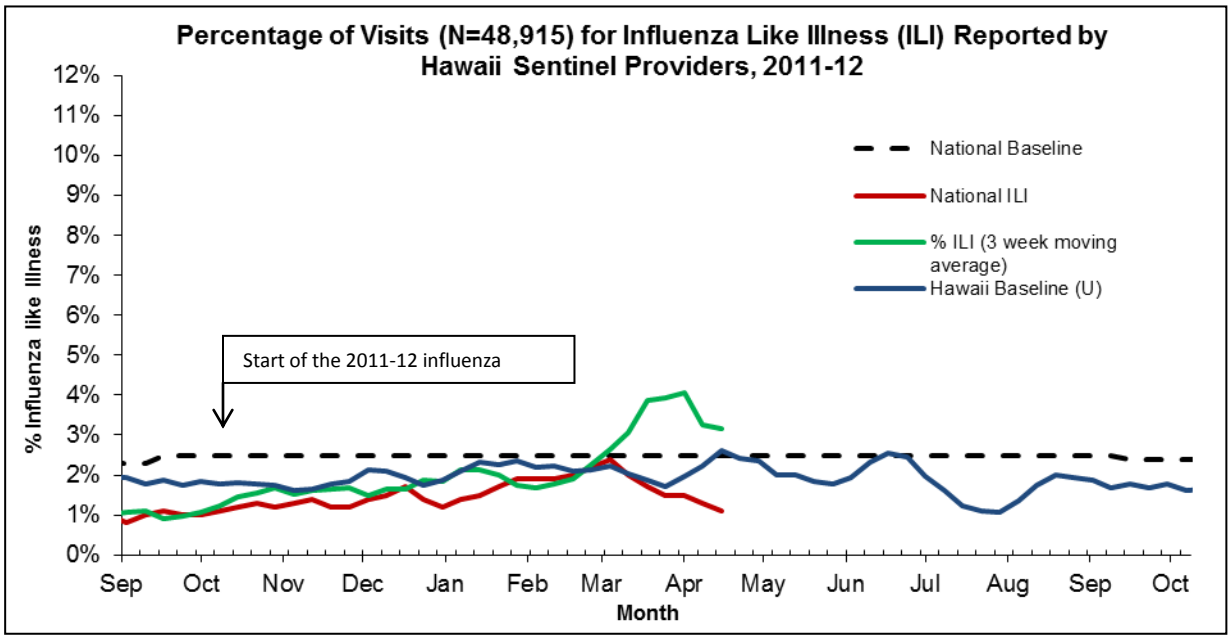
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

April 22–28, 2012: MMWR[1] Week 17, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 17 of the 2011–12 influenza year, 2.7% (95% CI 1.8–3.7%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 17 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to the national baseline[4] (2.4%) and higher than the national ILI (1.1%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 17 of the 2011–12 influenza season, 5.4% (95% CI 0.8–10.2%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 17 was comparable to both the epidemic threshold (7.6%) and national P&I mortality (6.9%).

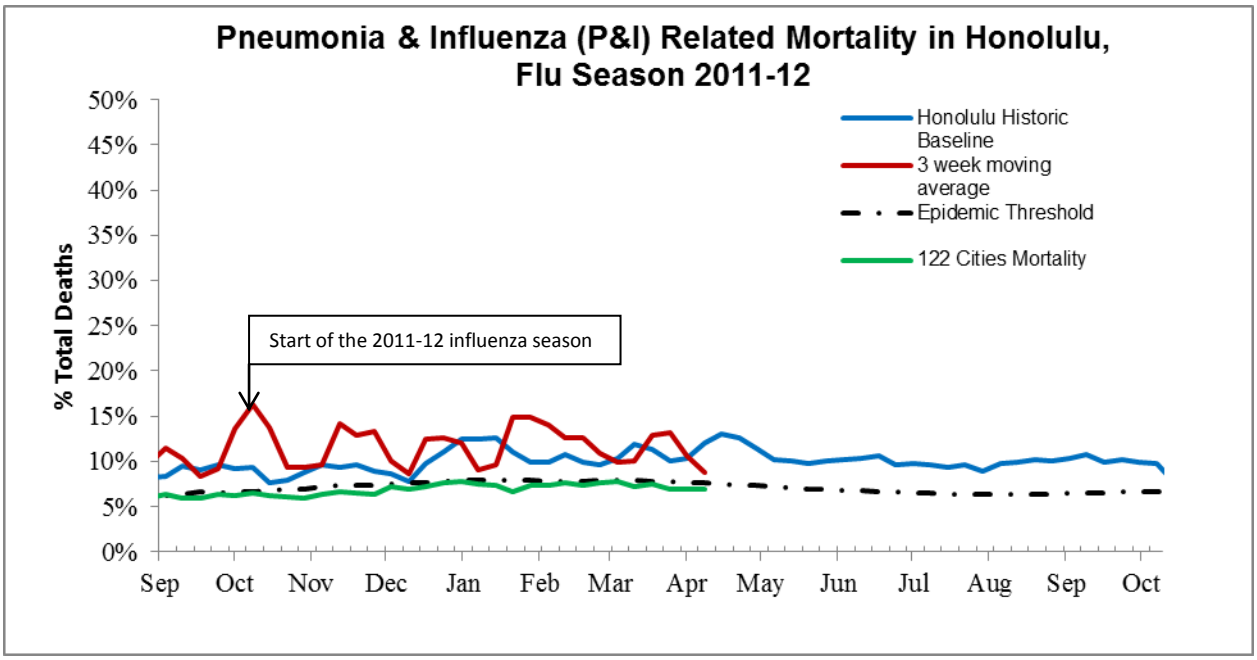
---

[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 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were two influenza-associated pediatric deaths reported to the CDC during week 17. The deaths occurred during week 7 (week ending February 18, 2012), and week 14 (week ending April 7, 2012. One death was associated with a 2009 H1N1 virus and the other was associated with a seasonal influenza A (H3) virus. Total influenza-associated pediatric deaths for the 2011–12 season is currently twenty.

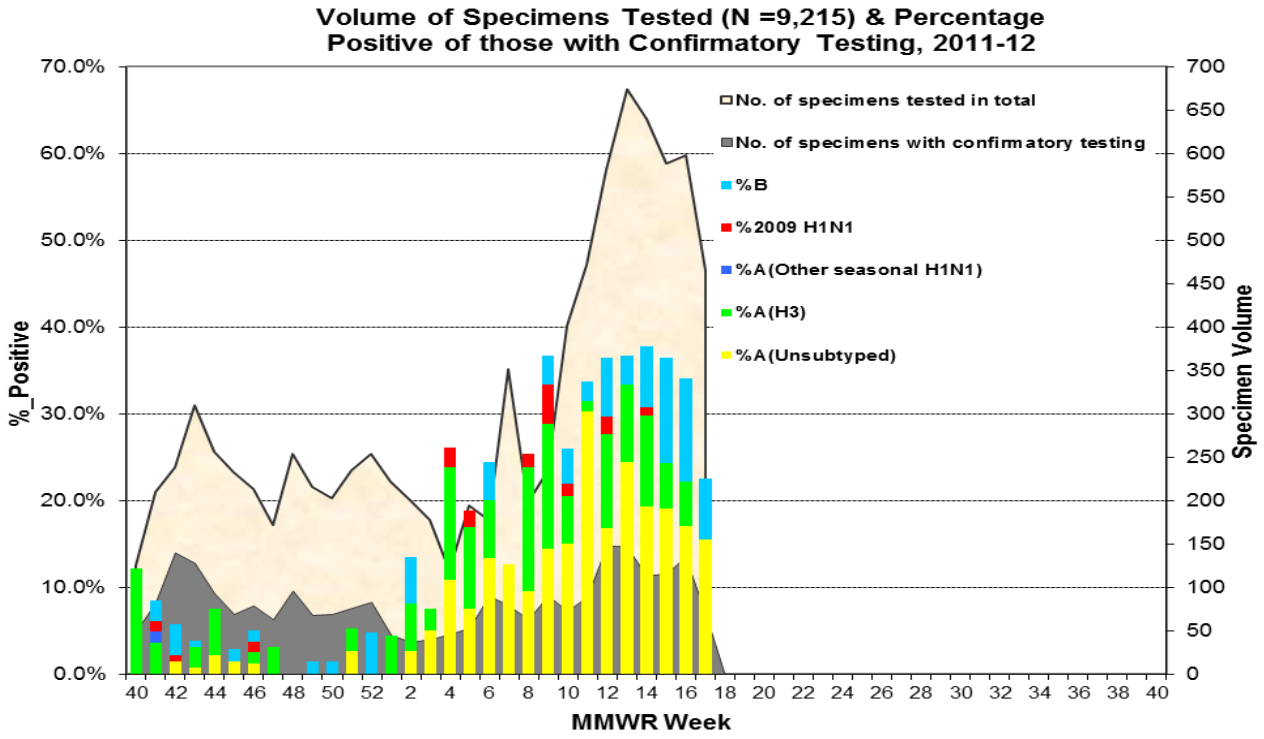
II. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 9,215 specimens have been tested statewide for influenza viruses. Of these, 6,683 (72.5%) were screened only by rapid antigen tests whereas the remaining 2,532 (27.5%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 1,109 (12.0%) cases of influenza A and 245 (2.7%) cases of influenza B were detected using any method. Of the influenza A cases detected, 15 (1.4%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 125 (11.3%) were influenza A (H3), and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.[6]

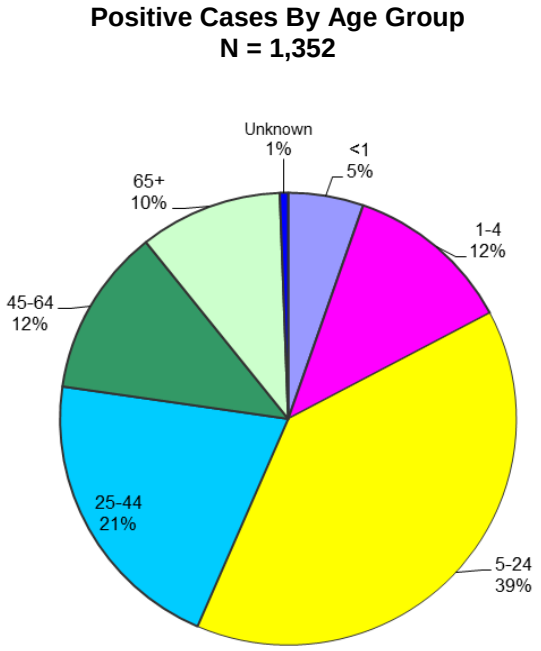
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

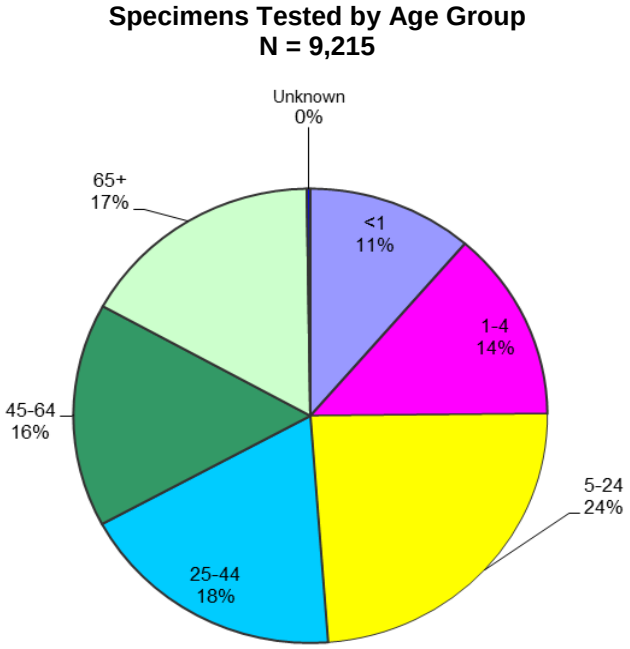
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 14.7% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X																								
Parainfluenza Virus				X						X	X	X						X		X	X					X				X																							
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																						
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X																						
Varicella Zoster Virus																									X																												
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																						
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X		X	X																							
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X																						

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

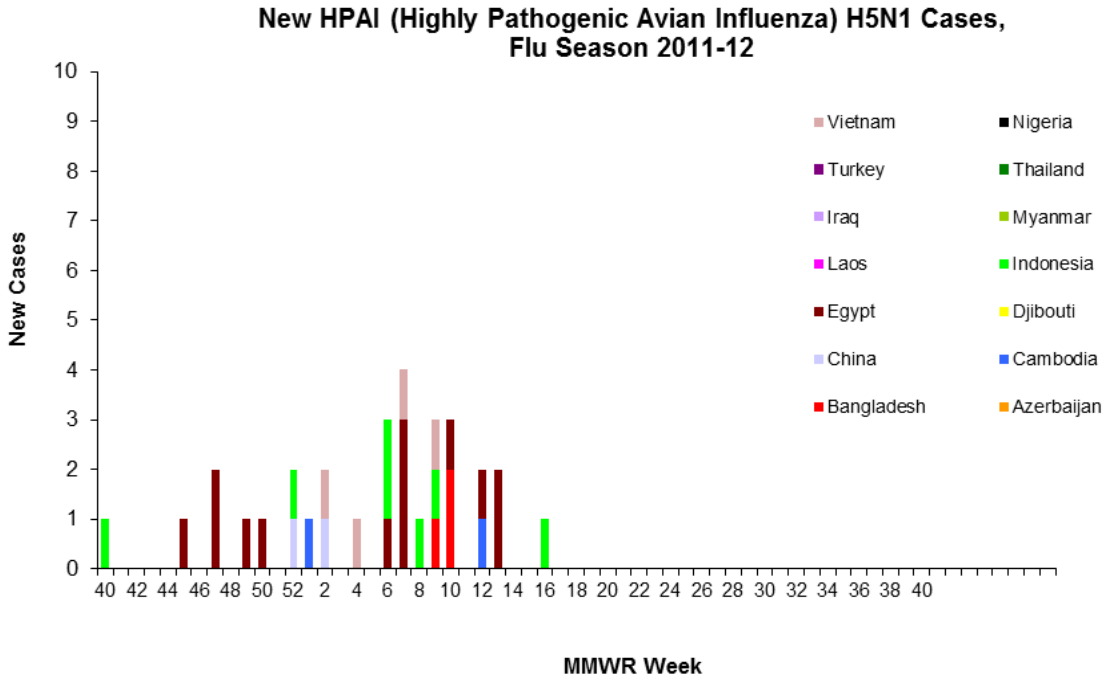
IV. Clustered ILI Activity

There was one ILI cluster reported on Oahu during week 17. The cluster occurred in a school and is still being investigated. Currently there have been 6 reported influenza-like clusters reported to HDOH.

VIII. Avian Influenza – Last Updated May 2, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	2	2	20	18
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	9	5	167	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	6	6	189	157
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	25	16	**603**	**356**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

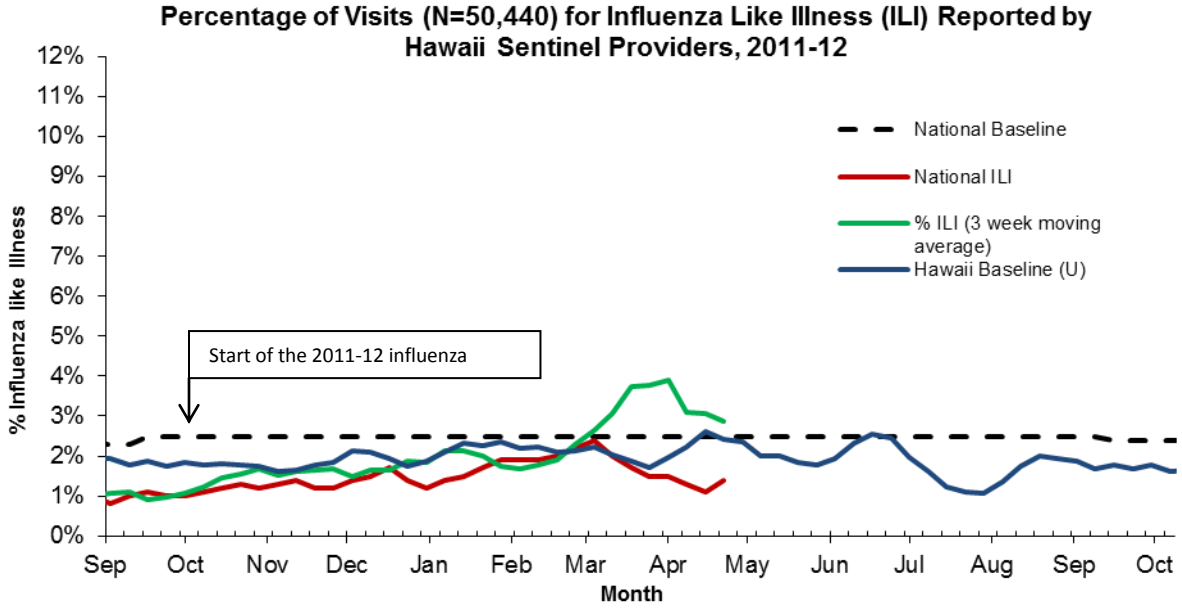
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

April 29–May 5, 2012: MMWR[1] Week 18, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 18 of the 2011–12 influenza year, 3.1% (95% CI 2.0–4.3%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 18 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to the national baseline[4] (2.4%) and higher than the national ILI (1.4%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 18 of the 2011–12 influenza season, 15.1% (95% CI 6.9–23.3%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 18 was comparable to both the epidemic threshold (7.5%) and national P&I mortality (6.9%).

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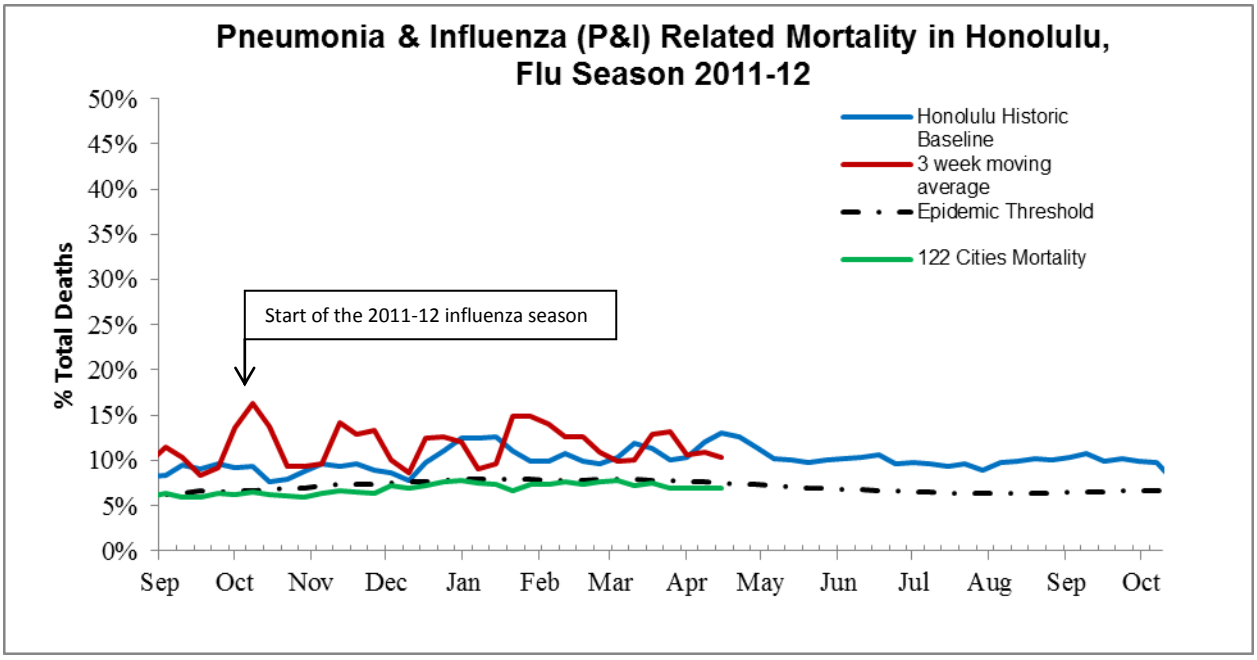
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were two influenza-associated pediatric deaths reported to the CDC during week 18. The deaths occurred during week 17 (week ending April 28, 2012) and week 18 (week ending May 5, 2012). One death was associated with an influenza B virus and the other was associated with an influenza A virus in which the subtype was not determined. Total influenza-associated pediatric deaths for the 2011–12 season is currently 22.

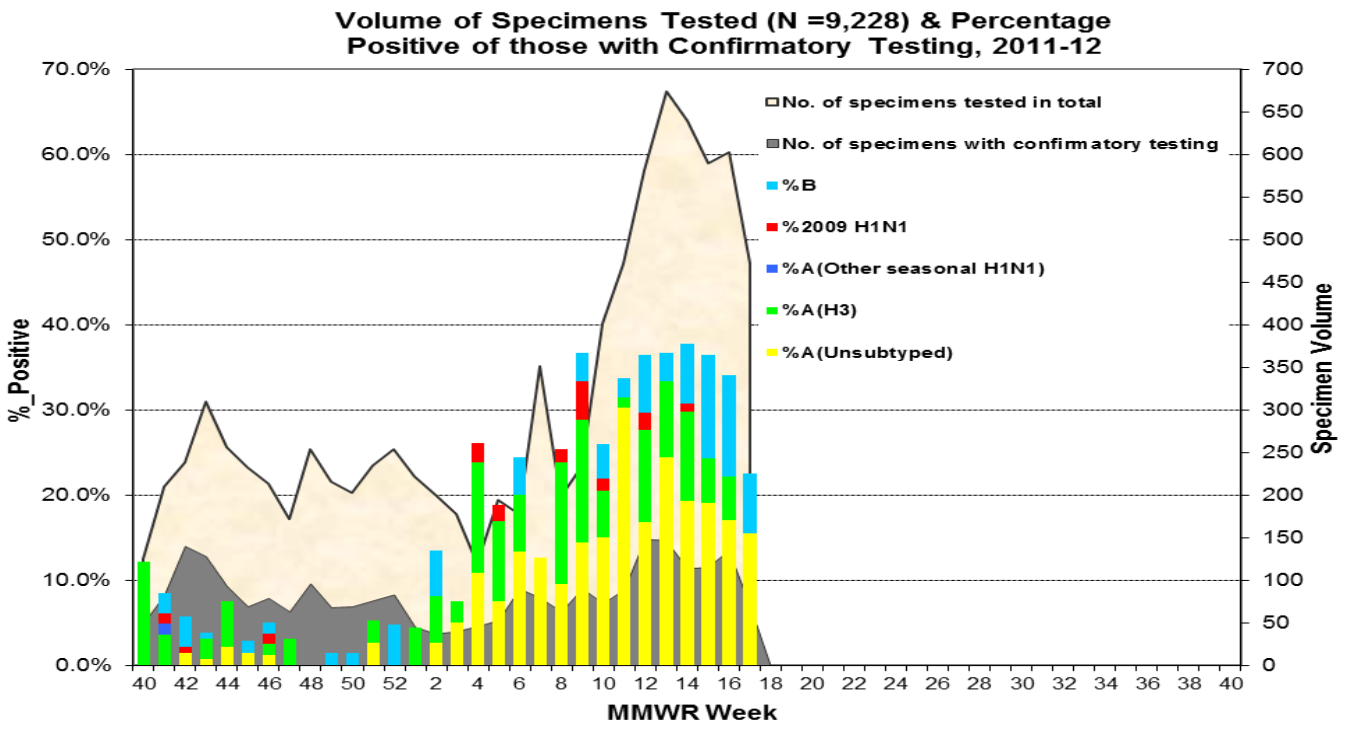
II. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 9,228 specimens have been tested statewide for influenza viruses. Of these, 6,696 (72.6%) were screened only by rapid antigen tests whereas the remaining 2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method. Of the influenza A cases detected, 15 (1.4%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 125 (11.3%) were influenza A (H3), and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.[6]

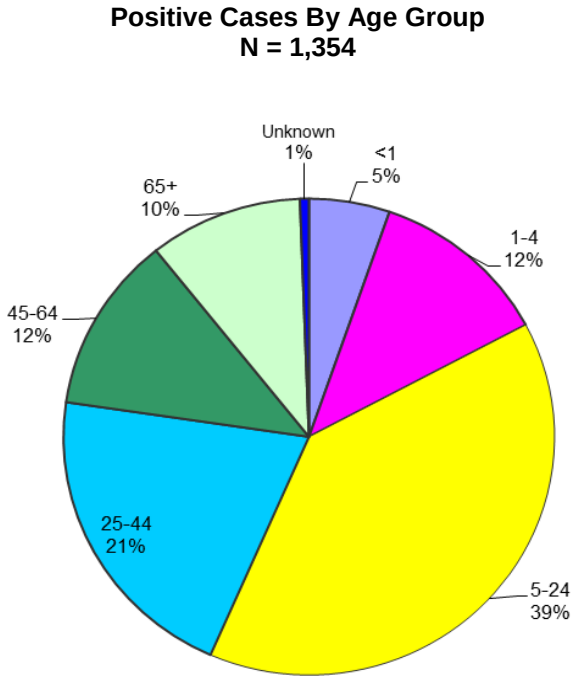
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

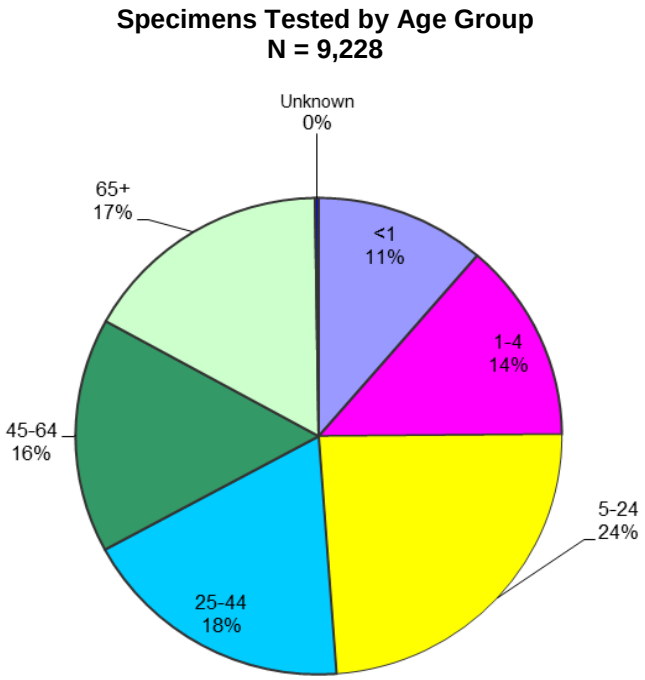
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 14.7% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X																								
Parainfluenza Virus				X						X	X	X						X		X	X					X				X																							
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																						
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X																						
Varicella Zoster Virus																									X																												
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																						
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X		X	X																							
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X																						

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

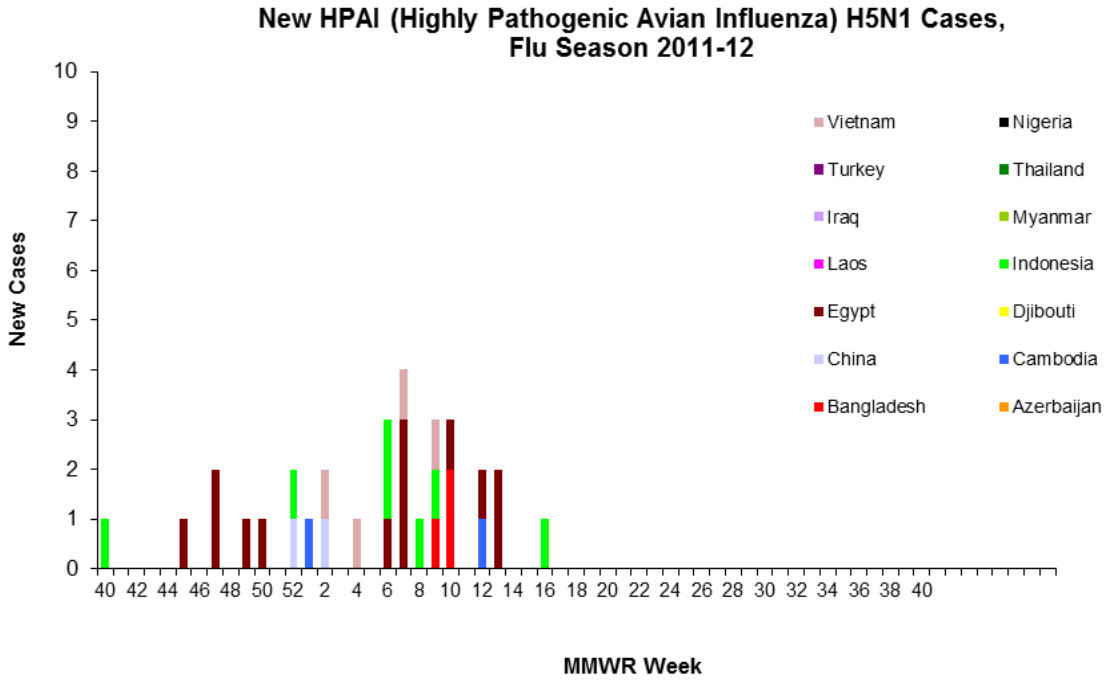
IV. Clustered ILI Activity

There no ILI cluster reported during week 18. Currently there have been 6 reported influenza-like clusters reported to HDOH.

VIII. Avian Influenza – Last Updated May 2, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	2	2	20	18
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	9	5	167	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	6	6	189	157
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	25	16	**603**	**356**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
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18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
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35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

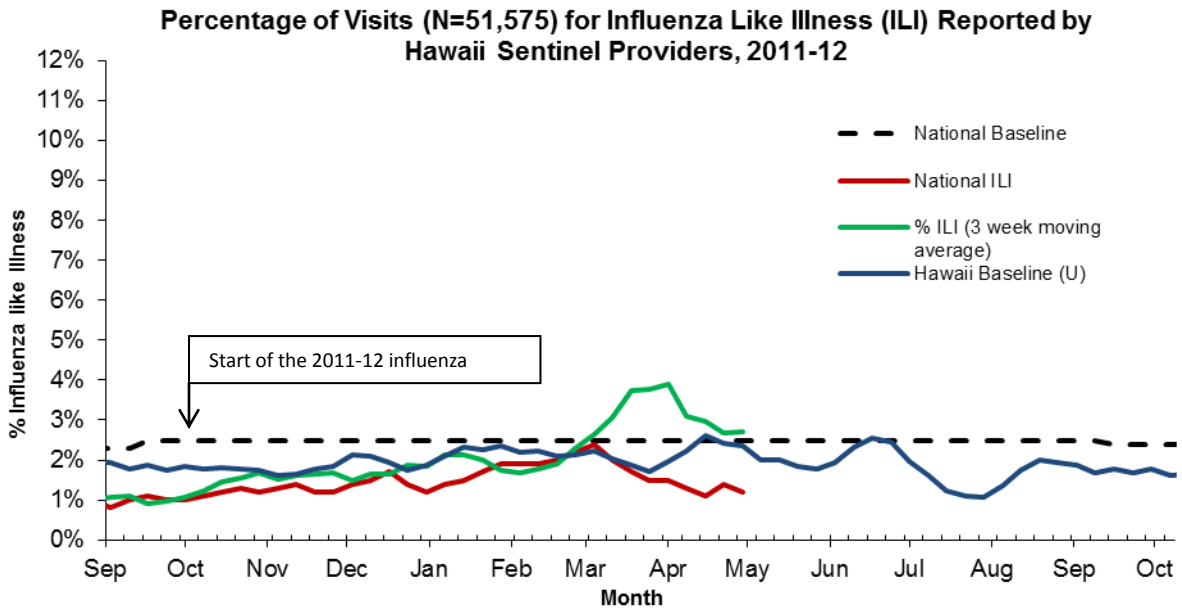
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

May 6–12, 2012: MMWR[1] Week 19, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 19 of the 2011–12 influenza year, 3.1% (95% CI 2.0–4.3%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 19 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to the national baseline[4] (2.4%) and higher than the national ILI (1.2%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 19 of the 2011–12 influenza season, 11.7% (95% CI 4.5–18.9%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 19 was comparable to both the epidemic threshold (7.5%) and national P&I mortality (6.1%).

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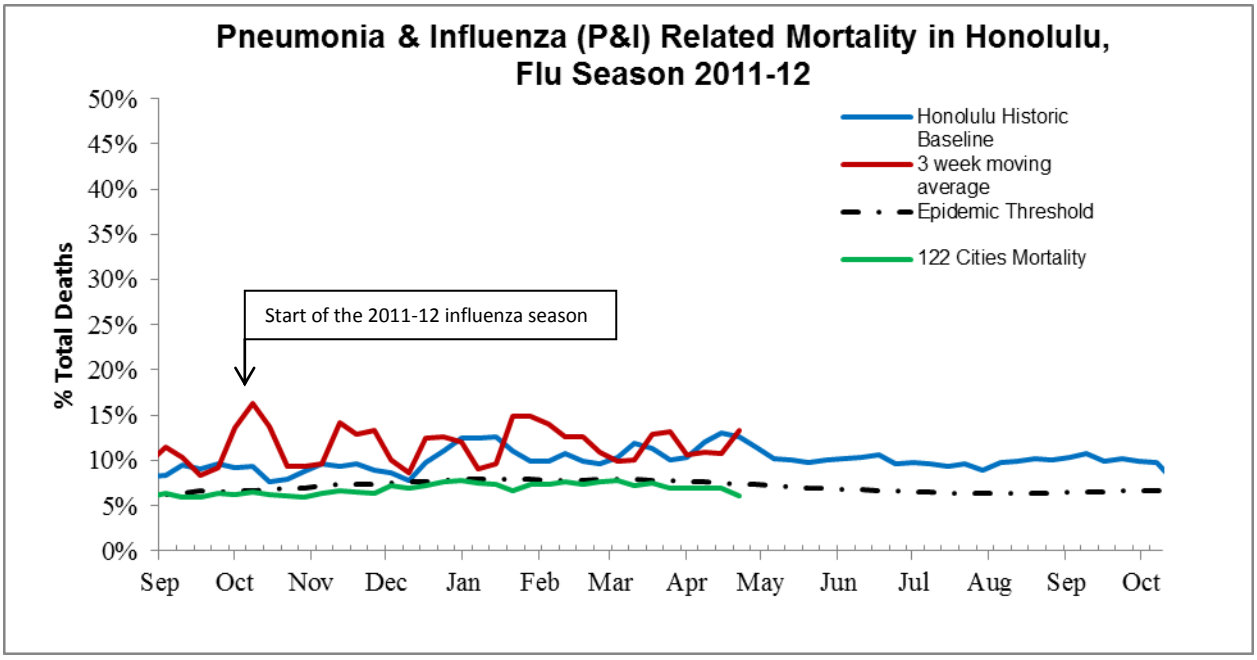
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were two influenza-associated pediatric deaths reported to the CDC during week 19. The deaths occurred during week 17 (week ending April 28, 2012) and week 19 (week ending May 12, 2012). One death was associated with an influenza B virus and the other was associated with an influenza A virus in which the subtype was not determined. Total influenza-associated pediatric deaths for the 2011–12 season is currently 24.

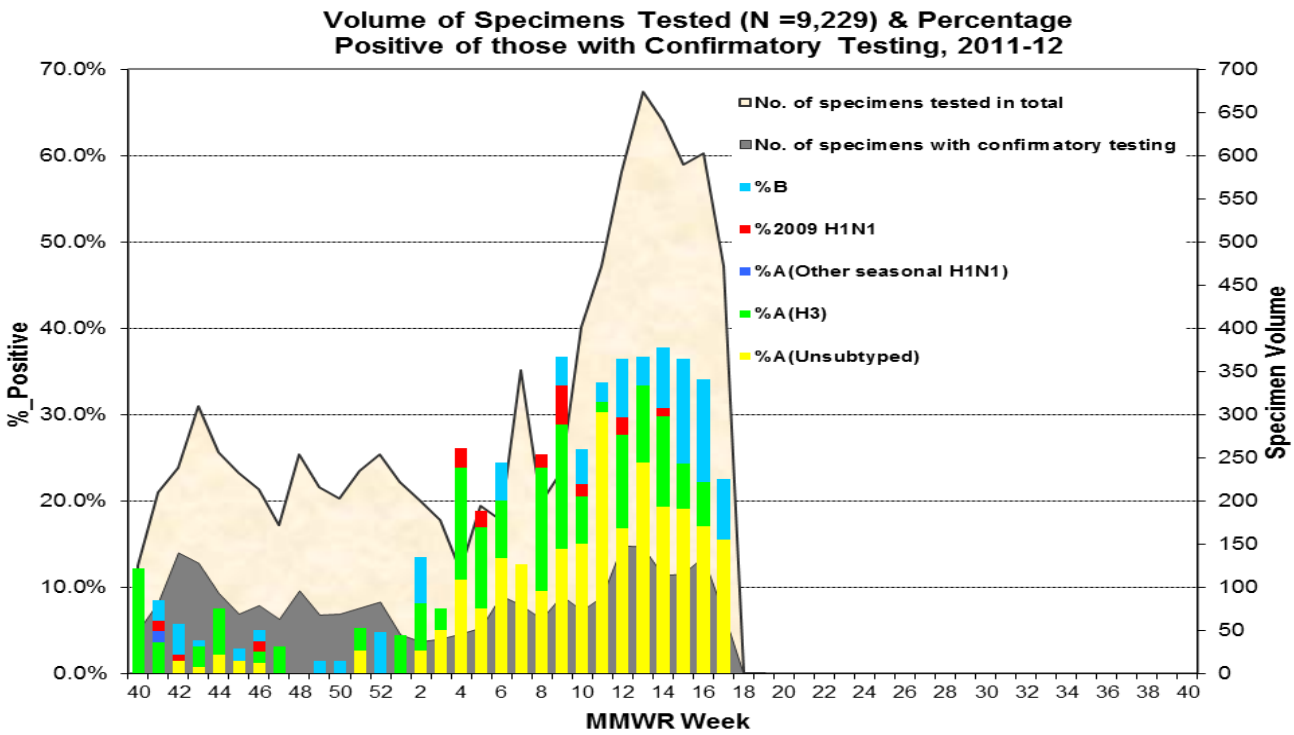
II. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 9,229 specimens have been tested statewide for influenza viruses. Of these, 6,697 (72.6%) were screened only by rapid antigen tests whereas the remaining 2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method. Of the influenza A cases detected, 15 (1.4%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 125 (11.3%) were influenza A (H3), and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.[6]

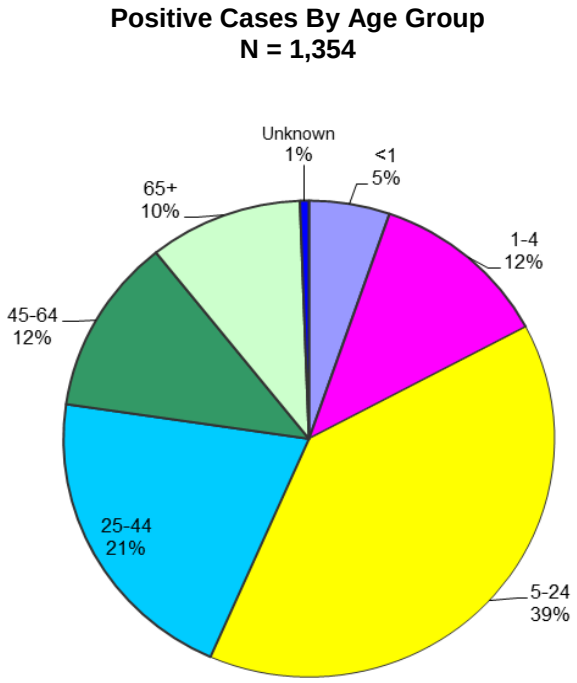
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

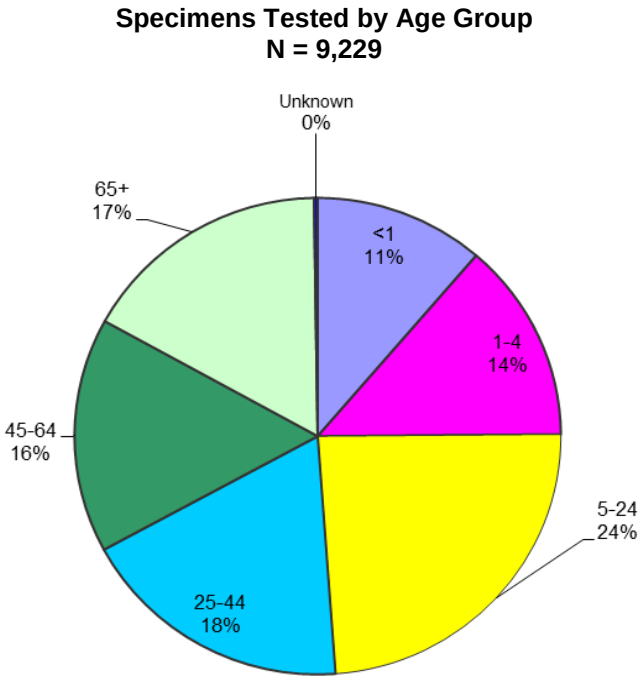
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 14.7% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X																								
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X																					
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																						
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																						
Varicella Zoster Virus																									X																													
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																							
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X																							
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X																					

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

IV. Clustered ILI Activity

There were no ILI clusters reported during week 19. Currently there have been 6 reported influenza-like clusters reported to HDOH.

VIII. Avian Influenza – Last Updated May 2, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	2	2	20	18
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Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
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Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
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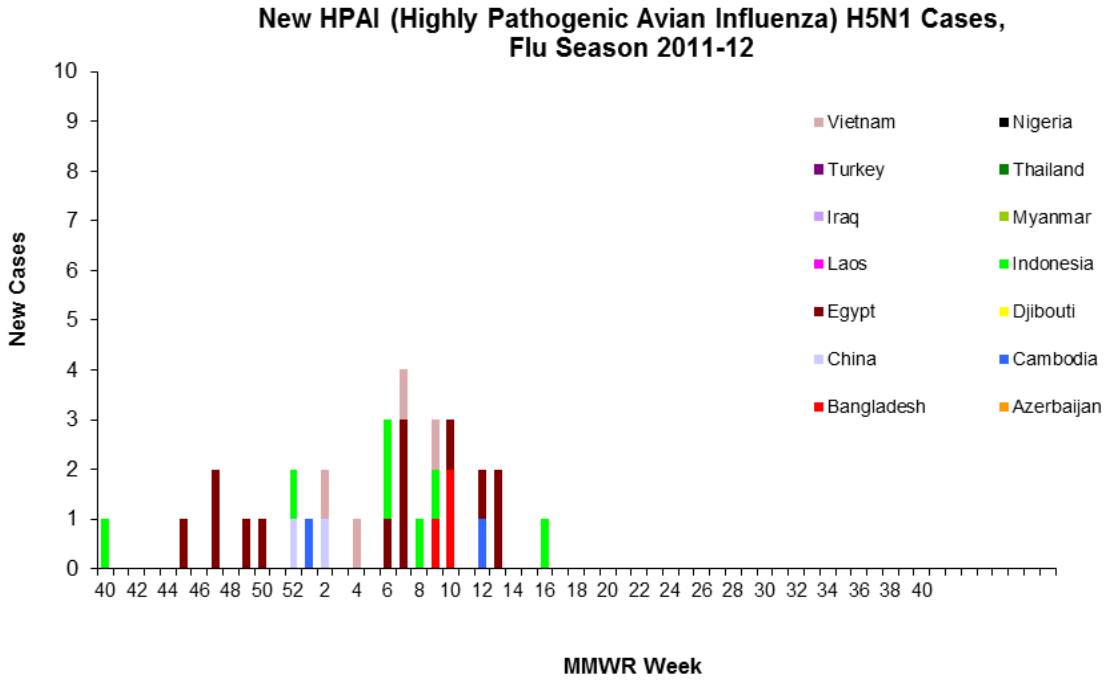

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Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
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34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

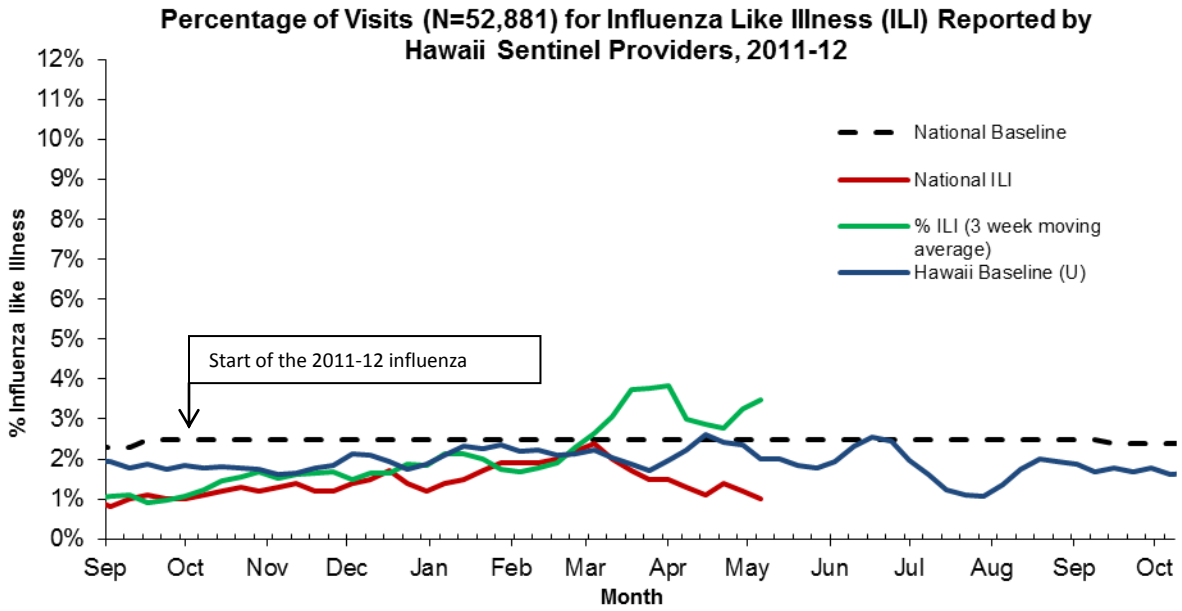
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

May 13–19, 2012: MMWR[1] Week 20, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 20 of the 2011–12 influenza year, 3.9% (95% CI 2.5–5.1%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 20 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to the national baseline[4] (2.4%) and higher than the national ILI (1.0%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 20 of the 2011–12 influenza season, 19.2% (95% CI 8.5–29.9%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was higher than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 20 was higher than both the epidemic threshold (7.4%) and national P&I mortality (6.4%).

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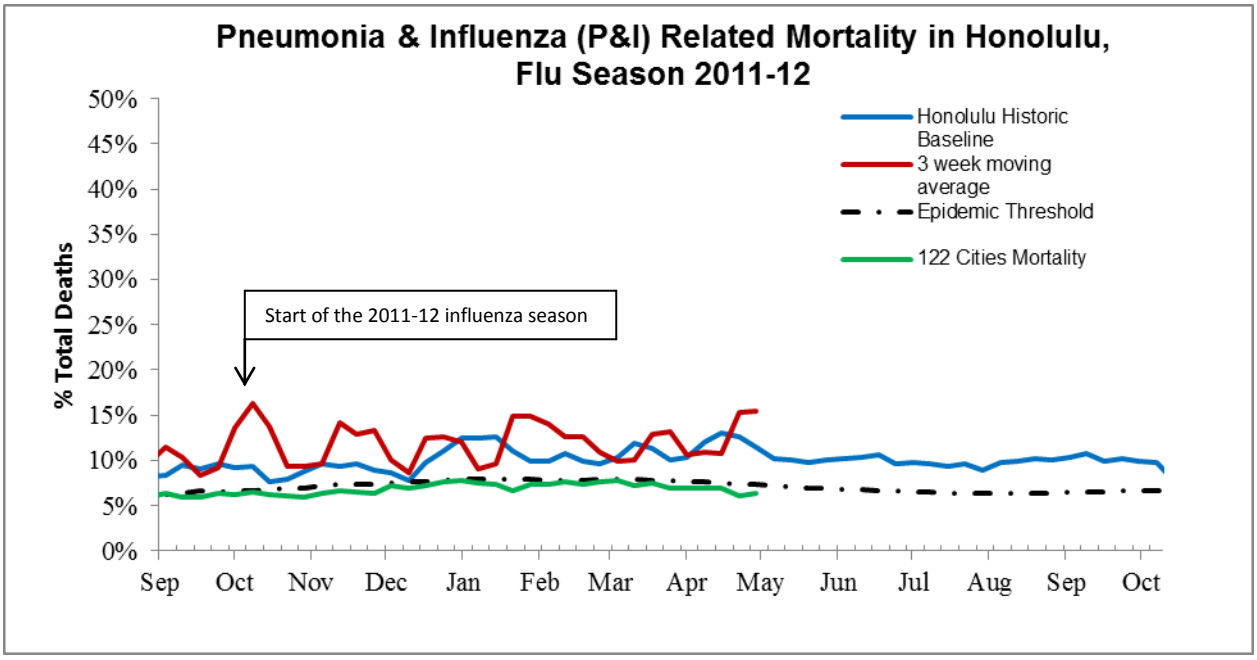
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were two influenza-associated pediatric deaths reported to the CDC during week 20. Both deaths occurred during week 19 (week ending May 12, 2012). One death was associated with an influenza B virus and the other was associated with a seasonal influenza A (H3) virus. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 26.

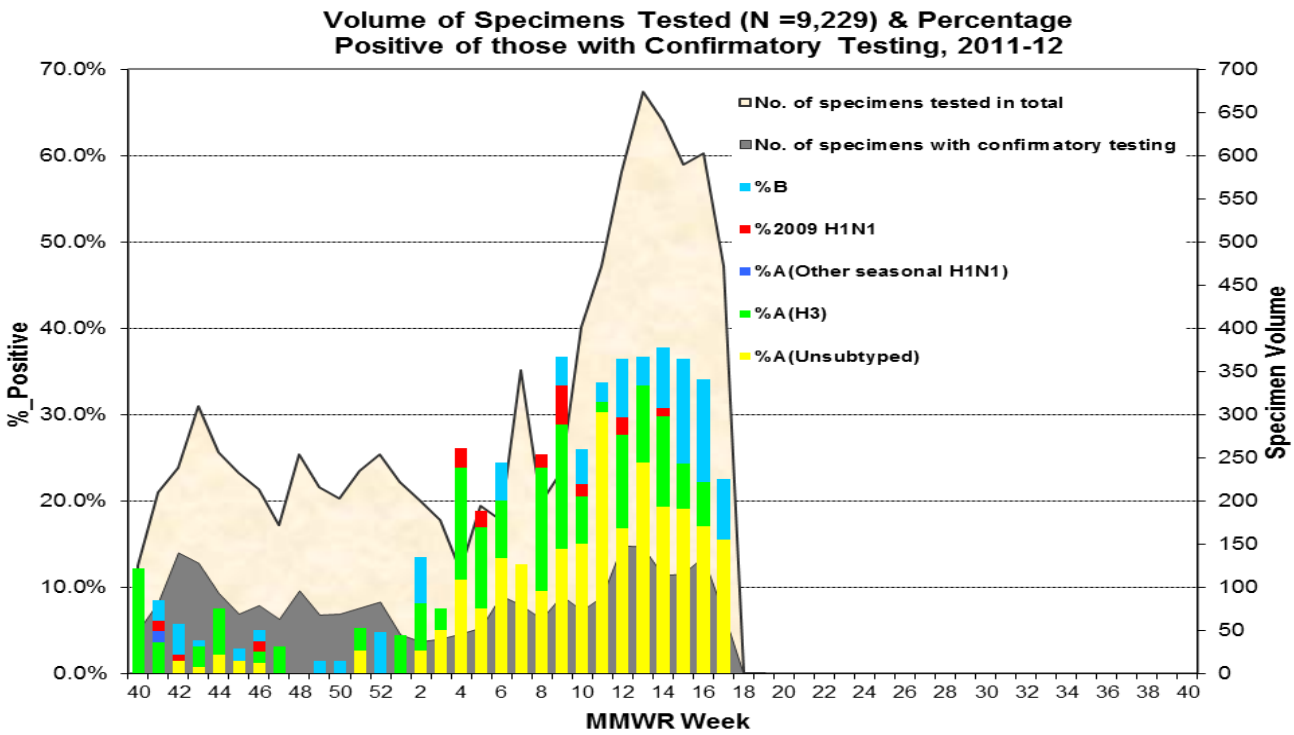
II. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 9,229 specimens have been tested statewide for influenza viruses. Of these, 6,697 (72.6%) were screened only by rapid antigen tests whereas the remaining 2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method. Of the influenza A cases detected, 15 (1.4%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 125 (11.3%) were influenza A (H3), and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.[6]

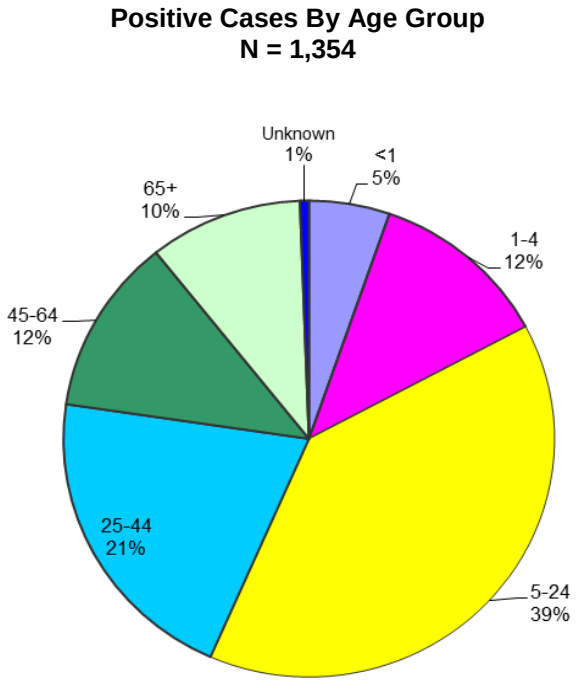
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

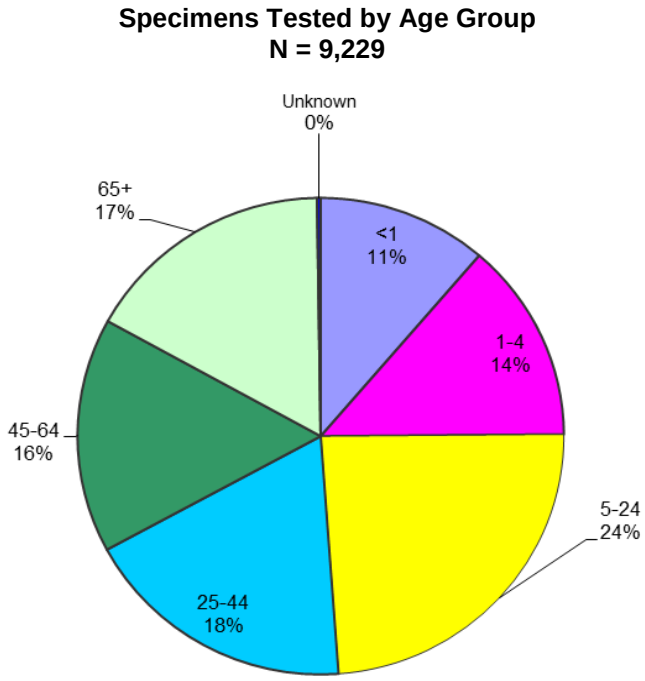
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 14.7% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X																		
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X																			
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																			
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																			
Varicella Zoster Virus																									X																												
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																						
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																				
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X																			

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

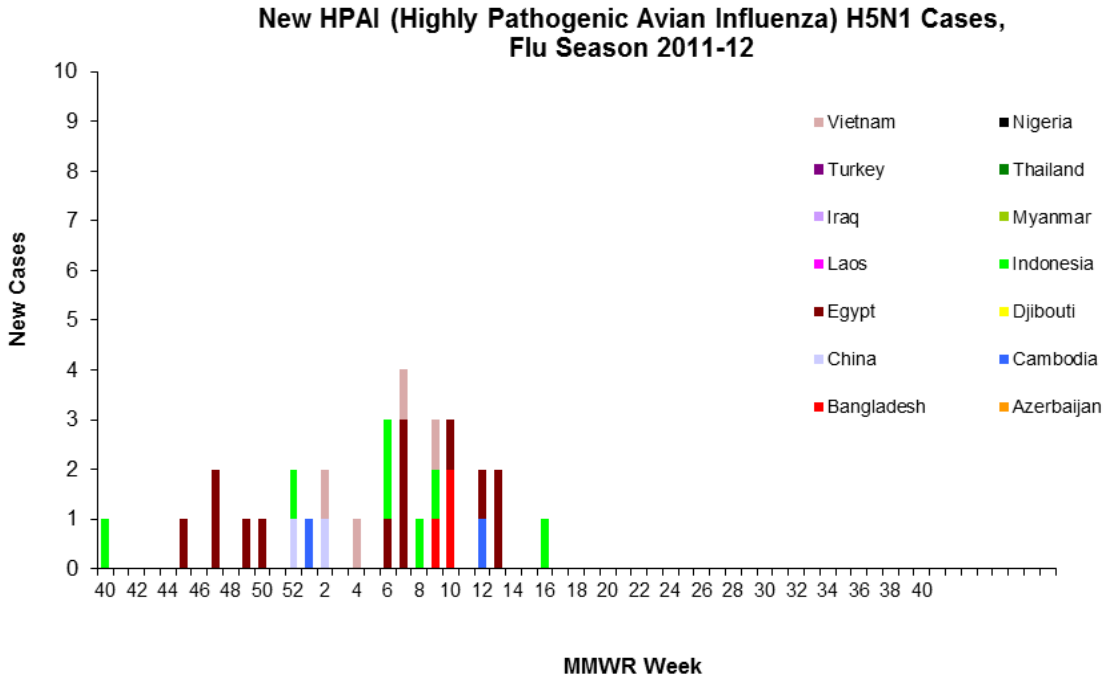
IV. Clustered ILI Activity

There were no ILI clusters reported during week 20. Currently there have been 6 reported influenza-like clusters reported to HDOH.

VIII. Avian Influenza – Last Updated May 2, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	2	2	20	18
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	1	1	42	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	9	5	167	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	6	6	189	157
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	25	16	**603**	**356**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
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43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
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49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
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June 14, 2012 Volume 2012 (22)

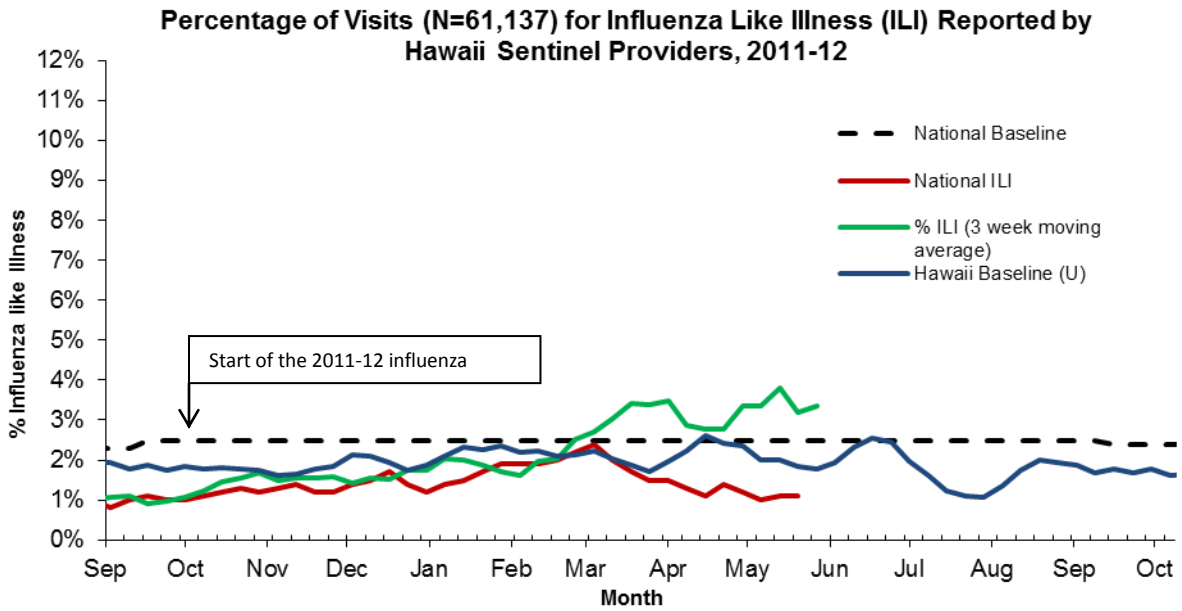
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

May 27–June 2, 2012: MMWR[1] Week 22, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 22 of the 2011–12 influenza year, 4.3% (95% CI 3.0–5.6%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 22 of 2012 was higher than the historical baseline in Hawaii ($p<0.05$)[2,3] as well as the national baseline[4] (2.4%) and national ILI (1.1%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 22 of the 2011–12 influenza season, 9.2% (95% CI 2.2–16.3%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 22 was comparable to the epidemic threshold (7.2%) and the national P&I mortality (6.0%).

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[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 1 for interpretation of MMWR weeks.

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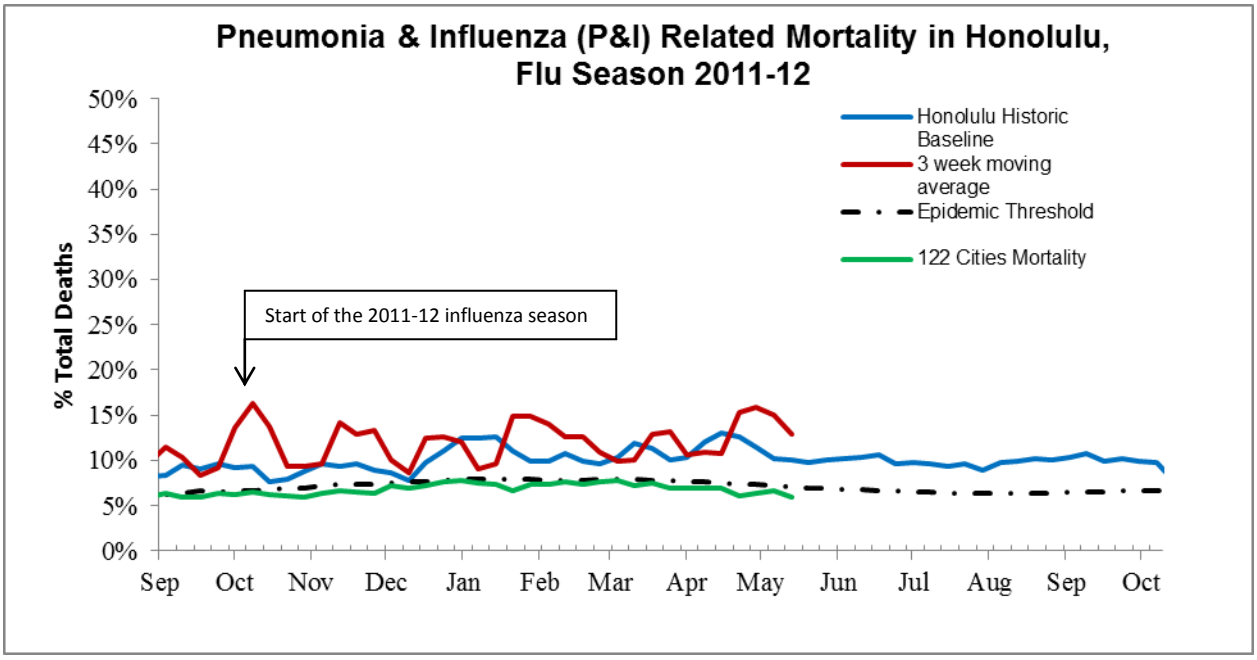
[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. The chart above represents a 3-week moving 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.



Influenza Associated Pediatric Mortality[5]

There were no influenza-associated pediatric deaths reported to the CDC during week 22. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 26.

II. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 9,229 specimens have been tested statewide for influenza viruses. Of these, 6,697 (72.6%) were screened only by rapid antigen tests whereas the remaining 2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method. Of the influenza A cases detected, 15 (1.4%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 125 (11.3%) were influenza A (H3), and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.[6]

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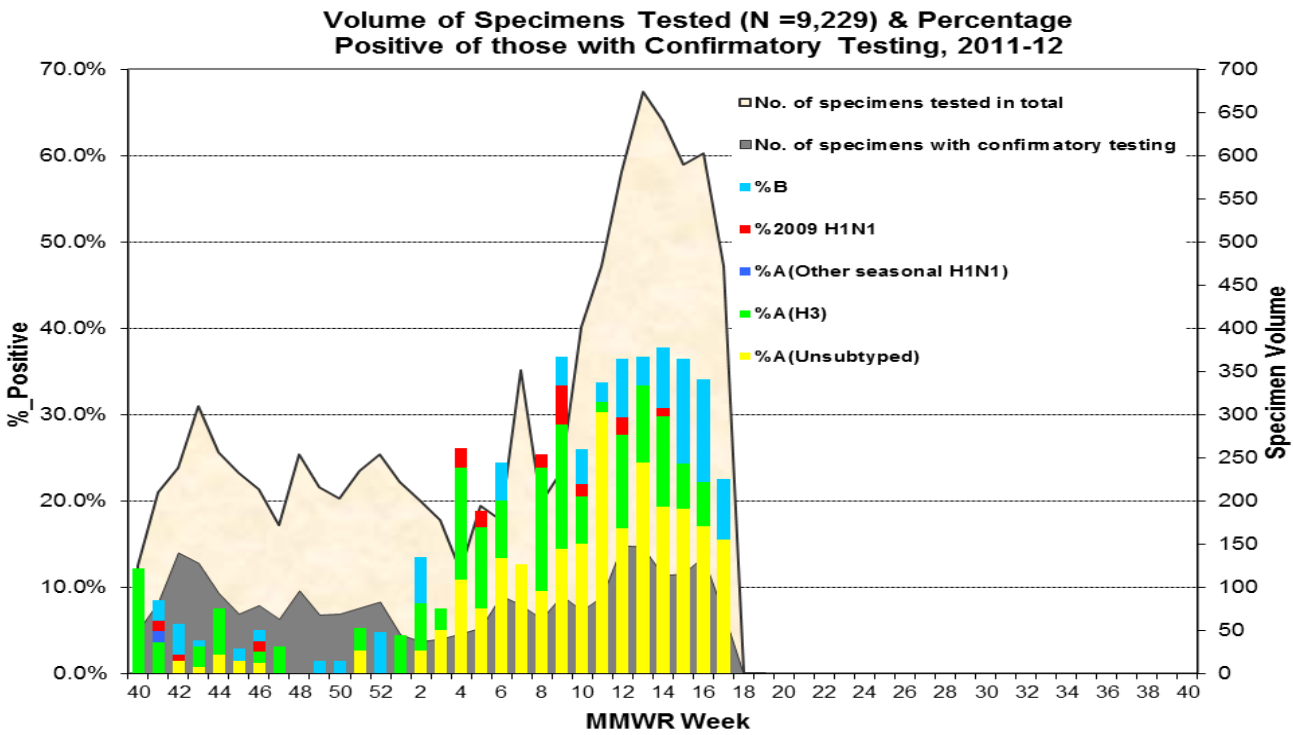

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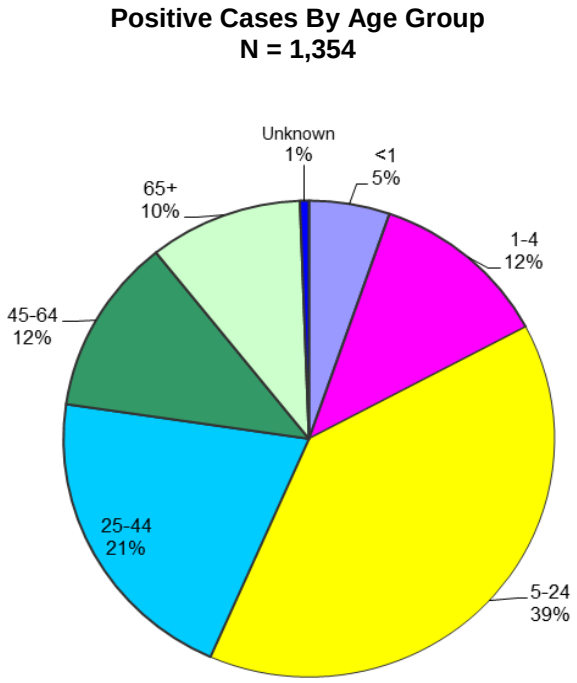

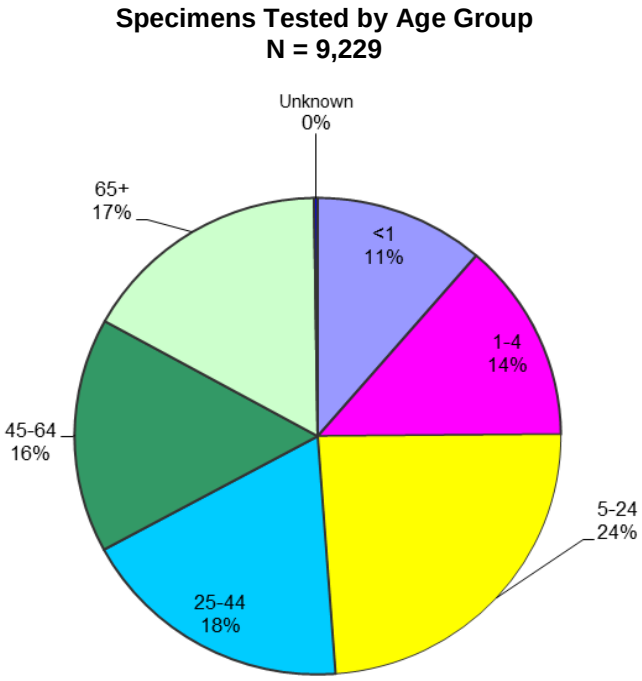

Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
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Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X																
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X																			
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	
Varicella Zoster Virus																									X																													
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																							
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																				
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X																	

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

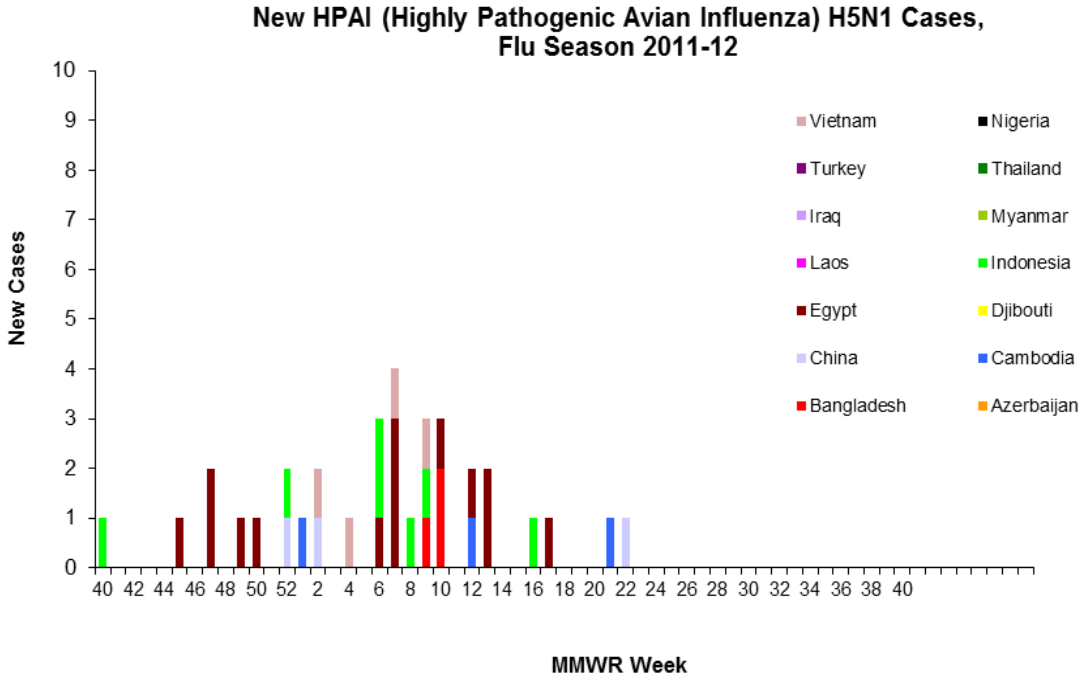
IV. Clustered ILI Activity

There were no ILI clusters reported during week 22. Currently there have been 6 reported influenza-like clusters reported to HDOH.

VIII. Avian Influenza – Last Updated June 7, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	6	6	189	157
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	28	17	**606**	**357**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
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18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
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30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

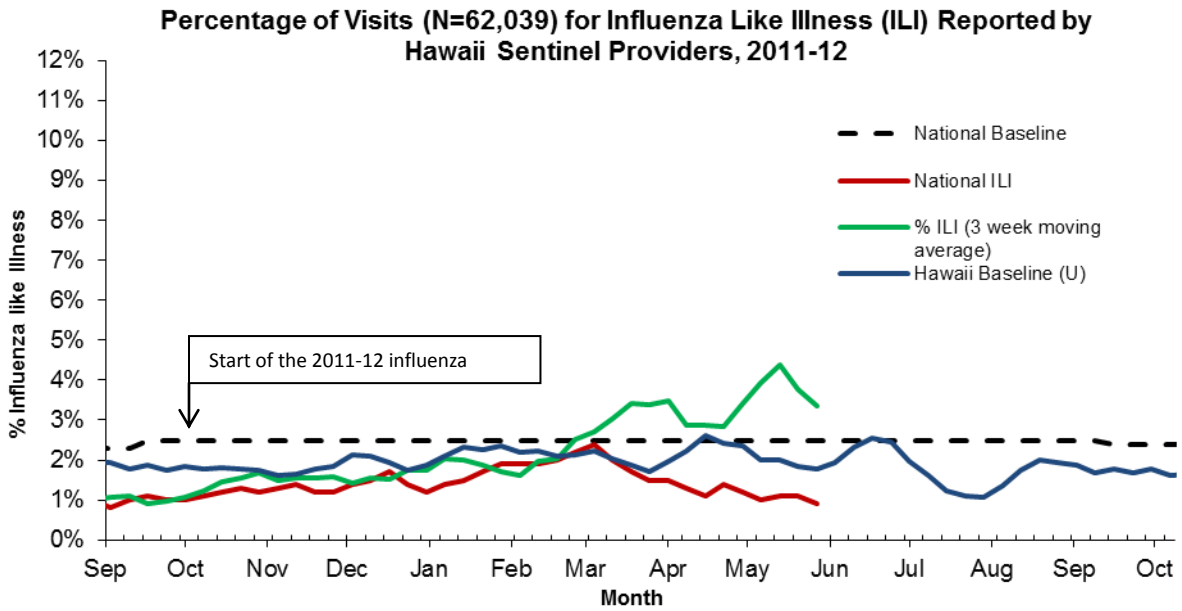
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

June 3–9, 2012: MMWR[1] Week 23, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 23 of the 2011–12 influenza year, 2.4% (95% CI 1.3–3.5%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 23 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to the national baseline[4] (2.4%) and higher than the national ILI (0.9%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 23 of the 2011–12 influenza season, 8.3% (95% CI 1.9–14.7%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 23 was comparable to the epidemic threshold (7.1%) and the national P&I mortality (6.3%).

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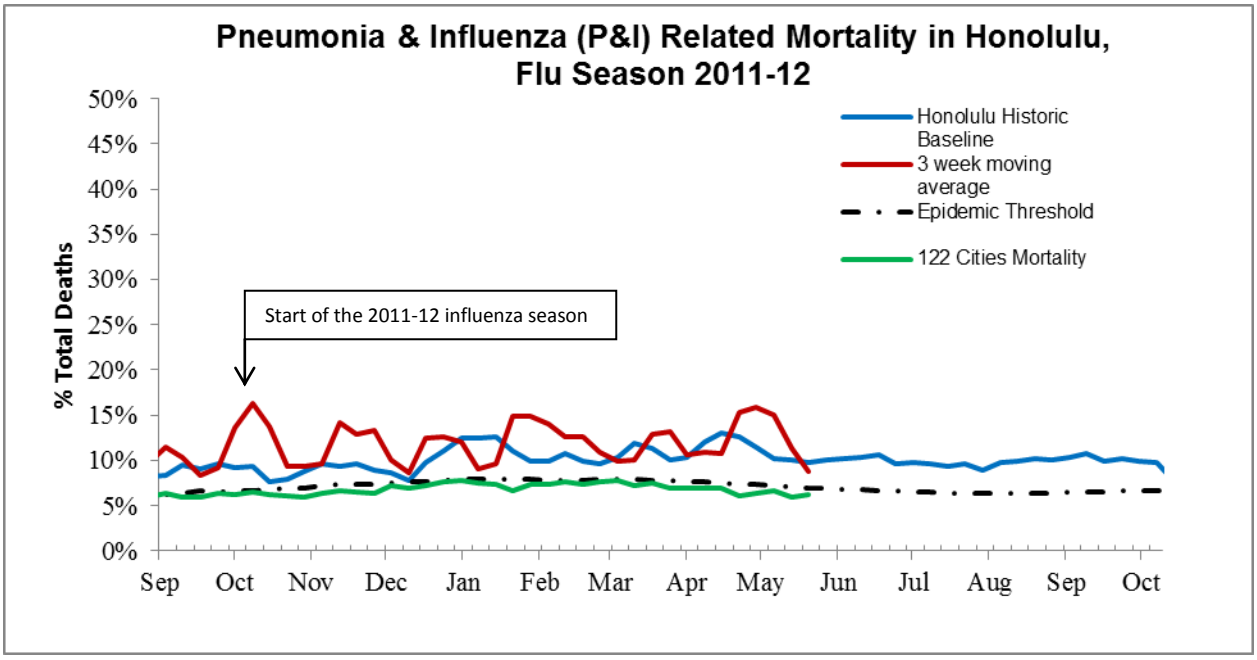
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were no influenza-associated pediatric deaths reported to the CDC during week 23. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 26.

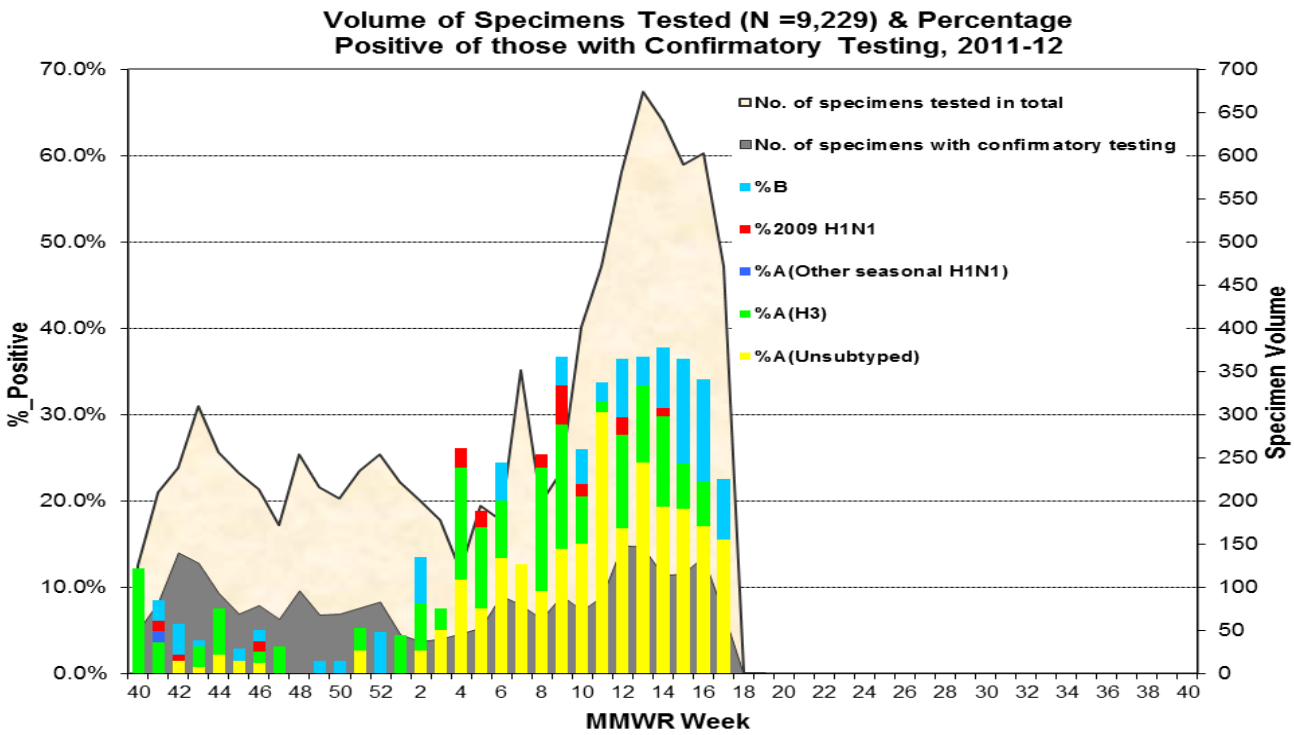
II. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 9,229 specimens have been tested statewide for influenza viruses. Of these, 6,697 (72.6%) were screened only by rapid antigen tests whereas the remaining 2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method. Of the influenza A cases detected, 15 (1.4%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 125 (11.3%) were influenza A (H3), and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.[6]

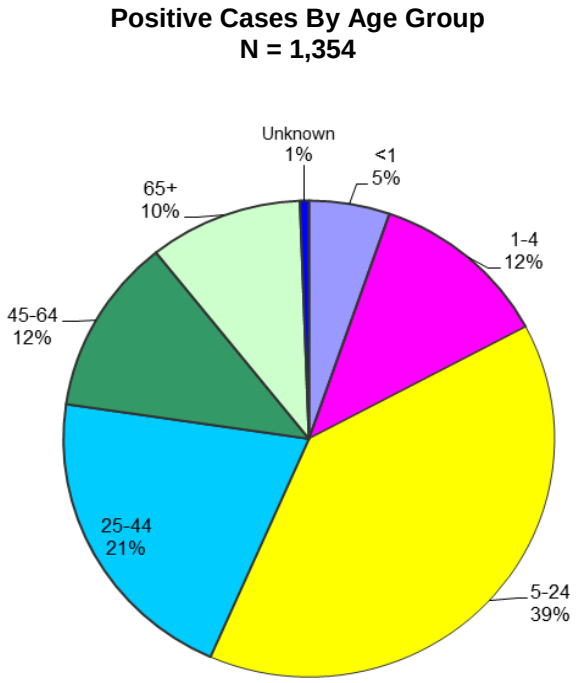
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

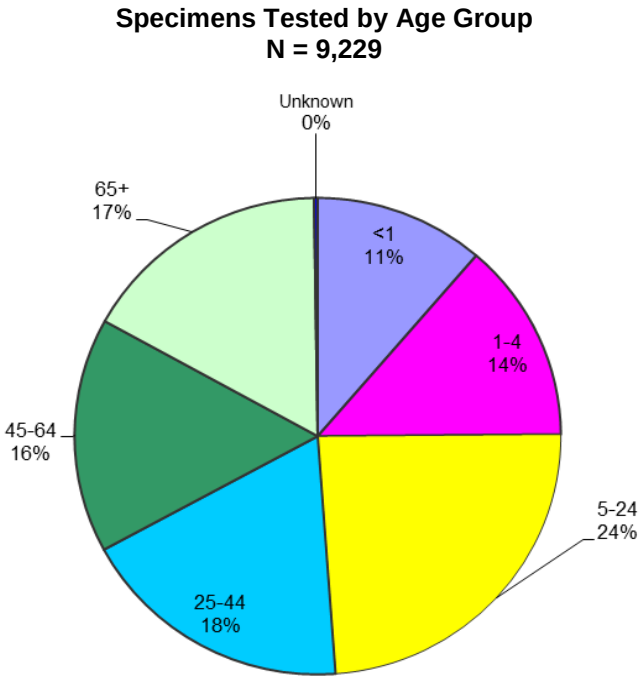
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 14.7% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
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Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X																
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X																			
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	
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Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X																	

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

IV. Clustered ILI Activity

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VIII. Avian Influenza – Last Updated June 7, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
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Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
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Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
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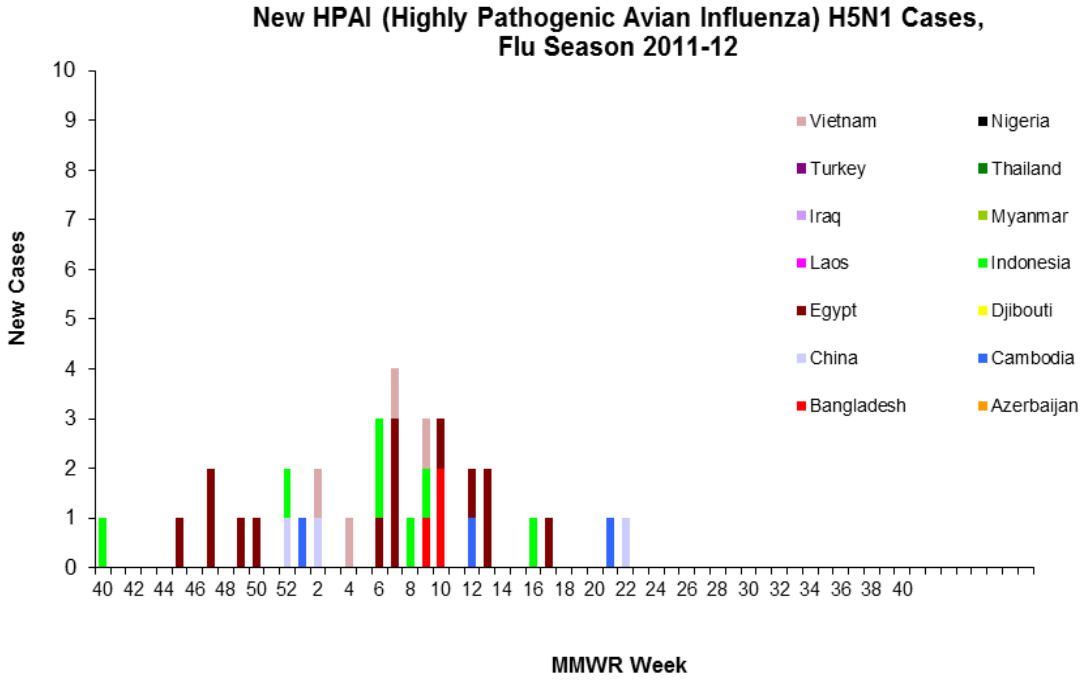

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Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
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25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
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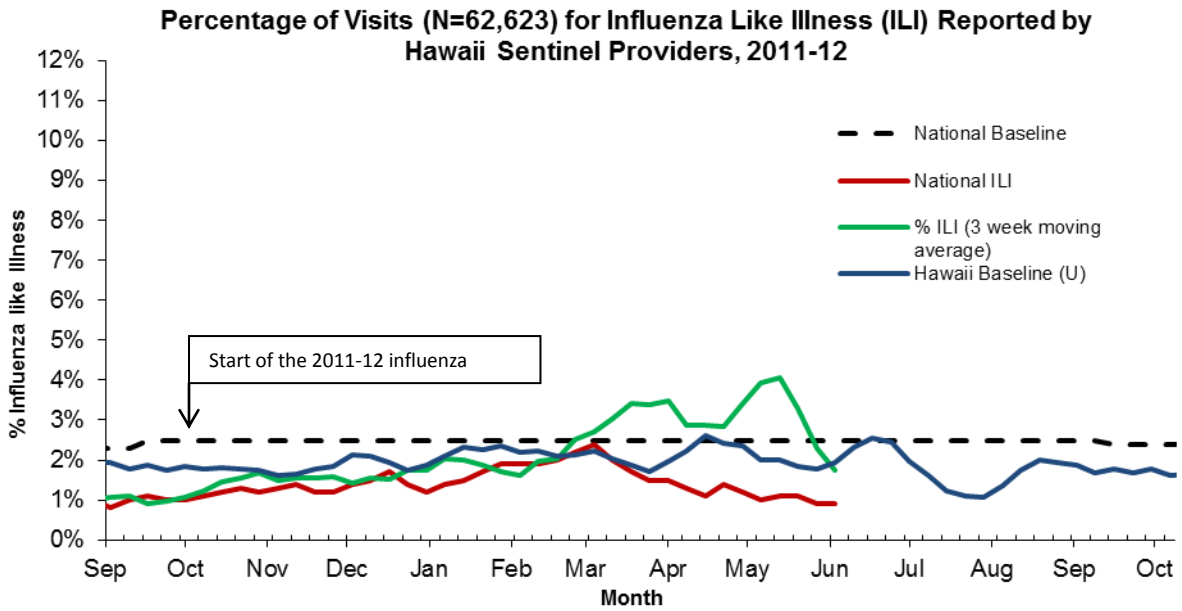
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

June 10–16, 2012: MMWR[1] Week 24, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 24 of the 2011–12 influenza year, 1.6% (95% CI 0.8–2.5%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 24 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to the national baseline[4] (2.4%) and the national ILI (0.9%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 24 of the 2011–12 influenza season, 14.6% (95% CI 4.6–24.6%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 24 was comparable to the epidemic threshold (7.0%) and the national P&I mortality (6.3%).

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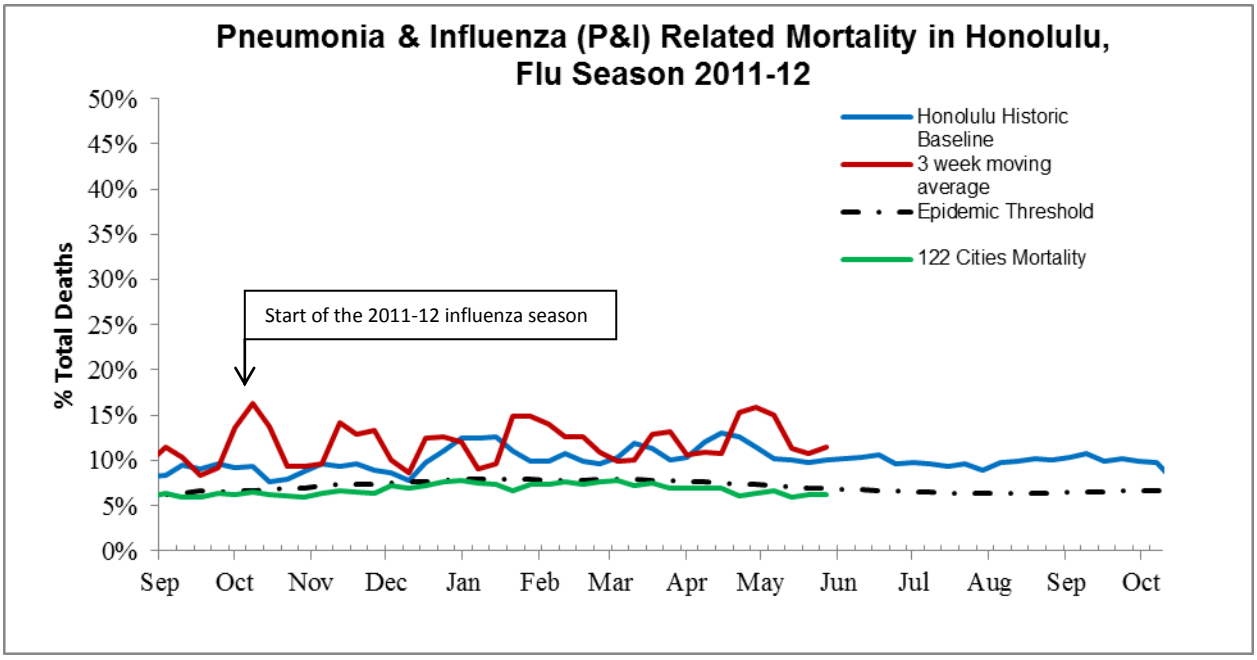
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There were three influenza-associated pediatric deaths reported to the CDC during week 24. The deaths occurred during week 9 (week ending March 3, 2012), week 17 (week ending April 28, 2012) and week 23 (week ending June 9, 2012). One death was associated with H1N1 and the other two were associated with an influenza B virus. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 29.

II. Laboratory Surveillance

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 9,229 specimens have been tested statewide for influenza viruses. Of these, 6,697 (72.6%) were screened only by rapid antigen tests whereas the remaining 2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method. Of the influenza A cases detected, 15 (1.4%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 125 (11.3%) were influenza A (H3), and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.[6]

The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

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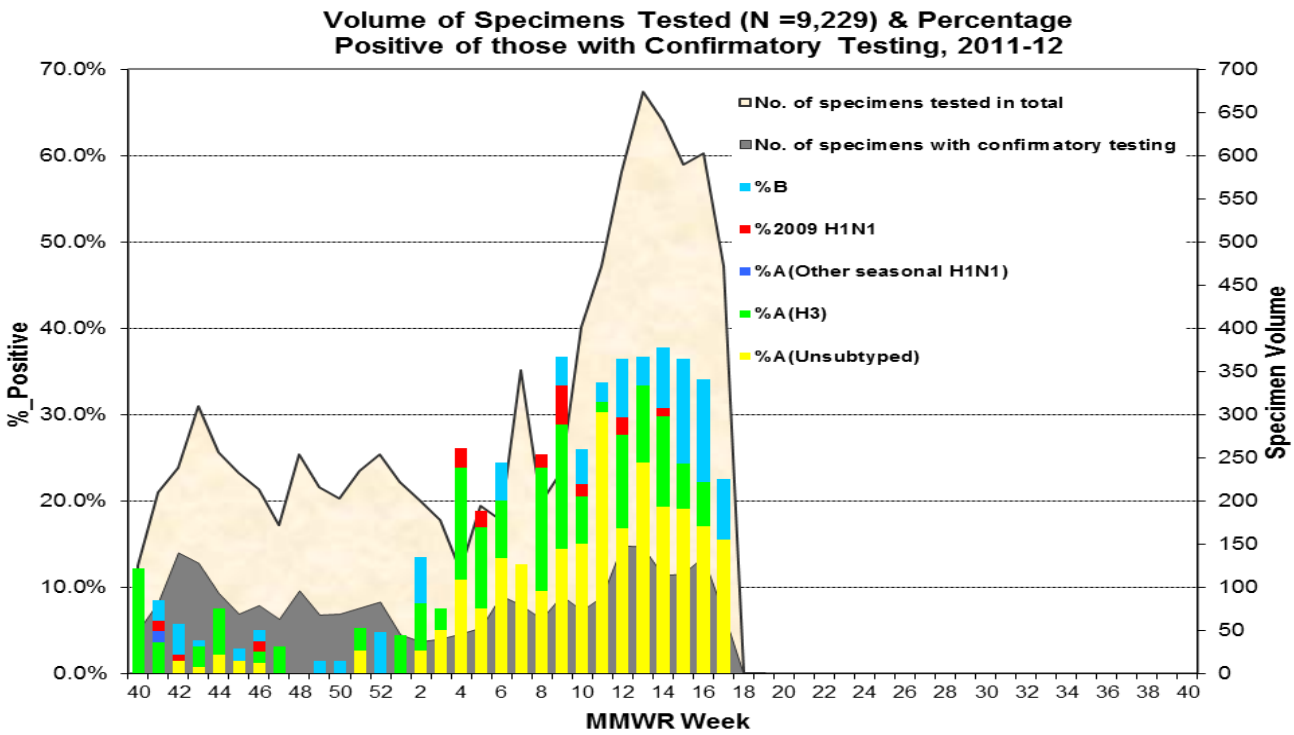
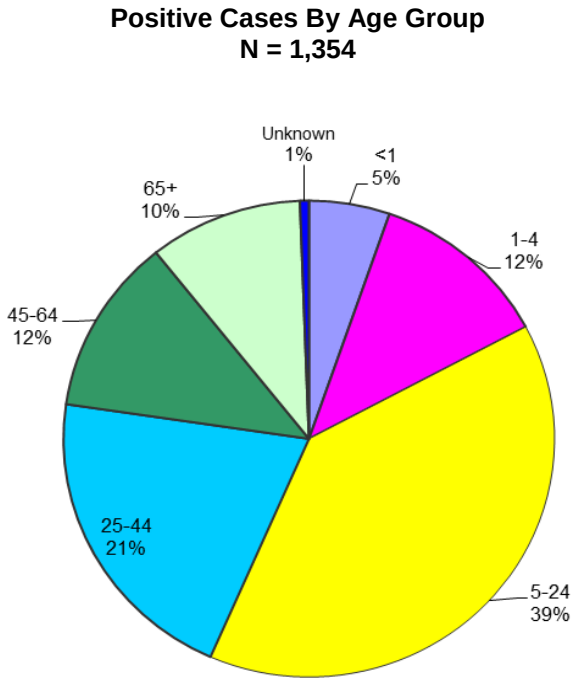
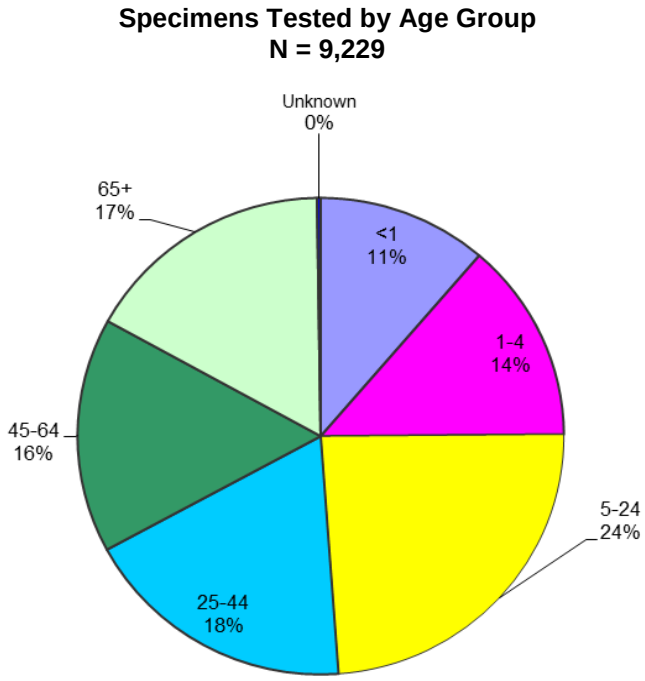


The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 14.7% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X															
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X															
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	
Varicella Zoster Virus																									X												X																	
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																							
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																				
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X																	

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

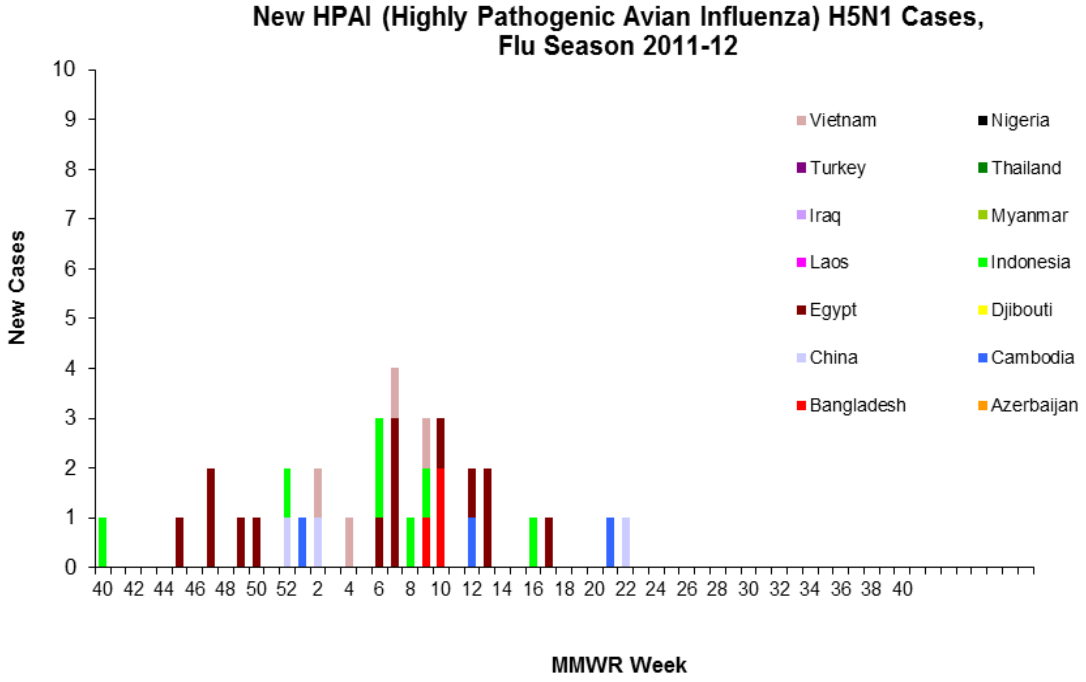
IV. Clustered ILI Activity

There was one ILI cluster reported during week 24. The cluster occurred in a long-term care facility and results indicated that three residents tested positive for an influenza A (H3) virus. Currently there have been 7 influenza-like clusters reported to HDOH.

VIII. Avian Influenza – Last Updated June 7, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	6	6	189	157
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	28	17	**606**	**357**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
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32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
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42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
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July 3, 2012 Volume 2012 (25)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

June 17–23, 2012: MMWR[1] Week 25, 2012

I. Surveillance of Influenza-like Illness (ILI):

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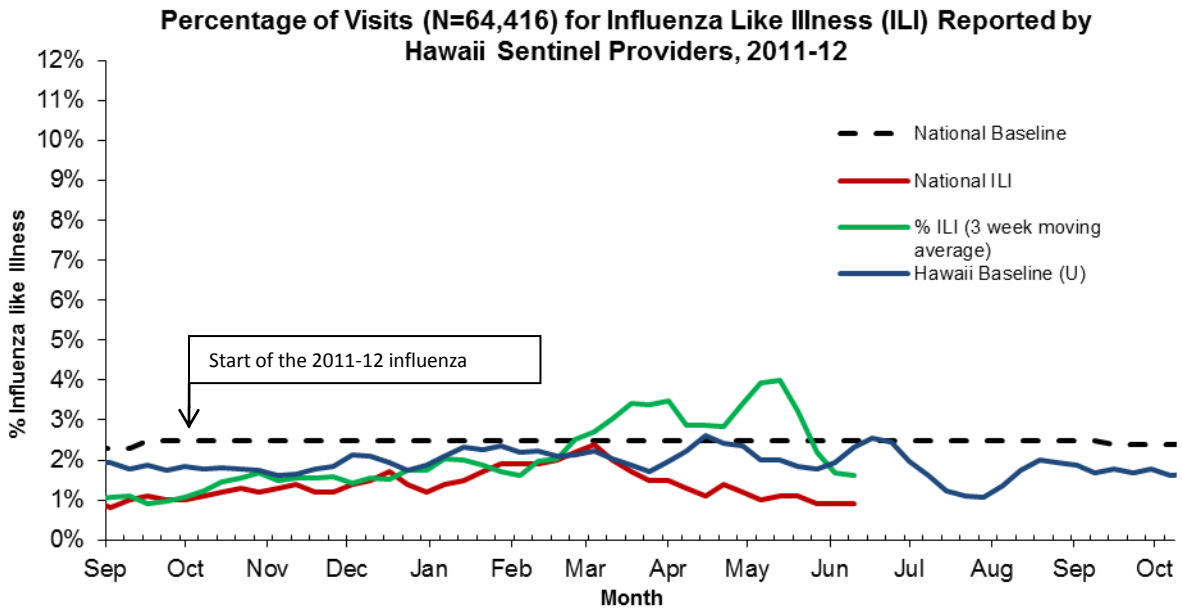

Pneumonia and Influenza (P&I) Related Mortality:

During week 25 of the 2011–12 influenza season, 11.2% (95% CI 5.2–17.2%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 25 was comparable to the epidemic threshold (6.9%) and the national P&I mortality (6.5%).

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[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 1 for interpretation of MMWR weeks.

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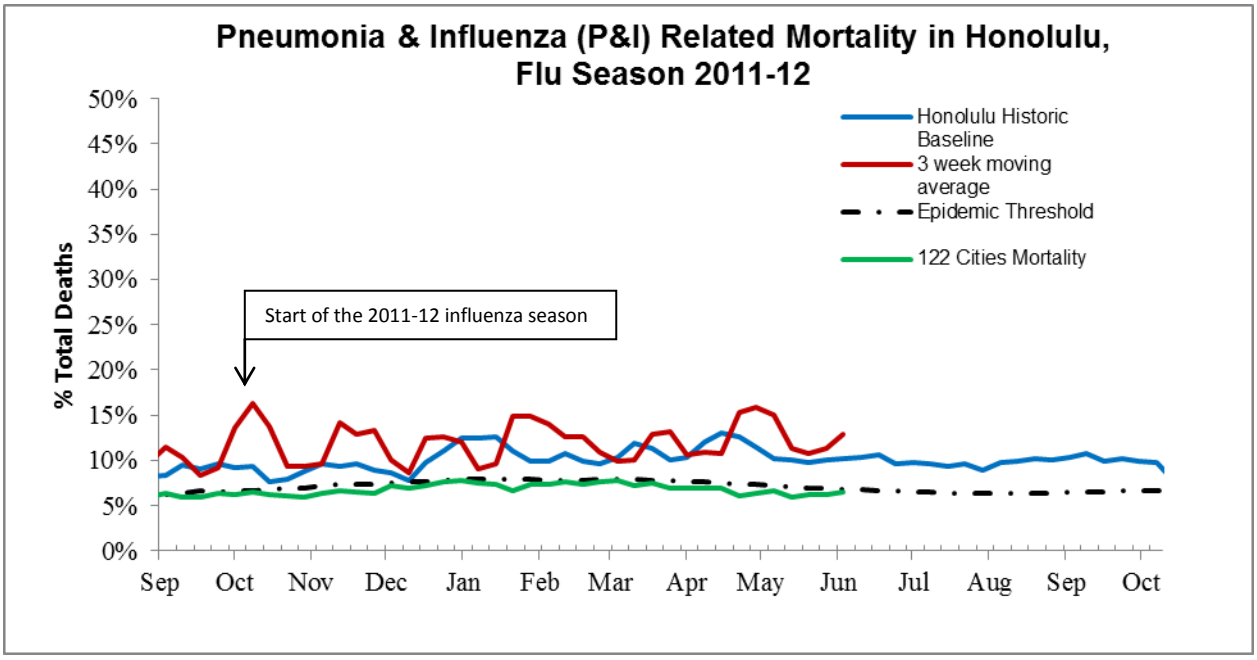

Influenza Associated Pediatric Mortality[5]

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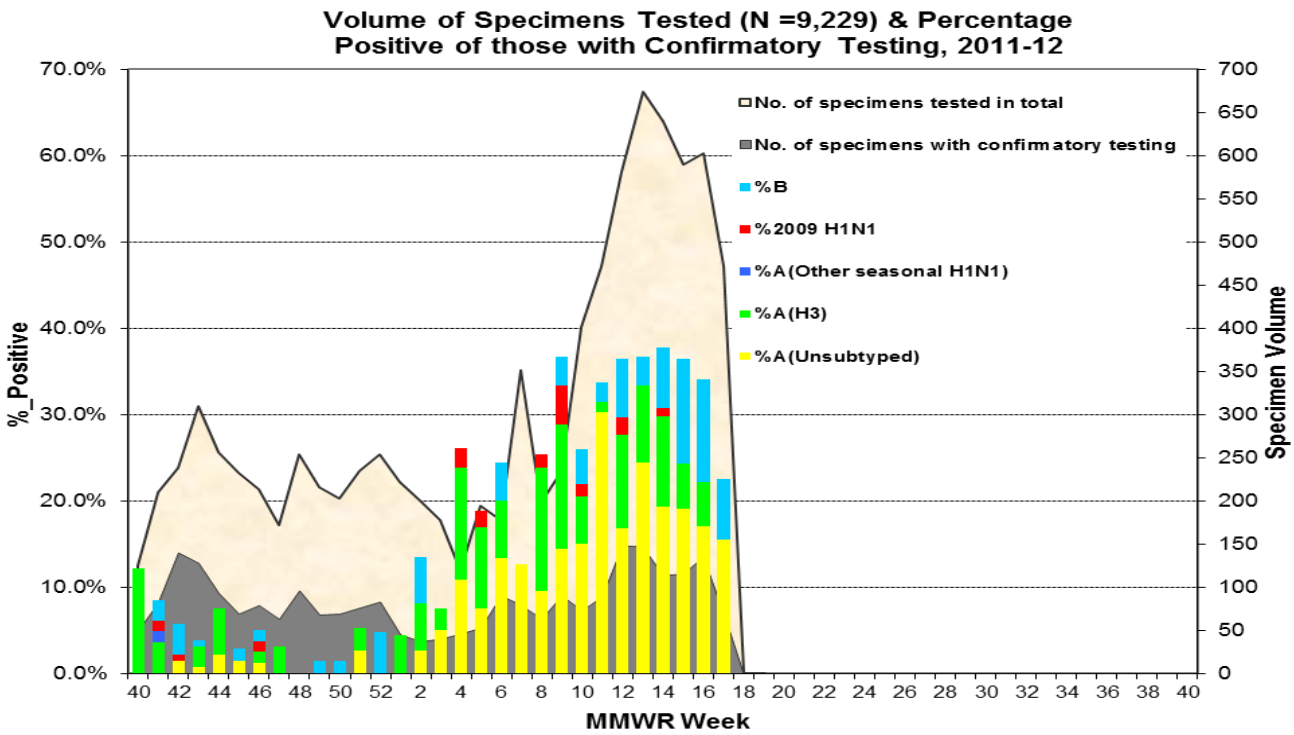
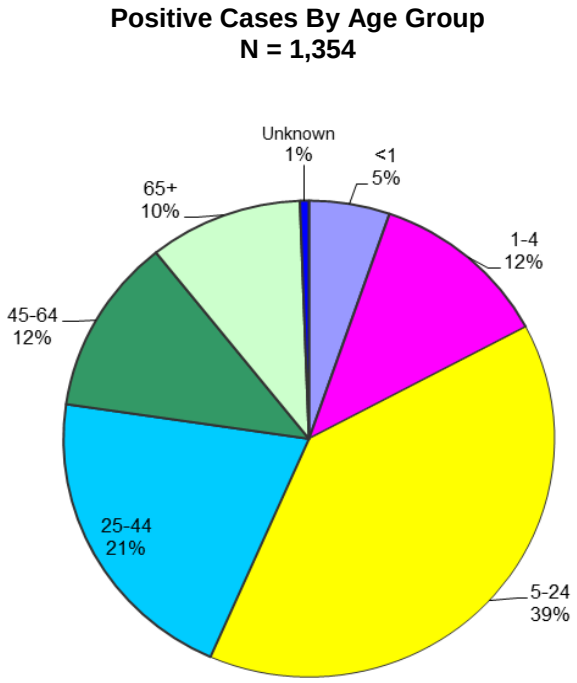
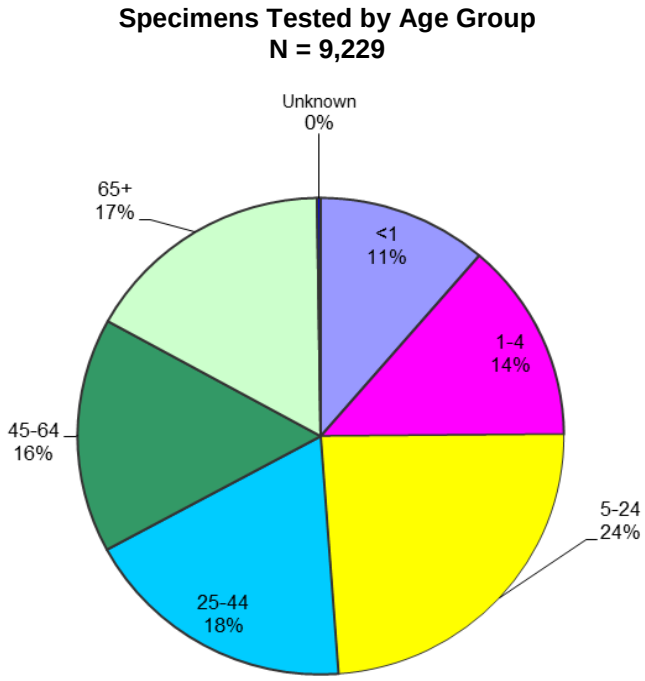


The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 14.7% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																						
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																		
Coxsackie Virus																																																							
Cytomegalovirus			X																																																				
Echovirus																																																							
Enterovirus	X		X																																																				
Herpes Simplex Virus, Type 1																																																							
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X															
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X															
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X															
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	
Varicella Zoster Virus																									X												X																		
Influenza 2009 H1N1		X	X				X										X	X				X			X																													
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																								
Influenza A (Other seasonal H1N1)		x															X					X	X																															
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																					
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X																		

*Testing for non-flu respiratory pathogens is limited among the laboratories in the state. Therefore available data should only be interpreted as suggesting the presence or circulation of a pathogen and not as specific trends.

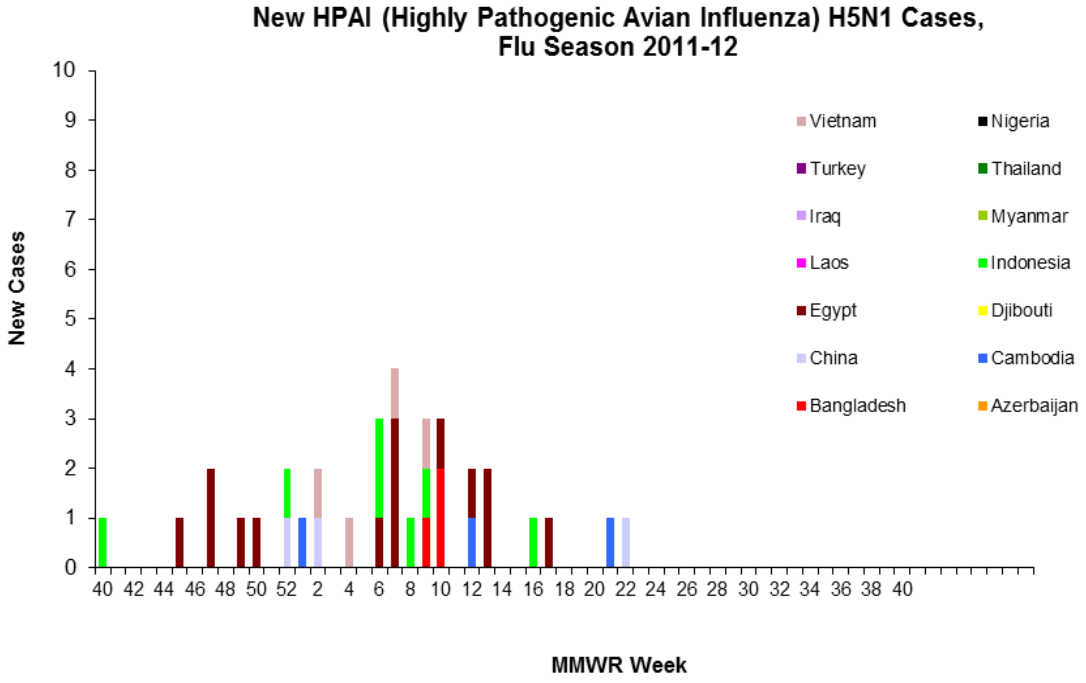
IV. Clustered ILI Activity

There no ILI clusters reported to HDOH during week 25. Currently there have been 7 influenza-like clusters reported to HDOH.

VIII. Avian Influenza – Last Updated June 7, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	6	6	189	157
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	28	17	**606**	**357**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

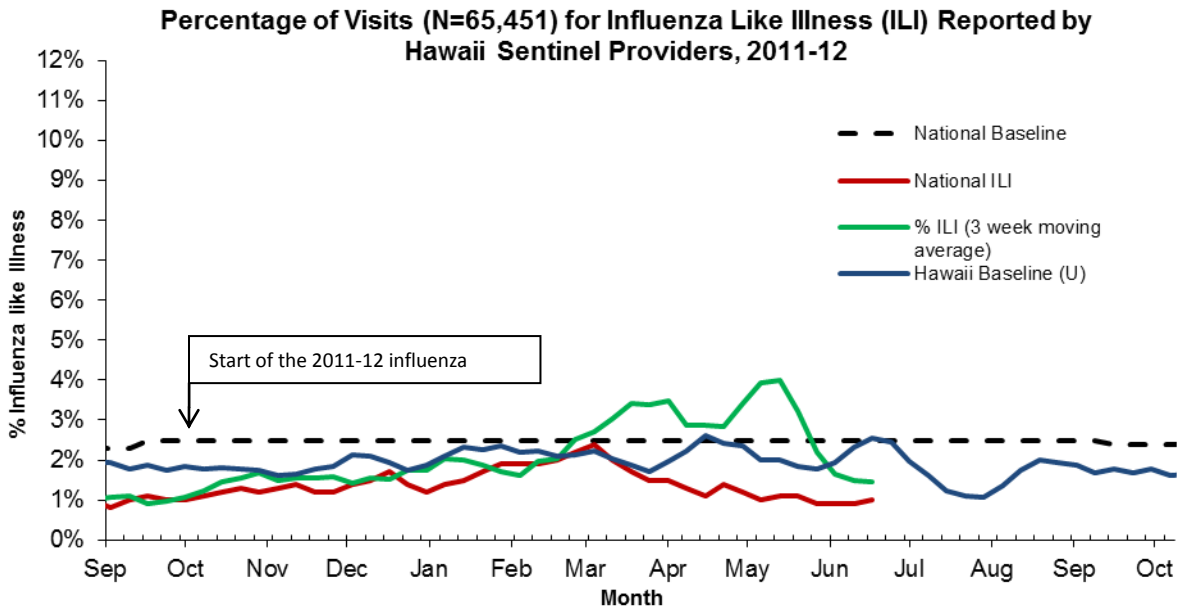
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

June 24–30, 2012: MMWR[1] Week 26, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 26 of the 2011–12 influenza year, 1.3% (95% CI 0.6–2.1%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 26 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] and the national baseline[4] (2.4%) but comparable to the national ILI (1.0%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 26 of the 2011–12 influenza season, 17.4% (95% CI 8.5–26.3%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 26 was higher than the epidemic threshold (6.9%) and the national P&I mortality (6.6%).

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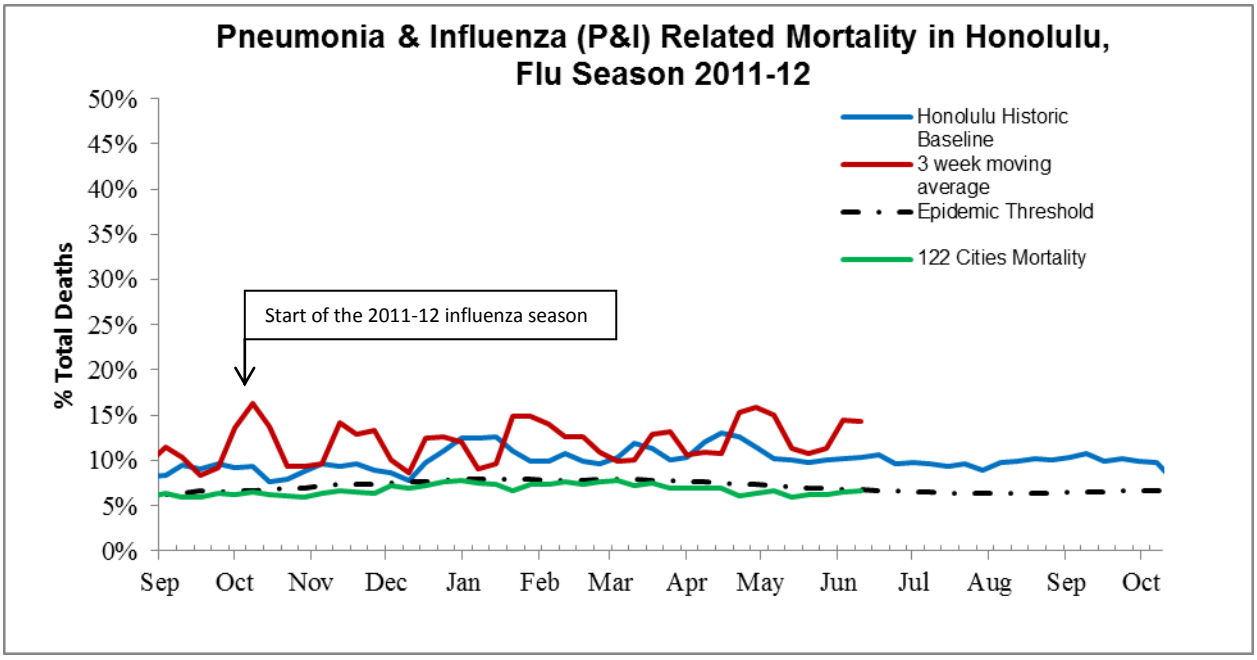
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There was one influenza-associated pediatric deaths reported to the CDC during week 26. The deaths occurred during week 21 (week ending May 26, 2012). The death was associated with 2009 H1N1. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 31.

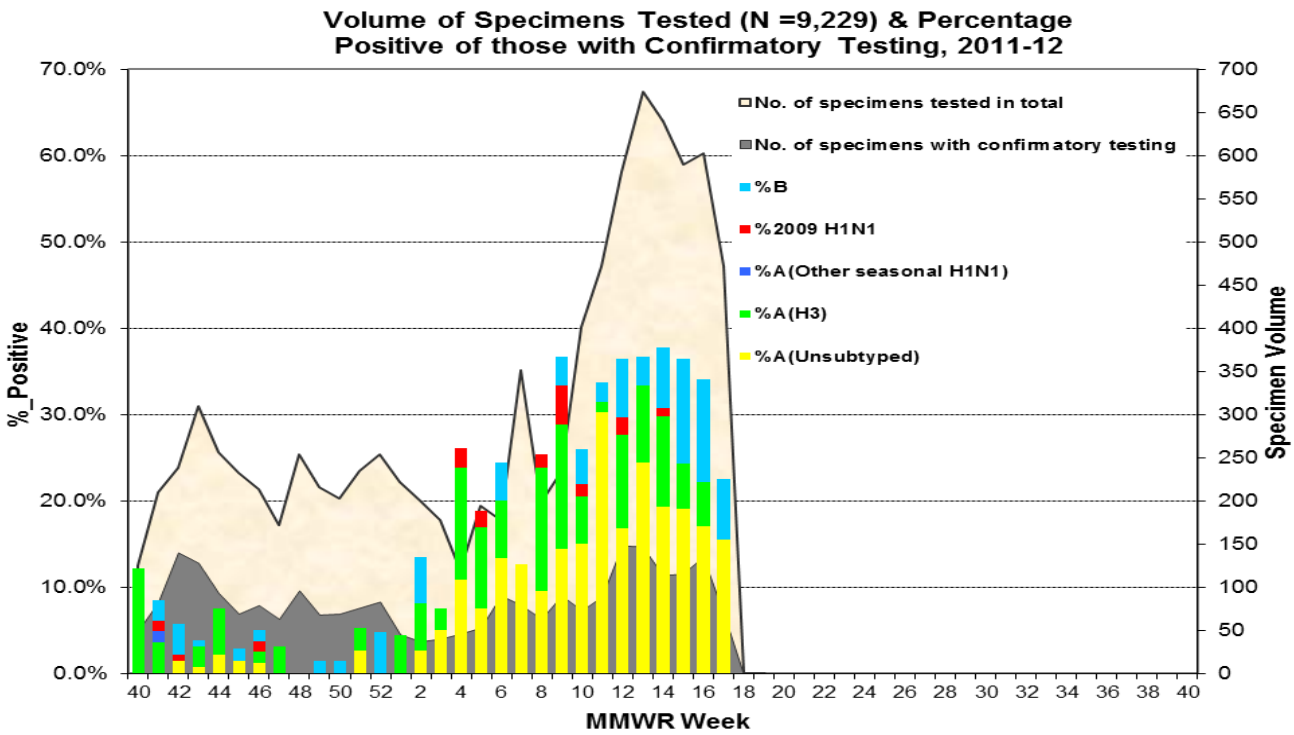
II. Laboratory Surveillance:

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 9,229 specimens have been tested statewide for influenza viruses. Of these, 6,697 (72.6%) were screened only by rapid antigen tests whereas the remaining 2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method. Of the influenza A cases detected, 15 (1.4%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 125 (11.3%) were influenza A (H3), and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.[6]

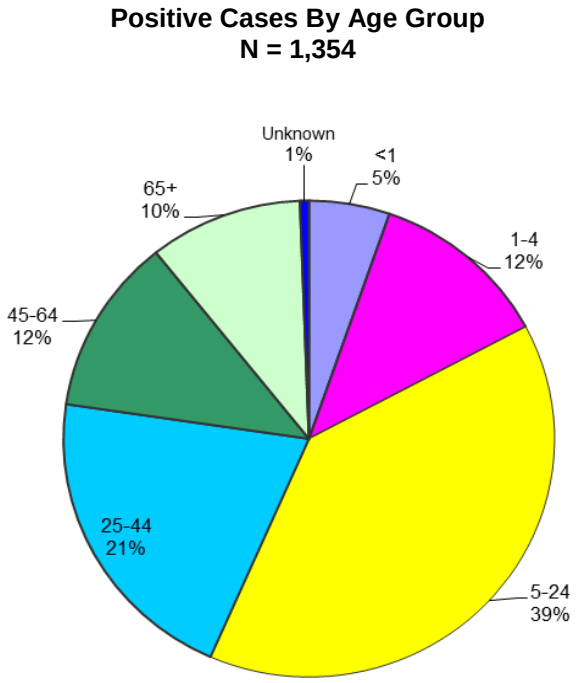
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

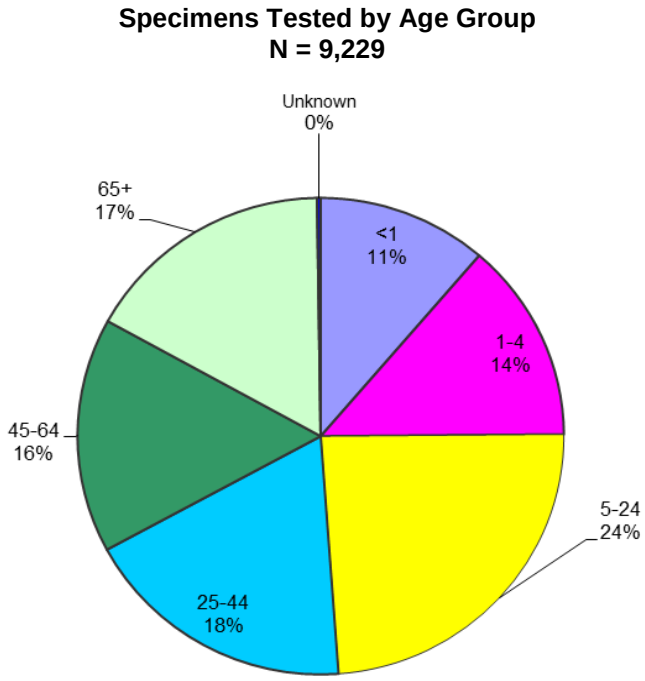
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 14.7% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																				
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
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Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X													
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X												
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X													
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X													
Varicella Zoster Virus																									X												X																
Influenza 2009 H1N1		X	X				X										X	X				X			X																											
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Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X																	

IV. Clustered ILI Activity

There no ILI clusters reported to HDOH during week 26. Currently there have been 7 influenza-like clusters reported to HDOH.

VIII. Avian Influenza – Last Updated June 7, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
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Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
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Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
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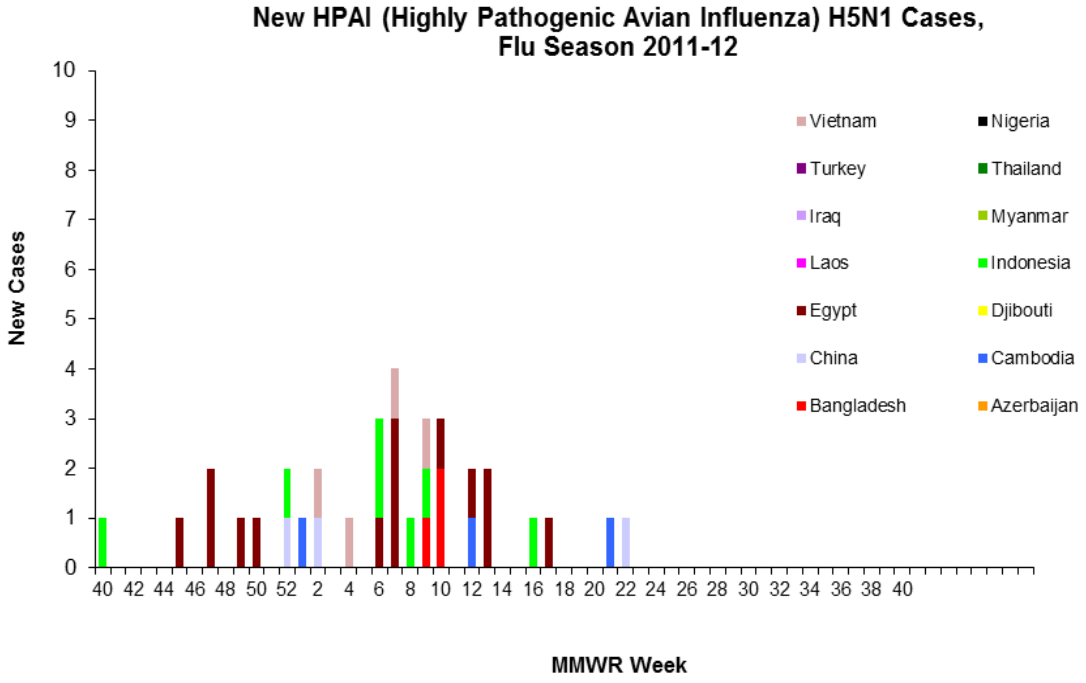

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3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
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44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
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53			1/3/2015		

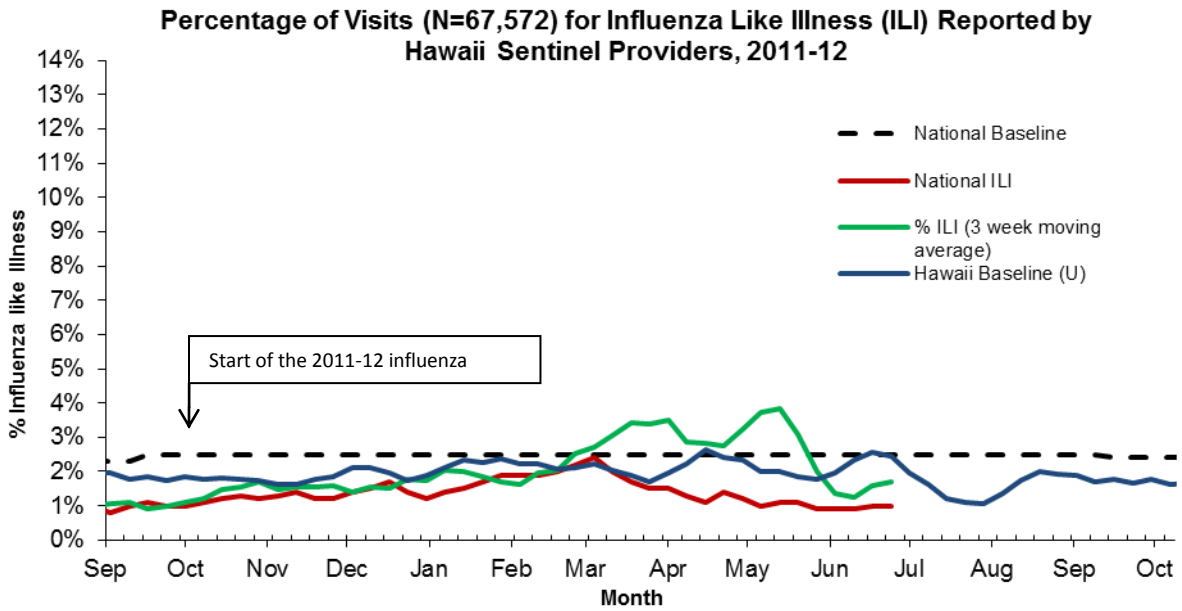
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

July1–7, 2012: MMWR[1] Week 27, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 27 of the 2011–12 influenza year, 2.1% (95% CI 1.0–3.1%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 27 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to the national baseline[4] (2.4%) but comparable to the national ILI (1.0%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 27 of the 2011–12 influenza season, 7.1% (95% CI 0–14.9%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 27 was comparable to the epidemic threshold (6.8%) and the national P&I mortality (6.1%).

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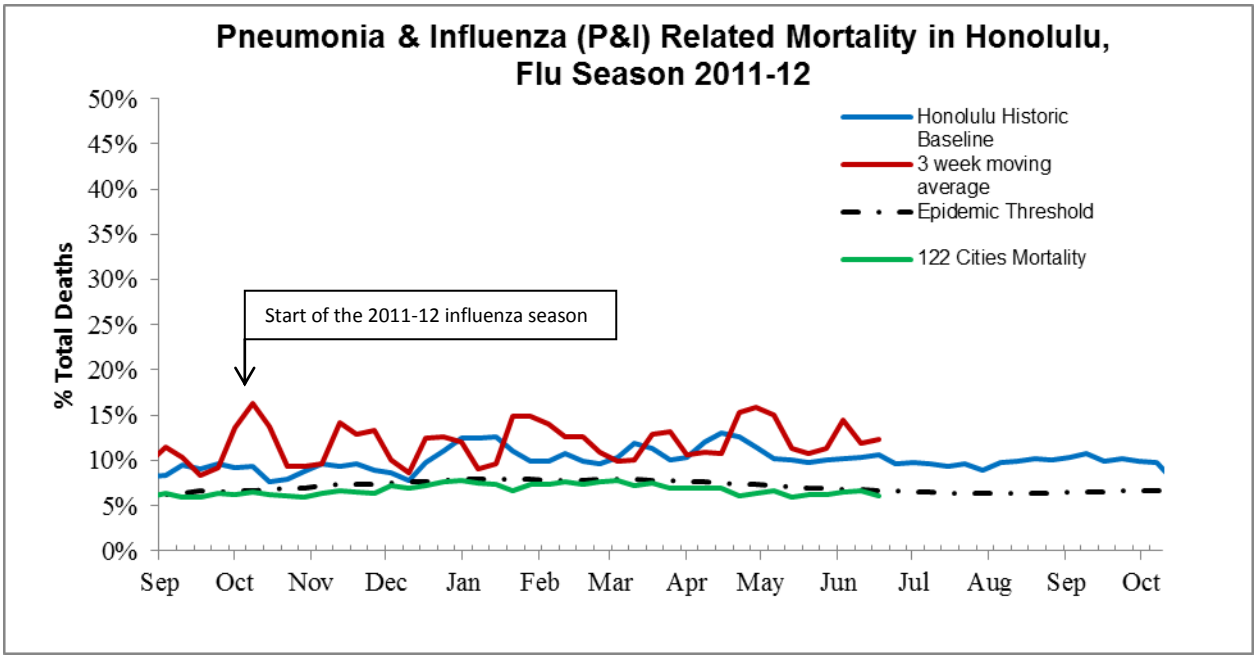
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There was one influenza-associated pediatric deaths reported to the CDC during week 27. The deaths occurred during week 17 (week ending April 28, 2012). The death was associated with an influenza A (H3) virus. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 32.

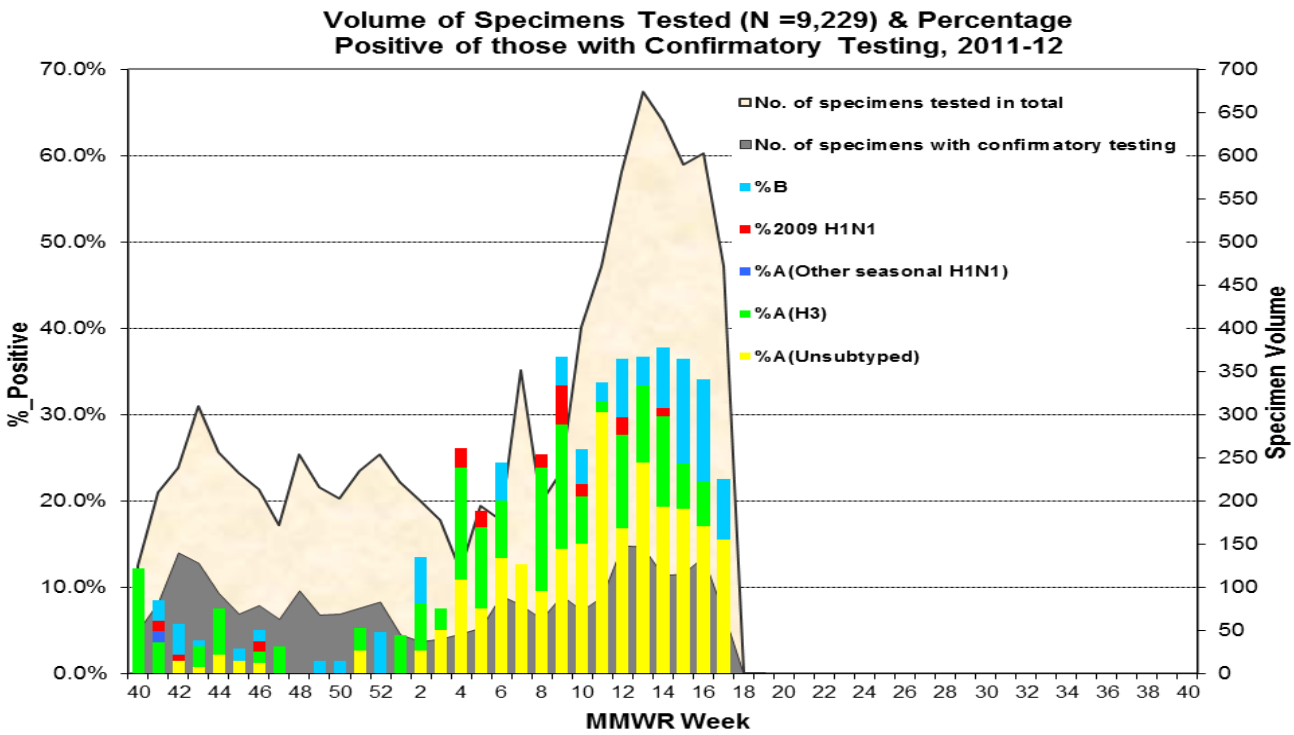
II. Laboratory Surveillance:

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 9,229 specimens have been tested statewide for influenza viruses. Of these, 6,697 (72.6%) were screened only by rapid antigen tests whereas the remaining 2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method. Of the influenza A cases detected, 15 (1.4%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 125 (11.3%) were influenza A (H3), and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.[6]

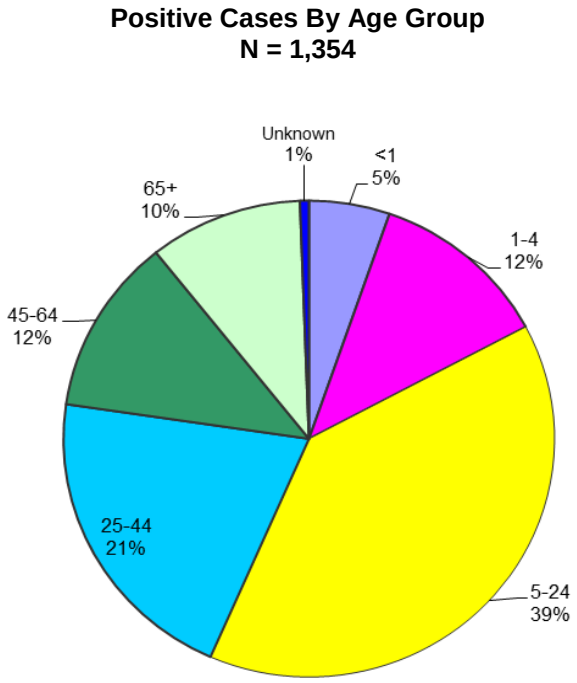
The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).

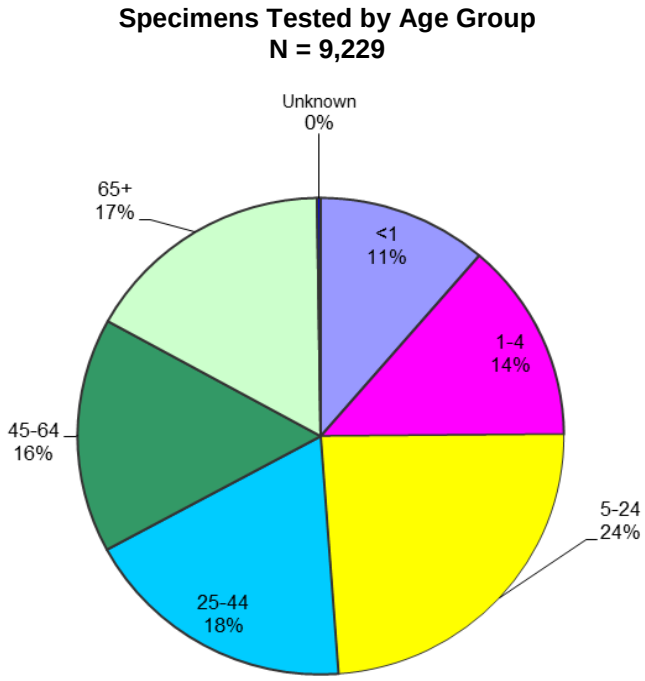
[5] These data were reported by the Hawai‘i State Department of Health Vital Statistics Office.

[6] Only specimens meeting priority criteria (those from hospitalized patients with 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, and those with underlying medical conditions, and specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was only conducted as ordered on a case by case basis. The majority of specimens testing positive by rapid antigen testing or RT-PCR at the commercial laboratories did not meet criteria and were not subtyped.



The pie charts below indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the 14.7% specimens that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																			
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X													
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X												
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X												
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X												
Varicella Zoster Virus																									X												X																
Influenza 2009 H1N1		X	X				X										X	X				X			X																											
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																						
Influenza A (Other seasonal H1N1)		x															X					X	X																													
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																			
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X																

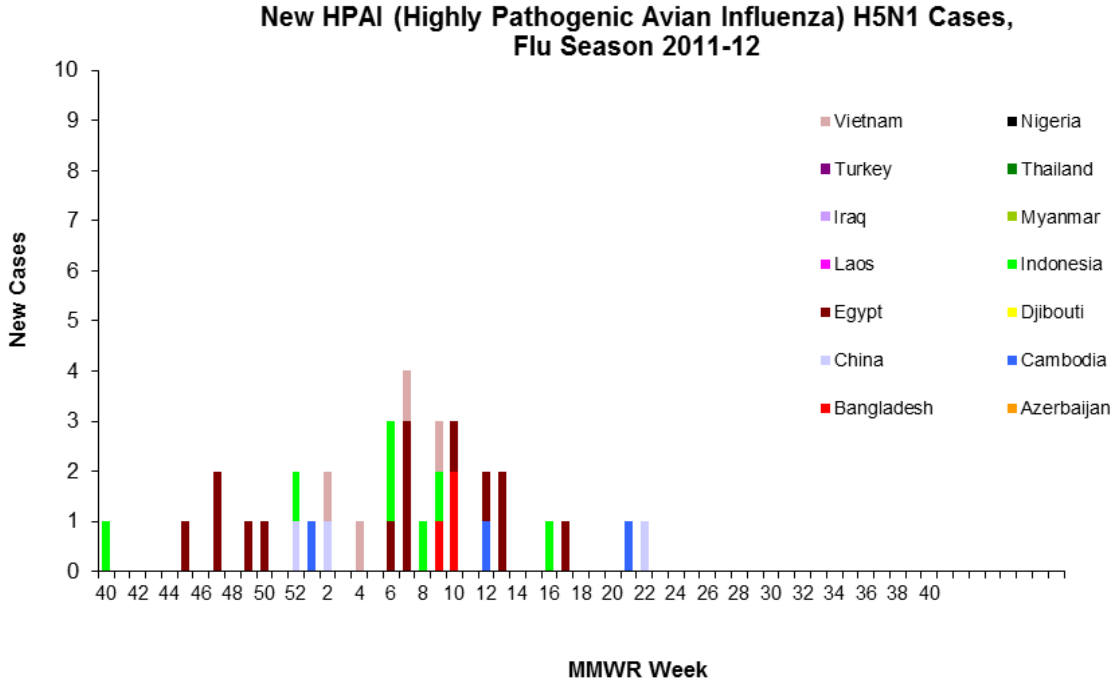
IV. Clustered ILI Activity

There no ILI clusters reported to HDOH during week 27. Currently there have been 7 influenza-like clusters reported to HDOH.

VIII. Avian Influenza – Last Updated July 6, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	7	7	190	158
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	29	18	**607**	**358**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
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48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
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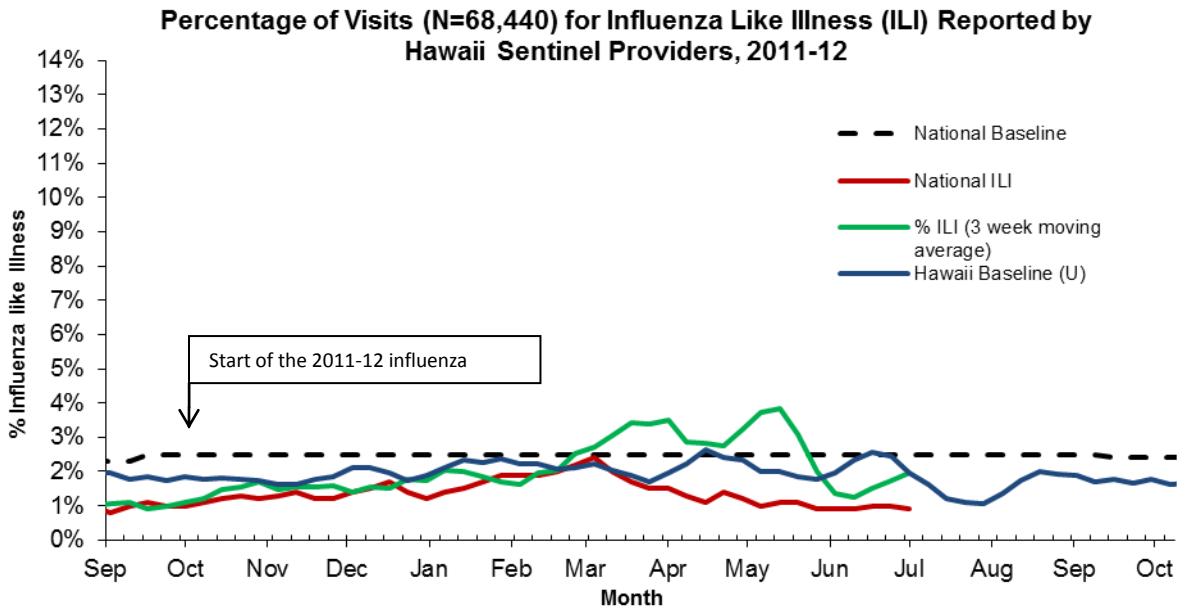
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

July8–14, 2012: MMWR[1] Week 28, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 28 of the 2011–12 influenza year, 2.0% (95% CI 1.0–3.0%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 28 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] but was comparable to the national baseline[4] (2.4%) and to the national ILI (0.9%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 28 of the 2011–12 influenza season, 13.9% (95% CI 5.9–21.9%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 28 was comparable to the epidemic threshold (6.7%) and the national P&I mortality (6.0%).

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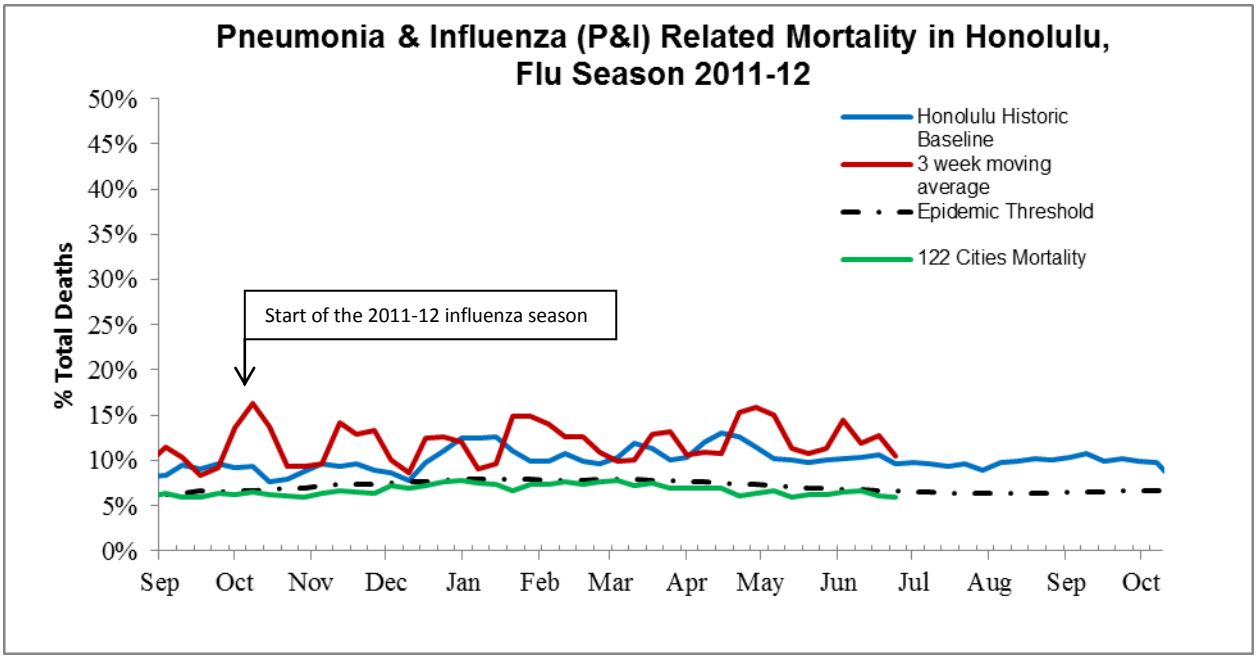
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There was one influenza-associated pediatric deaths reported to the CDC during week 28. The deaths occurred during week 11 (week ending March 17, 2012). The death was associated with an influenza A (H3) virus. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 33.

II. Laboratory Surveillance:

Since the beginning of the 2011–12 influenza season (MMWR week 40, 2011), a total of 9,229 specimens have been tested statewide for influenza viruses. Of these, 6,697 (72.6%) were screened only by rapid antigen tests whereas the remaining 2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture). Altogether a total of 1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method. Of the influenza A cases detected, 15 (1.4%) were 2009 H1N1, 1 (0.1%) was other seasonal influenza A (H1), 125 (11.3%) were influenza A (H3), and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.[6]

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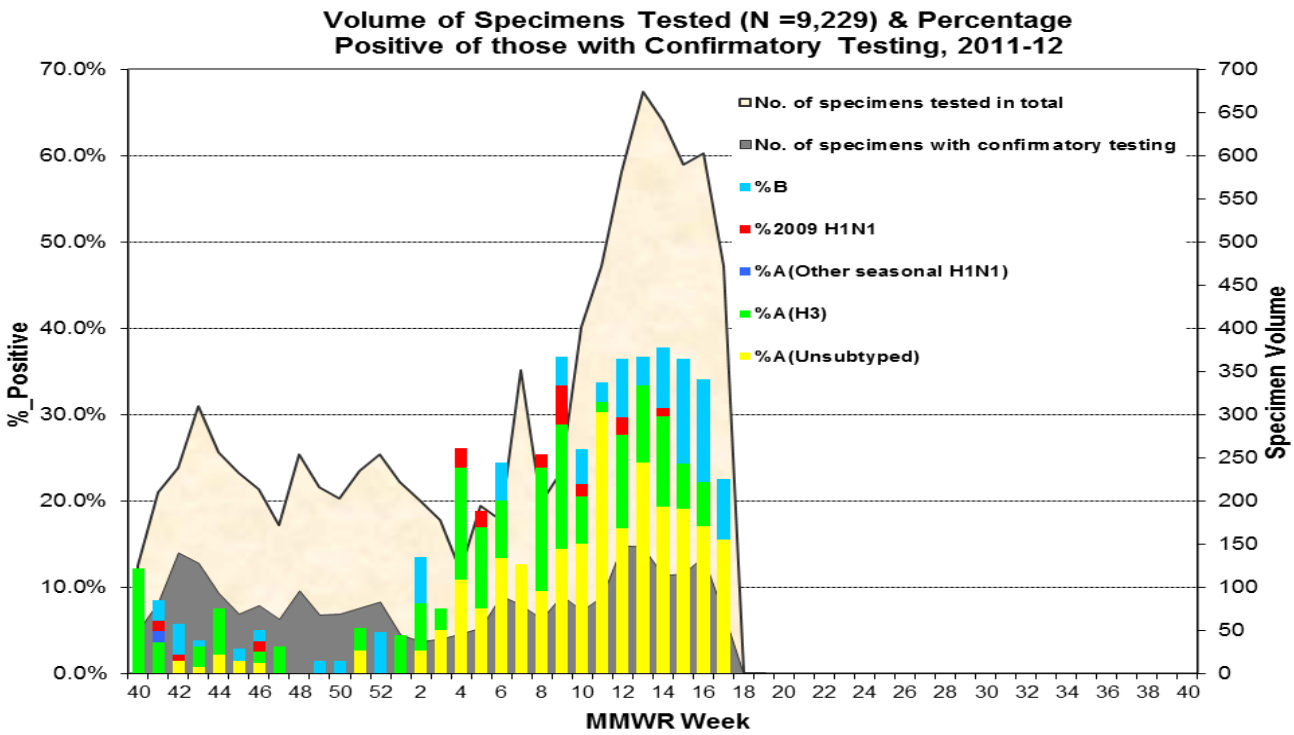

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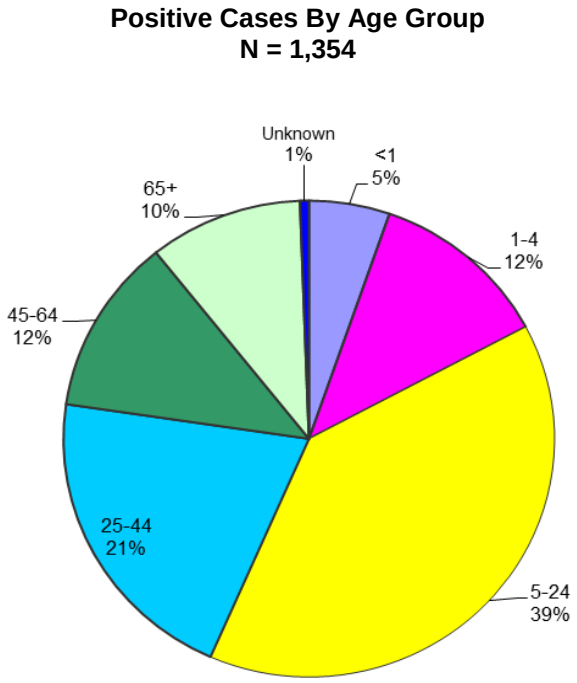
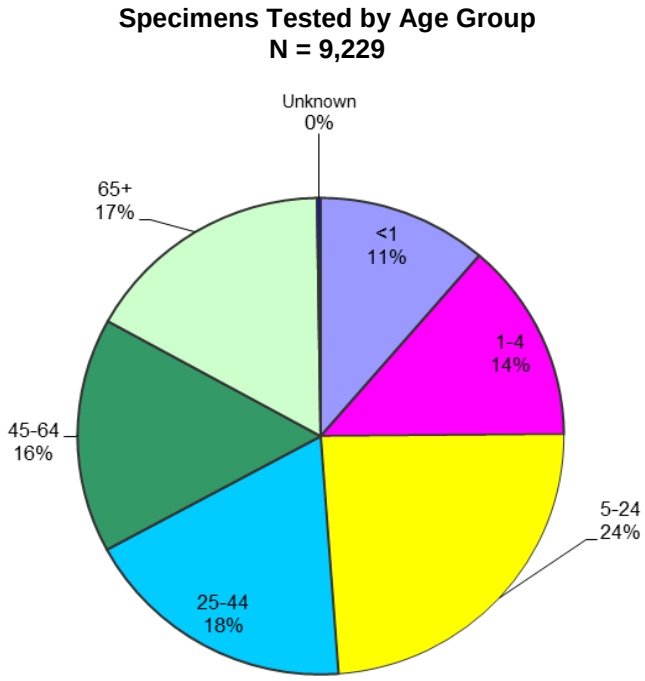




All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																			
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X													
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X												
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X												
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X												
Varicella Zoster Virus																									X												X																
Influenza 2009 H1N1		X	X				X										X	X				X			X																											
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																						
Influenza A (Other seasonal H1N1)		x															X					X	X																													
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																			
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X																

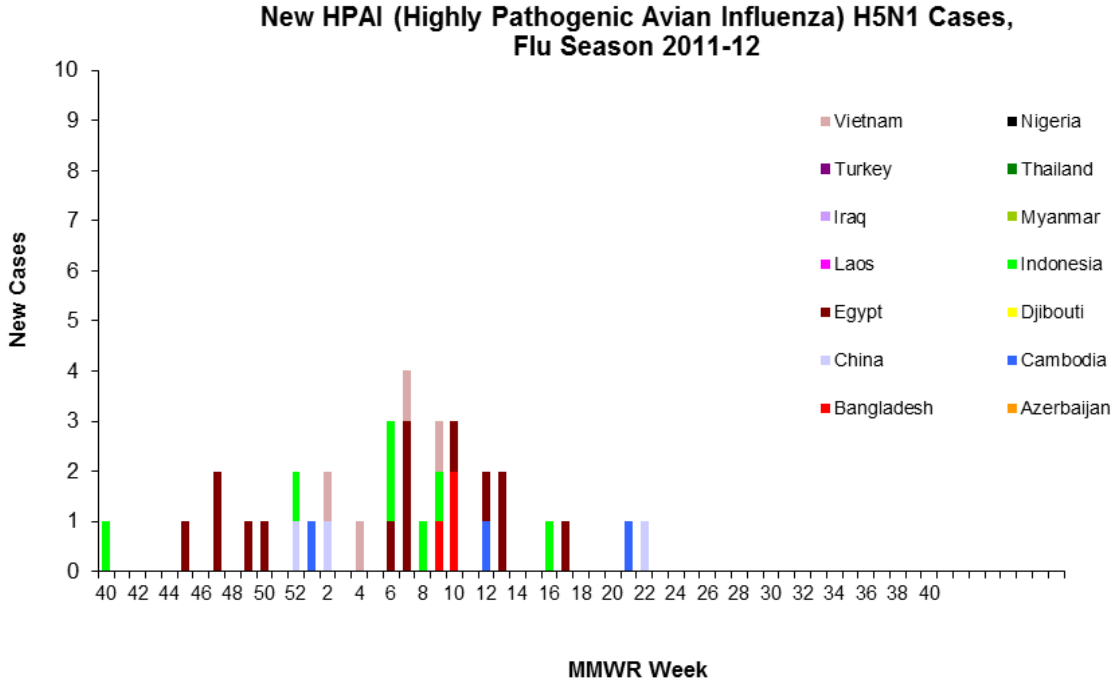
IV. Clustered ILI Activity

There no ILI clusters reported to HDOH during week 28. Currently there have been 7 influenza-like clusters reported to HDOH.

VIII. Avian Influenza – Last Updated July 6, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	7	7	190	158
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	29	18	**607**	**358**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
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45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
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48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

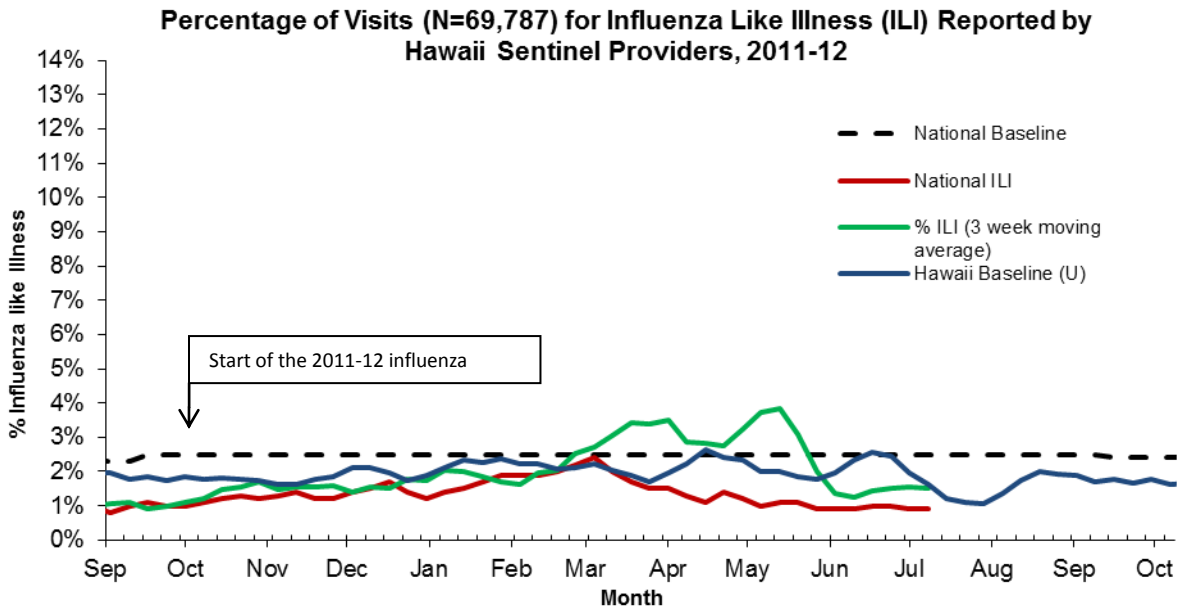
HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

July 9–21, 2012: MMWR[1] Week 29, 2012

I. Surveillance of Influenza-like Illness (ILI):

During week 29 of the 2011–12 influenza year, 1.4% (95% CI 0.6–2.3%) of outpatient visits to Hawaii sentinel providers were attributable to influenza-like illness (ILI). Outpatient ILI reported during week 29 of 2012 was lower than the historical baseline in Hawaii ($p<0.05$)[2,3] and the national baseline[4] (2.4%) but was comparable to the national ILI (0.9%).



Pneumonia and Influenza (P&I) Related Mortality:

During week 29 of the 2011–12 influenza season, 7.1% (95% CI 1.1–13.1%) of all deaths in Honolulu, Hawaii were caused by pneumonia or influenza. This P&I was lower than the historical P&I baseline[2] in Hawaii. Honolulu P&I mortality for week 29 was comparable to the epidemic threshold (6.6%) and the national P&I mortality (5.6%).

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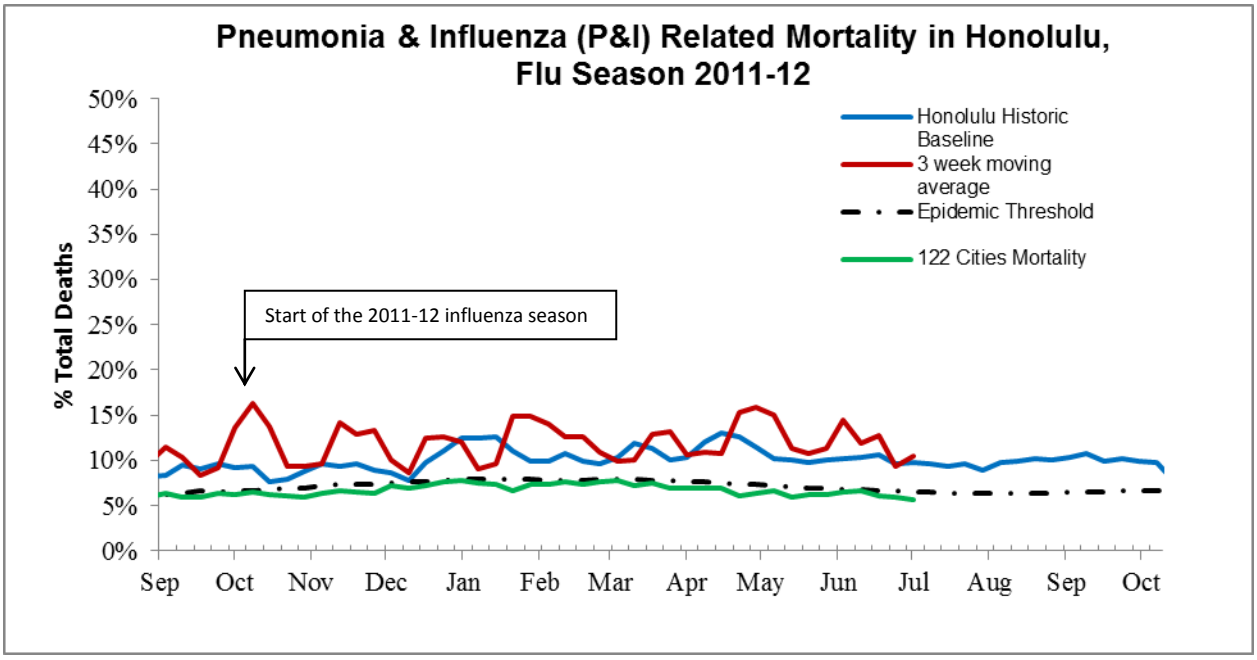
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. See appendix 1 for interpretation of MMWR weeks.

[2] The Hawai'i historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists, since these comprise a new class of ILINet providers. 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.



Influenza Associated Pediatric Mortality[5]

There was one influenza-associated pediatric deaths reported to the CDC during week 29. The deaths occurred during week 13 (week ending March 31, 2012). The death was associated with an influenza B virus. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 34.

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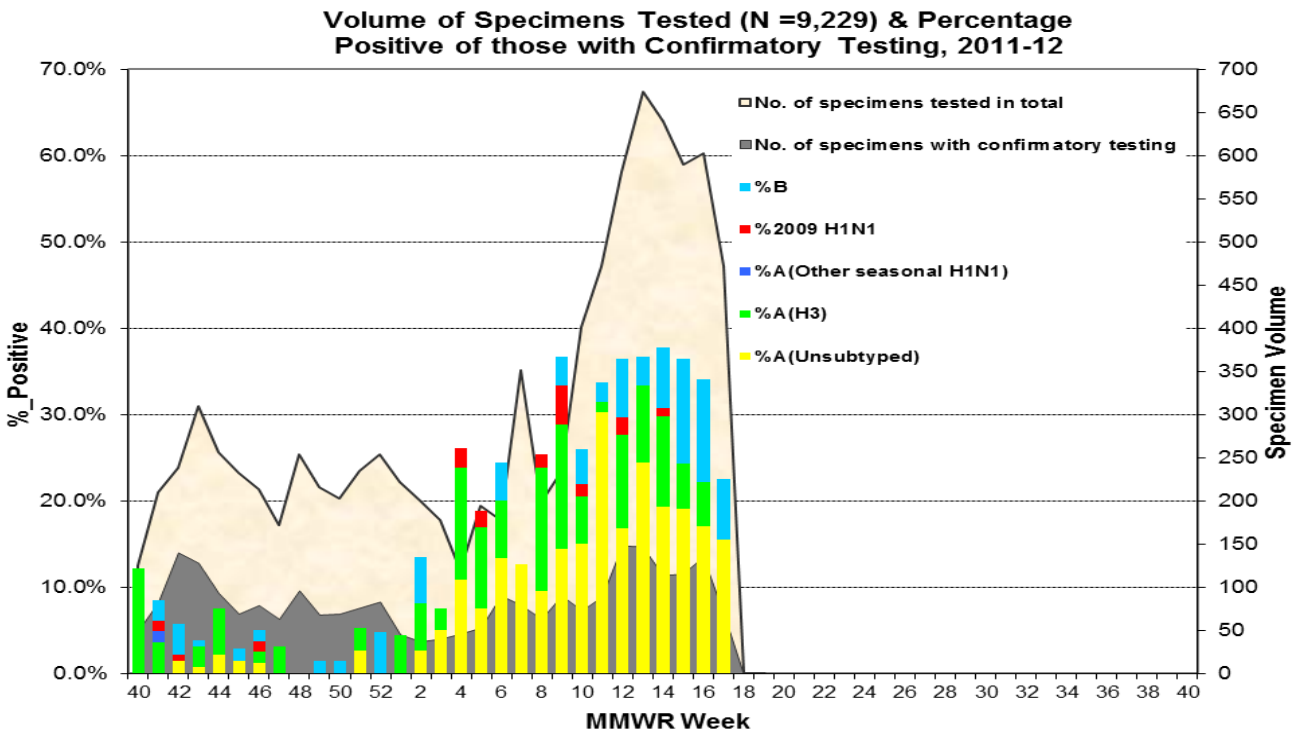

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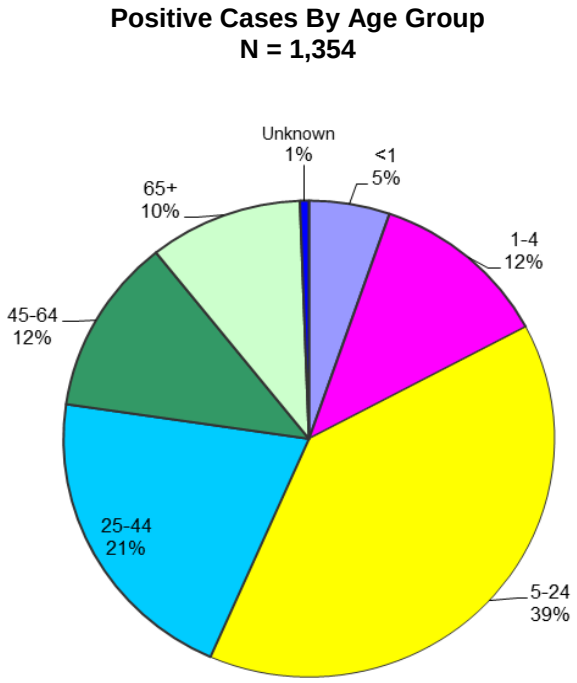

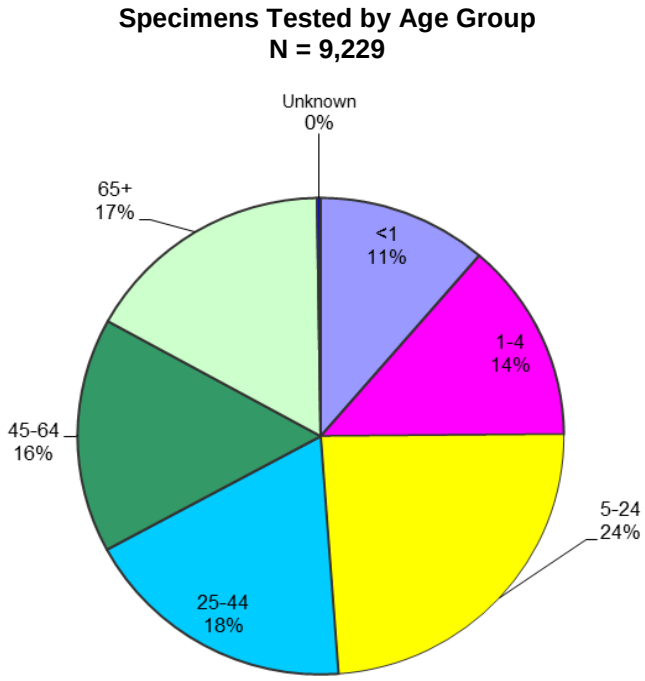

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Adenovirus	X	X	X		X																																																
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Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X													
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X			X									
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X										
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
Varicella Zoster Virus																									X												X																
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																							
Influenza A (Other seasonal H1N1)		x															X					X	X																														
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Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X																	

IV. Clustered ILI Activity

There no ILI clusters reported to HDOH during week 29. Currently there have been 7 influenza-like clusters reported to HDOH.

VIII. Avian Influenza – Last Updated July 6, 2012

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
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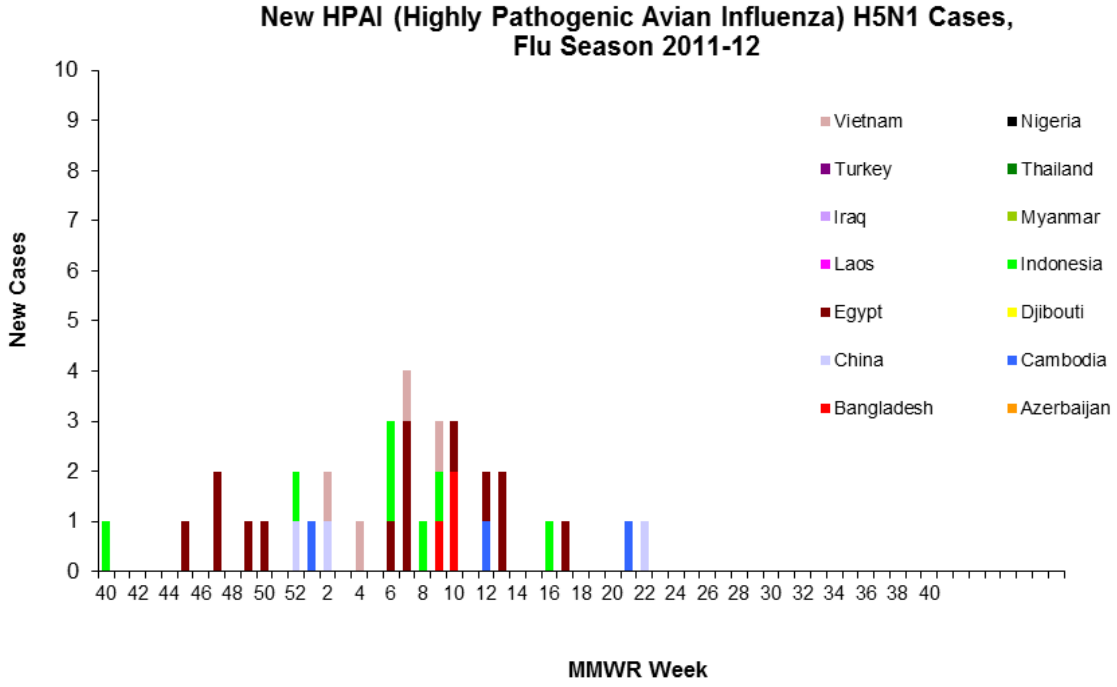
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	7	7	190	158
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	29	18	**607**	**358**

Total number of cases (C) includes number of deaths (D). The World Health Organization reports only laboratory-confirmed cases. All dates refer to onset of illness.



[7] For more information regarding the ongoing outbreak in the United States, refer to CDC's website at http://www.cdc.gov/h1n1flu/. Updates from WHO are posted at http://www.who.int/en/.

Appendix 1: MMWR Week

Please refer to the table below to interpret data presented by MMWR week.

Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
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29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
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34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

July 22–28, 2012: Week 30

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2011–12 influenza season officially began on week 40, 2011 (week ending October 8, 2011)**
- ILI activity in Hawaii is still low and appears to be comparable to week 29.
- 1,356 (14.7%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 30.
- No influenza-associated deaths, including pediatric deaths, were reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the CDC during week 30.
- Worldwide there have been no additional reported avian influenza cases since week 27.

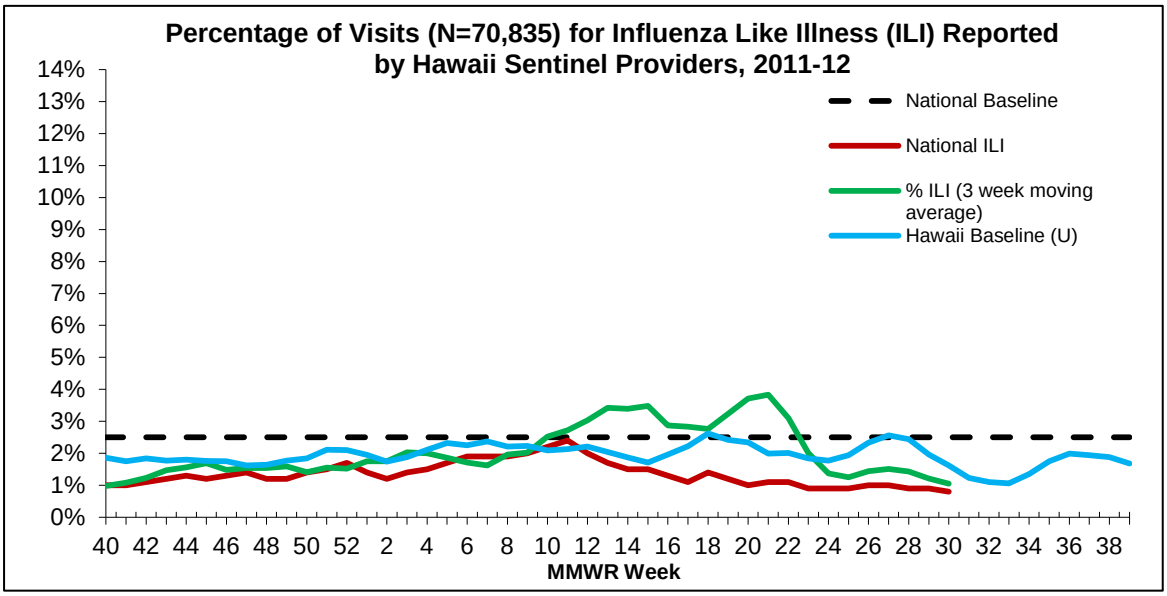
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100˚F AND a cough and/or sore throat. ILI is based on reported symptoms and not confirmed laboratory 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 from sentinel providers. Nevertheless, in combination with laboratory testing and other surveillance systems, the ILI helps monitor influenza and other respiratory pathogen activity. For more information concerning ILINet and sentinel requirements, please visit the CDC (here).

For week 30 of the current influenza season:

- *1.0% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii*[2,3]
- *Hawaii's ILI outpatient visits were lower than the national baseline (2.4%)*[4] *but comparable to the national ILI (.8%).*
- *ILI Cluster Activity: There were no ILI clusters reported during week 30. Currently there have been 7 influenza-like clusters reported to HDOH – 2 confirmed and 1 suspected cluster.*



[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. The chart above represents a 3-week moving average and not the actual ILI by week.

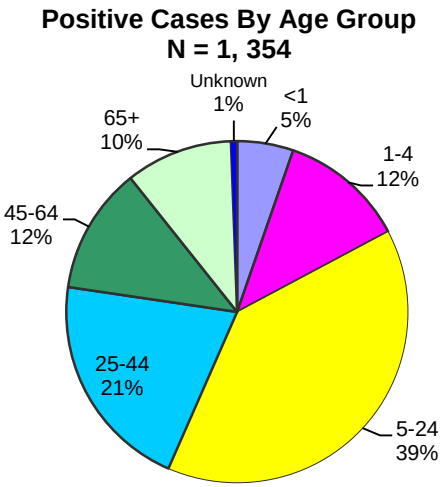
[4] The National Baseline is calculated by CDC as the mean percentage of visits for ILI during weeks 21–39 with two standard deviations. Because of large variability in regional ILI, comparison of the national baseline with local ILI may not be appropriate. It is provided in this report because no meaningful 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.

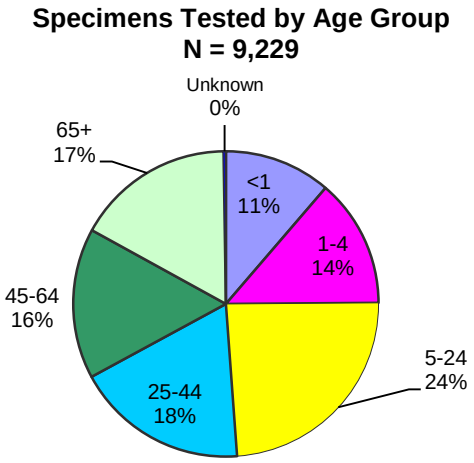
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, along with several private laboratories report testing results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with ARDS or x-ray confirmed pneumonia, 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 specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was 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 did not meet criteria and were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2011–12 flu season:

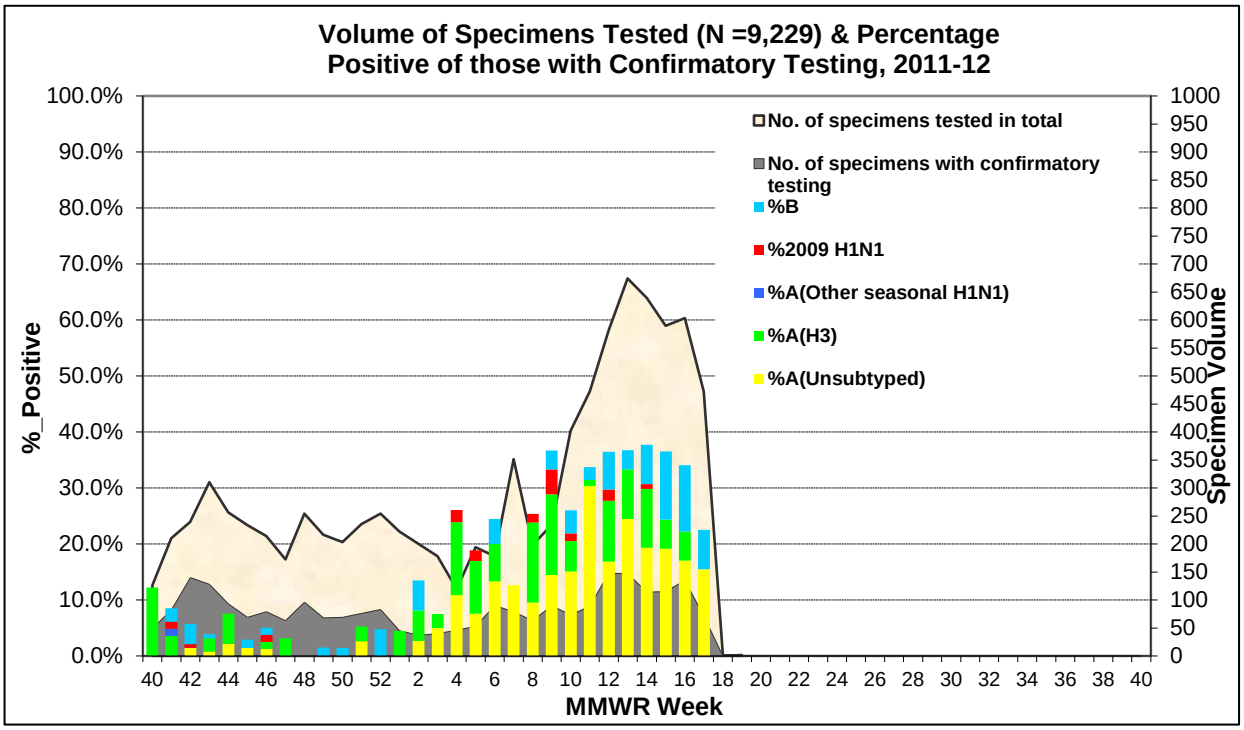
- *A total of 9,229 specimens have been tested statewide for influenza viruses*
  - *6,697 (72.6%) were screened by rapid antigen tests*
  - *2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *15 (1.4%) were 2009 H1N1,*
    - *1 (0.1%) was other seasonal influenza A (H1),*
    - *125 (11.3%) were influenza A (H3),*
    - *and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the *14.7% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 results are tested on a limited basis because of the high costs associated with respiratory panel tests. **Therefore, all available data represents the presence of circulating pathogens and cannot be used to determine specific trends**.

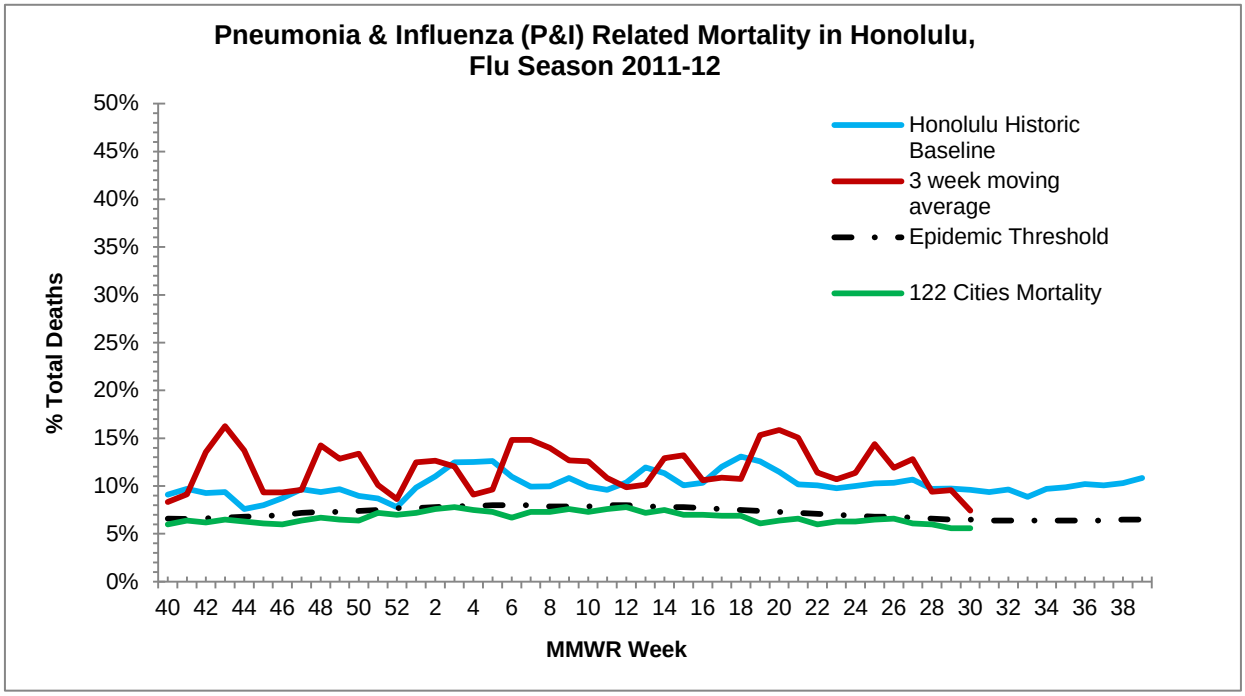
All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																			
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X													
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X			X									
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X									
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
Varicella Zoster Virus																									X												X																
Influenza 2009 H1N1		X	X				X										X	X				X			X																											
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																						
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																				
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X																	

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods – 122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. The CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 30 of the current influenza season:

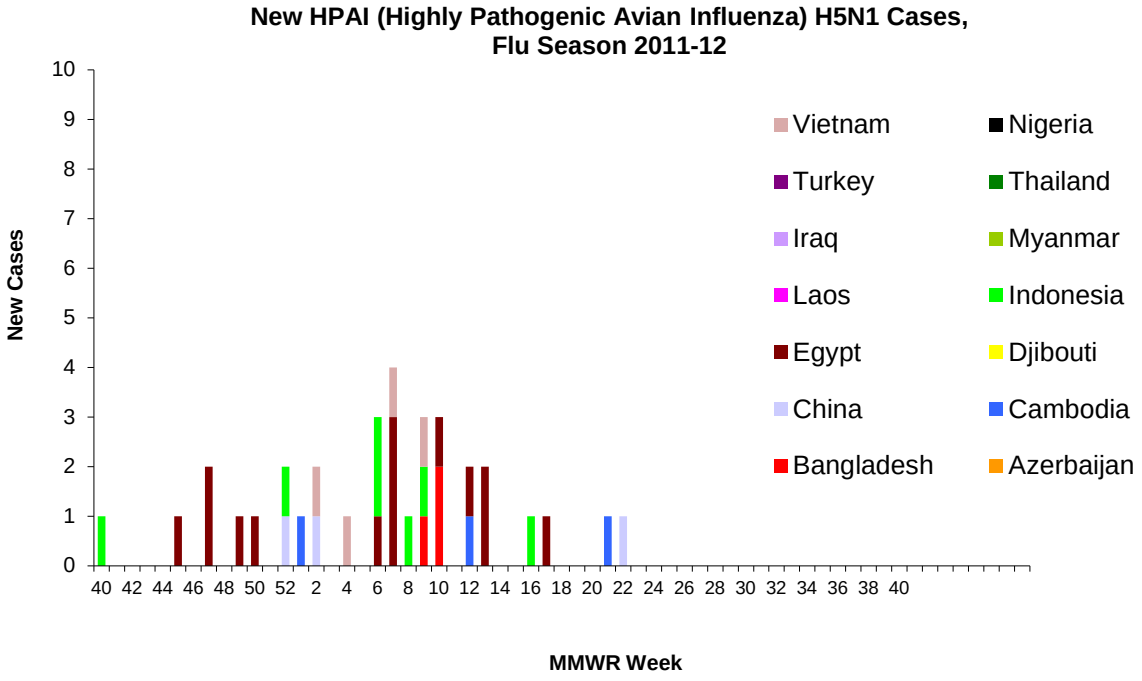
- *7.7% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii*
- *Both the national 122 city P&I mortality (5.6%) and epidemic threshold (6.6%) were comparable to Honolulu.*



- *Pediatric Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons less than 18 years of age.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to the CDC during week 30. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 34.*

- *There has been one flu-related pediatric death in Hawaii for the 2011–12 season. The death occurred during week 17 (week ending April 28, 2012) and was associated with 2009 H1N1.*

VI. Avian Influenza: As part of a comprehensive influenza surveillance system and in order to prevent the spread of such diseases in humans, it is important to keep track of all circulating influenza types. Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 which is presently circulating in poultry. For more information regarding avian influenza, please visit the CDC (here) or the WHO (here). WHO reports total number of cases and deaths related to laboratory-confirmed avian influenza. **WHO avian influenza was last updated in July 6, 2012.**



Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	6	6	189	157
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	28	17	**606**	**357**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

Appendix 2: MMWR Week Dates

Please refer to the table below to interpret data presented by MMWR week.

Week Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
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3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
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5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
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15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
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28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
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48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

August 14, 2012 | Volume 2012 (31)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

July 29–August 4, 2012: Week 31

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2011–12 influenza season officially began on week 40, 2011 (week ending October 8, 2011)**
  - The 2011–12 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits in Hawaii appear to be slightly higher to week 30.
- 1,356 (14.7%) of laboratory specimens have tested positive for influenza
- There were two ILI clusters reported during week 31.
- There was one influenza-associated death reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the CDC during week 31.
- Nationwide there were 135 additional reports of influenza A (H3N2) variant viruses.
- Worldwide there have been no additional reported avian influenza cases since week 27.

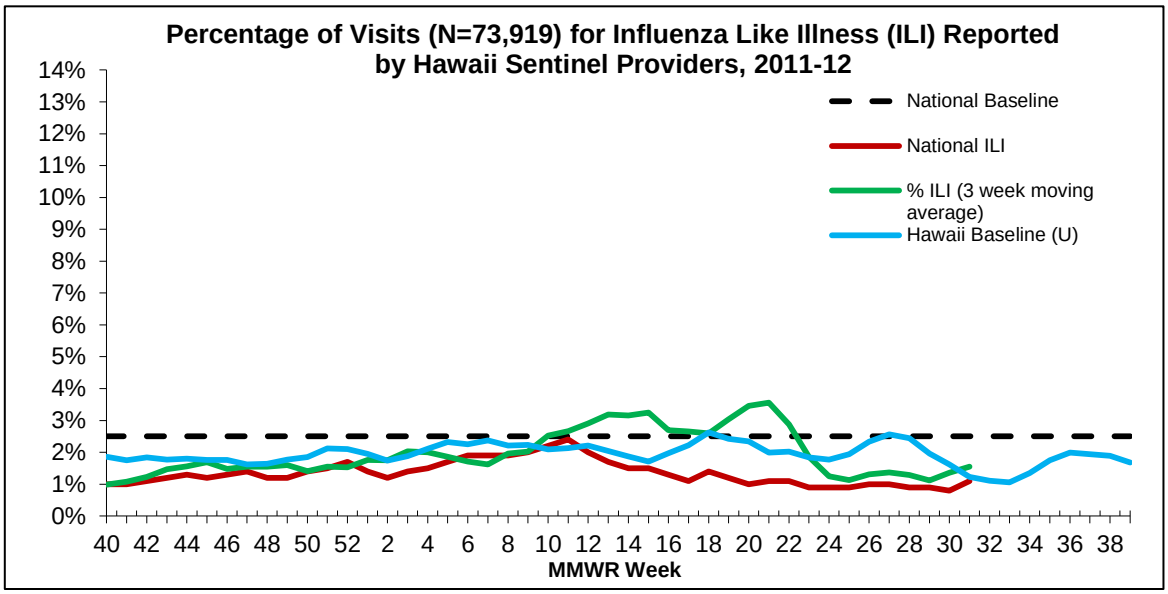
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100˚F AND a cough and/or sore throat. ILI is based on reported symptoms and not confirmed laboratory 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 from sentinel providers. Nevertheless, in combination with laboratory testing and other surveillance systems, the ILI helps monitor influenza and other respiratory pathogen activity. For more information concerning ILINet and sentinel requirements, please visit the CDC (here).

For week 31 of the current influenza season:

- *2.1% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii*[2,3]
- *Hawaii's ILI outpatient visits were comparable to the national baseline (2.4%)*[4] *and the national ILI (1.1%).*
- *ILI Cluster Activity: There were two ILI clusters reported during week 31. One occurred in an elementary school and the other in a long-term healthcare facility. Currently there have been 9 influenza-like clusters reported to HDOH – 3 confirmed and 2 suspected clusters.*



[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. The chart above represents a 3-week moving average and not the actual ILI by week.

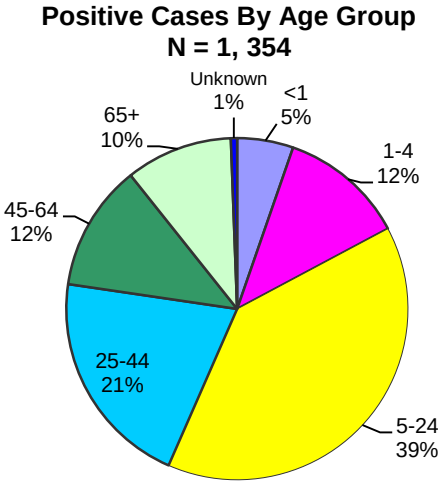
[4] The National Baseline is calculated by CDC as the mean percentage of visits for ILI during weeks 21–39 with two standard deviations. Because of large variability in regional ILI, comparison of the national baseline with local ILI may not be appropriate. It is provided in this report because no meaningful 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.

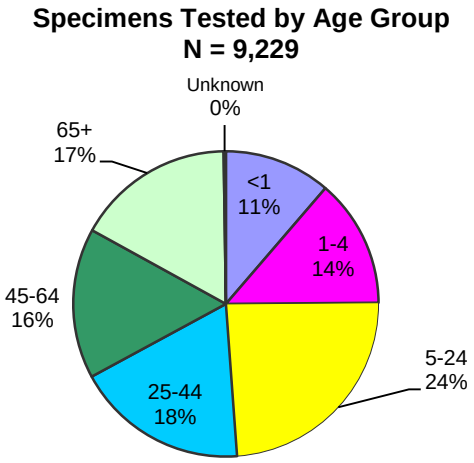
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, along with several private laboratories report testing results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with ARDS or x-ray confirmed pneumonia, 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 specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was 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 did not meet criteria and were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2011–12 flu season:

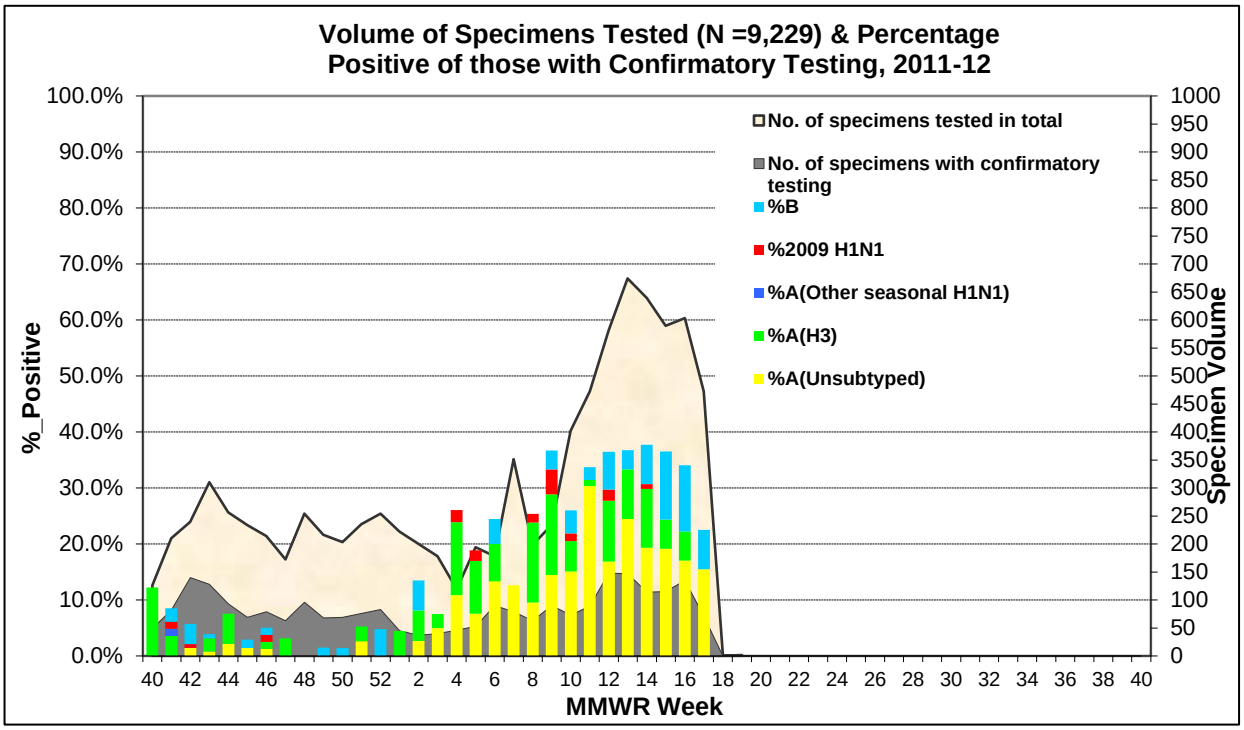
- *A total of 9,229 specimens have been tested statewide for influenza viruses*
  - *6,697 (72.6%) were screened by rapid antigen tests*
  - *2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *15 (1.4%) were 2009 H1N1,*
    - *1 (0.1%) was other seasonal influenza A (H1),*
    - *125 (11.3%) were influenza A (H3),*
    - *and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the *14.7% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 results are tested on a limited basis because of the high costs associated with respiratory panel tests. **Therefore, all available data represents the presence of circulating pathogens and cannot be used to determine specific trends**.

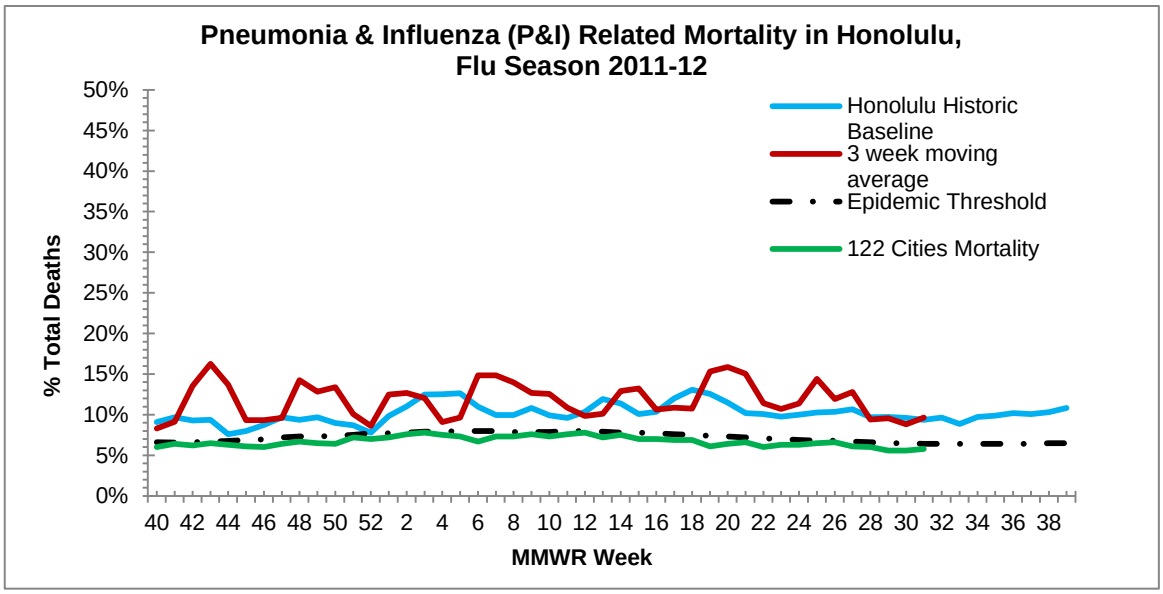
All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																				
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X													
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X			X									
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X									
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
Varicella Zoster Virus																									X												X																
Influenza 2009 H1N1		X	X				X										X	X				X			X																											
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																						
Influenza A (Other seasonal H1N1)		x															X					X	X																													
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																			
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X																

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods – 122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. The CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 31 of the current influenza season:

- *11.6% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii*
- *Both the national 122 city P&I mortality (5.8%) and epidemic threshold (6.5%) were comparable to Honolulu.*

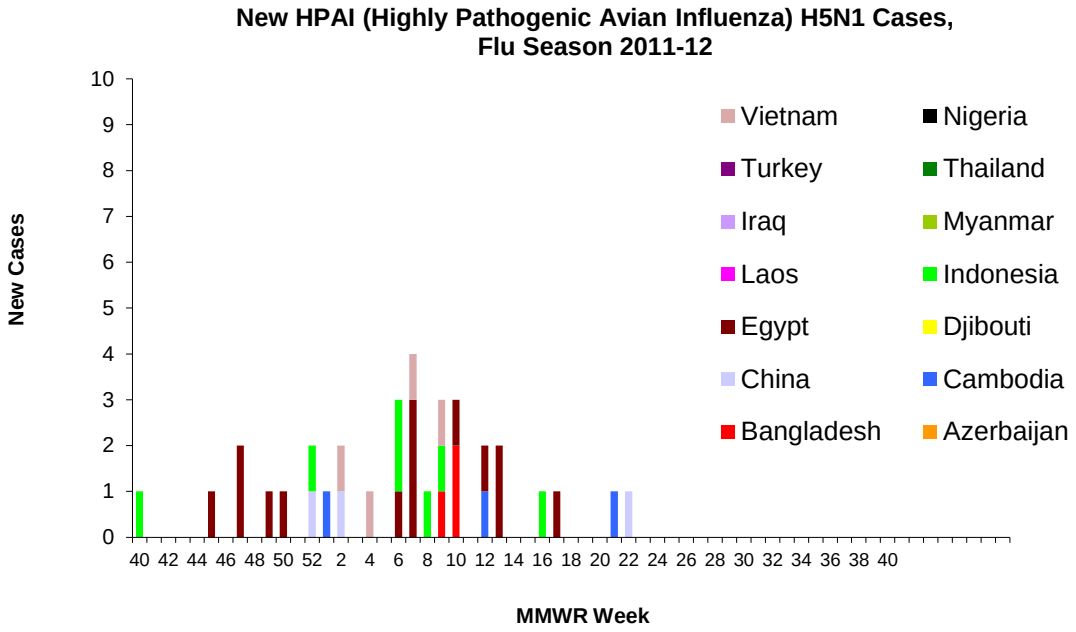


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons less than 18 years of age.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to the CDC during week 31. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 34.*
  - *There has been two flu-related deaths – one pediatric and one among an elderly individual – in Hawaii for the 2011–12 season. The pediatric death occurred during week 17 (week ending April 28, 2012) and was associated with 2009 H1N1. The adult death occurred during week 31 (week ending August 4, 2011) and was associated with a seasonal influenza A (H3).*

VI. Influenza Watch: As part of a comprehensive influenza surveillance system and in order to prevent the spread of such diseases in humans, it is important to keep track of all circulating influenza types. Two animal origin influenza A subtypes are currently of interest – influenza A variant virus (H3N2v) and Avian flu (H5N1).

A. H3N2v: Since August 2011, 164 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human cases of H3N2v were first identified in the northeastern United States in the summer of 2011 and have since spread to 9 states, including Hawaii. The following states have reported cases: Hawaii (1), Indiana (120), Iowa (3), Ohio (31), Illinois (1), Maine (2), Pennsylvania (3), Utah (1), and West Virginia (2). To date no human-to-human transmission has been identified and most cases have reported contact with swine prior to illness onset.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 which is presently circulating in poultry. For more information regarding avian influenza, please visit the CDC (here) or the WHO (here). WHO reports total number of cases and deaths related to laboratory-confirmed avian influenza. **WHO avian influenza was last updated in August 10, 2012.**



Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

Appendix 2: MMWR Week Dates

Please refer to the table below to interpret data presented by MMWR week.

Week Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

August 5–11, 2012: Week 32

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2011–12 influenza season officially began on week 40, 2011 (week ending October 8, 2011)**
  - The 2011–12 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits in Hawaii appear to be comparable to week 31.
- 1,356 (14.7%) of laboratory specimens have tested positive for influenza
- There were two ILI clusters reported during week 32.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the CDC during week 32.
- Nationwide there have been 230 reports of influenza A (H3N2) variant viruses.
- Worldwide there has been no additional avian influenza case since August 10, 2012.

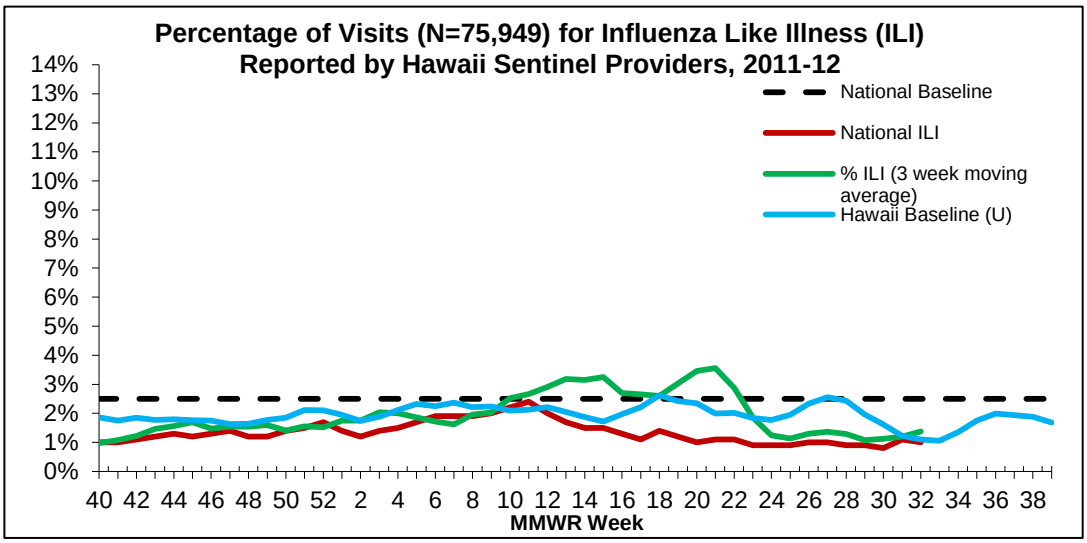
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100˚F AND a cough and/or 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 from sentinel providers. Nevertheless, in combination with laboratory testing and other surveillance systems, the ILI helps monitor influenza and other respiratory pathogen activity. For more information concerning ILINet and sentinel requirements, please visit the CDC (here).

For week 32 of the current influenza season:

- *1.2% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii*[2,3]
- *Hawaii's ILI outpatient visits lower than the national baseline (2.4%)*[4] *but comparable to the national ILI (1.0%).*
- *ILI Cluster Activity: There were two ILI clusters reported during week 32. Both occurred in long-term healthcare facilities. Both were also associated with seasonal influenza A (H3). For the 2011–12 influenza season there have been 11 influenza-like clusters reported to HDOH—5 confirmed and 2 suspected clusters.*



[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. The chart above represents a 3-week moving average and not the actual ILI by week.

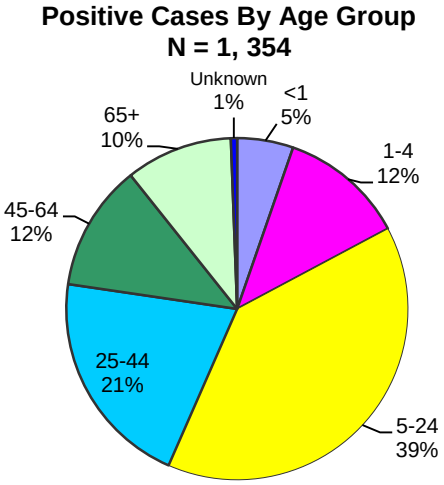
[4] The National Baseline is calculated by CDC as the mean percentage of visits for ILI during weeks 21–39 with two standard deviations. Because of large variability in regional ILI, comparison of the national baseline with local ILI may not be appropriate. It is provided in this report because no meaningful 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.

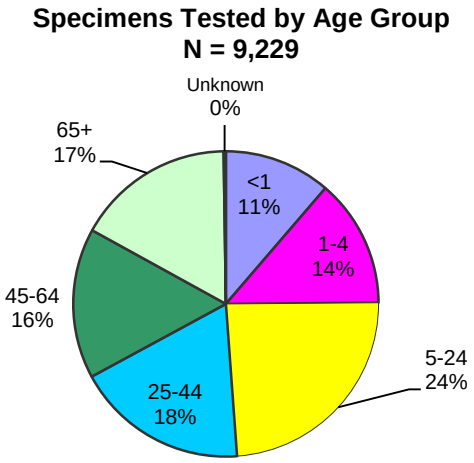
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, along with several private laboratories report testing results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with ARDS or x-ray confirmed pneumonia, 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 specimens from patients who presented with unusual or severe manifestations of influenza infections) were forwarded to SLD for sub-typing. Sub-typing at the commercial laboratories was 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 did not meet criteria and were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2011–12 flu season:

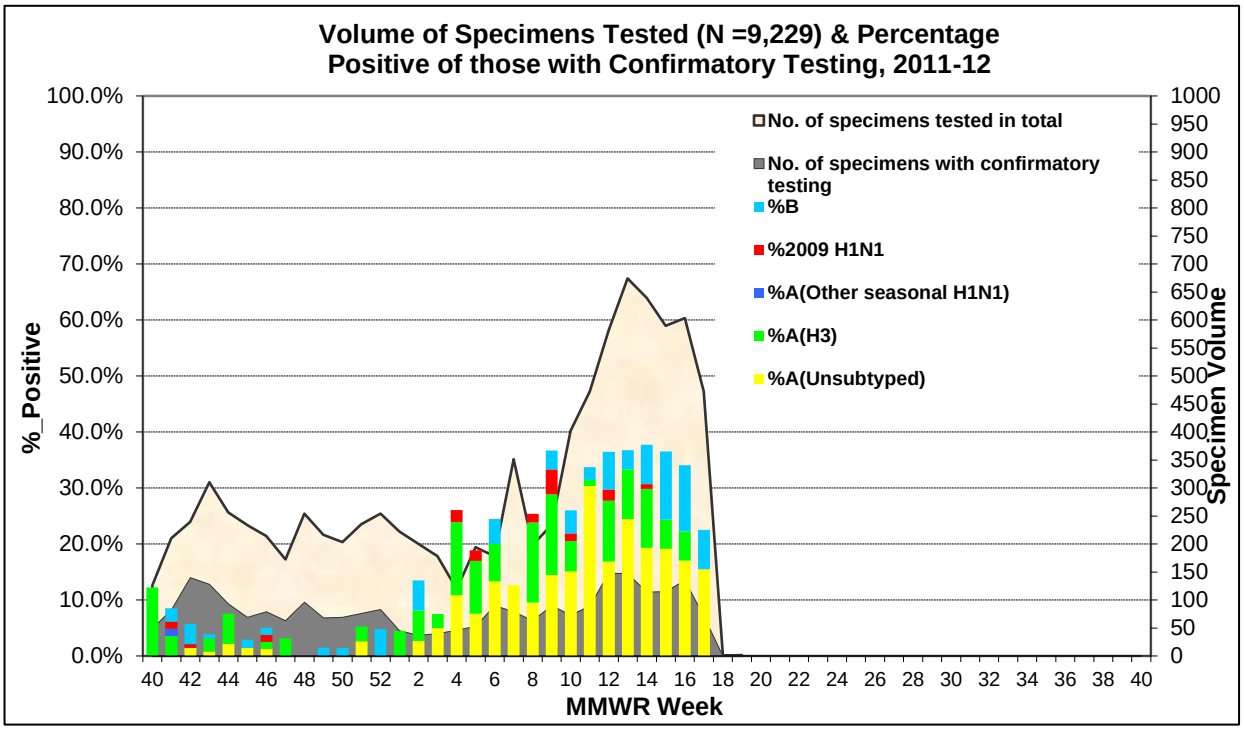
- *A total of 9,229 specimens have been tested statewide for influenza viruses*
  - *6,697 (72.6%) were screened by rapid antigen tests*
  - *2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *15 (1.4%) were 2009 H1N1,*
    - *1 (0.1%) was other seasonal influenza A (H1),*
    - *125 (11.3%) were influenza A (H3),*
    - *and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the *14.7% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 results are tested on a limited basis because of the high costs associated with respiratory panel tests. **Therefore, all available data represents the presence of circulating pathogens and cannot be used to determine specific trends**.

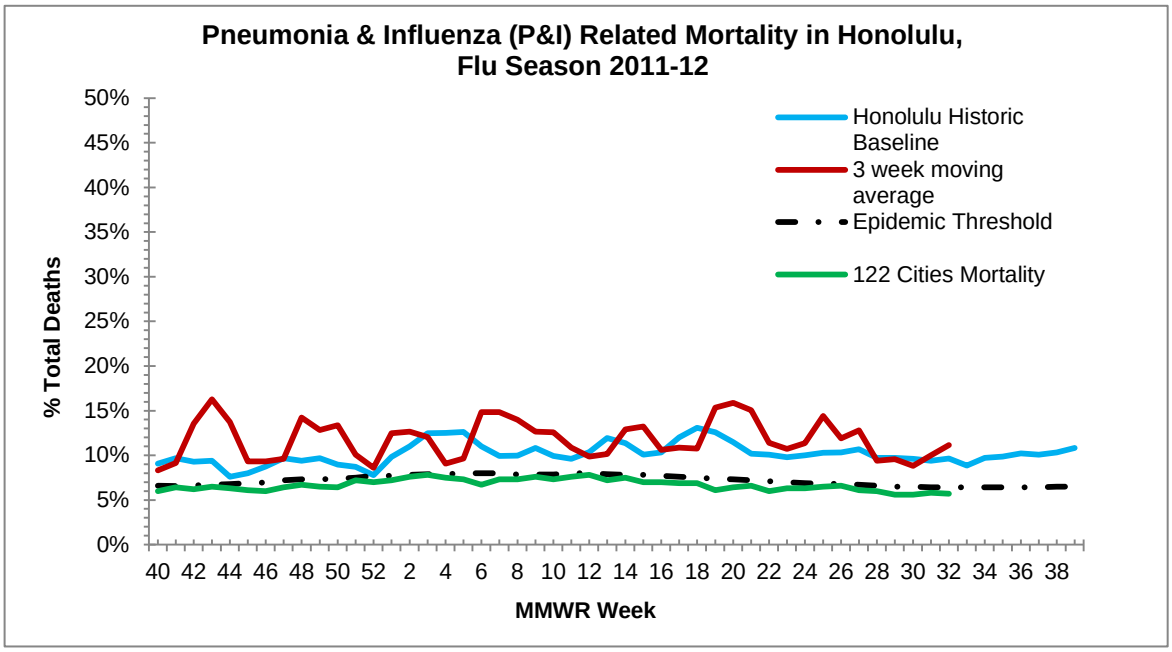
All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																				
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X													
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X			X									
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X									
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
Varicella Zoster Virus																									X												X																
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X																							
Influenza A (Other seasonal H1N1)		x															X					X	X																														
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																				
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X																	

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods – 122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. The CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 32 of the current influenza season:

- *10.6% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii*
- *Both the national 122 city P&I mortality (5.7%) and epidemic threshold (6.5%) were comparable to Honolulu.*

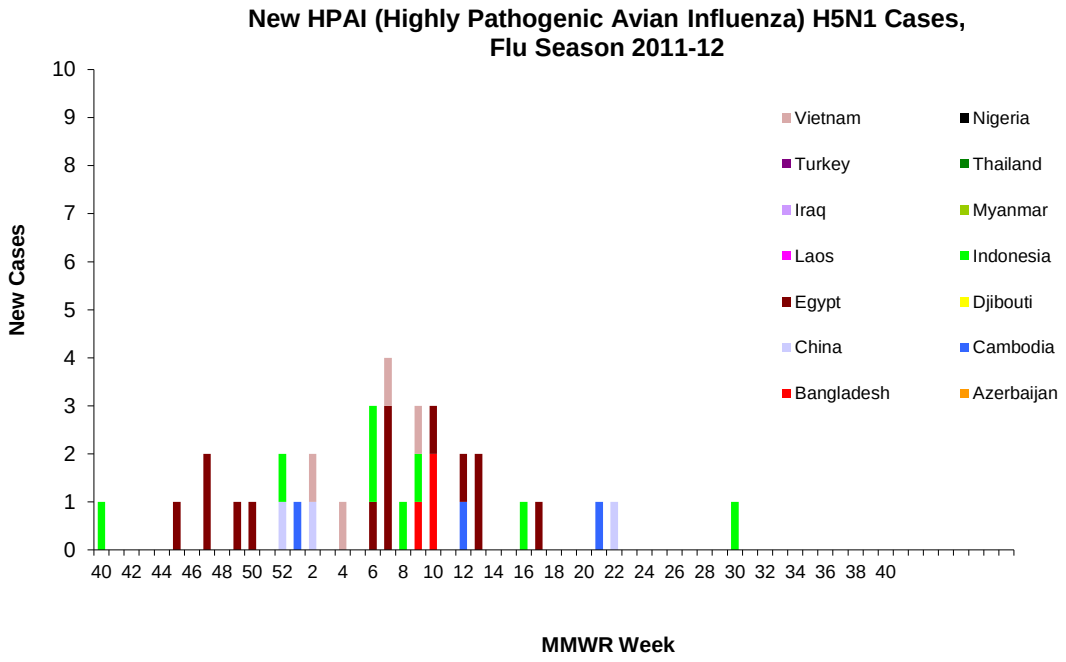


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons less than 18 years of age.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to the CDC during week 32. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 34.*
  - *There have been two flu-related deaths – one pediatric and one among an elderly individual – in Hawaii for the 2011–12 season. The pediatric death occurred during week 17 (week ending April 28, 2012) and was associated with 2009 H1N1. The adult death occurred during week 31 (week ending August 4, 2011) and was associated with a seasonal influenza A (H3).*

VI. Influenza Watch: As part of a comprehensive influenza surveillance system and in order to prevent the spread of such diseases in humans, it is important to keep track of all circulating influenza types. Two animal-origin influenza A subtypes are currently of interest – influenza A variant virus (H3N2v) and Avian flu (H5N1).

A. H3N2v: Since August 2011, 230 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human cases of H3N2v were first identified in the northeastern United States in the summer of 2011 and have since spread to 11 states, including Hawaii. The following states have reported cases: Hawaii (1), Indiana (138), Iowa (3), Ohio (72), Illinois (3), Maine (2), Pennsylvania (4), Utah (1), Michigan (1), Wisconsin (2) and West Virginia (3). To date no human-to-human transmission has been identified and most cases have reported contact with swine prior to illness onset.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 which is presently circulating in poultry. For more information regarding avian influenza, please visit the CDC (here) or the WHO (here). WHO reports total number of cases and deaths related to laboratory-confirmed avian influenza. **WHO avian influenza was last updated in August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

Appendix 2: MMWR Week Dates

Please refer to the table below to interpret data presented by MMWR week.

Week Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

August 28, 2012 | Volume 2012 (33)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

August 12–18, 2012: Week 33

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2011–12 influenza season officially began on week 40, 2011 (week ending October 8, 2011)**
  - The 2011–12 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (0.9%) in Hawaii are comparable (i.e., within 95% confidence intervals) to week 32 (1.2%).
- 1,356 (14.7%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 33.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the CDC during week 33.
- Nationwide there have been 281 reports of influenza A (H3N2) variant viruses.
- Worldwide there has been no additional avian influenza case since August 10, 2012.

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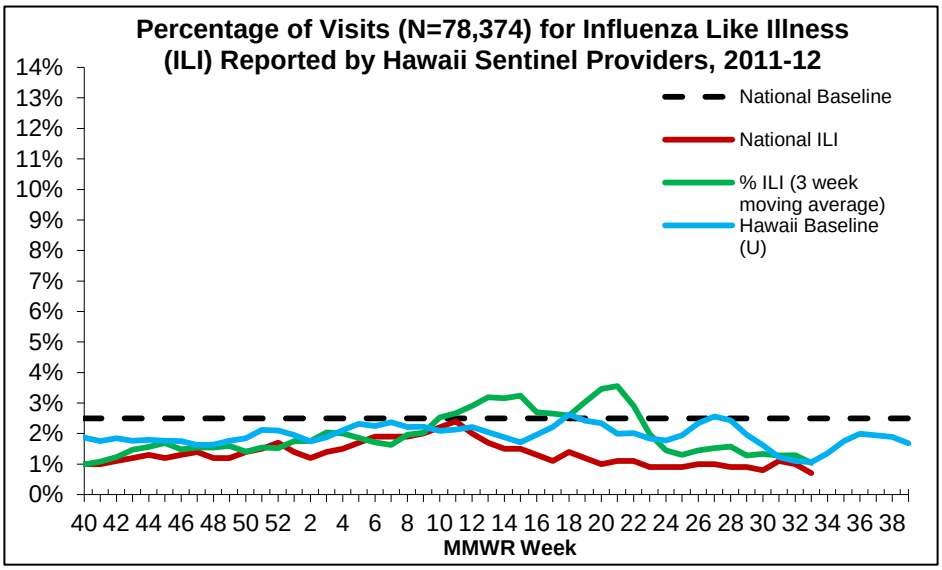
INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100°F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 (here).

For week 33 of the current influenza season:

- *0.9% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were lower than the national baseline (2.4%)[4] but comparable to the national ILI (0.7%) (i.e.,. within 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported during week 33. For the 2011–12 influenza season there have been 11 influenza-like clusters reported to HDOH—5 confirmed and 2 suspected clusters.*



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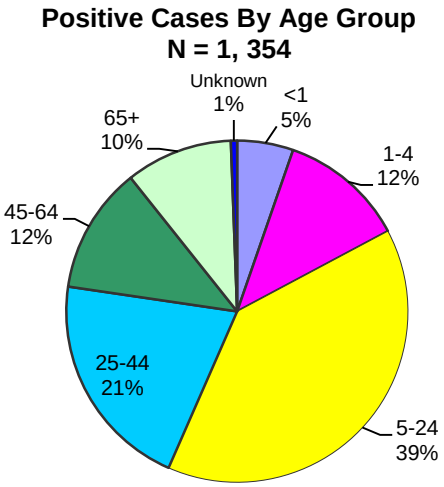
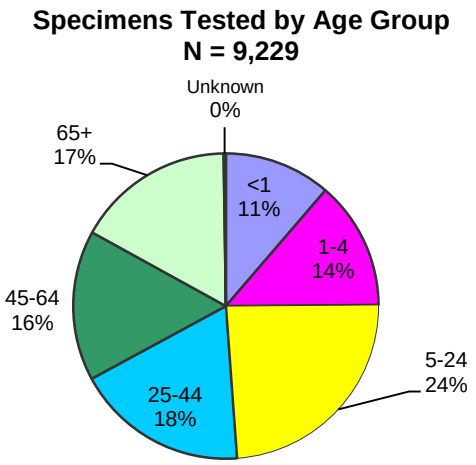
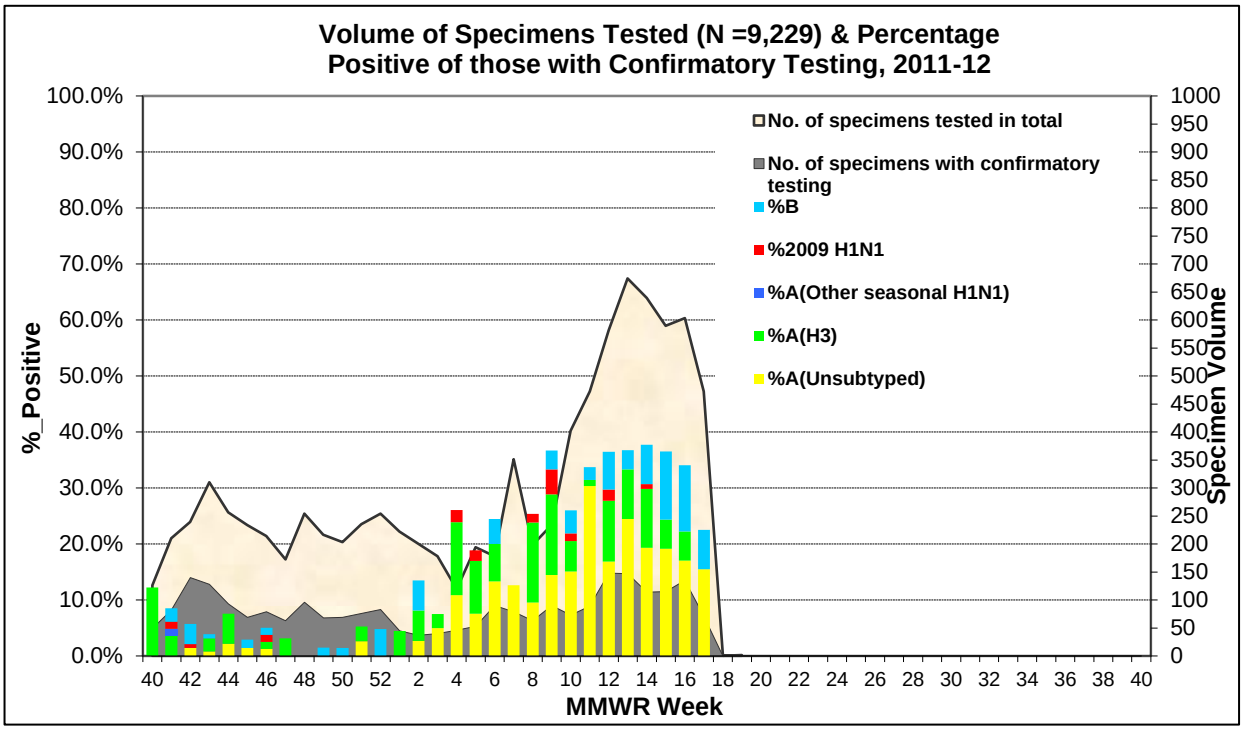
  - *influenza A cases included:*
    - *15 (1.4%) were 2009 H1N1,*
    - *1 (0.1%) was other seasonal influenza A (H1),*
    - *125 (11.3%) were influenza A (H3),*
    - *and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the *14.7% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis because of the high costs associated with respiratory panel tests. **Therefore, all available data represents the presence of circulating pathogens and cannot be used to determine specific trends**.

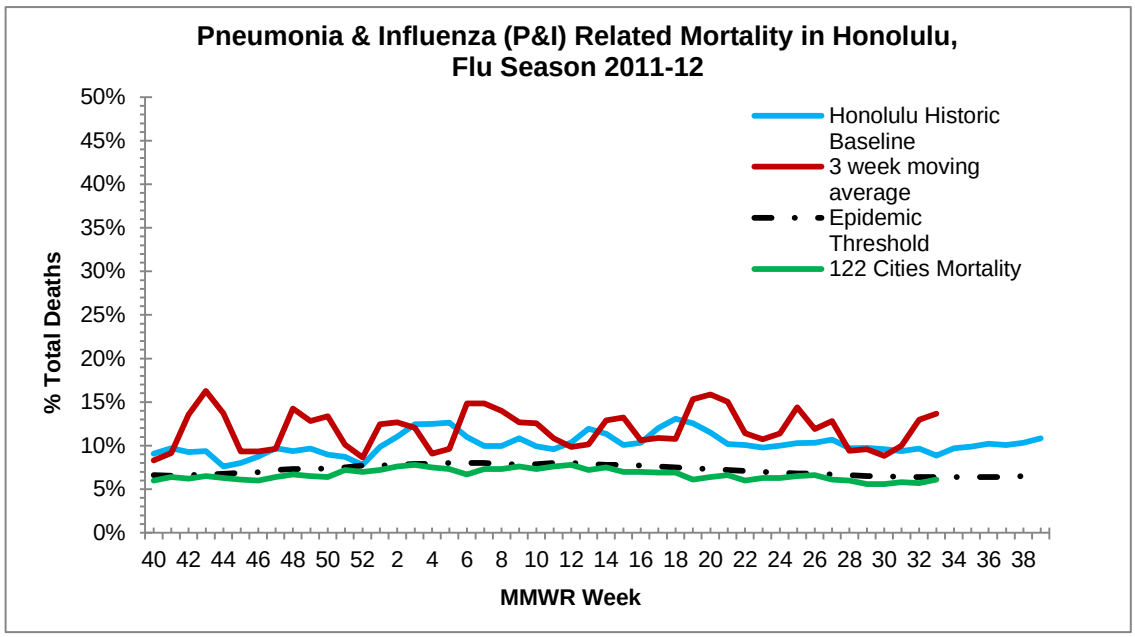
All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																			
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X						X	X							
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X			X		X		X						
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X						
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X						
Varicella Zoster Virus																									X												X																
Influenza 2009 H1N1		X	X				X										X	X				X			X																											
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X									X	X	X	X	X	X	X							
Influenza A (Other seasonal H1N1)		x															X					X	X																								X						
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																				
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X											X						

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. The CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 33 of the current influenza season:

- *16.7% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was higher than the historical baseline in Hawaii ($p<0.05$)*
- *Both the national 122 city P&I mortality (6.1%) and epidemic threshold (6.5%) were comparable to Honolulu (i.e., within 95% confidence interval).*

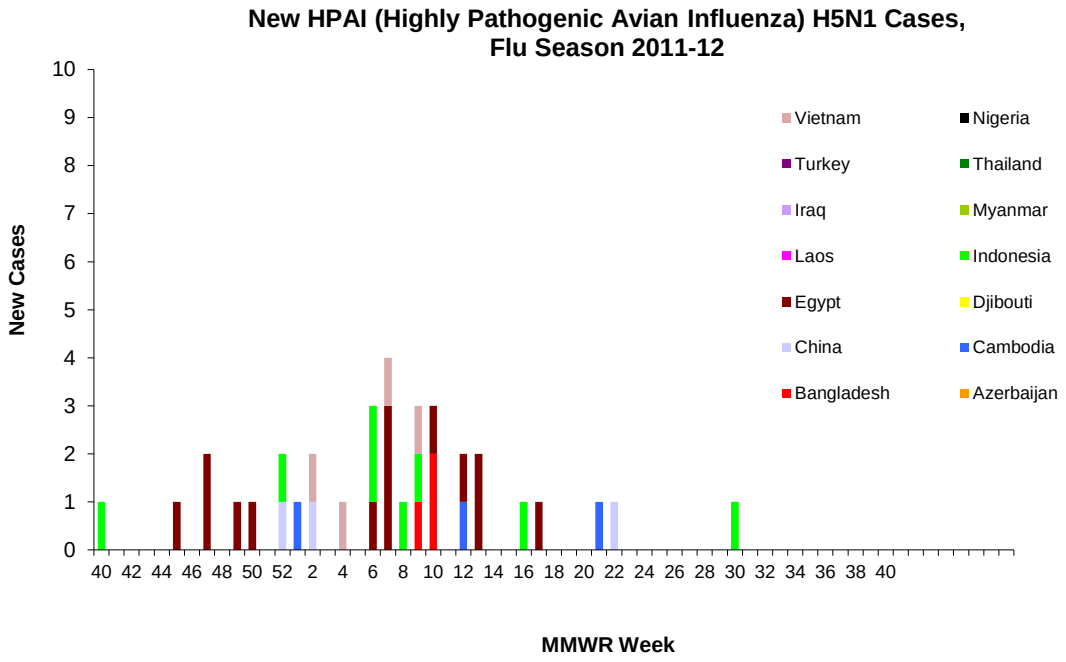


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to the CDC during week 33. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 34.*
  - *There have been two flu-related deaths–one pediatric and one among an elderly individual–in Hawaii for the 2011–12 season. The pediatric death occurred during week 17 (week ending April 28, 2012) and was associated with 2009 H1N1 viral infection. The adult death occurred during week 31 (week ending August 4, 2011) and was associated with a seasonal influenza A (H3) viral infection. Both had underlying medical conditions.*

VI. Influenza Watch: As part of a comprehensive influenza surveillance system and to prevent the spread of such diseases in humans, it is important to monitor all circulating influenza types. Two animal-origin influenza A subtypes are currently of interest: influenza A variant virus (H3N2v) and Avian flu (H5N1).

A. H3N2v: Since August 2011, 281 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human cases of H3N2v were first identified in the northeastern United States in the summer of 2011 and have since spread to 12 states, including Hawaii. The following states have reported cases: Hawaii (1), Indiana (138), Iowa (3), Ohio (98), Illinois (4), Maine (2), Pennsylvania (6), Utah (1), Michigan (5), Wisconsin (8) and West Virginia (3). Most cases have reported contact with swine prior to illness onset but three cases were likely the result of human-to-human transmission.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 which is presently circulating in poultry. For more information regarding avian influenza, please visit the CDC (here) or the WHO (here). WHO reports total number of cases and deaths related to laboratory-confirmed avian influenza. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

Appendix 2: MMWR Week Dates

Please refer to the table below to interpret data presented by MMWR week.

Week Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

September 5, 2012 Volume 2012 (34)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

August 19–25, 2012: Week 34

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2011–12 influenza season officially began on week 40, 2011 (week ending October 8, 2011)**
  - The 2011–12 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (1.7%) in Hawaii are comparable (i.e., within 95% confidence intervals) to week 33 (1.2%).
- 1,356 (14.7%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 34.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the CDC during week 34.
- Nationwide there have been 301 reports of influenza A (H3N2) variant viruses.
- Worldwide there has been no additional avian influenza case since August 10, 2012.

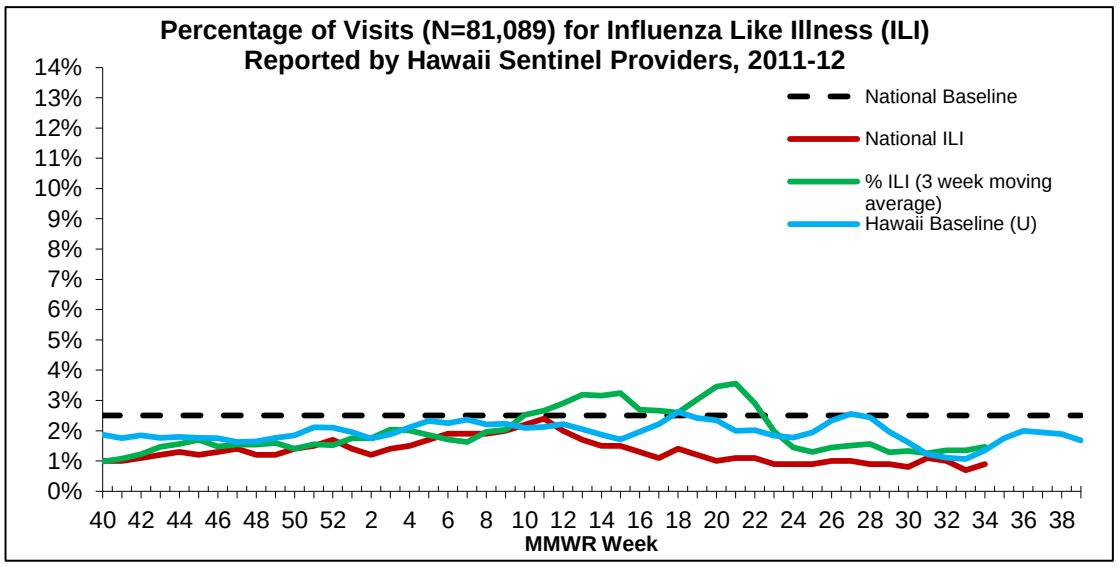
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100˚F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 (here).

For week 34 of the current influenza season:

- *1.7% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were comparable to the national baseline (2.4%)[4] but higher than the national ILI (0.9%) (i.e., within 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported during week 34. For the 2011–12 influenza season there have been 11 influenza-like clusters reported to HDOH—5 confirmed and 2 suspected clusters.*



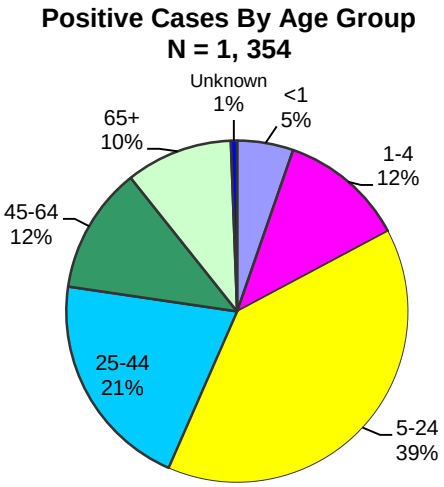
[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).
[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. 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.

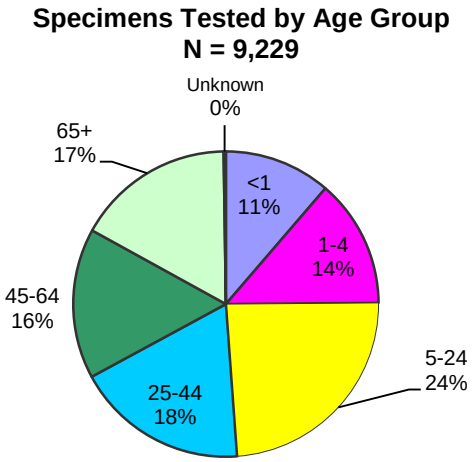
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2011–12 flu season:

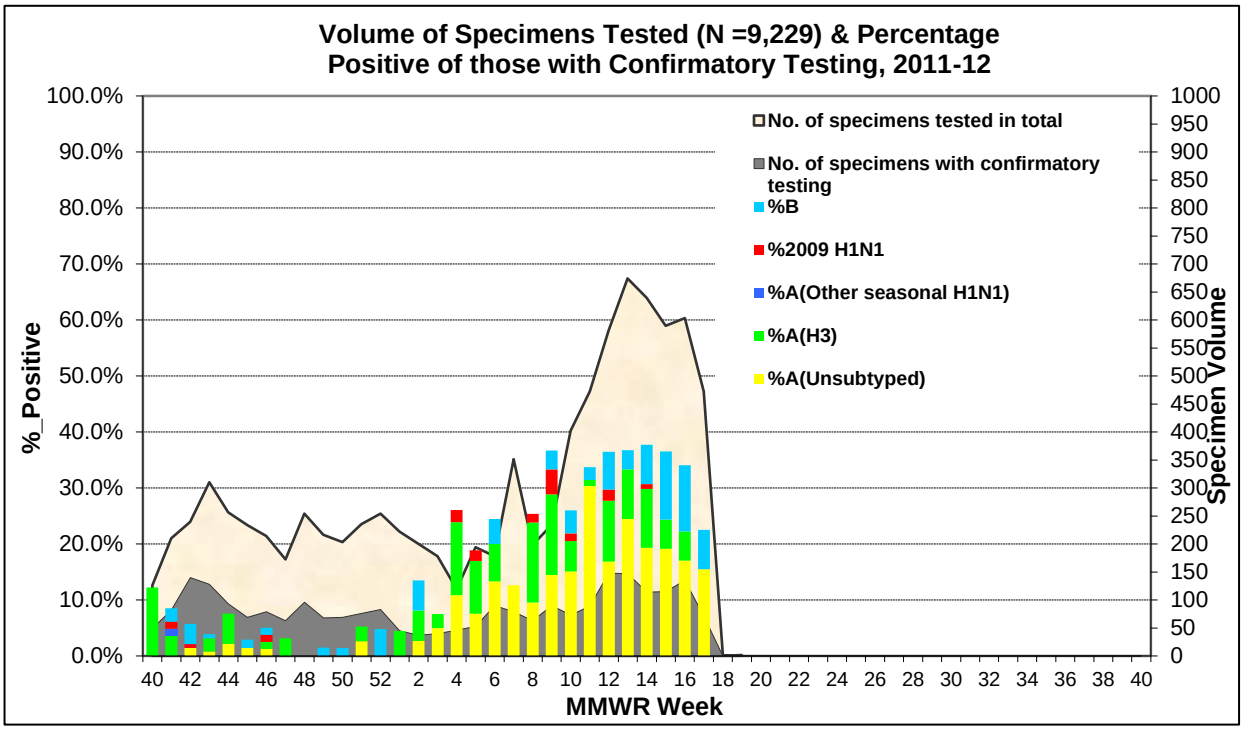
- *A total of 9,229 specimens have been tested statewide for influenza viruses*
  - *6,697 (72.6%) were screened only by rapid antigen tests with no confirmatory testing*
  - *2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *15 (1.4%) were 2009 H1N1,*
    - *1 (0.1%) was other seasonal influenza A (H1),*
    - *125 (11.3%) were influenza A (H3),*
    - *and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the *14.7% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis because of the high costs associated with respiratory panel tests. **Therefore, all available data represents the presence of circulating pathogens and cannot be used to determine specific trends**.

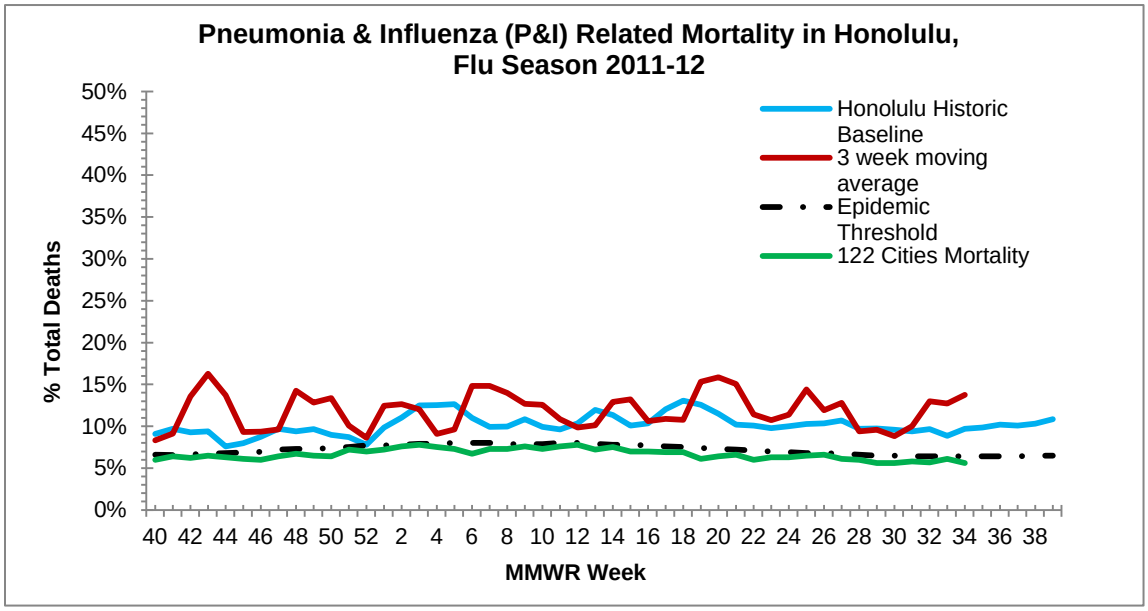
All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																				
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X						X	X							
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X			X		X		X						
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X						
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X						
Varicella Zoster Virus																									X												X																
Influenza 2009 H1N1		X	X				X										X	X				X			X																											
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X								X	X	X	X	X	X	X								
Influenza A (Other seasonal H1N1)		x															X					X	X																							X							
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																				
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X											X						

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. The CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 34 of the current influenza season:

- *10.8% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (5.6%) and epidemic threshold (6.5%) were comparable to Honolulu (i.e., within 95% confidence interval).*

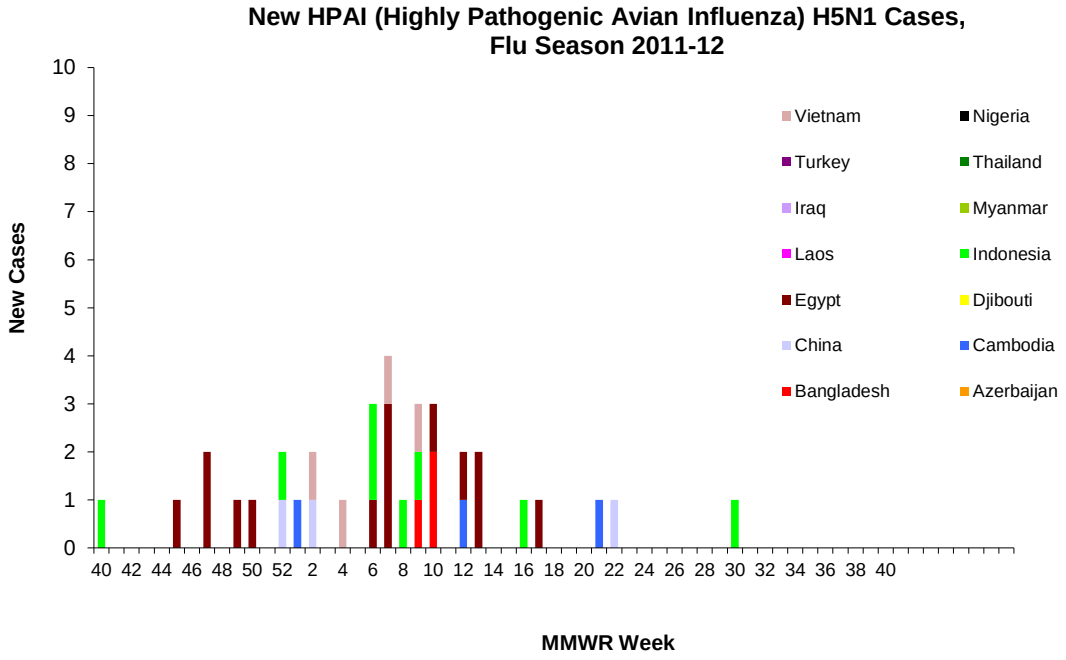


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to the CDC during week 34. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 34.*
  - *There have been two flu-related deaths–one pediatric and one among an elderly individual–in Hawaii for the 2011–12 season. The pediatric death occurred during week 17 (week ending April 28, 2012) and was associated with 2009 H1N1 viral infection. The adult death occurred during week 31 (week ending August 4, 2011) and was associated with a seasonal influenza A (H3) viral infection. Both had underlying medical conditions.*

VI. Influenza Watch: As part of a comprehensive influenza surveillance system and to prevent the spread of such diseases in humans, it is important to monitor all circulating influenza types. Two animal-origin influenza A subtypes are currently of interest: influenza A variant virus (H3N2v) and Avian flu (H5N1).

A. H3N2v: Since August 2011, 301 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human cases of H3N2v were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states, including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (5), Minnesota (2), Ohio (101), Pennsylvania (10), Utah (1), West Virginia (5), and Wisconsin (15). Most cases have reported contact with swine prior to illness onset but three cases were likely the result of human-to-human transmission. There have been 15 hospitalizations and one death associated with H3N2v.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 which is presently circulating in poultry. For more information regarding avian influenza, please visit the CDC (here) or the WHO (here). WHO reports total number of cases and deaths related to laboratory-confirmed avian influenza. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

Appendix 2: MMWR Week Dates

Please refer to the table below to interpret data presented by MMWR week.

Week Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

August 26–September 1, 2012: Week 35

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2011–12 influenza season officially began on week 40, 2011 (week ending October 8, 2011)**
  - The 2011–12 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (2.3%) in Hawaii were higher (i.e., outside 95% confidence intervals) than week 34 (1.5%).
- 1,356 (14.7%) of laboratory specimens have tested positive for influenza
- There was one ILI cluster reported during week 35.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 35.
- Nationwide there have been 309 reports of influenza A (H3N2) variant viruses and 3 reports of influenza A (H1N2) variant viruses.
- Worldwide there has been no additional avian influenza case since August 10, 2012.

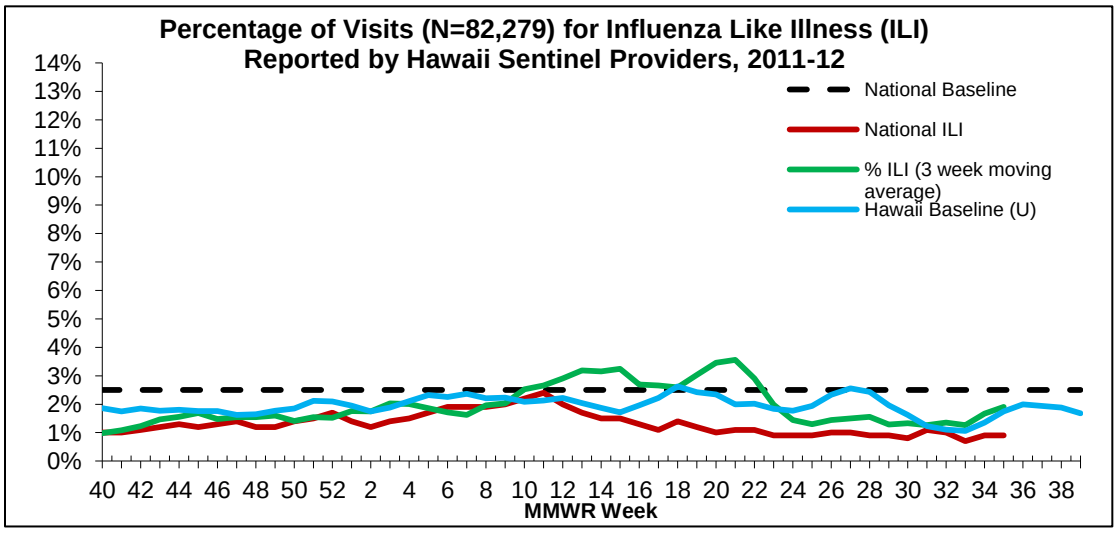
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100°F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 35 of the current influenza season:

- *2.3% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were comparable to the national baseline (2.4%)[4] but higher than the national ILI (0.9%) (i.e., outside the 95% confidence interval).*
- *ILI Cluster Activity: There was one ILI cluster reported during week 35. The cluster occurred in a long-term healthcare facility and was associated with a seasonal influenza A virus. For the 2011–12 influenza season there have been 12 influenza-like clusters reported to HDOH—6 confirmed and 2 suspected clusters.*



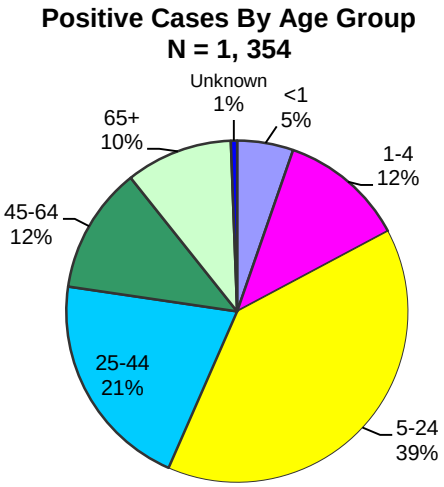
[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).
[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. 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.

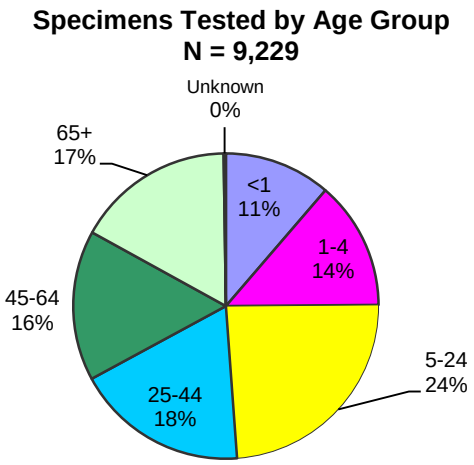
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2011–12 flu season:

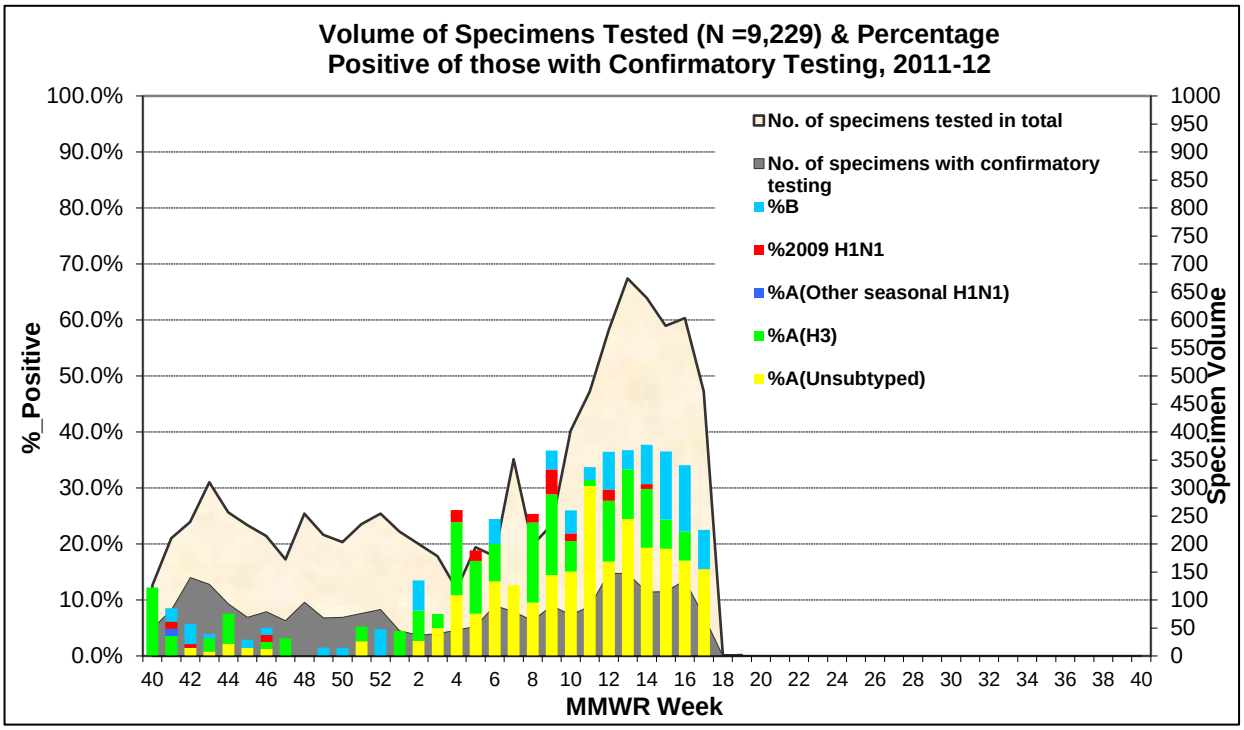
- *A total of 9,229 specimens have been tested statewide for influenza viruses*
  - *6,697 (72.6%) were screened only by rapid antigen tests with no confirmatory testing*
  - *2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *15 (1.4%) were 2009 H1N1,*
    - *1 (0.1%) was other seasonal influenza A (H1),*
    - *125 (11.3%) were influenza A (H3),*
    - *and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the *14.7% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis because of the high costs associated with respiratory panel tests. **Therefore, all available data represents the presence of circulating pathogens and cannot be used to determine specific trends**.

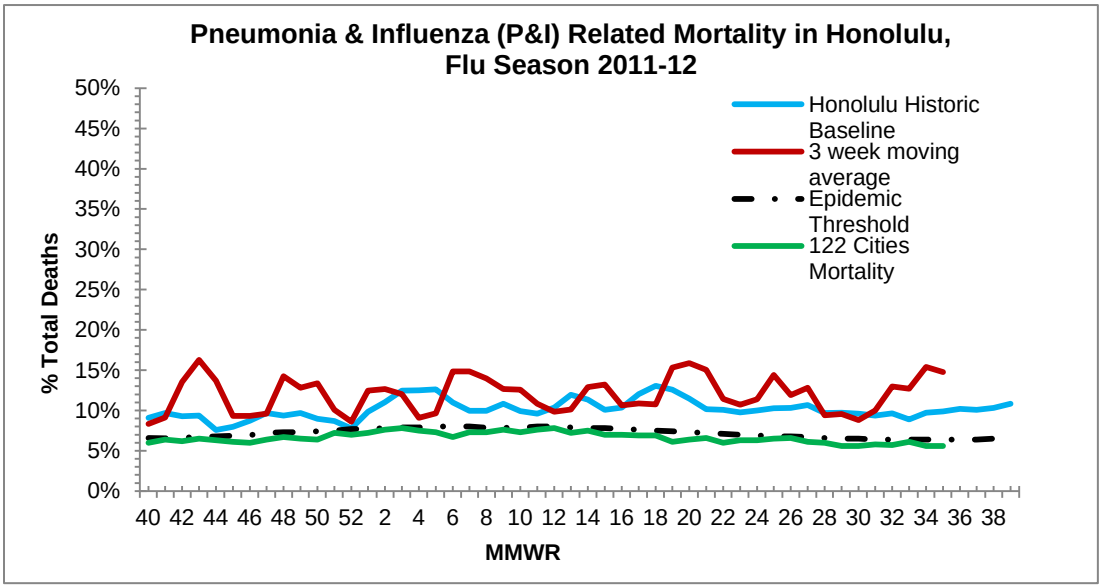
All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																						
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																		
Coxsackie Virus																																																						
Cytomegalovirus			X																																																			
Echovirus																																																						
Enterovirus	X		X																																																			
Herpes Simplex Virus, Type 1																																																						
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X						X	X			X				
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X			X		X		X	X	X				
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X				
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X				
Varicella Zoster Virus																									X												X																	
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X									X	X	X	X	X	X	X								
Influenza A (Other seasonal H1N1)		x															X					X	X																								X						
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																X					
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X											X						

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 35 of the current influenza season:

- *18.7% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was higher than the historical baseline in Hawaii ($p<0.05$)*
- *Both the national 122 city P&I mortality (5.6%) and epidemic threshold (6.5%) were lower than Honolulu P&I (i.e., outside 95% confidence interval).*

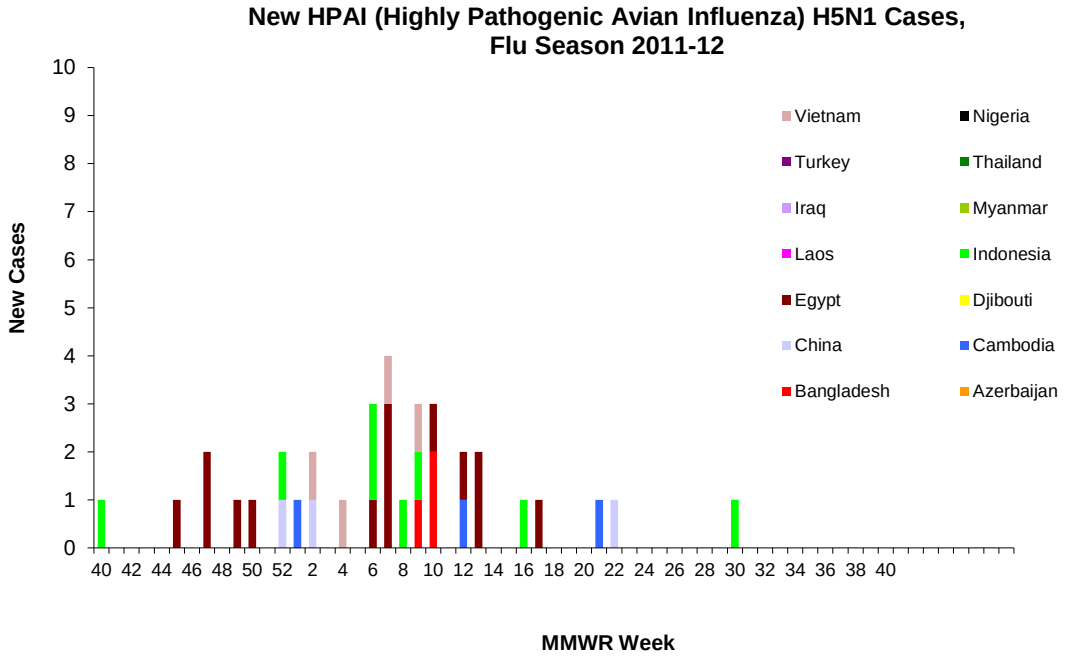


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to CDC during week 34. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 34.*
  - *There have been two flu-related deaths—one pediatric and one among an elderly individual—in Hawaii during the 2011–12 season. The pediatric death occurred during week 17 (week ending April 28, 2012) and was associated with 2009 H1N1 viral infection. The adult death occurred during week 31 (week ending August 4, 2011) and was associated with a seasonal influenza A (H3) viral infection. Both had underlying medical conditions.*

VI. Influenza Watch: As part of a comprehensive influenza surveillance system and to prevent the spread of such diseases in humans, it is important to monitor all circulating influenza types. Two animal-origin influenza A subtypes are currently of interest: influenza A variant virus (H3N2v and H1N2v) and Avian flu (H5N1).

A. Variant Viruses: Since August 2011, 309 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (5), Minnesota (2), Ohio (102), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (13). Most cases have reported contact with swine before illness onset, but three cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection. The cases all had exposure to swine before illness and have all recovered.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

Appendix 2: MMWR Week Dates

Please refer to the table below to interpret data presented by MMWR week.

Week Ending Dates for MMWR

MMWR WEEK	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

September 2–8, 2012: Week 36

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2011–12 influenza season officially began on week 40, 2011 (week ending October 8, 2011)**
  - The 2011–12 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (2.6%) in Hawaii was comparable (i.e., within 95% confidence intervals) to week 35 (2.3%).
- 1,356 (14.7%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 36.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 36.
- Nationwide there have been 318 reports of influenza A (H3N2) variant viruses, 3 reports of influenza A (H1N2) variant viruses, and one influenza A (H1N1) variant viruses.
- Worldwide there has been no additional avian influenza case since August 10, 2012.

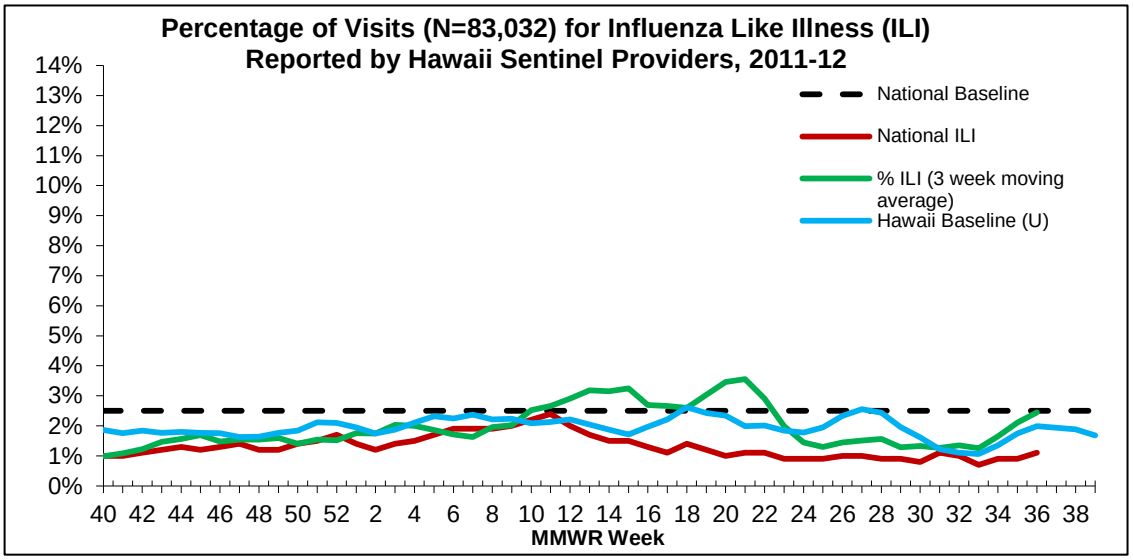
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100°F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 36 of the current influenza season:

- *2.6% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were comparable to the national baseline (2.4%)[4] but higher than the national ILI (1.1%) (i.e., outside the 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported during week 36. For the 2011–12 influenza season there have been 12 influenza-like clusters reported to HDOH—6 confirmed and 2 suspected clusters.*



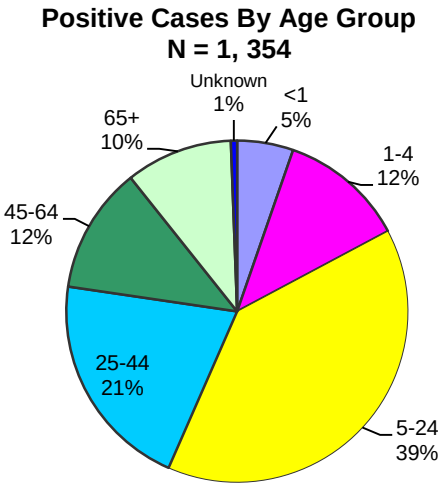
[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).
[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. 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.

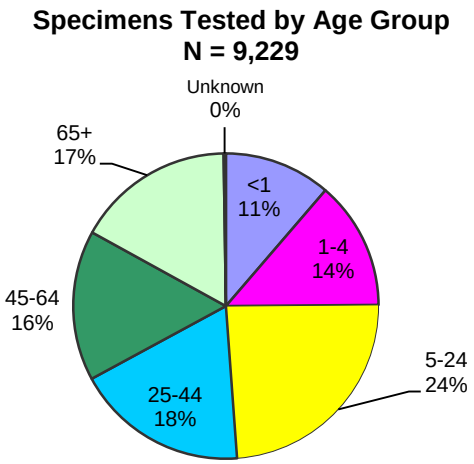
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2011–12 flu season:

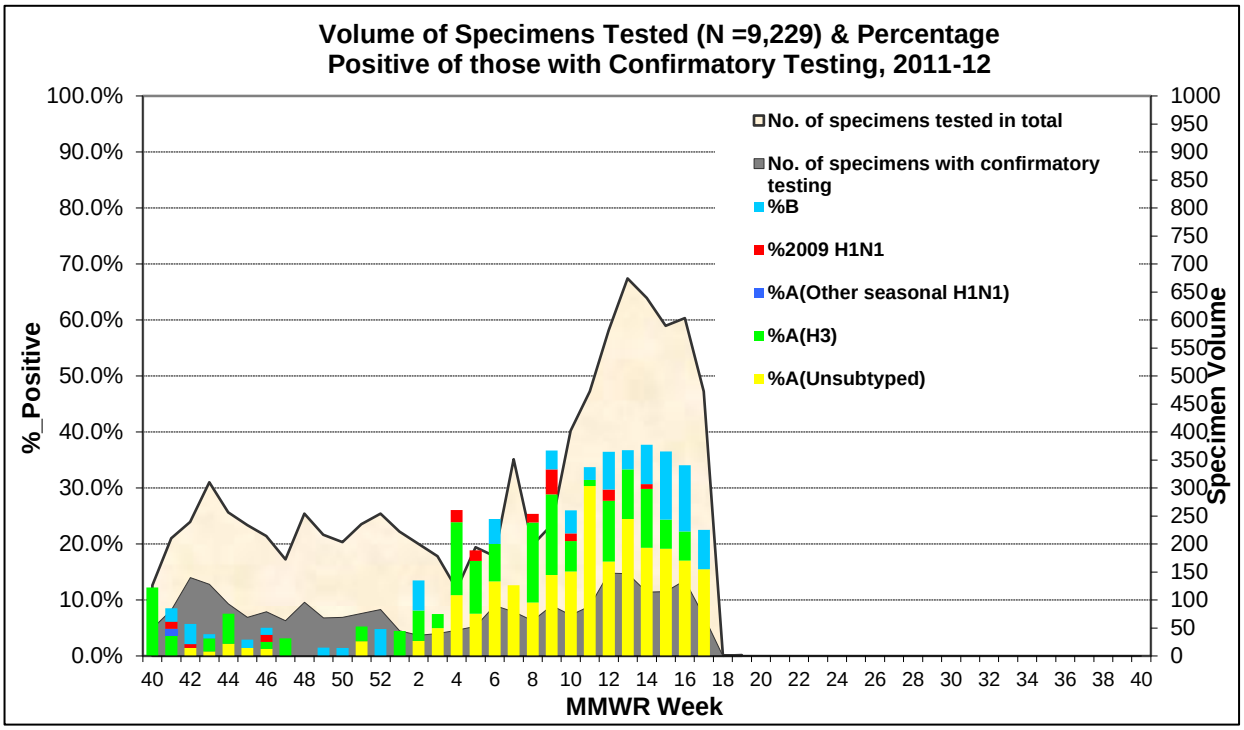
- *A total of 9,229 specimens have been tested statewide for influenza viruses*
  - *6,697 (72.6%) were screened only by rapid antigen tests with no confirmatory testing*
  - *2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *15 (1.4%) were 2009 H1N1,*
    - *1 (0.1%) was other seasonal influenza A (H1),*
    - *125 (11.3%) were influenza A (H3),*
    - *and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the *14.7% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

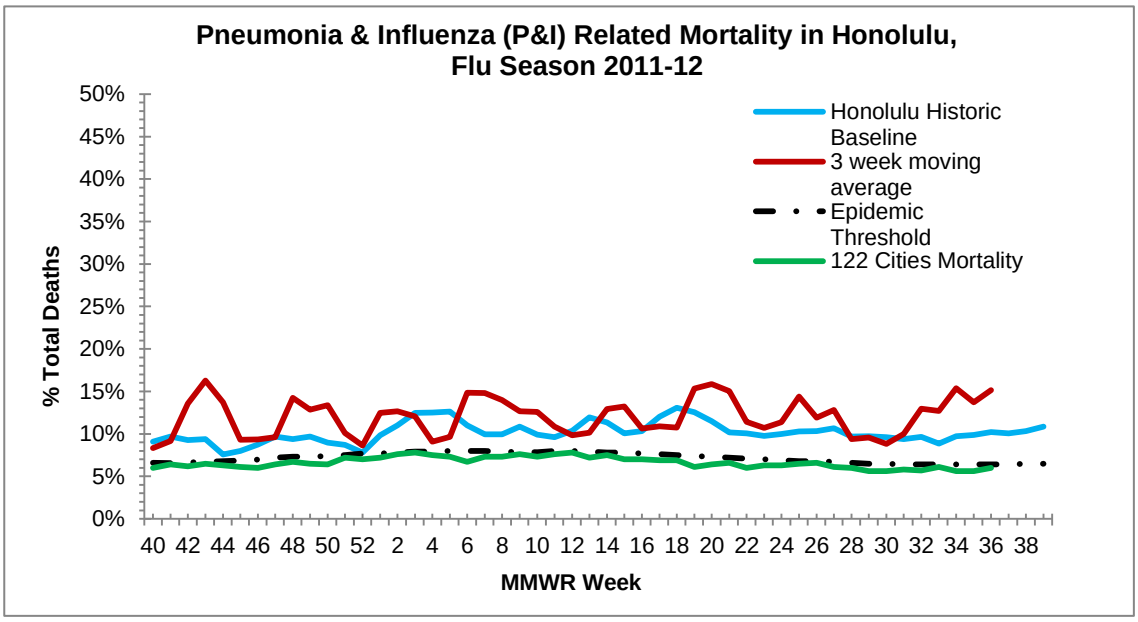
All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																						
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																		
Coxsackie Virus																																																						
Cytomegalovirus			X																																																			
Echovirus																																																						
Enterovirus	X		X																																																			
Herpes Simplex Virus, Type 1																																																						
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X						X	X			X				
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X			X		X		X	X	X				
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X				
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X				
Varicella Zoster Virus																									X												X																	
Influenza 2009 H1N1		X	X				X										X	X				X			X																													
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X									X	X	X	X	X	X	X									
Influenza A (Other seasonal H1N1)		x															X					X	X																								X							
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																X						
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X											X							

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 36 of the current influenza season:

- *11.7% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (6.0%) and epidemic threshold (6.5%) were comparable to the Honolulu P&I (i.e., within 95% confidence interval).*

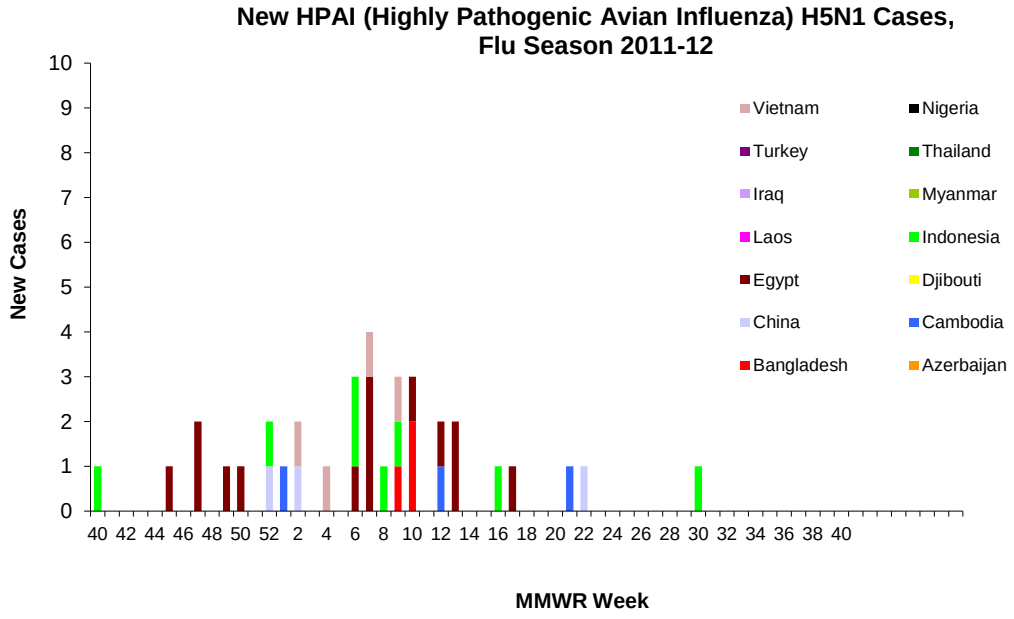


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to CDC during week 36. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 34.*
  - *There have been two flu-related deaths—one pediatric and one among an elderly individual—in Hawaii during the 2011–12 season. The pediatric death occurred during week 17 (week ending April 28, 2012) and was associated with 2009 H1N1 viral infection. The adult death occurred during week 31 (week ending August 4, 2011) and was associated with a seasonal influenza A (H3) viral infection. Both had underlying medical conditions.*

VI. Influenza Watch: As part of a comprehensive influenza surveillance system and to prevent the spread of such 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).

A. Variant Viruses: Since August 2011, 318 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (106), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

September 9–15, 2012: Week 37

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2011–12 influenza season officially began on week 40, 2011 (week ending October 8, 2011)**
  - The 2011–12 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (1.4%) in Hawaii were comparable (i.e., within 95% confidence intervals) to week 36 (1.8%).
- 1,356 (14.7%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 37.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 37.
- Nationwide there have been 318 reports of influenza A (H3N2) variant viruses, 3 reports of influenza A (H1N2) variant viruses, and one influenza A (H1N1) variant viruses.
- Worldwide there has been no additional avian influenza case since August 10, 2012.

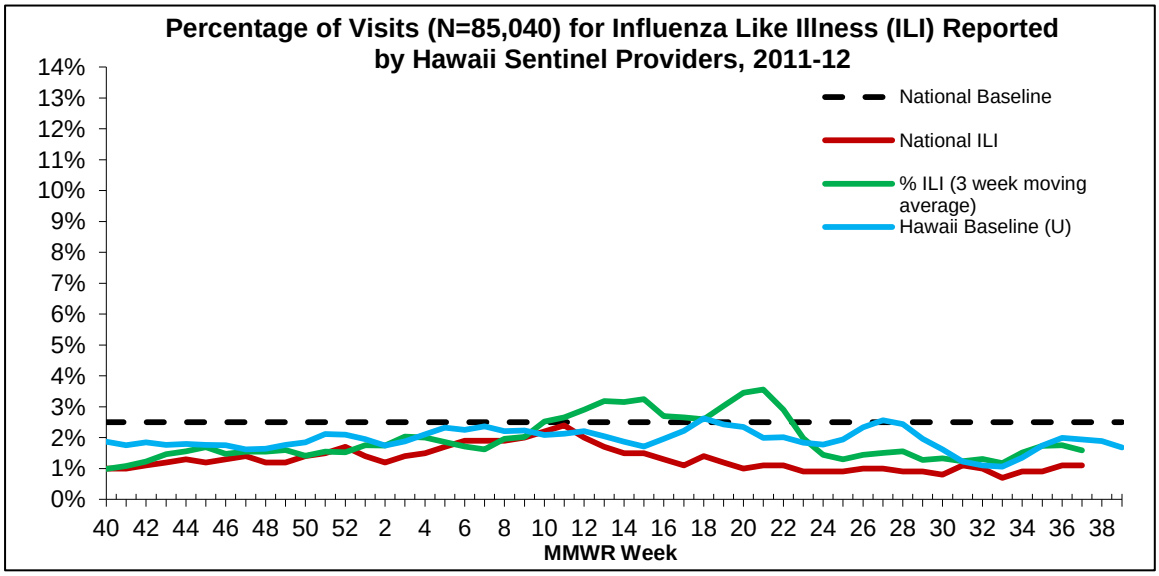
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100°F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 37 of the current influenza season:

- *1.4% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were lower than the national baseline (2.4%)[4] but comparable to the national ILI (1.1%) (i.e., inside the 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported during week 37. For the 2011–12 influenza season there have been 12 influenza-like clusters reported to HDOH—6 confirmed and 2 suspected clusters.*



[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. The chart above represents a 3-week moving average and not the actual ILI by week.

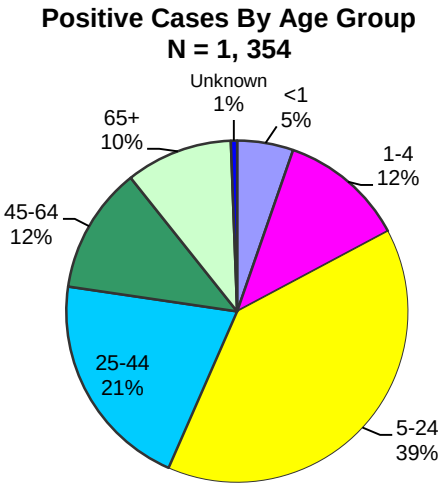
[4] The National Baseline is calculated by CDC as the mean percentage of visits for ILI during weeks 21–39 with two standard deviations. Because of large variability in regional ILI, comparison of the national baseline with local ILI may not be appropriate. It is provided in this report because no meaningful 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.

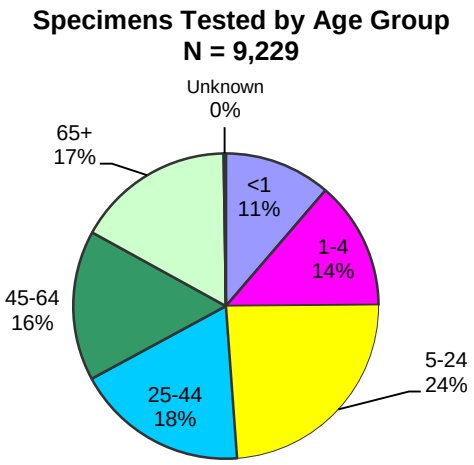
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2011–12 flu season:

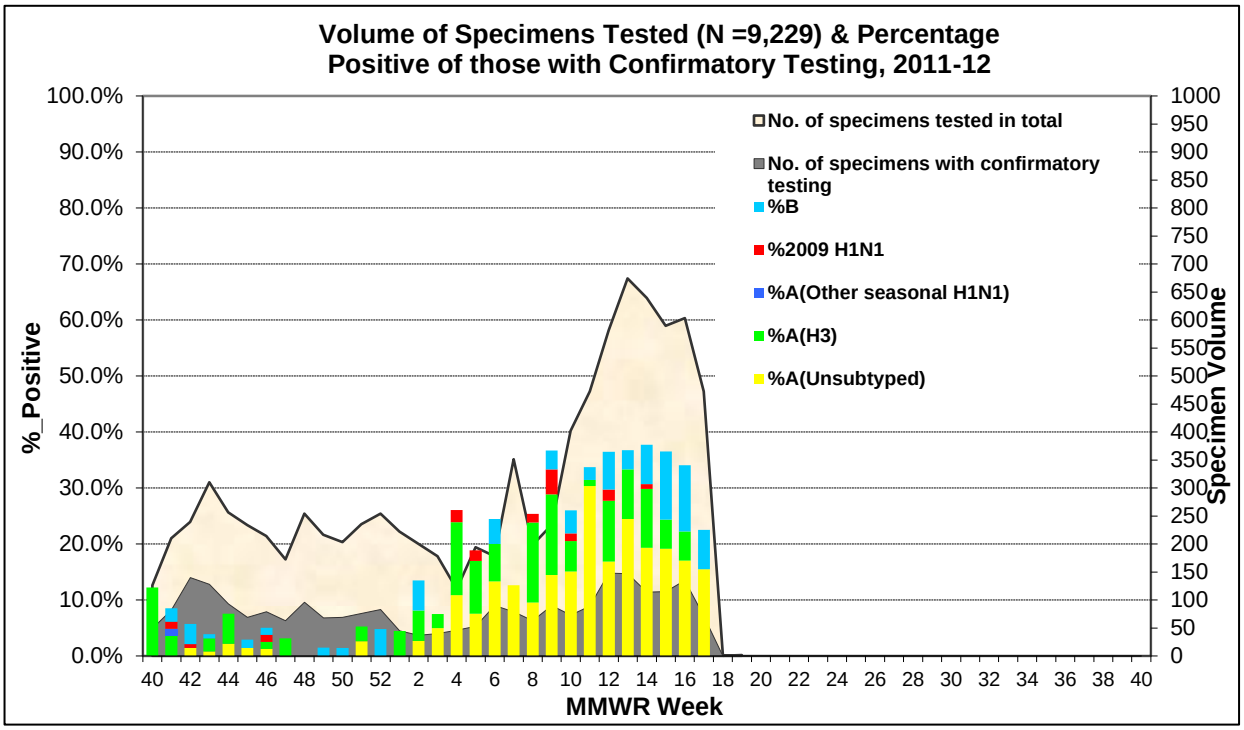
- *A total of 9,229 specimens have been tested statewide for influenza viruses*
  - *6,697 (72.6%) were screened only by rapid antigen tests with no confirmatory testing*
  - *2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *15 (1.4%) were 2009 H1N1,*
    - *1 (0.1%) was other seasonal influenza A (H1),*
    - *125 (11.3%) were influenza A (H3),*
    - *and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the *14.7% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

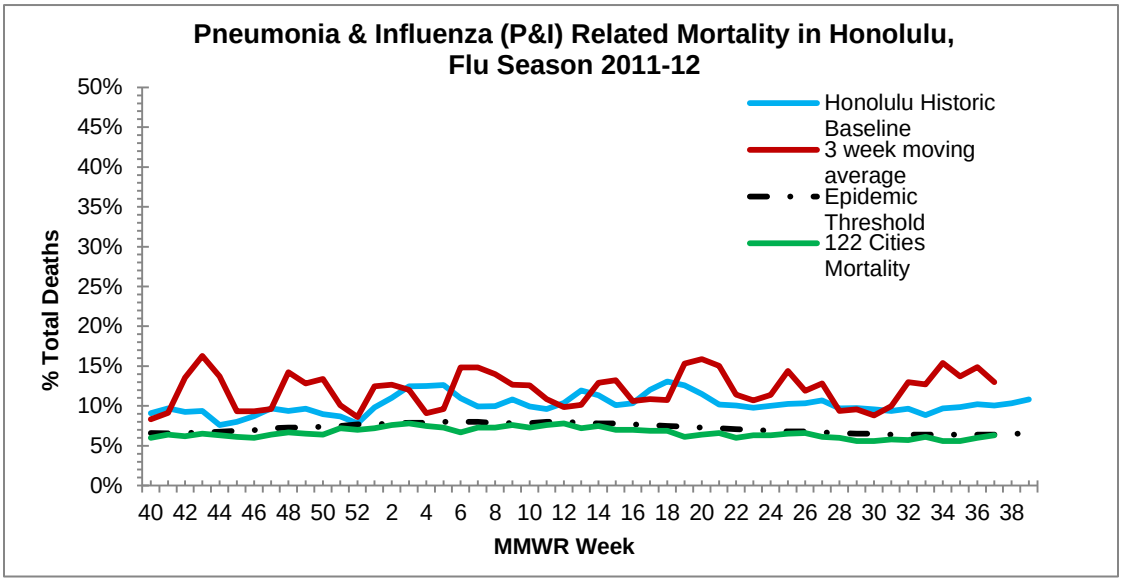
All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																				
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X						X	X			X				
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X			X		X		X	X	X			
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X			
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X			
Varicella Zoster Virus																									X												X																
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X									X	X	X	X	X	X	X								
Influenza A (Other seasonal H1N1)		x															X					X	X																								X						
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																X					
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X											X						

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 37 of the current influenza season:

- *14.3% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (6.3%) and epidemic threshold (6.5%) were comparable to the Honolulu P&I (i.e., within 95% confidence interval).*

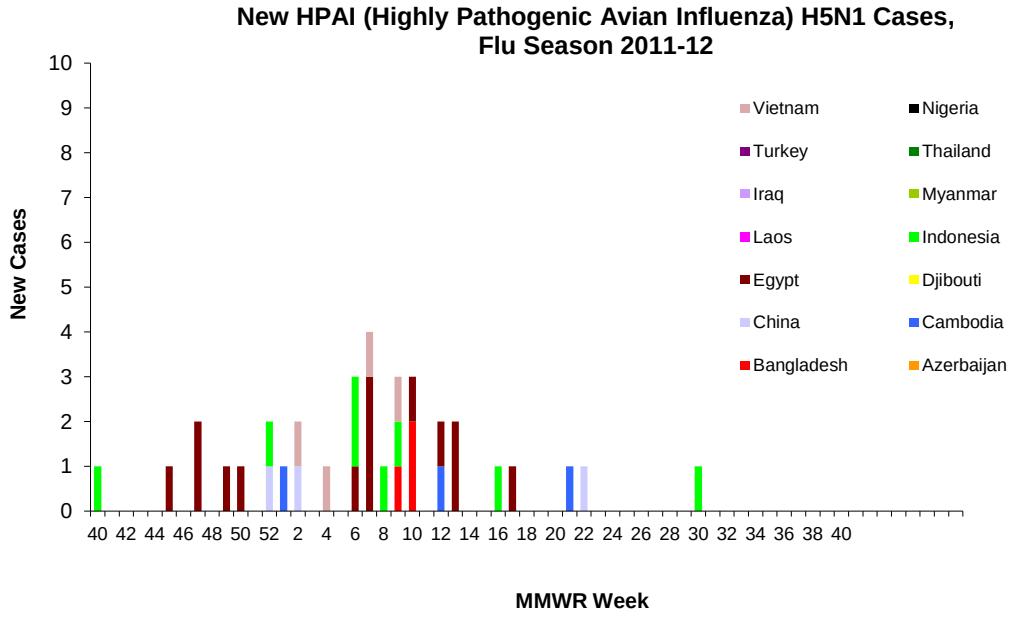


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to CDC during week 37. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 34.*
  - *There have been two flu-related deaths—one pediatric and one among an elderly individual—in Hawaii during the 2011–12 season. The pediatric death occurred during week 17 (week ending April 28, 2012) and was associated with 2009 H1N1 viral infection. The adult death occurred during week 31 (week ending August 4, 2011) and was associated with a seasonal influenza A (H3) viral infection. Both had underlying medical conditions.*

VI. Influenza Watch: As part of a comprehensive influenza surveillance system and to prevent the spread of such 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).

A. Variant Viruses: Since August 2011, 318 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (106), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

September 16–22, 2012: Week 38

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2011–12 influenza season officially began on week 40, 2011 (week ending October 8, 2011)**
  - The 2011–12 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (1.9%) in Hawaii were comparable (i.e., within 95% confidence intervals) to week 37 (1.4%).
- 1,356 (14.7%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 38.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 38.
- Nationwide there have been 319 reports of influenza A (H3N2) variant viruses, 3 reports of influenza A (H1N2) variant viruses, and one influenza A (H1N1) variant viruses.
- Worldwide there has been no additional avian influenza case since August 10, 2012.

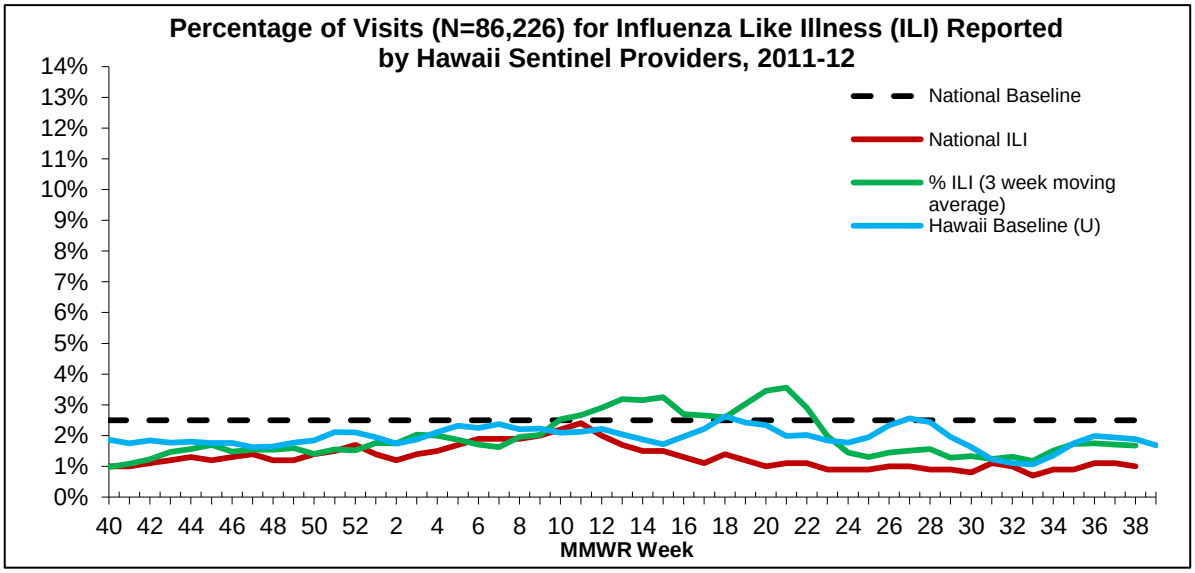
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100°F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 38 of the current influenza season:

- *1.9% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were comparable to the national baseline (2.4%)[4] but higher than the national ILI (1.0%) (i.e., inside the 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported during week 38. For the 2011–12 influenza season there have been 12 influenza-like clusters reported to HDOH—6 confirmed and 2 suspected clusters.*



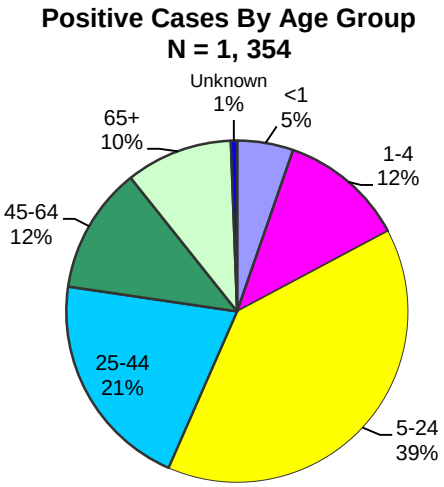
[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).
[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. 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.

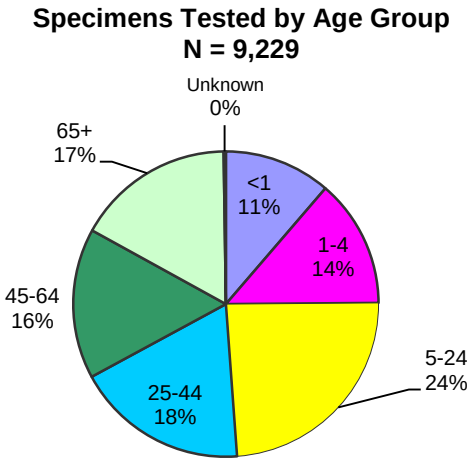
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2011–12 flu season:

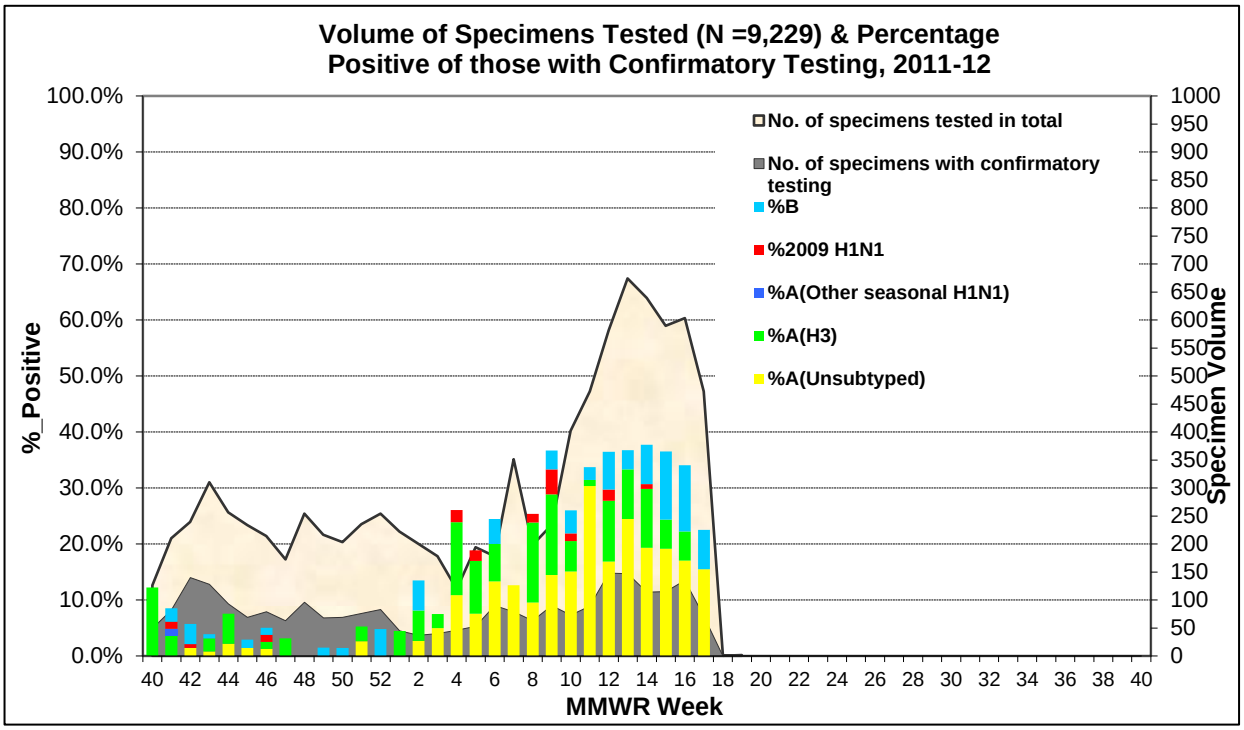
- *A total of 9,229 specimens have been tested statewide for influenza viruses*
  - *6,697 (72.6%) were screened only by rapid antigen tests with no confirmatory testing*
  - *2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *15 (1.4%) were 2009 H1N1,*
    - *1 (0.1%) was other seasonal influenza A (H1),*
    - *125 (11.3%) were influenza A (H3),*
    - *and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the *14.7% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

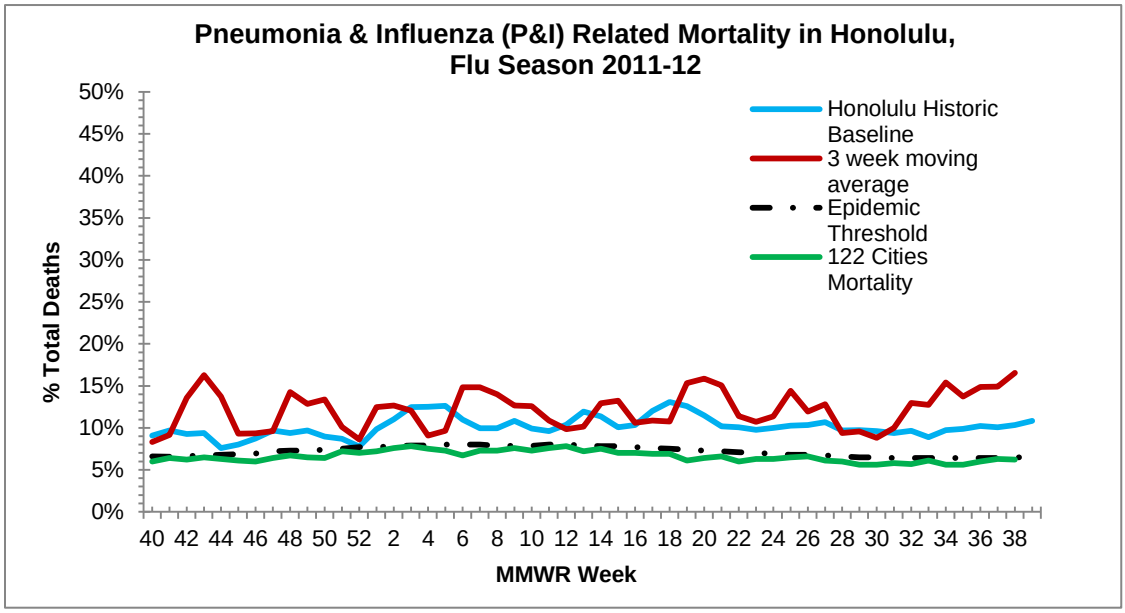
All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																						
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																		
Coxsackie Virus																																																							
Cytomegalovirus			X																																																				
Echovirus																																																							
Enterovirus	X		X																																																				
Herpes Simplex Virus, Type 1																																																							
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X						X	X			X			X	
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X			X		X		X	X	X				
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	
Varicella Zoster Virus																									X												X																	
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X									X	X	X	X	X	X	X								
Influenza A (Other seasonal H1N1)		x															X					X	X																								X						
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																X					
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X											X					

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 38 of the current influenza season:

- *18.8% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was higher than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (6.2%) and epidemic threshold (6.5%) were lower than the Honolulu P&I (i.e., outside 95% confidence interval).*

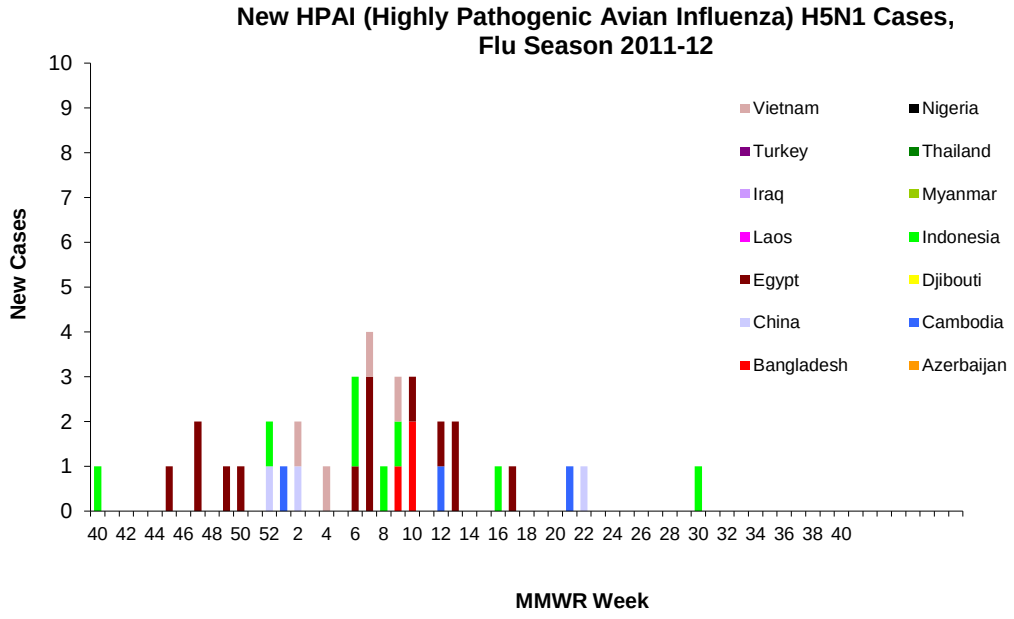


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to CDC during week 37. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 34.*
  - *There have been two flu-related deaths—one pediatric and one among an elderly individual—in Hawaii during the 2011–12 season. The pediatric death occurred during week 17 (week ending April 28, 2012) and was associated with 2009 H1N1 viral infection. The adult death occurred during week 31 (week ending August 4, 2011) and was associated with a seasonal influenza A (H3) viral infection. Both had underlying medical conditions.*

VI. Influenza Watch: As part of a comprehensive influenza surveillance system and to prevent the spread of such 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).

A. Variant Viruses: Since August 2011, 319 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

October 9, 2012 Volume 2012 (39)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

September 23–29, 2012: Week 39

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2011–12 influenza season officially began on week 40, 2011 (week ending October 8, 2011)**
  - The 2011–12 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (1.3%) in Hawaii were comparable (i.e., within 95% confidence intervals) to week 38 (1.8%).
- 1,356 (14.7%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 39.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 39.
- Nationwide there have been 319 reports of influenza A (H3N2) variant viruses, 3 reports of influenza A (H1N2) variant viruses, and one influenza A (H1N1) variant viruses.
- Worldwide there has been no additional avian influenza case since August 10, 2012.

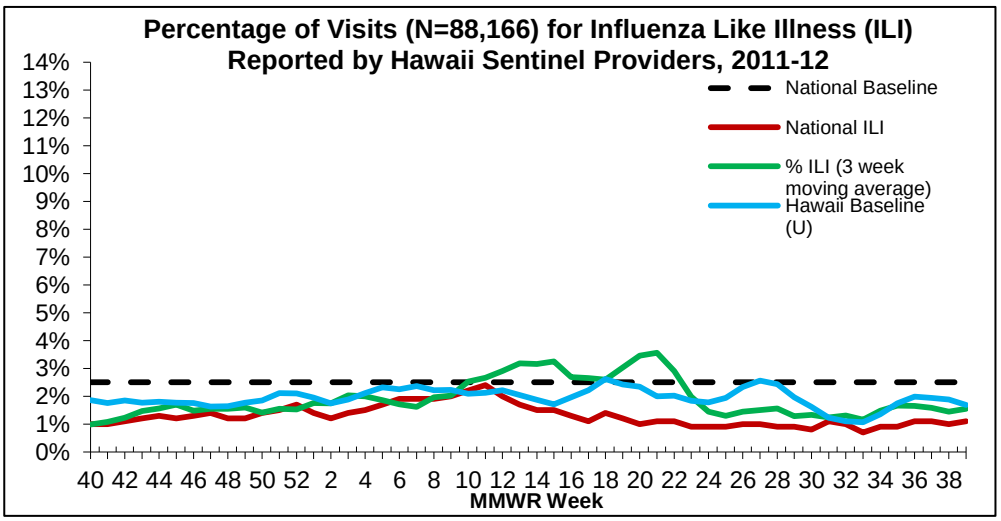
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100°F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 39 of the current influenza season:

- *1.3% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were lower than the national baseline (2.4%)[4] but comparable to the national ILI (1.1%) (i.e., inside the 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported during week 39. For the 2011–12 influenza season there have been 12 influenza-like clusters reported to HDOH—6 confirmed and 2 suspected clusters.*



[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. The chart above represents a 3-week moving average and not the actual ILI by week.

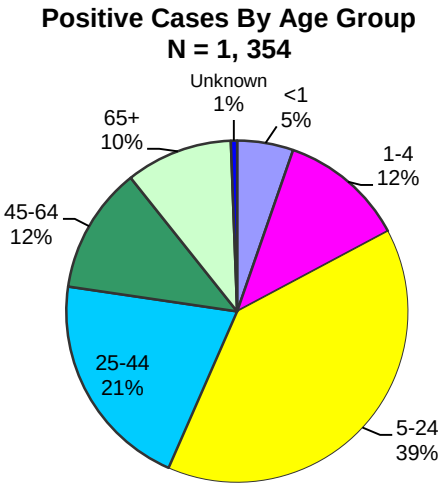
[4] The National Baseline is calculated by CDC as the mean percentage of visits for ILI during weeks 21–39 with two standard deviations. Because of large variability in regional ILI, comparison of the national baseline with local ILI may not be appropriate. It is provided in this report because no meaningful 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.

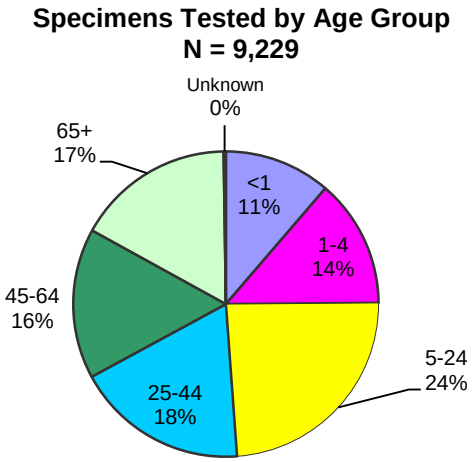
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2011–12 flu season:

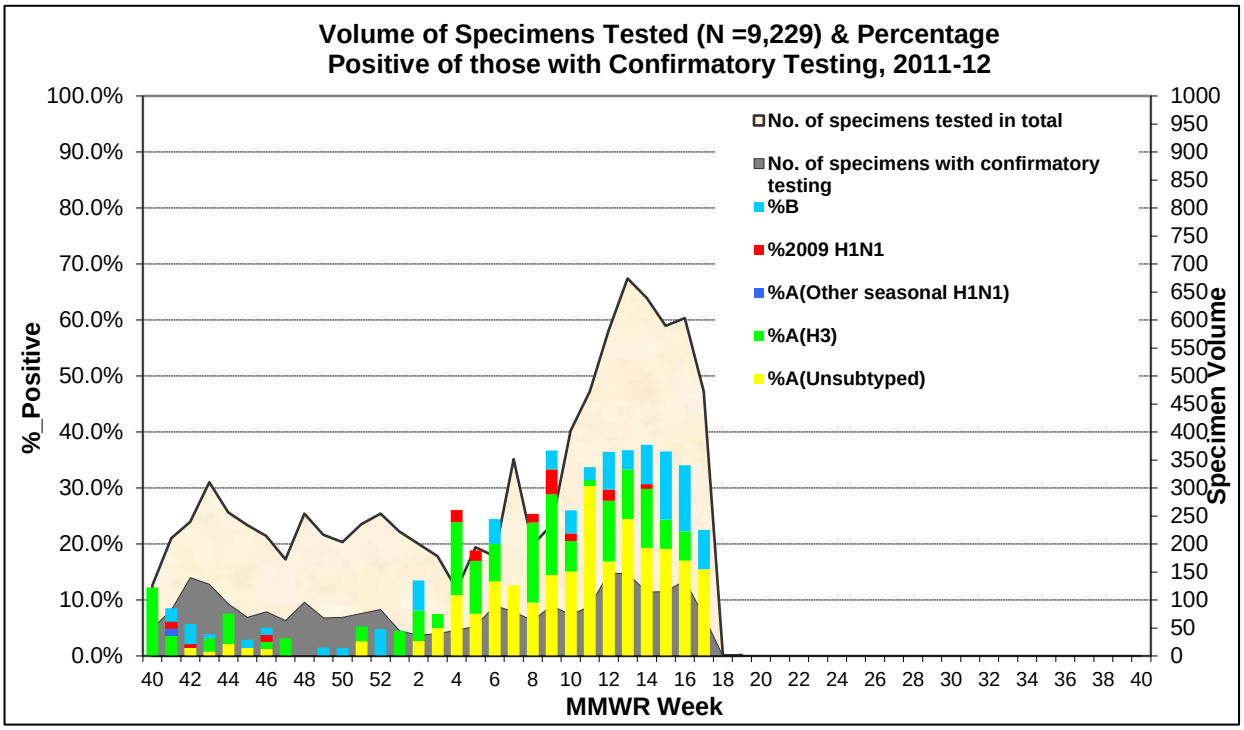
- *A total of 9,229 specimens have been tested statewide for influenza viruses*
  - *6,697 (72.6%) were screened only by rapid antigen tests with no confirmatory testing*
  - *2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *15 (1.4%) were 2009 H1N1,*
    - *1 (0.1%) was other seasonal influenza A (H1),*
    - *125 (11.3%) were influenza A (H3),*
    - *and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the *14.7% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture). *Please be advised that the following graph does not reflect current laboratory information; HDOH has been experiencing technical issues with the flu extraction database pertaining to laboratory data.*



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 on a limited basis 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**.

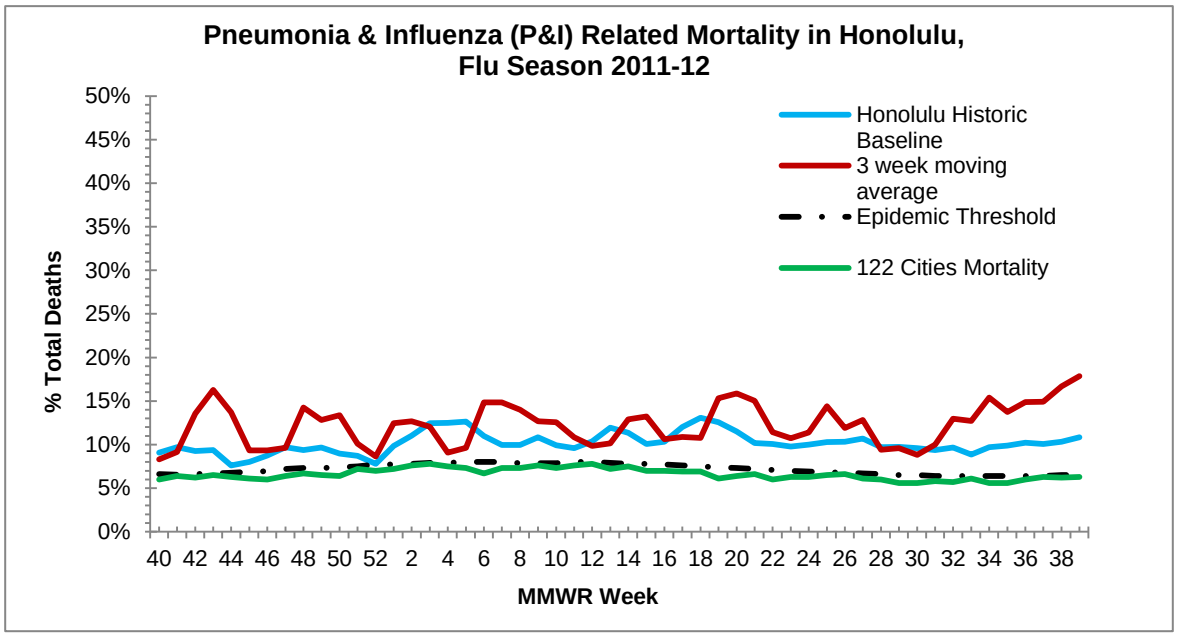
All Respiratory Isolates Identified during the 2011–12 Flu Season

	MMWR Week																																																				
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus	X	X	X		X																																																
Coxsackie Virus																																																					
Cytomegalovirus			X																																																		
Echovirus																																																					
Enterovirus	X		X																																																		
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus		X						X						X	X			X	X	X			X	X		X	X	X	X				X	X		X	X		X						X	X			X			X	
Parainfluenza Virus				X						X	X	X						X		X	X					X				X		X		X				X	X	X			X		X		X	X	X				
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rhinovirus														X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
Varicella Zoster Virus																									X												X																
Influenza 2009 H1N1		X	X				X										X	X				X			X																												
Influenza A (H3)	X	X		X	X		X	X				X		X	X				X			X	X		X	X	X	X	X	X									X	X	X	X	X	X	X								
Influenza A (Other seasonal H1N1)		x															X					X	X																								X						
Influenza A (unsubtyped)	X	X	X	X	X	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																X					
Influenza B		X	X	X	X	X	X			X	X		X		X				X	X		X	X	X		X	X	X	X	X	X	X		X		X											X						

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 39 of the current influenza season:

- *16.9% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (6.3%) and epidemic threshold (6.5%) were lower than the Honolulu P&I (i.e., outside 95% confidence interval).*

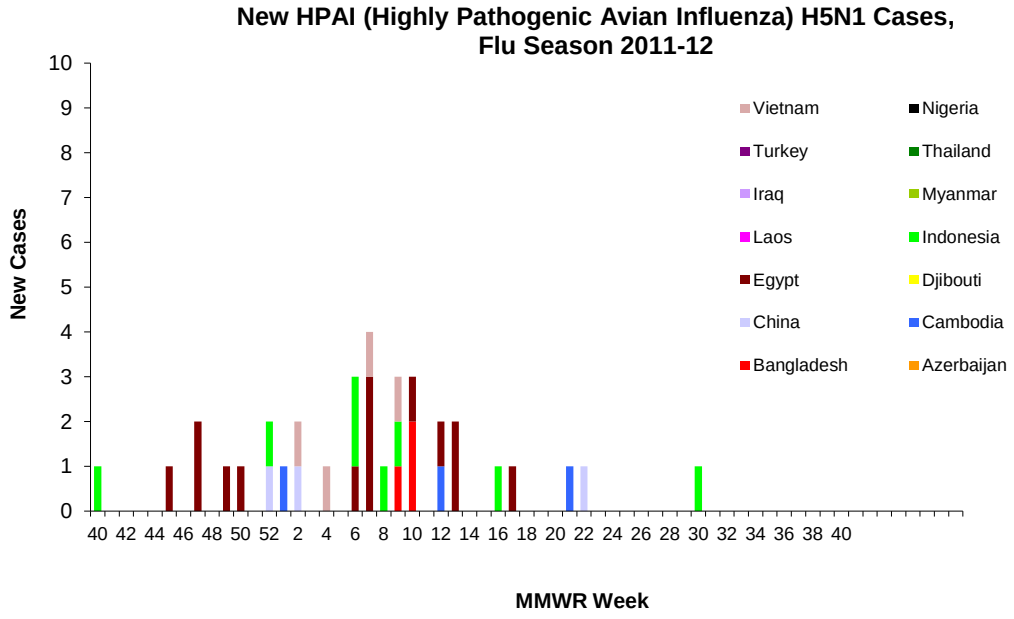


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to CDC during week 39. Total national influenza-associated pediatric deaths for the 2011–12 season is currently 34.*
  - *There have been two flu-related deaths—one pediatric and one among an elderly individual—in Hawaii during the 2011–12 season. The pediatric death occurred during week 17 (week ending April 28, 2012) and was associated with 2009 H1N1 viral infection. The adult death occurred during week 31 (week ending August 4, 2011) and was associated with a seasonal influenza A (H3) viral infection. Both had underlying medical conditions.*

VI. Influenza Watch: As part of a comprehensive influenza surveillance system and to prevent the spread of such 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).

A. Variant Viruses: Since August 2011, 319 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
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49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
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53			1/3/2015		

October 16, 2012 | Volume 2012 (40)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

September 30–October 6, 2012: Week 40

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2012–13 influenza season officially began on week 40, 2012 (week ending October 6, 2012)**
  - The 2012–13 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (0.7%) in Hawaii were comparable (i.e., within 95% confidence intervals) to week 39 (1.3%).
- Due to technical problems, no laboratory information will be available until week 41
- There were no ILI clusters reported during week 40.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 40.
- No novel influenza A viral infections were reported to CDC or HDOH during week 40.
- Worldwide there has been no additional avian influenza case since August 10, 2012.

[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.**

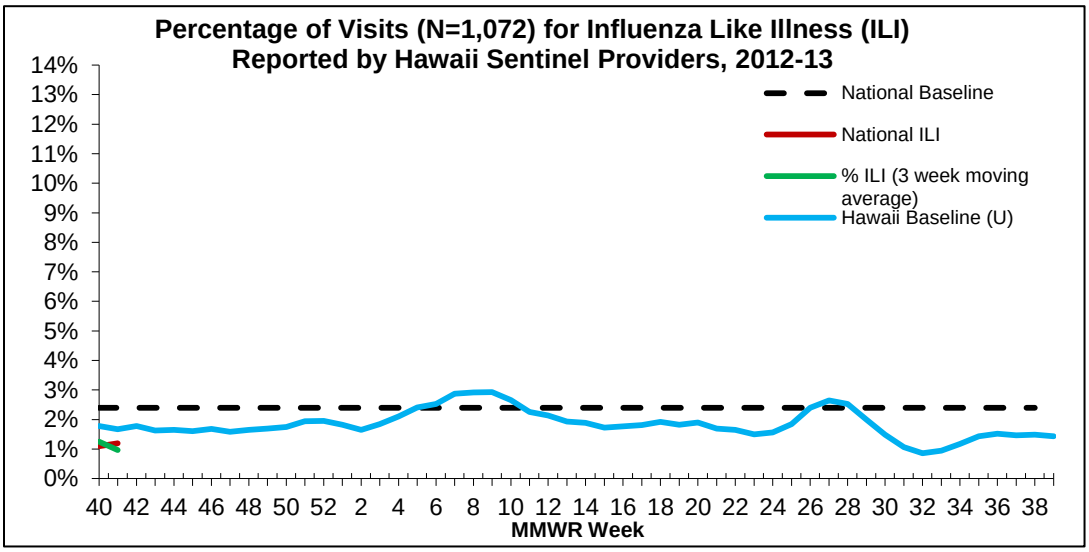
INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100°F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 40 of the current influenza season:

- *0.7% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were lower than the national baseline (2.2%)[4] and the national ILI (1.2%) (i.e., inside the 95% confidence interval).*

- *ILI Cluster Activity: There were no ILI clusters reported during week 40. For the 2012–13 influenza season there have been no influenza-like clusters reported to HDOH.*



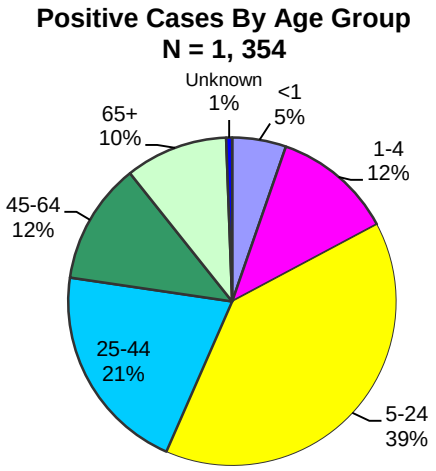
[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).
[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. 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.

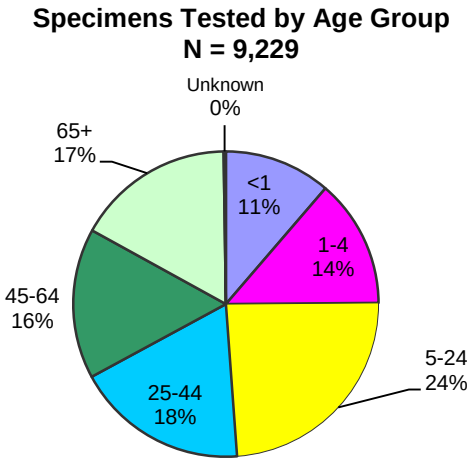
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2011–12 flu season:

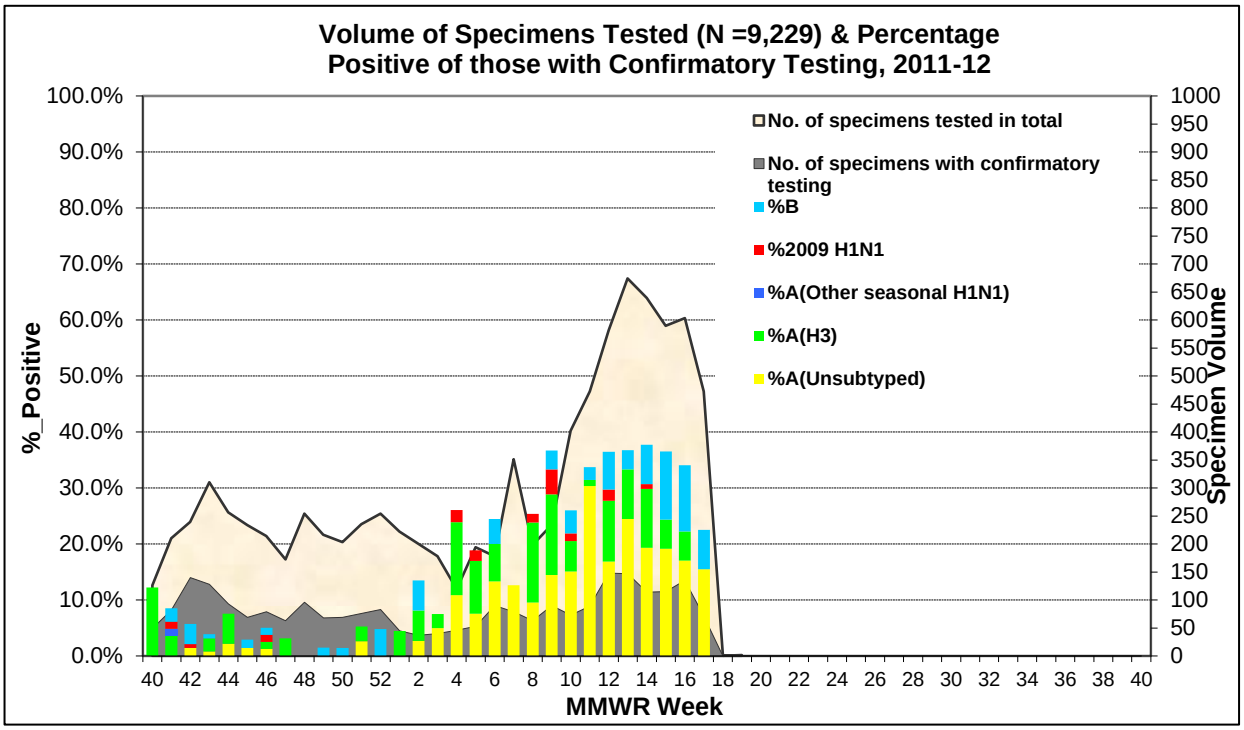
- *A total of 9,229 specimens have been tested statewide for influenza viruses*
  - *6,697 (72.6%) were screened only by rapid antigen tests with no confirmatory testing*
  - *2,532 (27.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *1,109 (12.0%) cases of influenza A and 247 (2.7%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *15 (1.4%) were 2009 H1N1,*
    - *1 (0.1%) was other seasonal influenza A (H1),*
    - *125 (11.3%) were influenza A (H3),*
    - *and the remaining (n = 968, 87.3%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2011–12 influenza season. Of the *14.7% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2011–12 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture). *Please be advised that the following graph does not reflect current laboratory information; HDOH has been experiencing technical issues with the flu extraction database pertaining to laboratory data. Data should be available starting week 41.*



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 on a limited basis 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**.

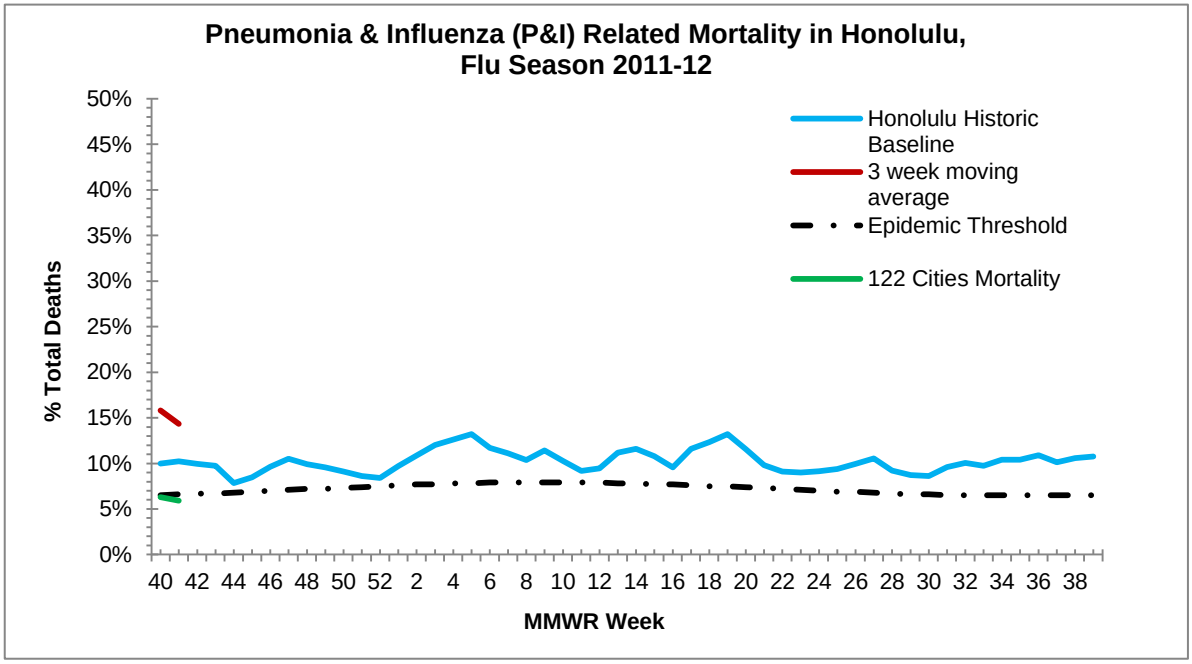
All Respiratory Isolates Identified during the 2012–13 Flu Season

	MMWR Week																																																				
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus																																																					
Coxsackie Virus																																																					
Cytomegalovirus																																																					
Echovirus																																																					
Enterovirus																																																					
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus																																																					
Parainfluenza Virus																																																					
Respiratory Syncytial Virus	X																																																				
Rhinovirus	X																																																				
Varicella Zoster Virus																																																					
Influenza 2009 H1N1																																																					
Influenza A (H3)																																																					
Influenza A (Other seasonal H1N1)																																																					
Influenza A (unsubtyped)																																																					
Influenza B																																																					

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 40 of the current influenza season:

- *11.7% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (5.9%) and epidemic threshold (6.2%) were comparable to the Honolulu P&I (i.e., outside 95% confidence interval).*

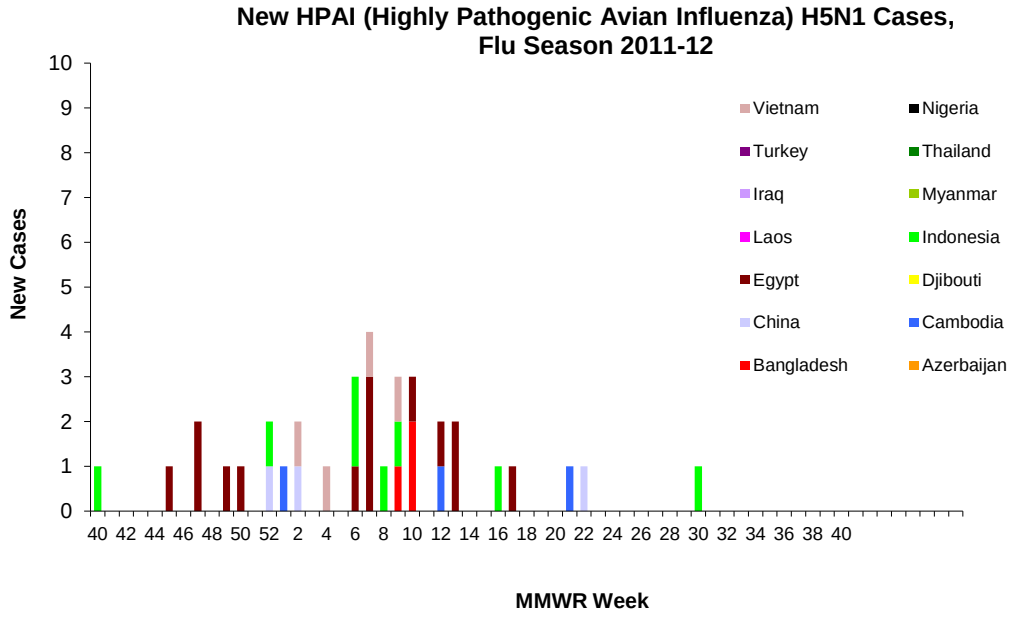


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to CDC during week 40. Total national influenza-associated pediatric deaths for the 2012–13 season is currently 0.*
  - *There have been no flu-related deaths in Hawaii during the 2012–13 season.*

VI. Influenza Watch: As part of a comprehensive influenza surveillance system and to prevent the spread of such 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).

A. Variant Viruses: Since August 2011, 319 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
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34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
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40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

October 23, 2012 | Volume 2012 (41)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

October 7–13, 2012: Week 41

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Report Snapshot:

- **The 2012–13 influenza season officially began on week 40, 2012 (week ending October 6, 2012)**
  - The 2012–13 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (1.5%) in Hawaii were higher (i.e., outside 95% confidence intervals) than week 40 (0.8%).
- 11 (0.05%) of laboratory specimens have tested positive for influenza
- There was one ILI cluster reported during week 41.
- There were no influenza-associated deaths reported to HDOH this week.
- One influenza-associated pediatric death was reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 41.
- No new variant influenza virus infections were reported to CDC during week 41.
- Worldwide there have been no additional avian influenza cases since August 10, 2012.

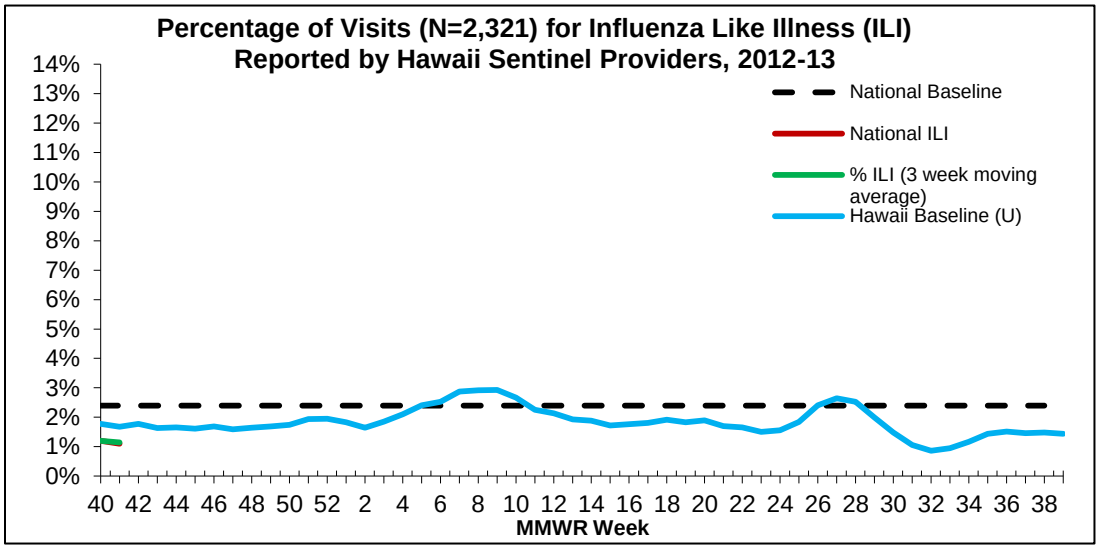
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100˚F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 41 of the current influenza season:

- *1.5% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were comparable to the national baseline (2.2%)[4] and the national ILI (1.1%) (i.e., inside the 95% confidence interval).*
- *ILI Cluster Activity: There was one ILI cluster at a long-term care facility reported to HDOH for week 41. An investigation is still being conducted to determine confirmation of an influenza virus. For the 2012–13 influenza season there has been one influenza-like clusters reported to HDOH.*



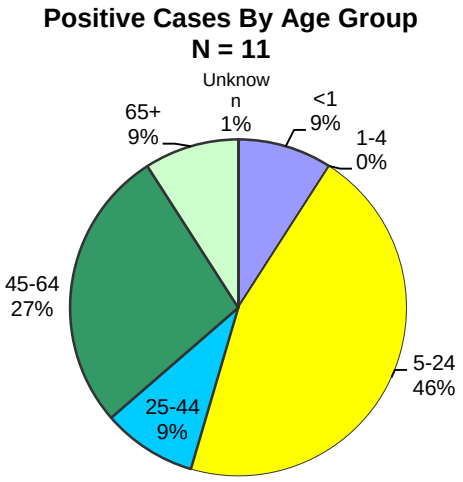
[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).
[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. 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.

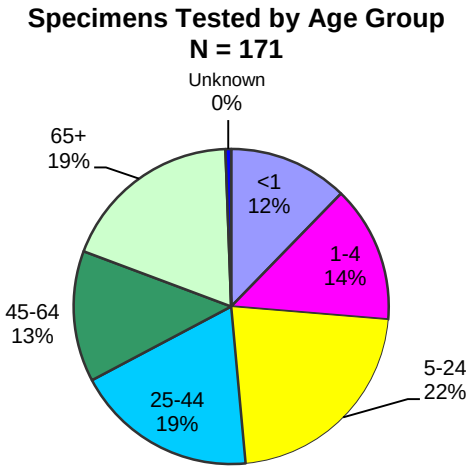
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2012–13 flu season:

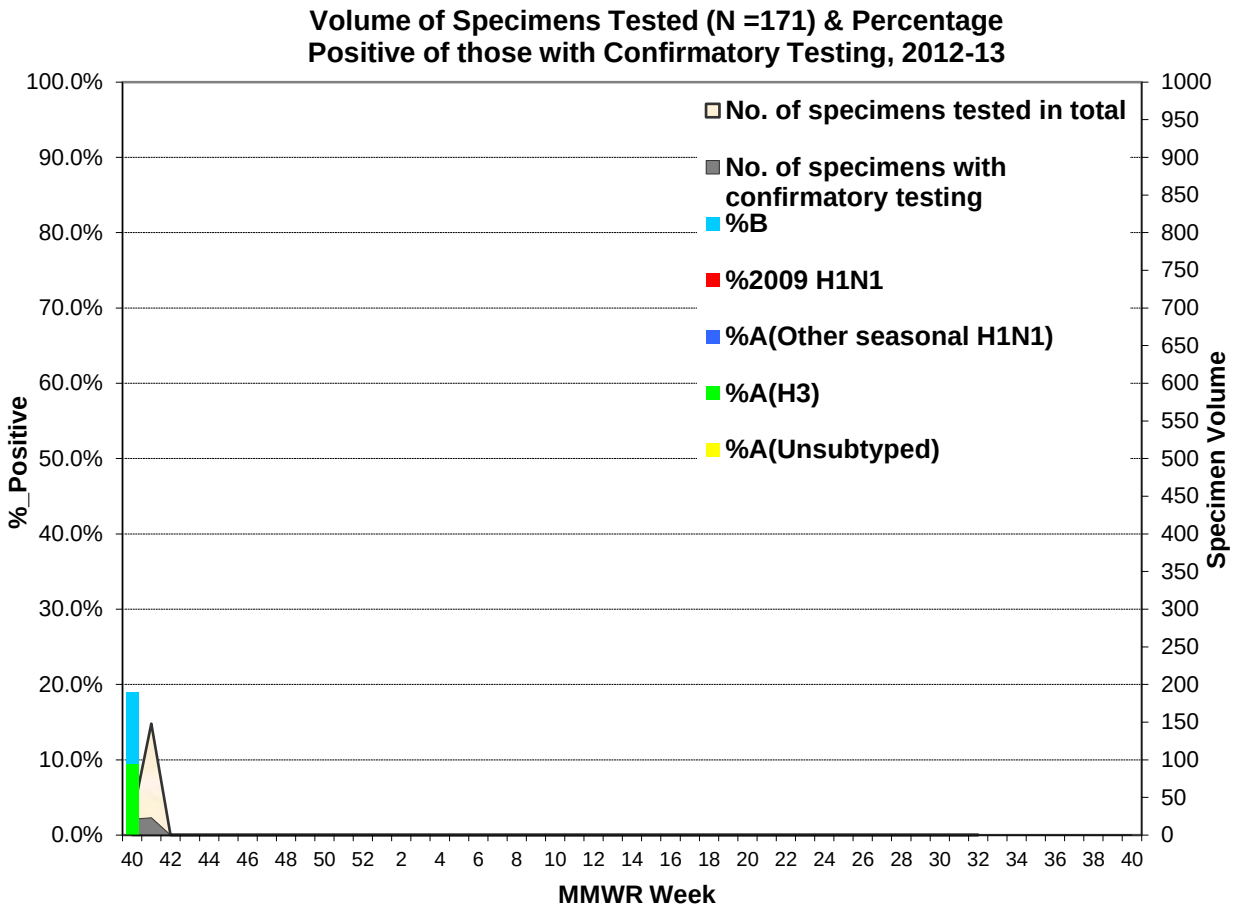
- *A total of 171 specimens have been tested statewide for influenza viruses*
  - *127 (74.3%) were screened only by rapid antigen tests with no confirmatory testing*
  - *44 (25.7%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *8 (4.7%) cases of influenza A and 3 (1.8%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *0 (0.0%) were 2009 H1N1,*
    - *0 (0.0%) were other seasonal influenza A (H1),*
    - *2 (25.0%) were influenza A (H3),*
    - *and the remaining (n = 6, 75.0%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2012–13 influenza season. Of the *6.4% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2012–13 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

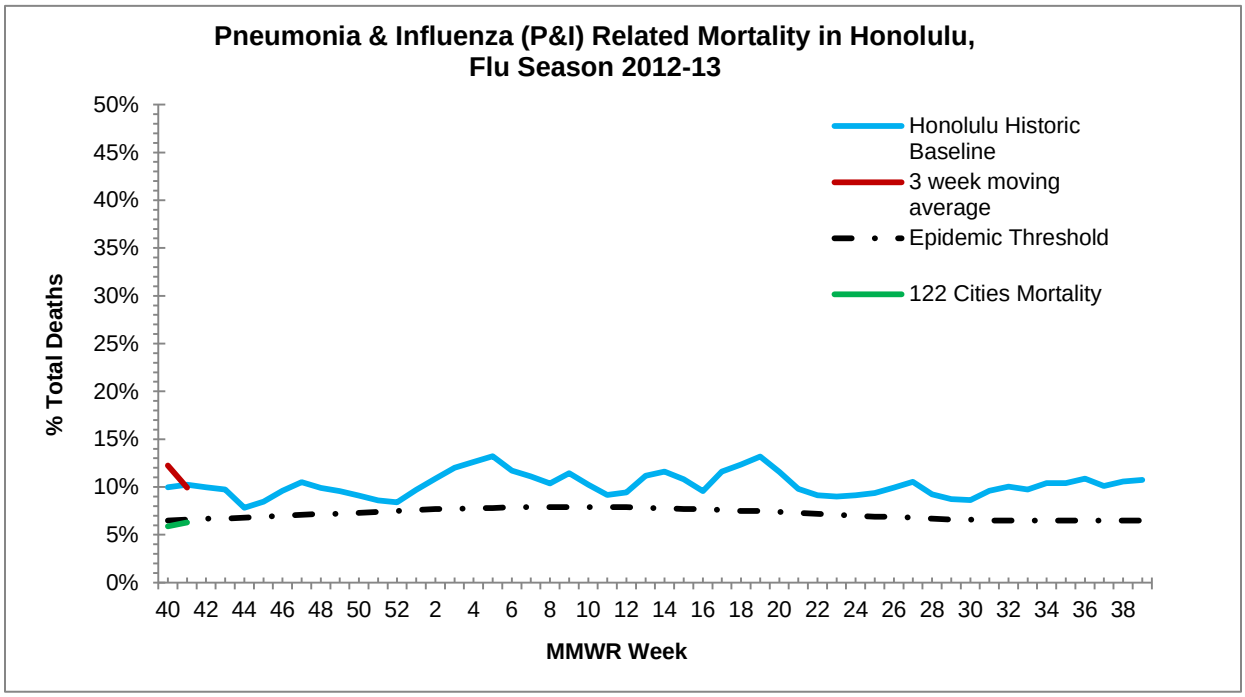
All Respiratory Isolates Identified during the 2012–13 Flu Season

	MMWR Week																																																				
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus																																																					
Coxsackie Virus																																																					
Cytomegalovirus																																																					
Echovirus																																																					
Enterovirus																																																					
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus																																																					
Parainfluenza Virus			X																																																		
Respiratory Syncytial Virus	X	X	X																																																		
Rhinovirus	X	X	X																																																		
Varicella Zoster Virus																																																					
Influenza 2009 H1N1																																																					
Influenza A (H3)																																																					
Influenza A (Other seasonal H1N1)																																																					
Influenza A (unsubtyped)																																																					
Influenza B																																																					

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 41 of the current influenza season:

- *8.1% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (6.3%) and epidemic threshold (6.3%) were comparable to the Honolulu P&I (i.e., inside 95% confidence interval).*

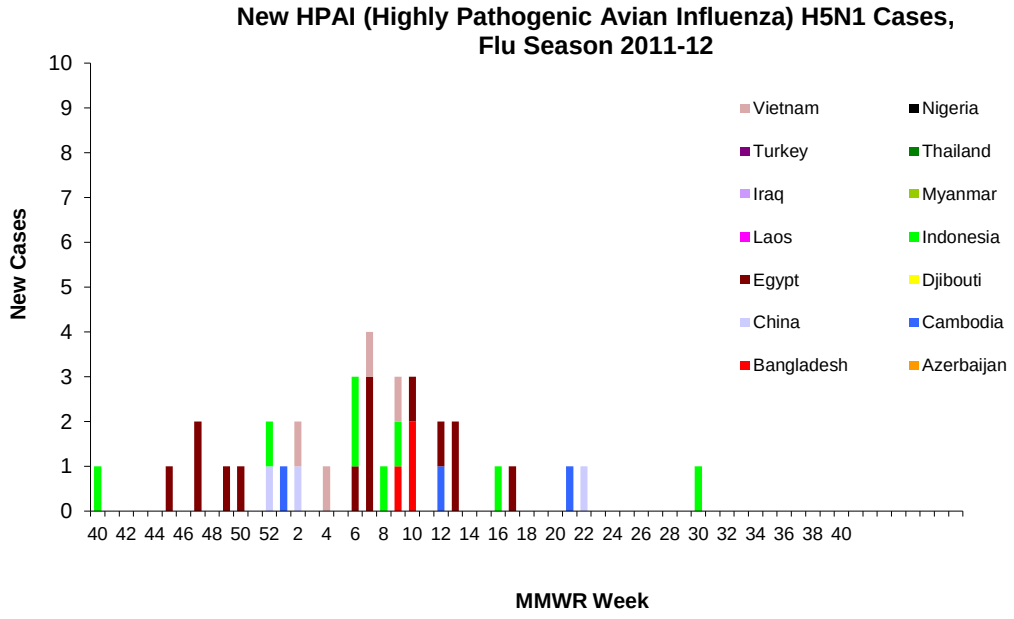


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There was one influenza-associated pediatric deaths reported to CDC during week 41. The death occurred during week 40 (week ending October 6, 2012) and was associated with an influenza A virus for which a subtype was not determined. Total national influenza-associated pediatric deaths for the 2012–13 season is currently 1.*
  - *There have been no flu-related deaths in Hawaii during the 2012–13 season.*

VI. 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).

A. Variant Viruses: Since August 2011, 319 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

October 30, 2012 | Volume 2012 (42)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

October 14–20, 2012: Week 42

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2012–13 influenza season officially began on week 40, 2012 (week ending October 6, 2012)**
  - The 2012–13 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (1.7%) in Hawaii were comparable (i.e., within 95% confidence intervals) to week 41 (1.5%).
- 42 (0.08%) of laboratory specimens have tested positive for influenza
- There was no ILI cluster reported during week 42.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 42.
- No new variant influenza virus infections were reported to CDC during week 42.
- Worldwide there have been no additional avian influenza cases since August 10, 2012.

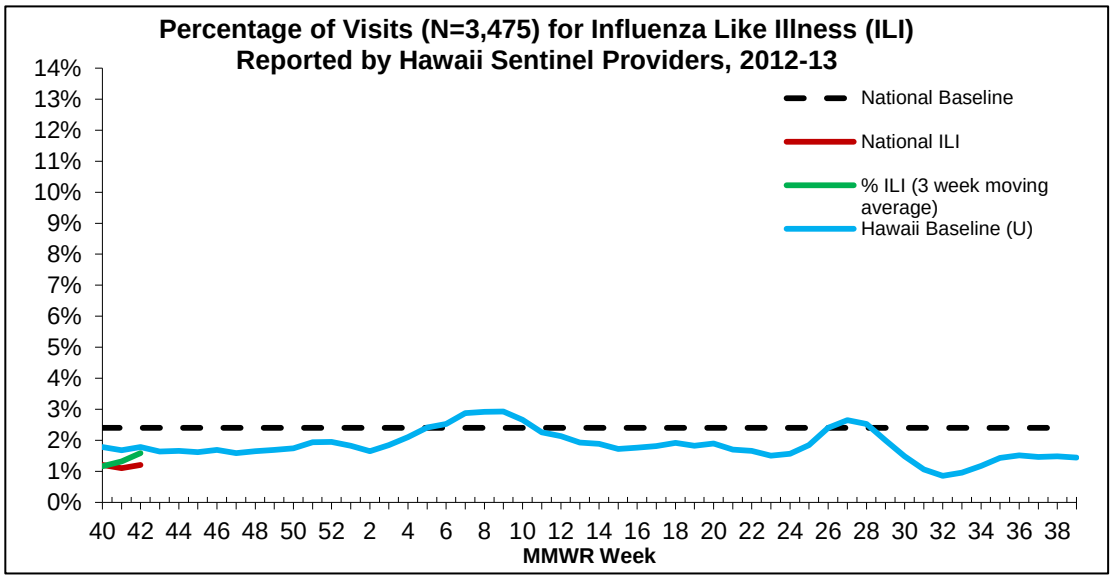
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100˚F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 42 of the current influenza season:

- *1.7% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were comparable to the national baseline (2.2%)[4] and the national ILI (1.2%) (i.e., inside the 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported to HDOH for week 42. For the 2012–13 influenza season there has been one influenza-like clusters reported to HDOH.*



[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. The chart above represents a 3-week moving average and not the actual ILI by week.

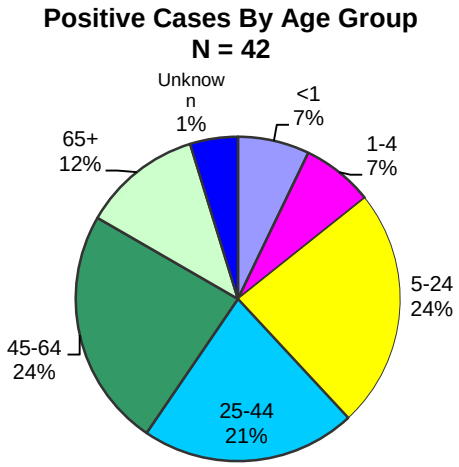
[4] The National Baseline is calculated by CDC as the mean percentage of visits for ILI during weeks 21–39 with two standard deviations. Because of large variability in regional ILI, comparison of the national baseline with local ILI may not be appropriate. It is provided in this report because no meaningful 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.

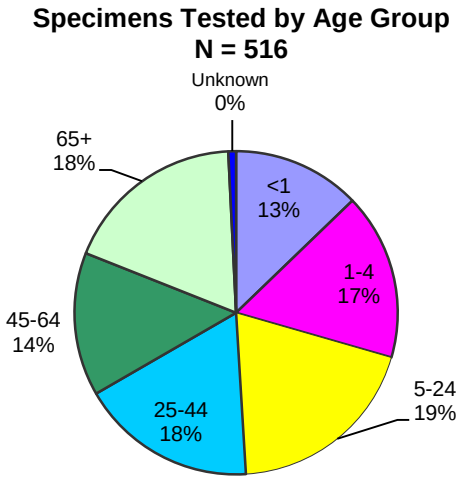
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2012–13 flu season:

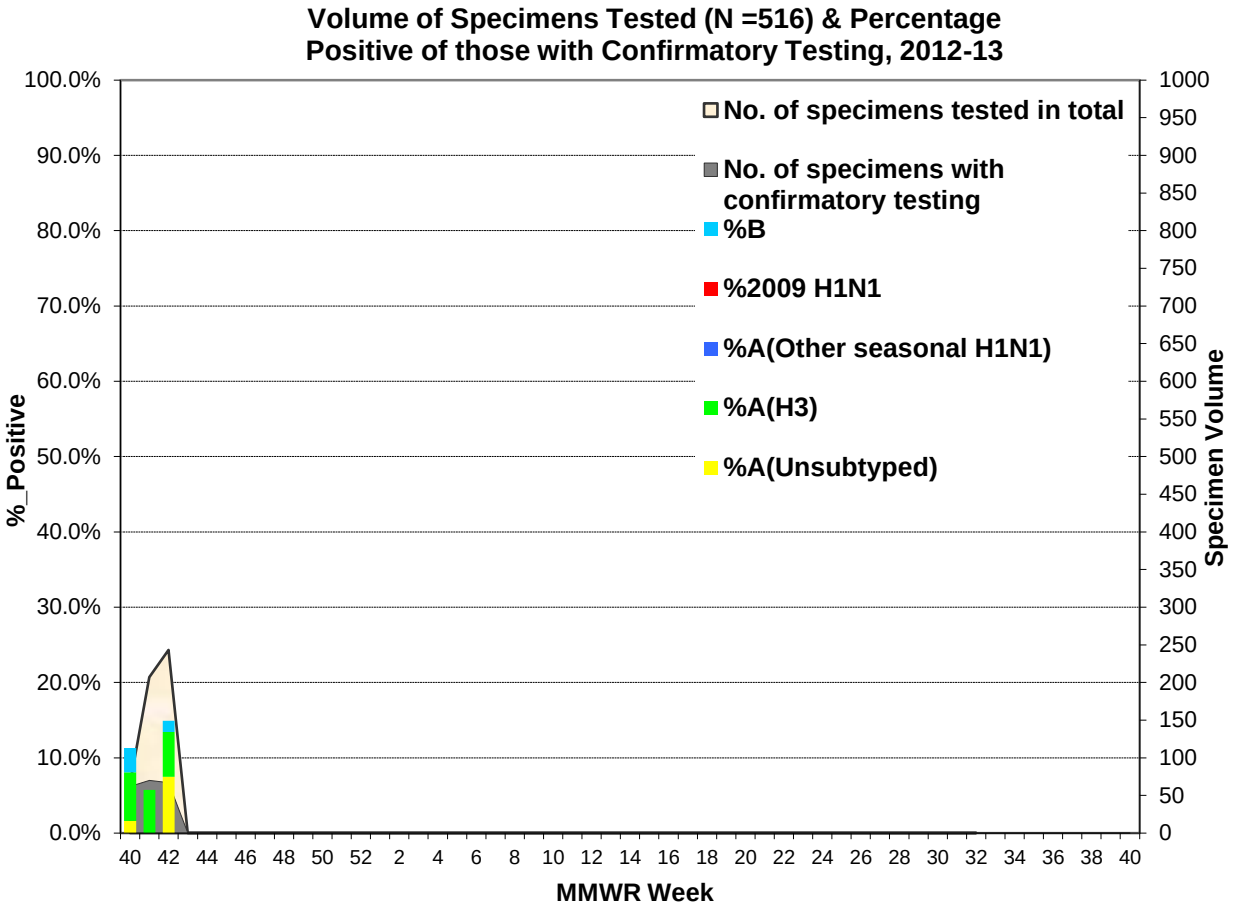
- *A total of 516 specimens have been tested statewide for influenza viruses*
  - *317 (61.4%) were screened only by rapid antigen tests with no confirmatory testing*
  - *199 (38.6%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *35 (6.8%) cases of influenza A and 7 (1.4%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *0 (0.0%) were 2009 H1N1,*
    - *0 (0.0%) were other seasonal influenza A (H1),*
    - *12 (34.3%) were influenza A (H3),*
    - *and the remaining (n = 23, 65.7%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2012–13 influenza season. Of the *8.1% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2012–13 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

All Respiratory Isolates Identified during the 2012–13 Flu Season

	MMWR Week																																																			
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
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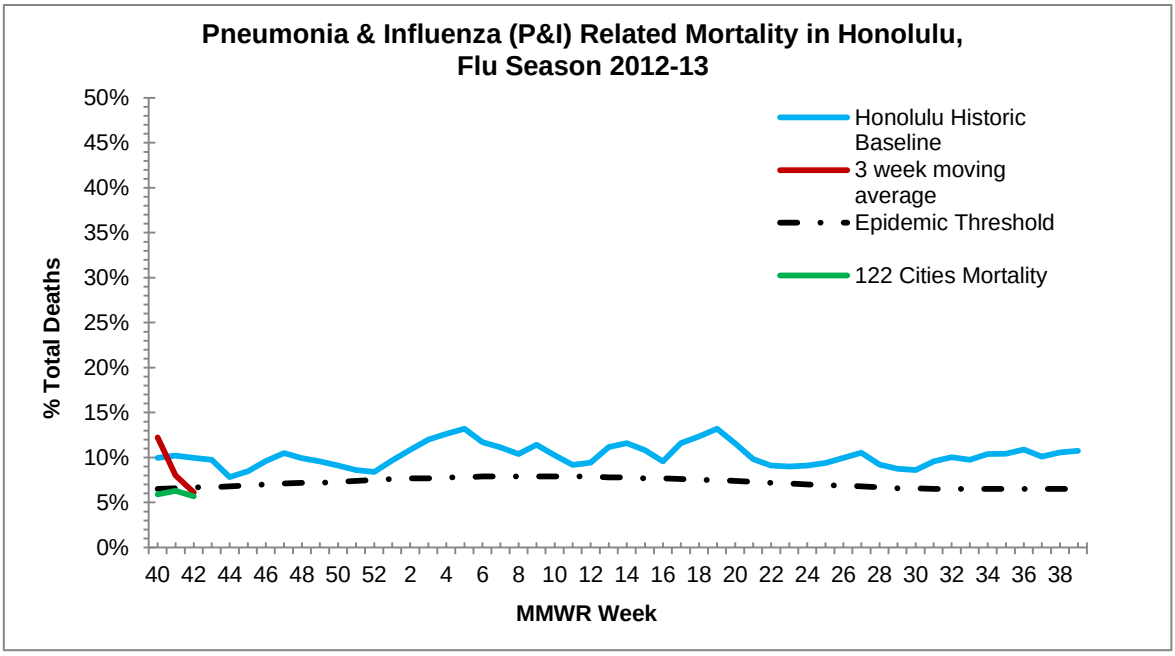
III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 42 of the current influenza season:

- *4.2% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (5.7%) and epidemic threshold (6.3%) were comparable to the Honolulu P&I (i.e., inside 95% confidence interval).*

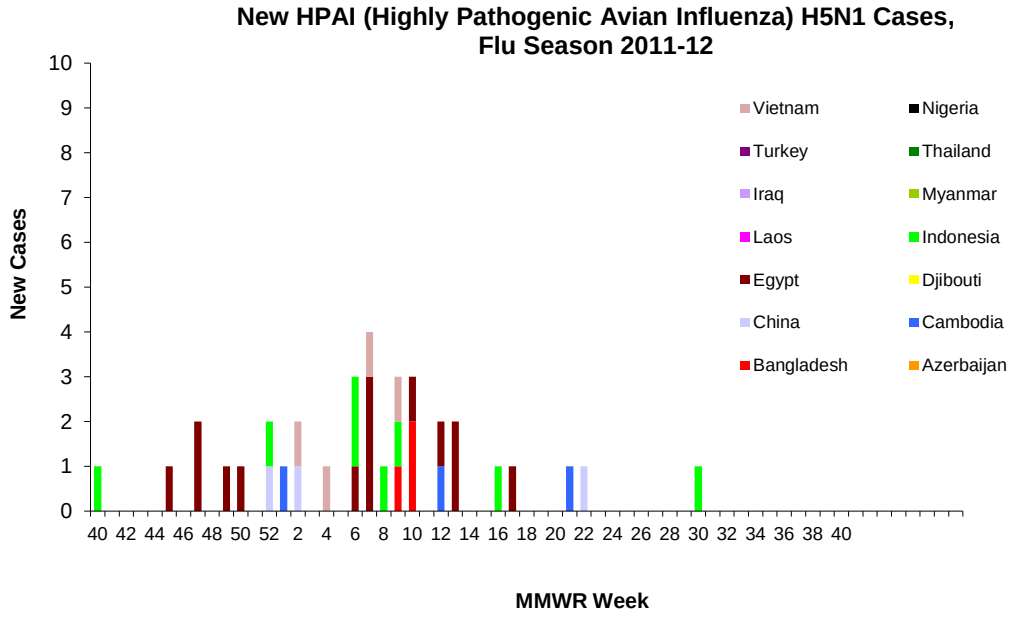
- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to CDC during week 42. Total national influenza-associated pediatric deaths for the 2012–13 season is currently 1.*
  - *There have been no flu-related deaths in Hawaii during the 2012–13 season.*



VI. 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).

A. Variant Viruses: Since August 2011, 319 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

November 7, 2012 | Volume 2012 (43)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

October 21–27, 2012: Week 43

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2012–13 influenza season officially began on week 40, 2012 (week ending October 6, 2012)**
  - The 2012–13 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (0.1%) in Hawaii were lower (i.e., outside 95% confidence intervals) than week 42 (1.6%).
- 80 (10.2%) of laboratory specimens have tested positive for influenza
- There was no ILI cluster reported during week 43.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 43.
- No new novel or variant influenza virus infections were reported to CDC during week 43.
- Worldwide there have been no additional avian influenza cases since August 10, 2012.

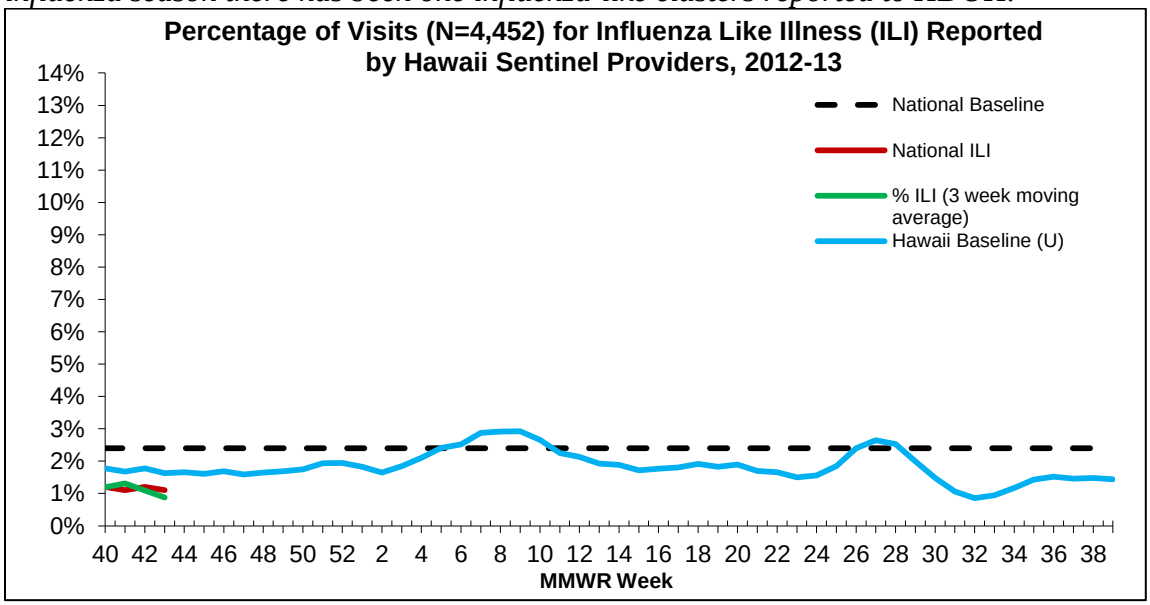
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100˚F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 43 of the current influenza season:

- *0.1% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were lower than the national baseline (2.2%)[4] and the national ILI (1.1%) (i.e., outside the 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported to HDOH for week 43. For the 2012–13 influenza season there has been one influenza-like clusters reported to HDOH.*



[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. The chart above represents a 3-week moving average and not the actual ILI by week.

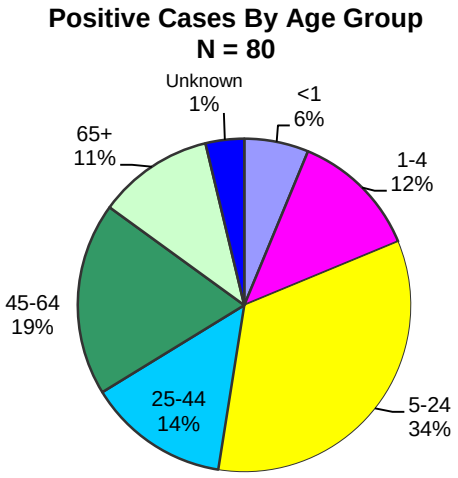
[4] The National Baseline is calculated by CDC as the mean percentage of visits for ILI during weeks 21–39 with two standard deviations. Because of large variability in regional ILI, comparison of the national baseline with local ILI may not be appropriate. It is provided in this report because no meaningful 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.

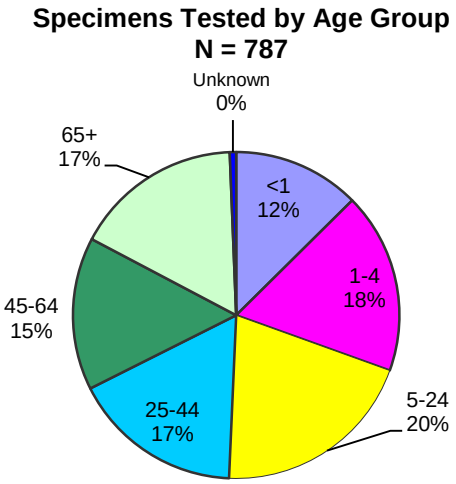
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (either RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the HDOH website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2012–13 flu season:

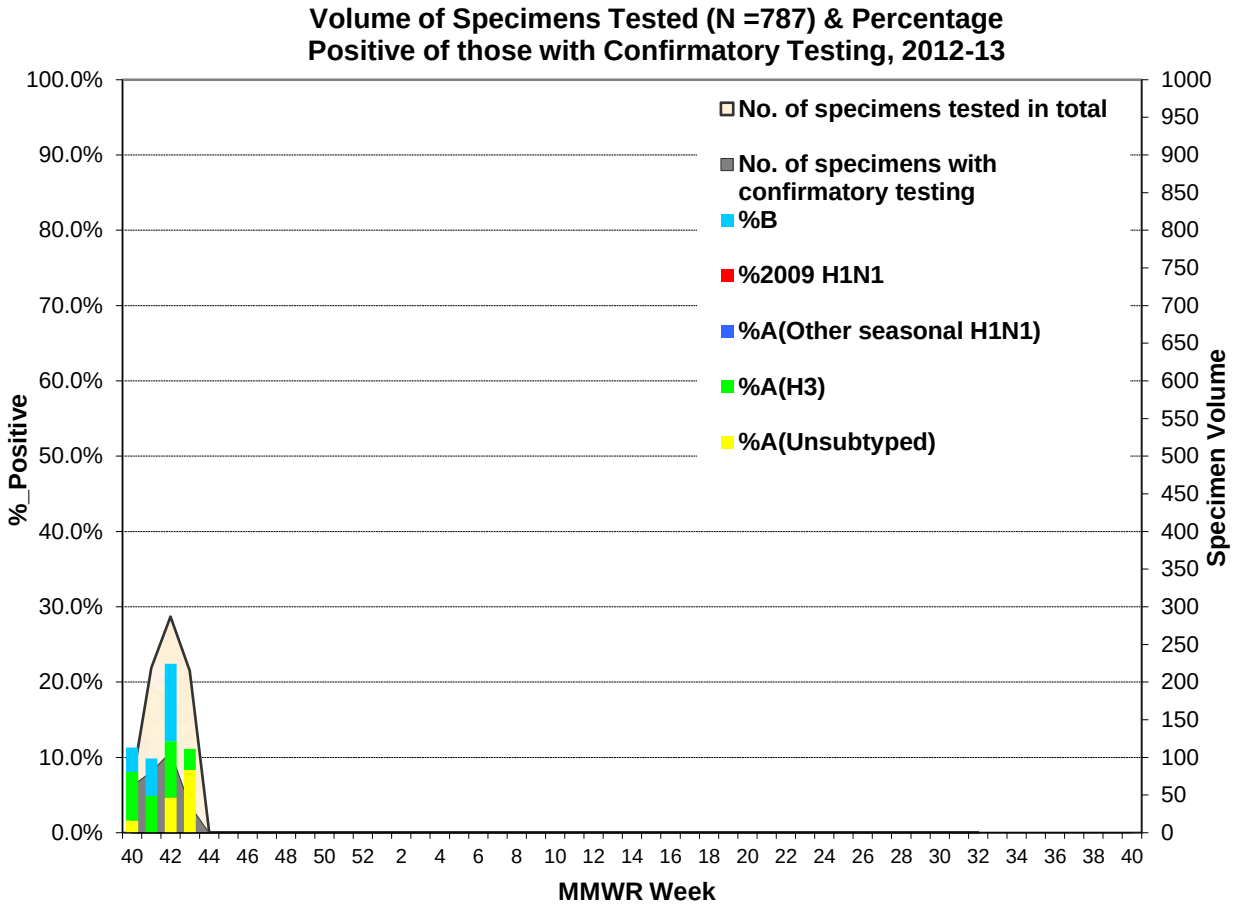
- *A total of 787 specimens have been tested statewide for influenza viruses*
  - *501 (63.7%) were screened only by rapid antigen tests with no confirmatory testing*
  - *286 (36.3%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *58 (7.4%) cases of influenza A and 22 (2.8%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *0 (0.0%) were 2009 H1N1,*
    - *0 (0.0%) were other seasonal influenza A (H1),*
    - *17 (29.3%) were influenza A (H3),*
    - *and the remaining (n = 41, 70.7%) were influenza A of unknown subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2012–13 influenza season. Of the *10.2% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2012–13 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

All Respiratory Isolates Identified during the 2012–13 Flu Season

	MMWR Week																																																				
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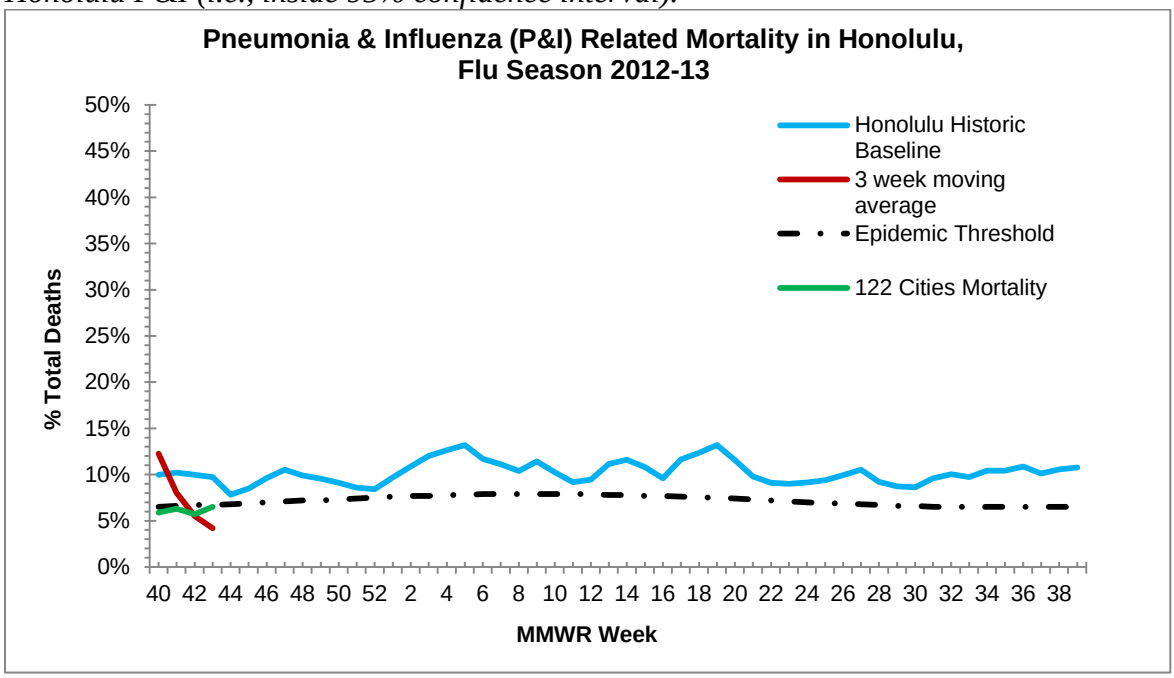
III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 43 of the current influenza season:

- *4.2% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (6.5%) and epidemic threshold (6.4%) were comparable to the Honolulu P&I (i.e., inside 95% confidence interval).*

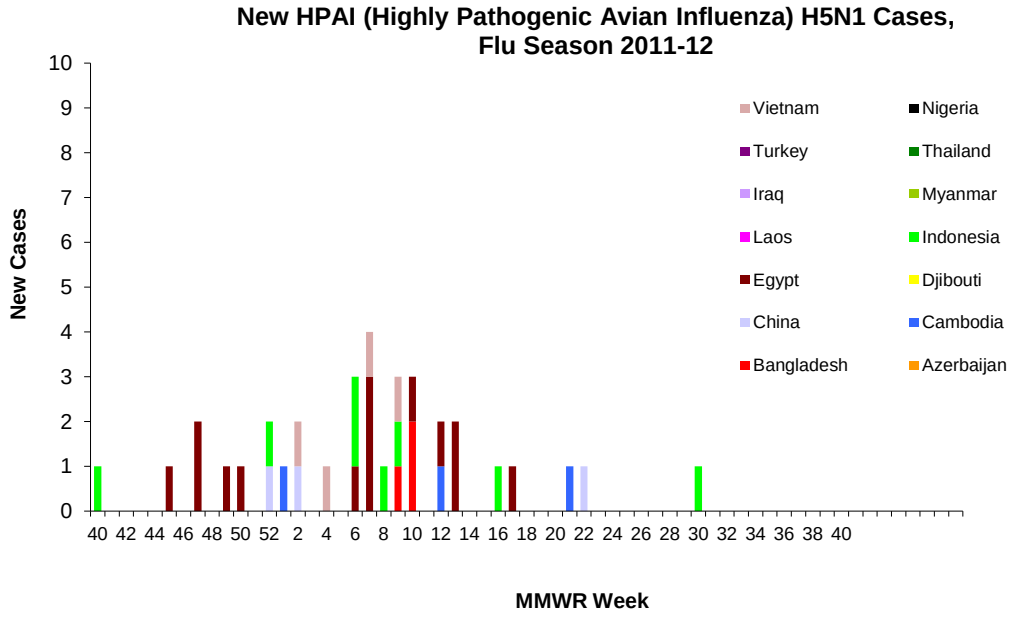


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to CDC during week 43. Total national influenza-associated pediatric deaths for the 2012–13 season is currently 1.*
  - *There have been no flu-related deaths in Hawaii during the 2012–13 season.*

VI. 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).

A. Variant Viruses: Since August 2011, 319 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance:http://hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Influ.htm To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

November 20, 2012 | Volume 2012 (45)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

November 4–10, 2012: Week 45

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2012–13 influenza season officially began on week 40, 2012 (week ending October 6, 2012)**
  - The 2012–13 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (1.0%) in Hawaii were comparable (i.e., within 95% confidence intervals) to week 44 (1.5%).
- 131 (10.2%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 45.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric deaths were reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 45.
- No new novel or variant influenza virus infections were reported to CDC during week 45.
- Worldwide there have been no additional avian influenza cases since August 10, 2012.

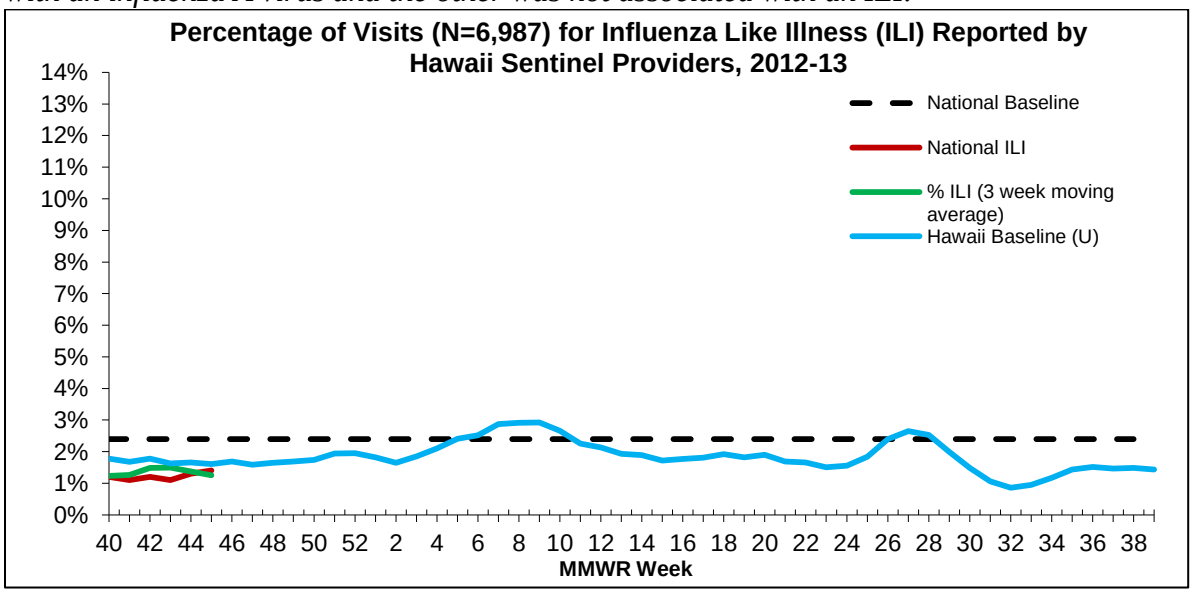
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100˚F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 45 of the current influenza season:

- *1.0% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were below the national baseline (2.2%)[4] but comparable to the national ILI (1.4%) (i.e., within the 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported to HDOH for week 45. For the 2012–13 influenza season there have been two influenza-like clusters reported to HDOH. One was associated with an influenza A virus and the other was not associated with an ILI.*



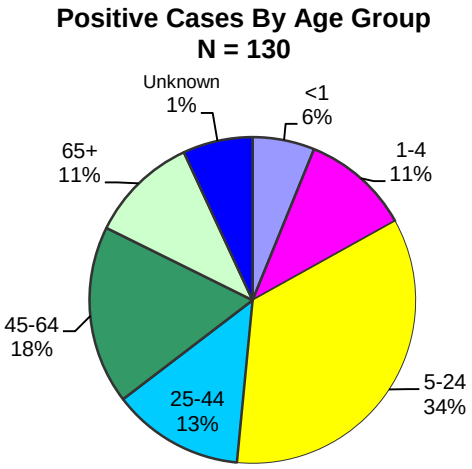
[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).
[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. 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.

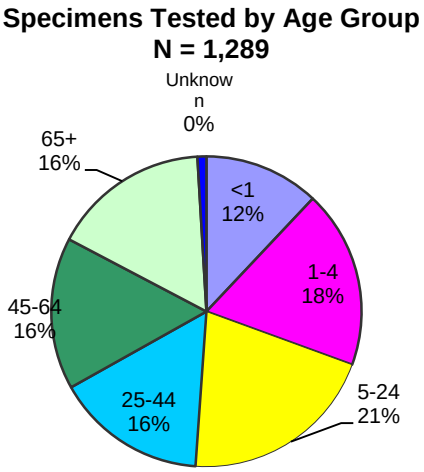
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (i.e., RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the CDC website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2012–13 flu season:

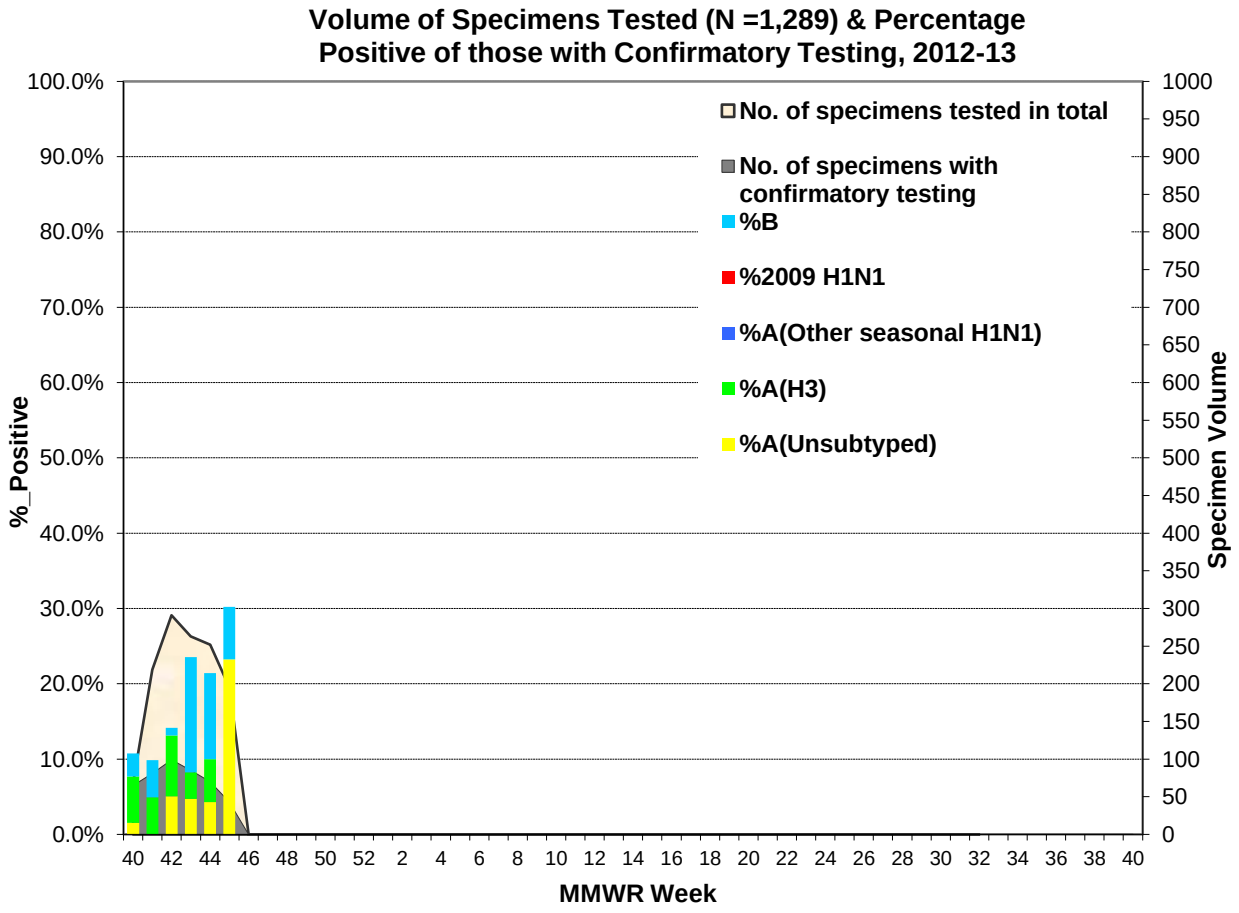
- *A total of 1,289 specimens have been tested statewide for influenza viruses*
  - *845 (65.6%) were screened only by rapid antigen tests with no confirmatory testing*
  - *444 (34.4%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *93 (7.2%) cases of influenza A and 38 (2.9%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *0 (0.0%) were 2009 H1N1,*
    - *0 (0.0%) were other seasonal influenza A (H1),*
    - *23 (24.7%) were influenza A (H3),*
    - *and the remaining (n = 70, 75.3%) were influenza A of undetermined subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2012–13 influenza season. Of the *10.1% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2012–13 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

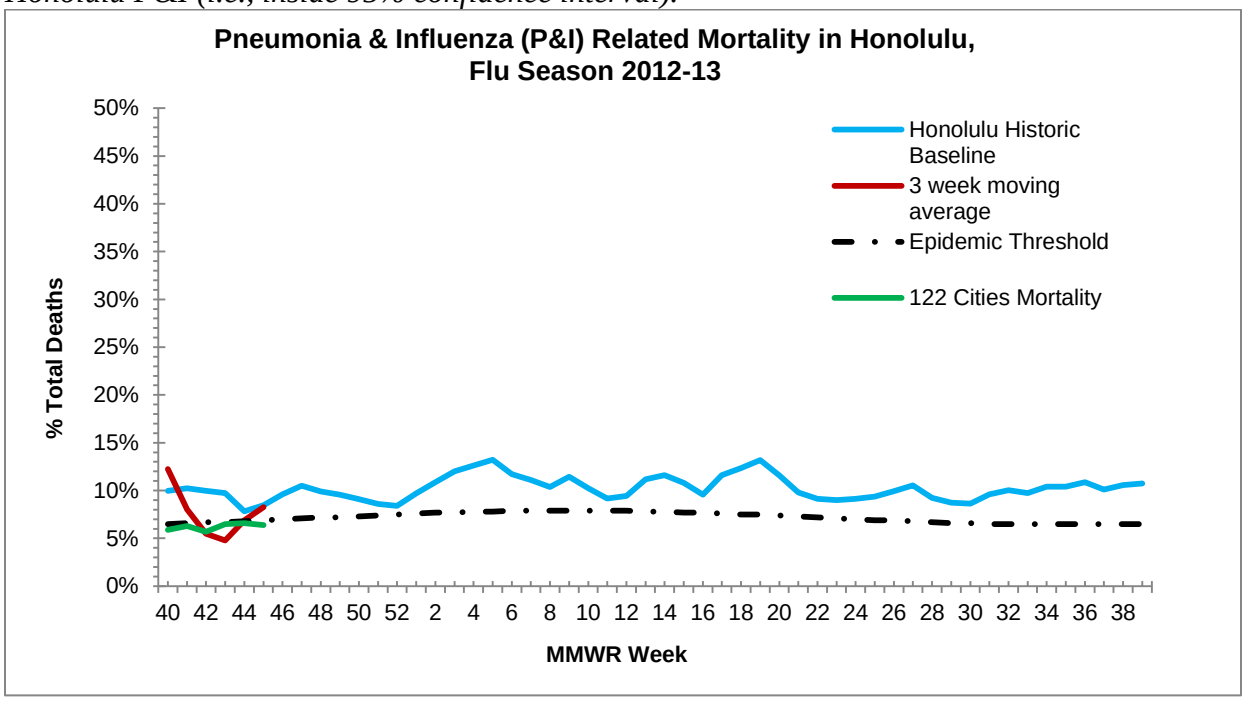
All Respiratory Isolates Identified during the 2012–13 Flu Season

	MMWR Week																																																						
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus																																																							
Coxsackie Virus																																																							
Cytomegalovirus																																																							
Echovirus																																																							
Enterovirus																																																							
Herpes Simplex Virus, Type 1																																																							
Metapneumovirus																																																							
Parainfluenza Virus			X		X																																																		
Respiratory Syncytial Virus	X	X	X	X	X	X																																																	
Rhinovirus	X	X	X	X	X	X																																																	
Varicella Zoster Virus																																																							
Influenza 2009 H1N1																																																							
Influenza A (H3)				X	X																																																		
Influenza A (Other seasonal H1N1)																																																							
Influenza A (unsubtyped)				X	X																																																		
Influenza B																																																							

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 45 of the current influenza season:

- *10.5% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii ($p<0.05$)*
- *Both the national 122 city P&I mortality (6.4%) and epidemic threshold (6.5%) were comparable to the Honolulu P&I (i.e., inside 95% confidence interval).*

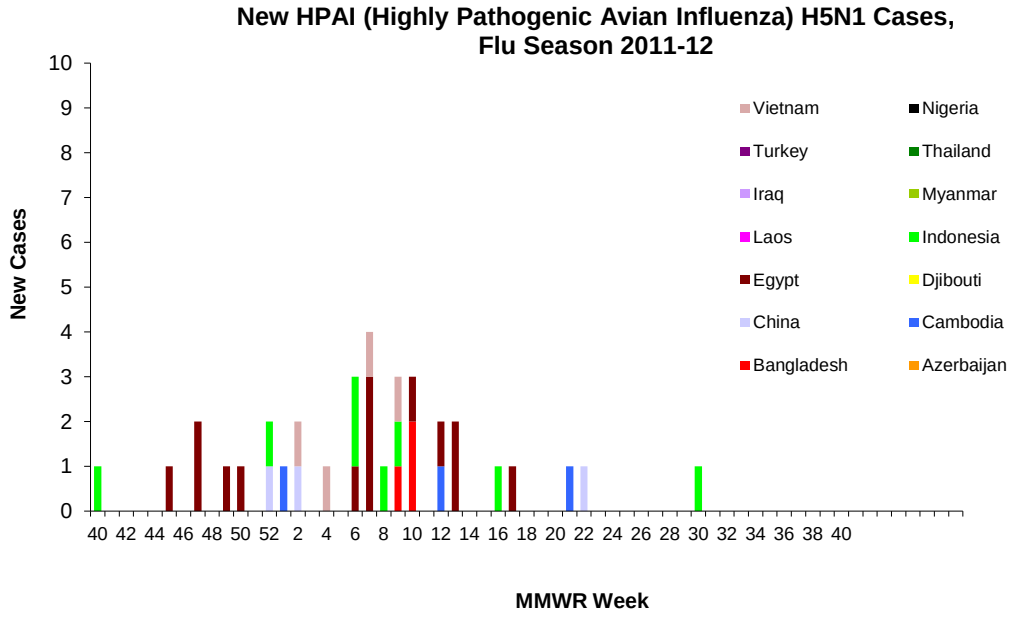


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to CDC during week 45. Total national influenza-associated pediatric deaths for the 2012–13 season is currently 1.*
  - *There have been no flu-related deaths in Hawaii during the 2012–13 season.*

VI. 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).

A. Variant Viruses: Since August 2011, 319 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance: http://www.flu.hawaii.gov/surveillance.html To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
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5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
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16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
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30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

November 27, 2012 | Volume 2012 (46)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

November 11–17, 2012: Week 46

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2012–13 influenza season officially began on week 40, 2012 (week ending October 6, 2012)**
  - The 2012–13 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (1.7%) in Hawaii was higher (i.e., outside 95% confidence intervals) to week 44 (1.0%).
- 140 (10.0%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 46.
- There were no influenza-associated deaths reported to HDOH this week.
- One influenza-associated pediatric death was reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 46.
- No new novel or variant influenza virus infections were reported to CDC during week 46.
- Worldwide there have been no additional avian influenza cases since August 10, 2012.

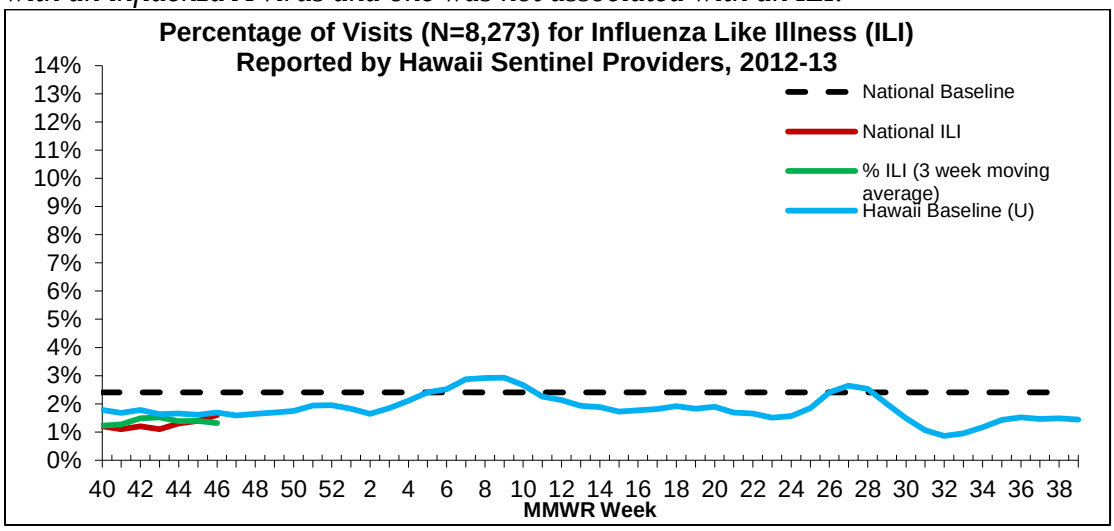
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100˚F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 46 of the current influenza season:

- *1.7% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were comparable to the national baseline (2.2%)[4] and the national ILI (1.6%) (i.e., within the 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported to HDOH for week 46. For the 2012–13 influenza season there have been three influenza-like clusters reported to HDOH. One was associated with an influenza A virus and one was not associated with an ILI.*



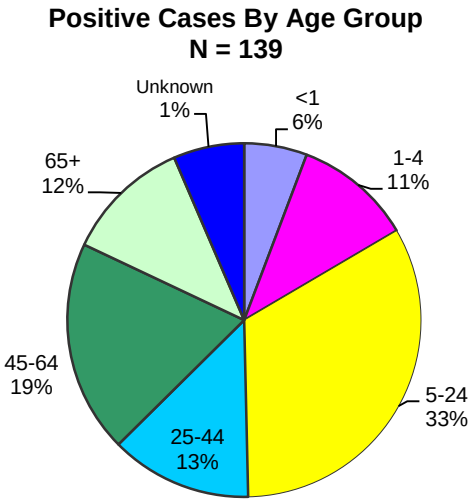
[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).
[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. 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.

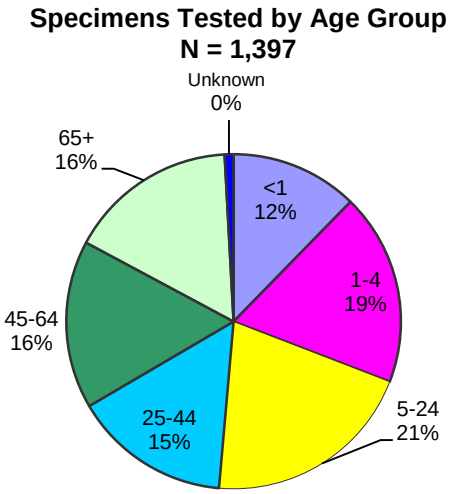
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (i.e., RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the CDC website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2012–13 flu season:

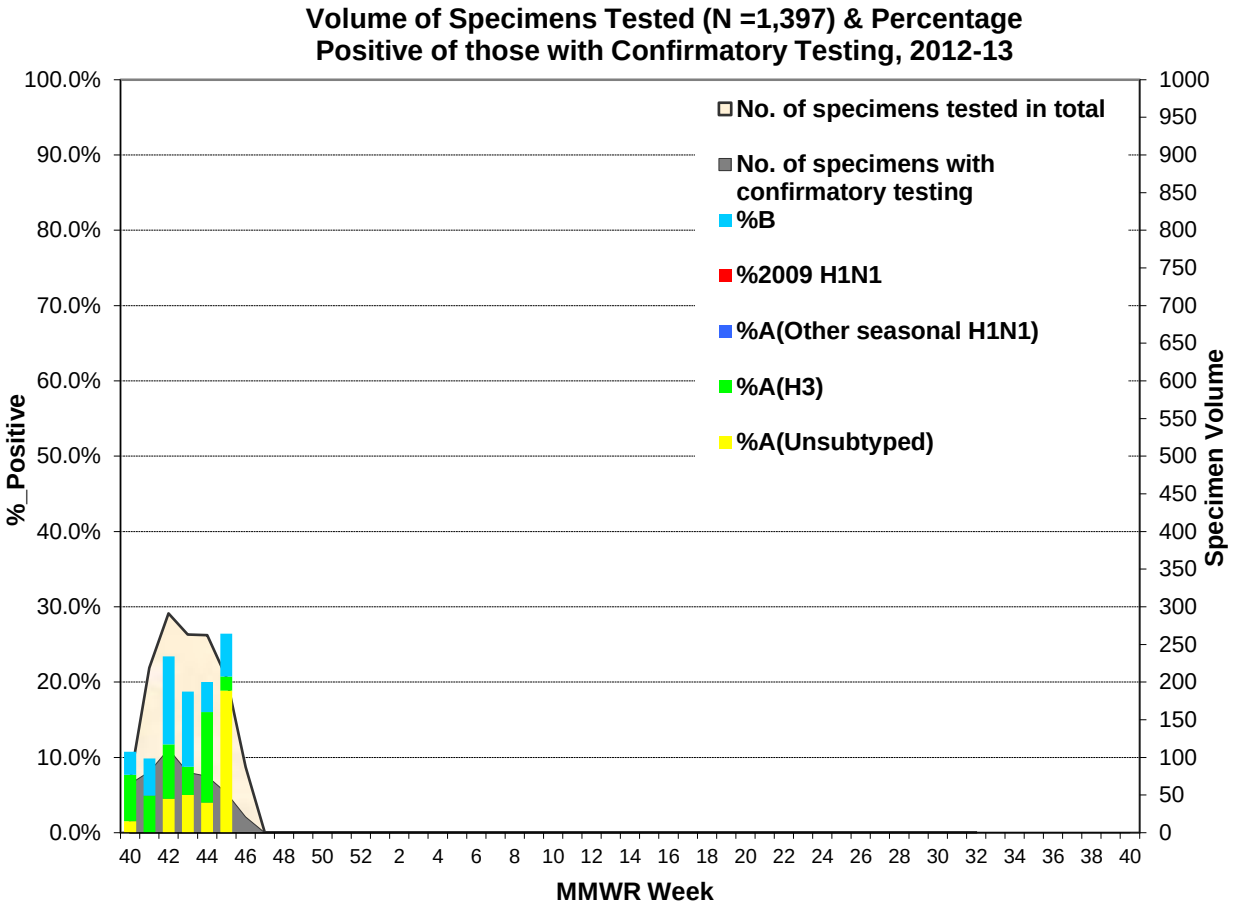
- *A total of 1,397 specimens have been tested statewide for influenza viruses*
  - *911 (65.2%) were screened only by rapid antigen tests with no confirmatory testing*
  - *486 (34.8%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *100 (7.2%) cases of influenza A and 40 (2.9%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *0 (0.0%) were 2009 H1N1,*
    - *0 (0.0%) were other seasonal influenza A (H1),*
    - *29 (29.0%) were influenza A (H3),*
    - *and the remaining (n = 71, 71.0%) were influenza A of undetermined subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2012–13 influenza season. Of the *9.9% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2012–13 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

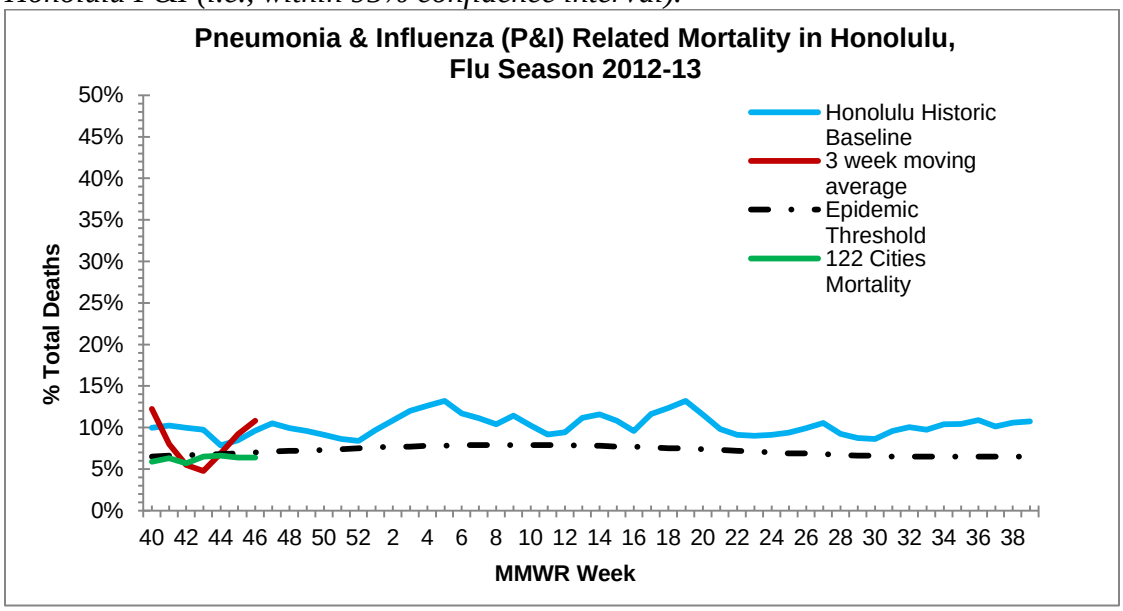
All Respiratory Isolates Identified during the 2012–13 Flu Season

	MMWR Week																																																			
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus																																																					
Coxsackie Virus																																																					
Cytomegalovirus																																																					
Echovirus																																																					
Enterovirus																																																					
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus																																																					
Parainfluenza Virus			X		X																																																
Respiratory Syncytial Virus	X	X	X	X	X	X																																															
Rhinovirus	X	X	X	X	X	X																																															
Varicella Zoster Virus																																																					
Influenza 2009 H1N1																																																					
Influenza A (H3)				X	X																																																
Influenza A (Other seasonal H1N1)																																																					
Influenza A (unsubtyped)				X	X																																																
Influenza B																																																					

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 46 of the current influenza season:

- *11.1% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii ($p<0.05$)*
- *Both the national 122 city P&I mortality (6.4%) and epidemic threshold (6.6%) were comparable to the Honolulu P&I (i.e., within 95% confidence interval).*

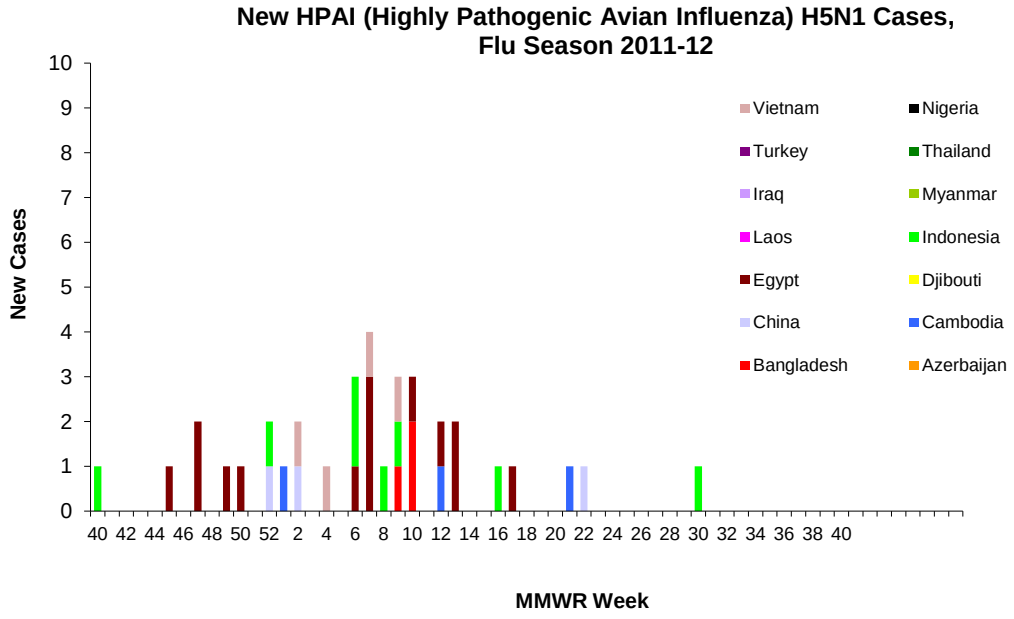


- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There was one influenza-associated pediatric deaths reported to CDC during week 46. The death occurred during week 46 (week ending November 17) and was associated with an influenza A (H3) virus. Total national influenza-associated pediatric deaths for the 2012–13 season is currently 2.*
  - *There have been no flu-related deaths in Hawaii during the 2012–13 season.*

VI. 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).

A. Variant Viruses: Since August 2011, 319 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (3), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

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Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance: http://www.flu.hawaii.gov/surveillance.html To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
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15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
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31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
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49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
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52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

December 4, 2012 | Volume 2012 (47)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

November 18–24, 2012: Week 47

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2012–13 influenza season officially began on week 40, 2012 (week ending October 6, 2012)**
  - The 2012–13 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (1.8%) in Hawaii was comparable (i.e., within 95% confidence intervals) to week 46 (1.7%).
- 143 (10.0%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 47.
- There were no influenza-associated deaths reported to HDOH this week.
- No influenza-associated pediatric death was reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 47.
- One new human infection with a novel influenza virus was reported to CDC during week 47.
- Worldwide there have been no additional reported avian influenza cases since August 10, 2012.

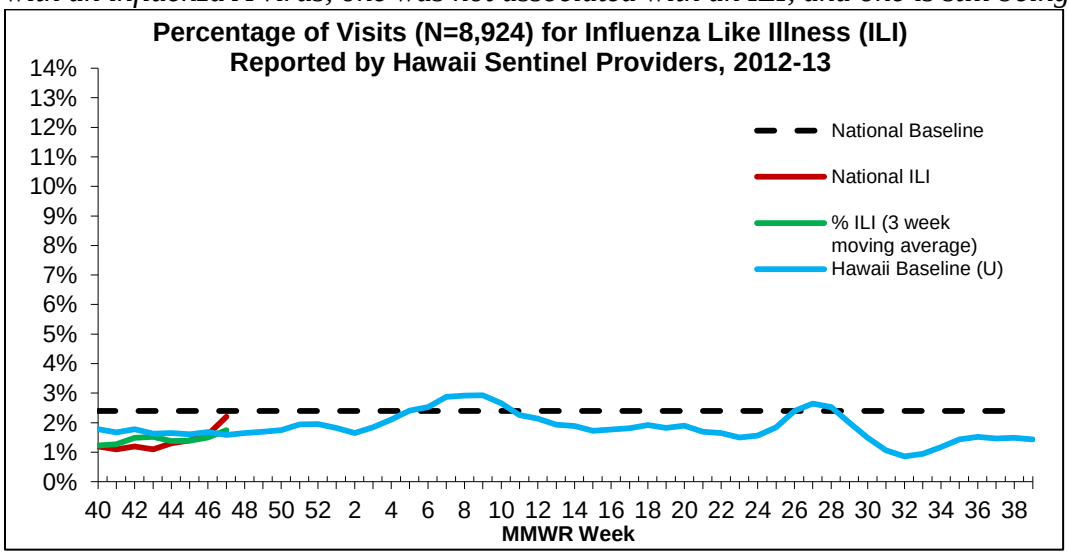
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100˚F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 47 of the current influenza season:

- *1.8% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were comparable to the national baseline (2.2%)[4] and the national ILI (2.2%) (i.e., within the 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported to HDOH for week 47. For the 2012–13 influenza season there have been three influenza-like clusters reported to HDOH. One was associated with an influenza A virus, one was not associated with an ILI, and one is still being investigated.*



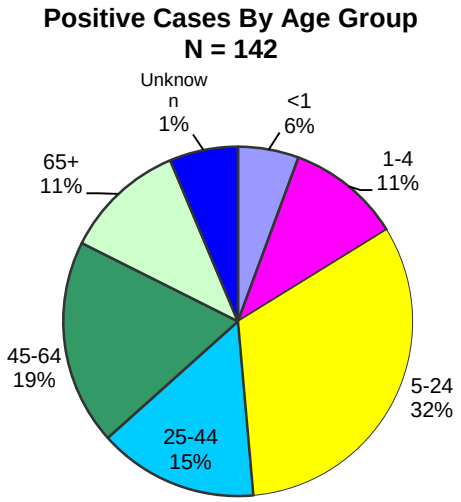
[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).
[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. 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.

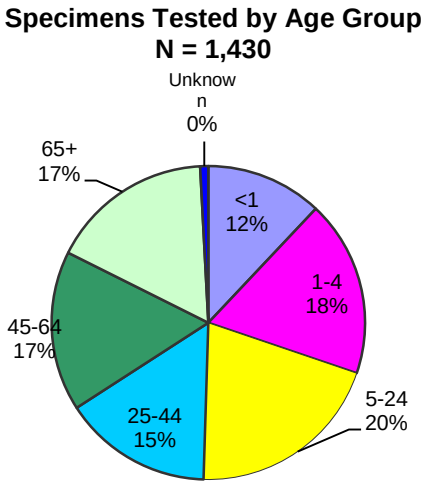
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (i.e., RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the CDC website (here).

A. Influenza: The following reflects laboratory findings since the beginning of the 2012–13 flu season:

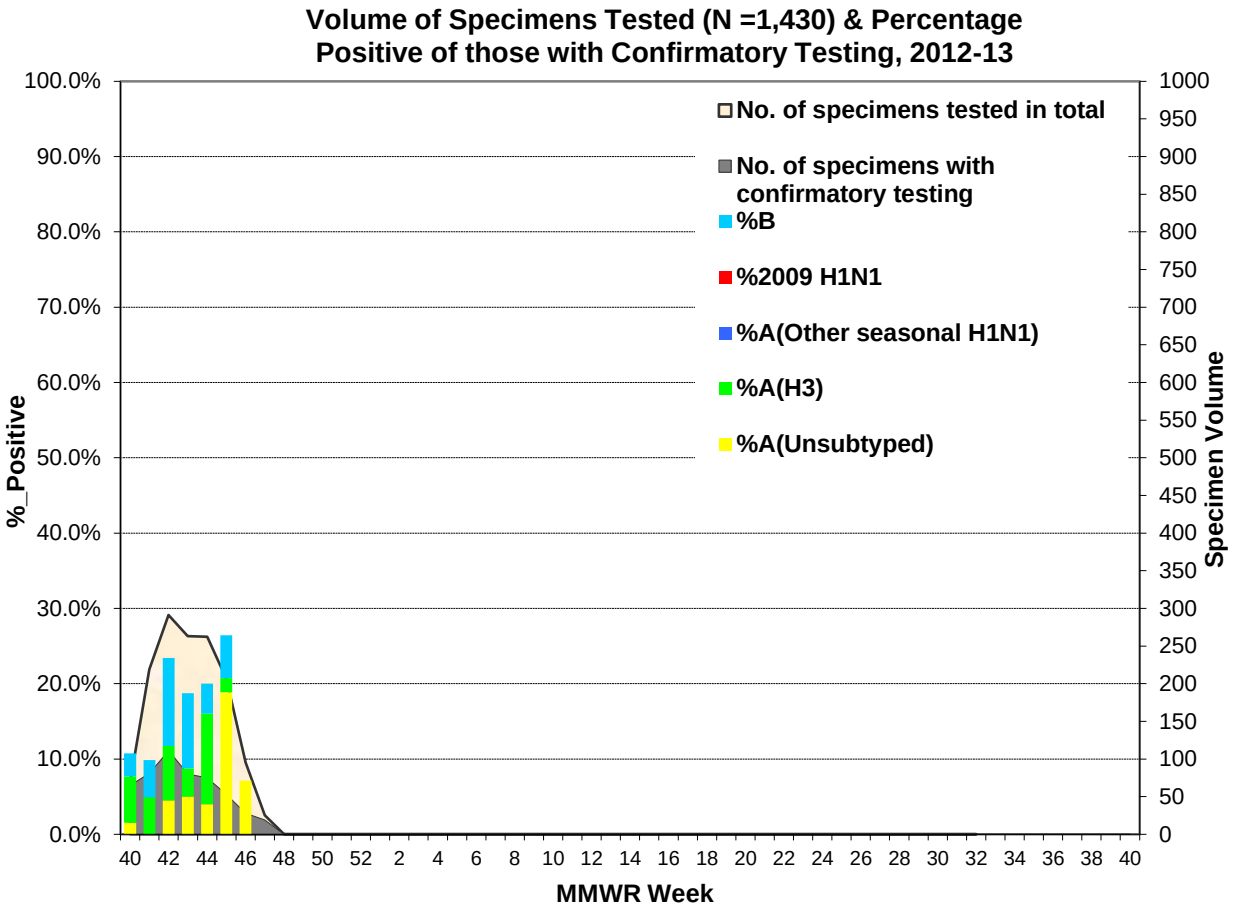
- *A total of 1,430 specimens have been tested statewide for influenza viruses*
  - *918 (64.2%) were screened only by rapid antigen tests with no confirmatory testing*
  - *512 (35.8%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *103 (7.2%) cases of influenza A and 40 (2.8%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *0 (0.0%) were 2009 H1N1,*
    - *0 (0.0%) were other seasonal influenza A (H1),*
    - *29 (28.2%) were influenza A (H3),*
    - *and the remaining (n = 74, 71.8%) were influenza A of undetermined subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2012–13 influenza season. Of the *9.9% specimens* that did test positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2012–13 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

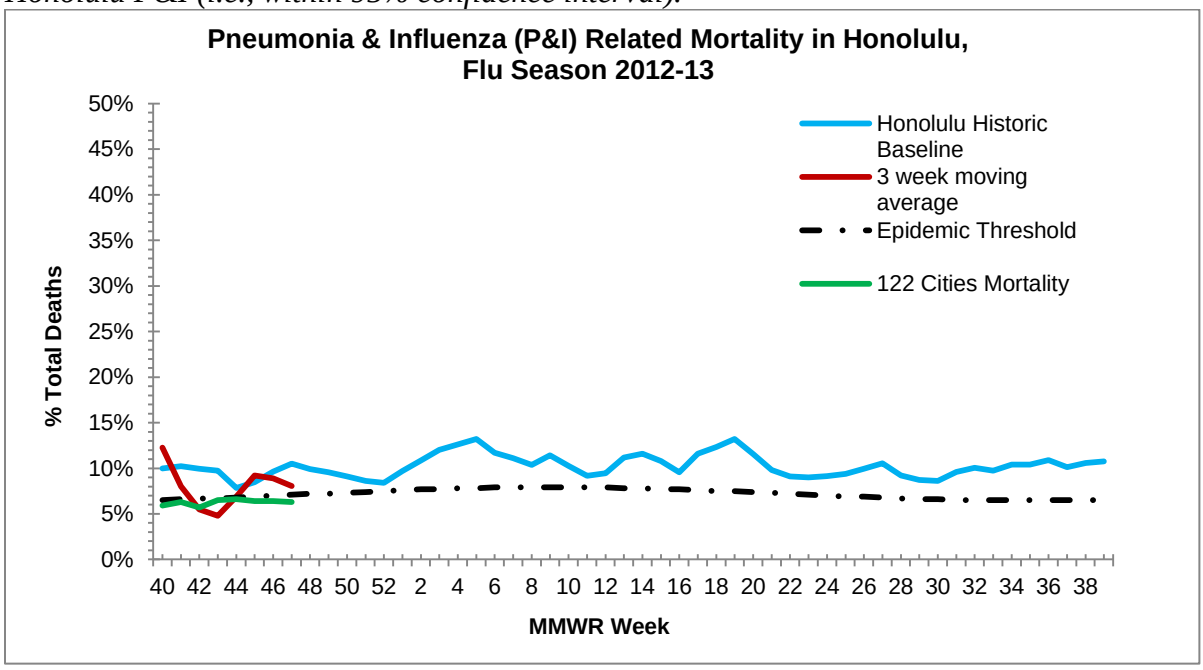
All Respiratory Isolates Identified during the 2012–13 Flu Season

	MMWR Week																																																				
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus																																																					
Coxsackie Virus																																																					
Cytomegalovirus																																																					
Echovirus																																																					
Enterovirus																																																					
Herpes Simplex Virus, Type 1																																																					
Metapneumovirus																																																					
Parainfluenza Virus			X		X																																																
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X																																													
Rhinovirus	X	X	X	X	X	X																																															
Varicella Zoster Virus																																																					
Influenza 2009 H1N1																																																					
Influenza A (H3)				X	X	X	X	X																																													
Influenza A (Other seasonal H1N1)																																																					
Influenza A (unsubtyped)				X	X	X	X	X																																													
Influenza B																																																					

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 47 of the current influenza season:

- *5.0% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (6.3%) and epidemic threshold (6.7%) were comparable to the Honolulu P&I (i.e., within 95% confidence interval).*



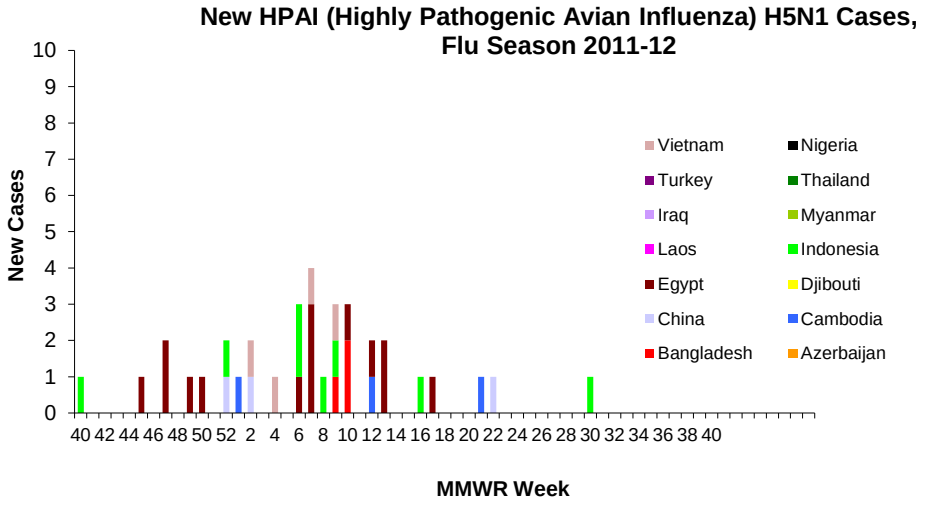
- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were no influenza-associated pediatric deaths reported to CDC during week 47. Total national influenza-associated pediatric deaths for the 2012–13 season is currently 2.*
  - *There have been no flu-related deaths in Hawaii during the 2012–13 season.*

VI. 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).

A. Variant Viruses: Since August 2011, 320 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (4), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

One human infection with an influenza A variant virus (H3N2v) has been reported for the 2012-13 flu season and was reported to CDC during week 47.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance: http://www.flu.hawaii.gov/surveillance.html To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
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32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
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38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

November 25–December 1, 2012: Week 48

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2012–13 influenza season officially began on week 40, 2012 (week ending October 6, 2012)**
  - The 2012–13 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (2.5%) in Hawaii was higher (i.e., outside 95% confidence intervals) than week 47 (1.5%).
- 145 (10.0%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 48.
- There were no influenza-associated deaths reported to HDOH this week.
- Three influenza-associated pediatric deaths were reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 48.
- No new human infections with a novel influenza virus were reported to CDC during week 48.
- Worldwide there have been no additional reported avian influenza cases since August 10, 2012.

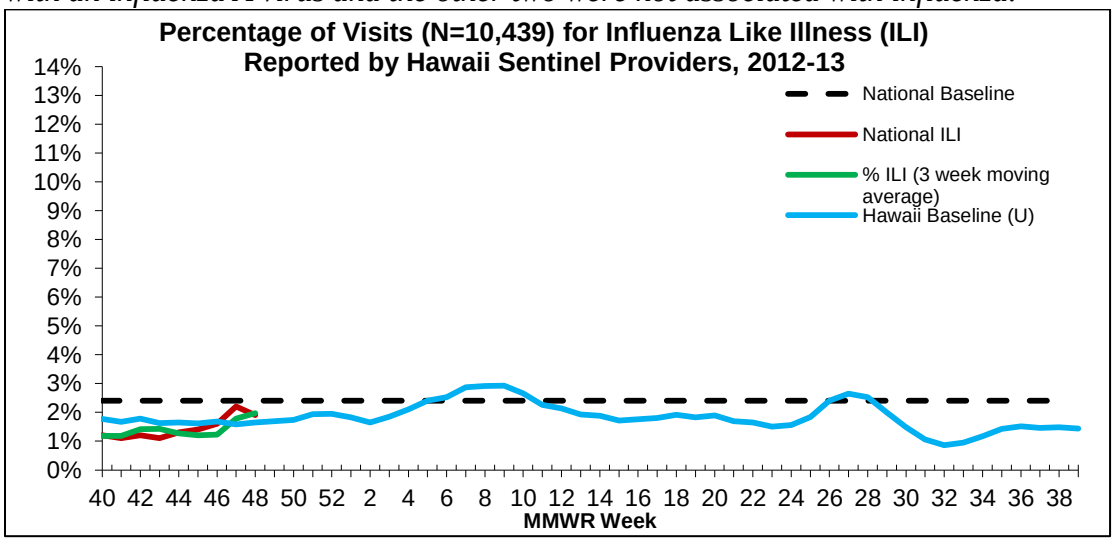
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100˚F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 48 of the current influenza season:

- *2.5% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were higher than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were comparable to the national baseline (2.2%)[4] and the national ILI (1.9%) (i.e., within the 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported to HDOH for week 48. For the 2012–13 influenza season there have been three influenza-like clusters reported to HDOH. One was associated with an influenza A virus and the other two were not associated with influenza.*



[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).
[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. 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.

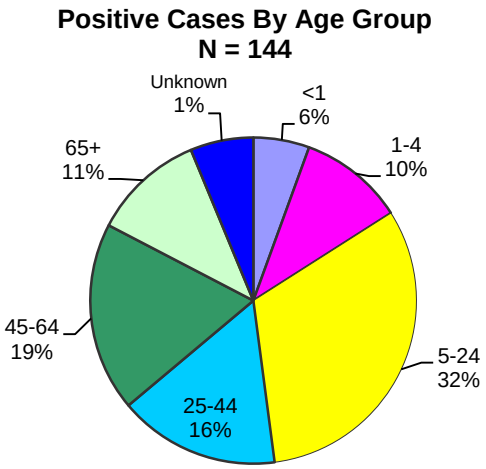
II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (i.e., RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the CDC website (here).

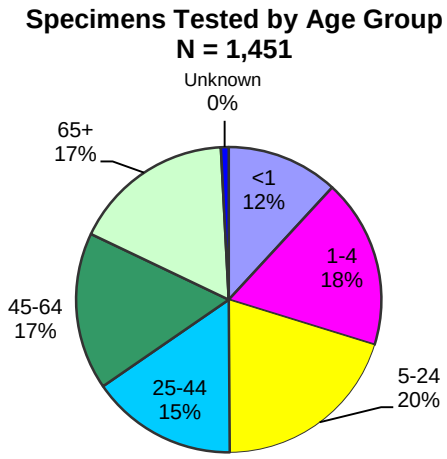
***HDOH DOCD is currently switching laboratory data transfer applications so the following data does not reflect the current specimen volumes.*

A. Influenza: The following reflects laboratory findings since the beginning of the 2012–13 flu season:

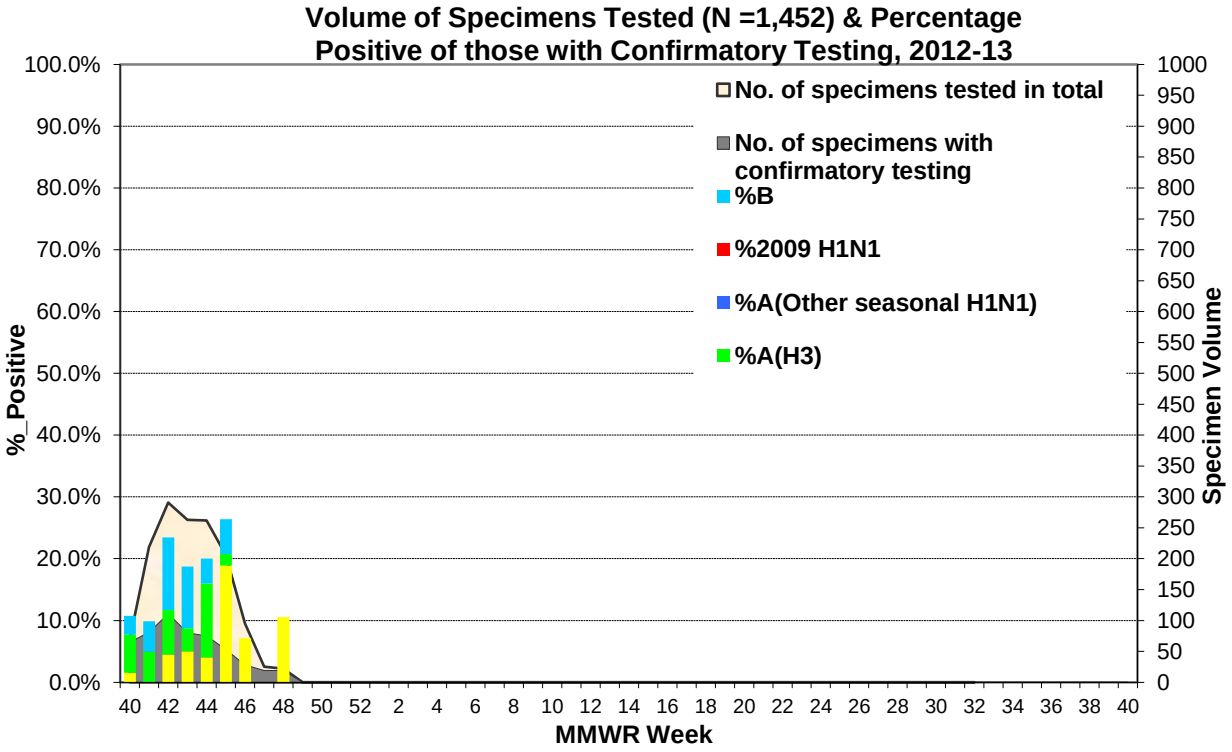
- *A total of 1,452 specimens have been tested statewide for influenza viruses*
  - *921 (63.4%) were screened only by rapid antigen tests with no confirmatory testing*
  - *531 (36.6%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *105 (7.2%) cases of influenza A and 40 (2.8%) cases of influenza B were detected using any method*
  - *influenza A cases included:*
    - *0 (0.0%) were 2009 H1N1,*
    - *0 (0.0%) were other seasonal influenza A (H1),*
    - *29 (27.6%) were influenza A (H3),*
    - *and the remaining (n = 76, 72.4%) were influenza A of undetermined subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2012–13 influenza season. Of the *9.9% of specimens* that tested positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2012–13 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

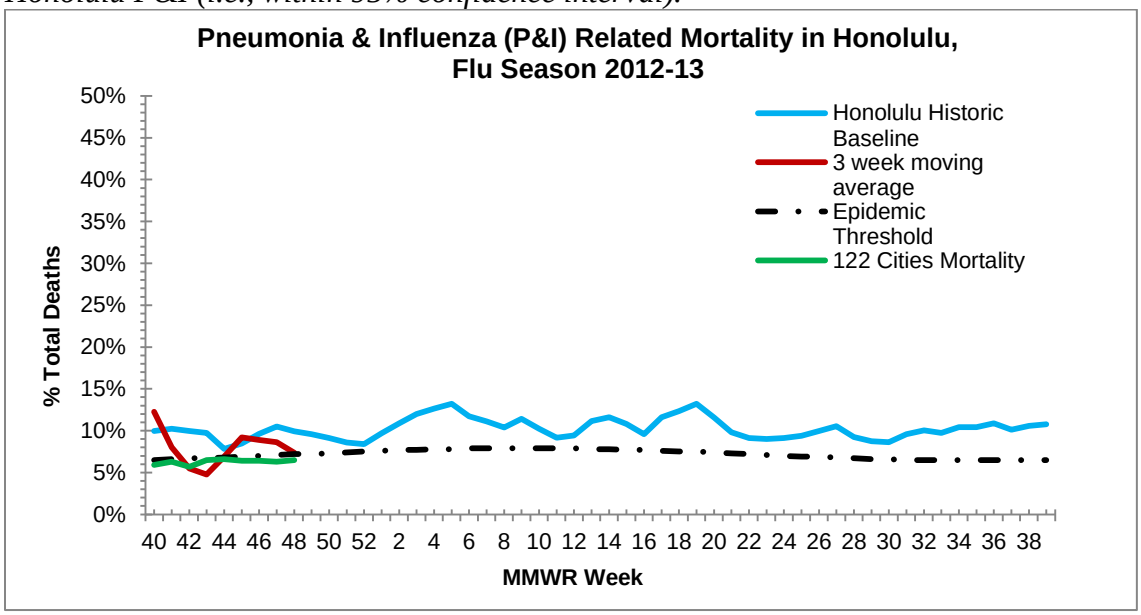
All Respiratory Isolates Identified during the 2012–13 Flu Season

	MMWR Week																																																						
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus																																																							
Coxsackie Virus																																																							
Cytomegalovirus																																																							
Echovirus																																																							
Enterovirus																																																							
Herpes Simplex Virus, Type 1																																																							
Metapneumovirus																																																							
Parainfluenza Virus			X		X																																																		
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X																																															
Rhinovirus	X	X	X	X	X	X																																																	
Varicella Zoster Virus																																																							
Influenza 2009 H1N1																																																							
Influenza A (H3)				X	X	X	X	X																																															
Influenza A (Other seasonal H1N1)																																																							
Influenza A (unsubtyped)				X	X	X	X	X																																															
Influenza B																																																							

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 48 of the current influenza season:

- *9.7% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was lower than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (6.5%) and epidemic threshold (6.8%) were comparable to the Honolulu P&I (i.e., within 95% confidence interval).*



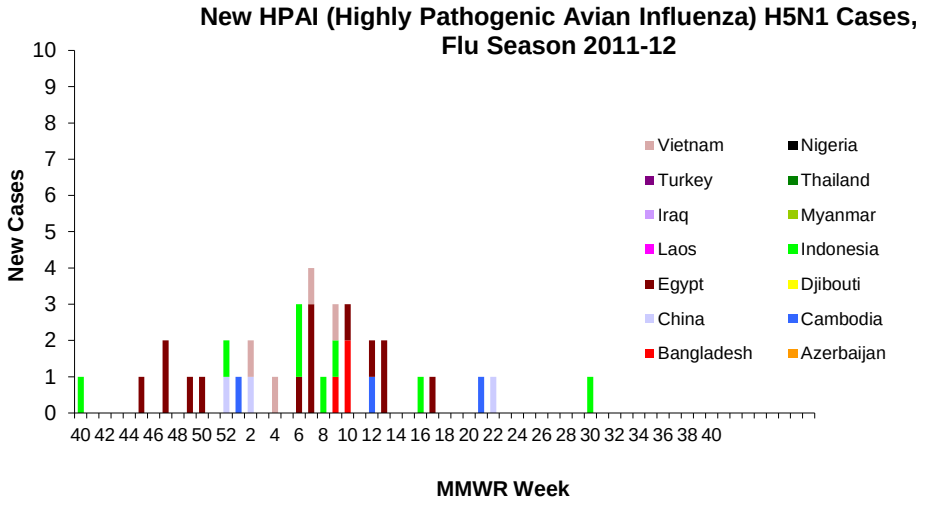
- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There were three influenza-associated pediatric deaths reported to CDC during week 48. One death occurred during week 27 (week ending November 24) and two deaths occurred during week 48 (week ending December 1). Two deaths were associated with influenza A viruses for which the subtypes were not determined and one death was associated with an influenza B virus. Total national influenza-associated pediatric deaths for the 2012–13 season is currently 5.*
  - *There have been no flu-related deaths in Hawaii during the 2012–13 season.*

VI. 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).

A. Variant Viruses: Since August 2011, 320 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (4), Maine (2), Maryland (12), Michigan (6), Minnesota (4), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

One human infection with an influenza A variant virus (H3N2v) has been reported for the 2012-13 flu season and was reported to CDC during week 47.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance: http://www.flu.hawaii.gov/surveillance.html To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

December 2–8, 2012: Week 49

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Report Snapshot:

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    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- ILI outpatient visits (1.0%) in Hawaii was lower (i.e., outside 95% confidence intervals) than week 48 (2.6%).
- 145 (10.0%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during week 49.
- There were no influenza-associated deaths reported to HDOH this week.
- One influenza-associated pediatric death was reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 49.
- One new human infection with a novel influenza virus was reported to CDC during week 49.
- Worldwide there have been no additional reported avian influenza cases since August 10, 2012.

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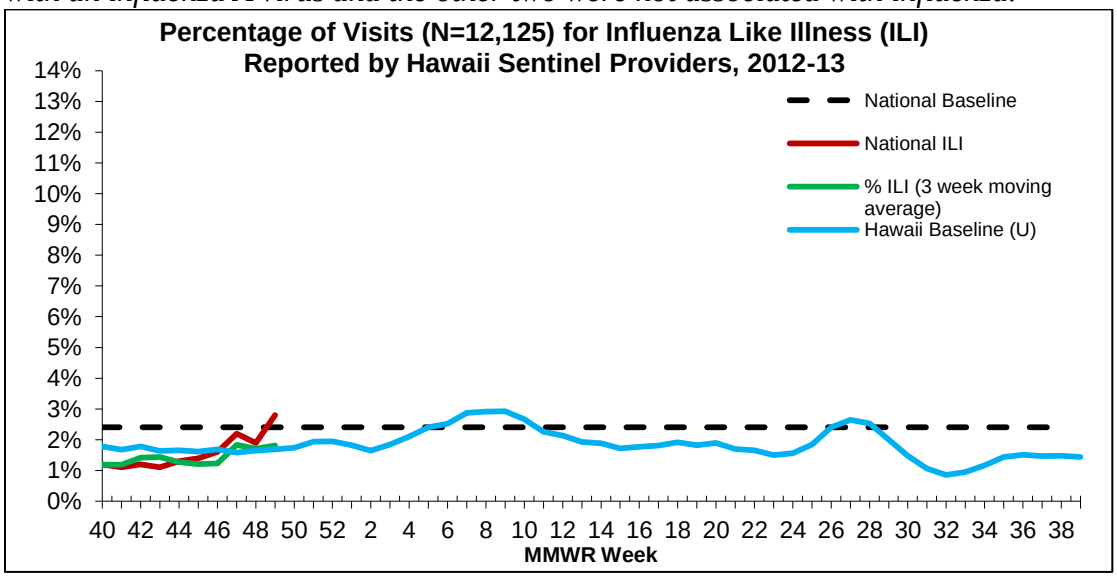
For week 49 of the current influenza season:

- *1.0% of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were lower than the historical baseline in Hawaii[2,3] ($p<0.05$).*
- *Hawaii's ILI outpatient visits were lower than the national baseline (2.2%)[4] and the national ILI (2.8%) (i.e., outside the 95% confidence interval).*
- *ILI Cluster Activity: There were no ILI clusters reported to HDOH for week 49. For the 2012–13 influenza season there have been three influenza-like clusters reported to HDOH. One was associated with an influenza A virus and the other two were not associated with influenza.*



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II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (i.e., RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the CDC website (here).

***HDOH DOCD is currently switching laboratory data transfer applications so the following data do not reflect the current specimen volumes.*

A. Influenza: The following reflects laboratory findings since the beginning of the 2012–13 flu season:

- *A total of 1,452 specimens have been tested statewide for influenza viruses*
  - *921 (63.4%) were screened only by rapid antigen tests with no confirmatory testing*
  - *531 (36.6%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
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  - *influenza A cases included:*
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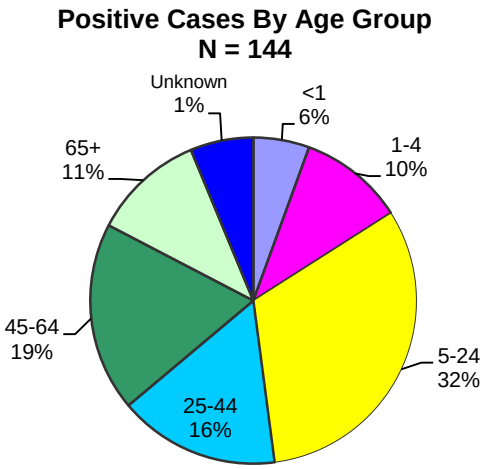
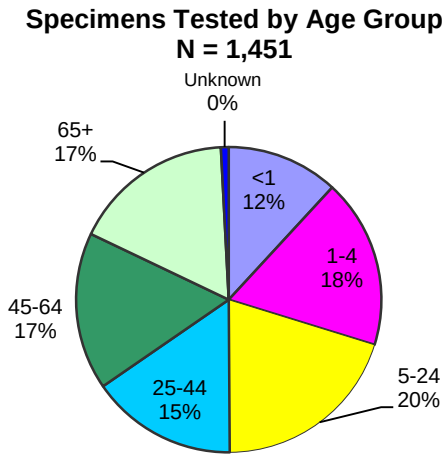
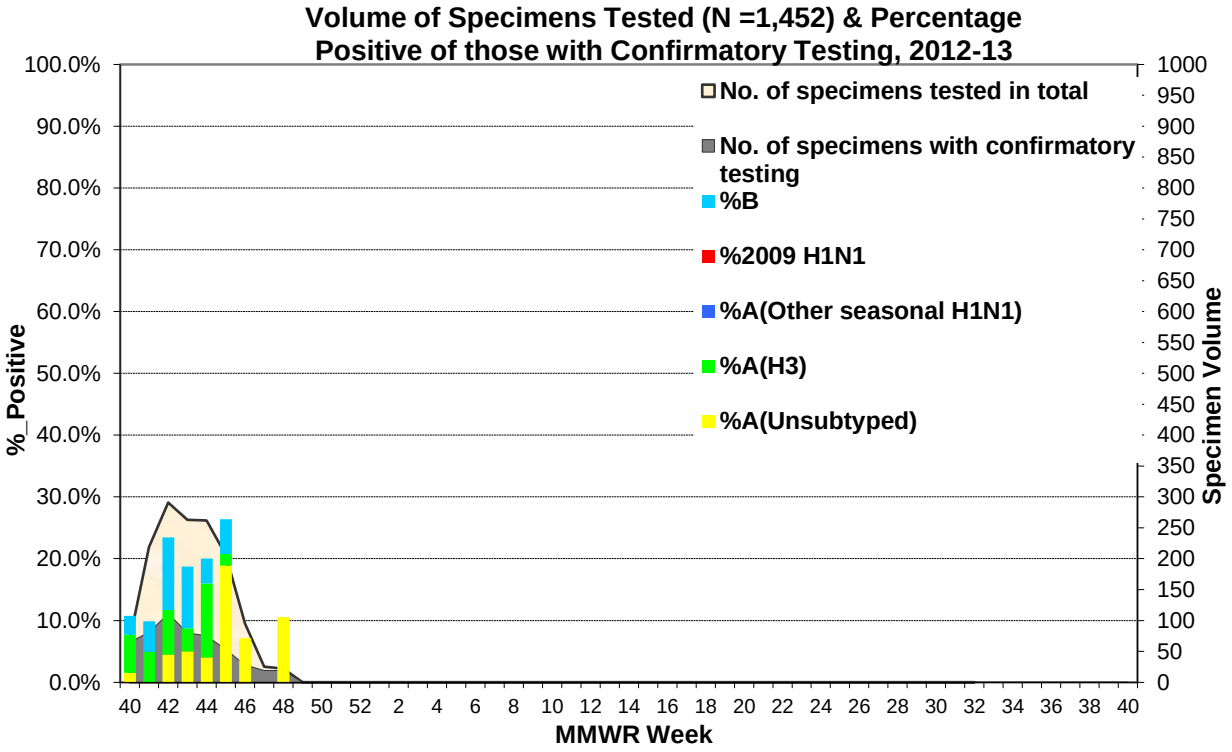
    - *and the remaining (n = 76, 72.4%) were influenza A of undetermined subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2012–13 influenza season. Of the *9.9% of specimens* that tested positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2012–13 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

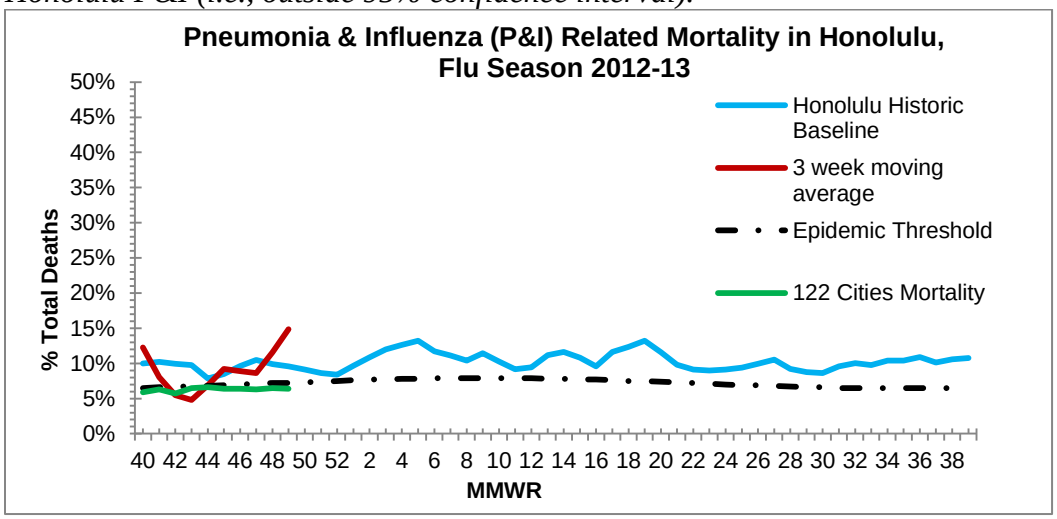
All Respiratory Isolates Identified during the 2012–13 Flu Season

	MMWR Week																																																						
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus																																																							
Coxsackie Virus																																																							
Cytomegalovirus																																																							
Echovirus																																																							
Enterovirus																																																							
Herpes Simplex Virus, Type 1																																																							
Metapneumovirus																																																							
Parainfluenza Virus			X		X																																																		
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X																																															
Rhinovirus	X	X	X	X	X	X																																																	
Varicella Zoster Virus																																																							
Influenza 2009 H1N1																																																							
Influenza A (H3)				X	X	X	X	X																																															
Influenza A (Other seasonal H1N1)																																																							
Influenza A (unsubtyped)				X	X	X	X	X																																															
Influenza B																																																							

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For week 49 of the current influenza season:

- *20.0% of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was higher than the historical baseline in Hawaii (p<0.05)*
- *Both the national 122 city P&I mortality (6.4%) and epidemic threshold (6.9%) were lower than the Honolulu P&I (i.e., outside 95% confidence interval).*



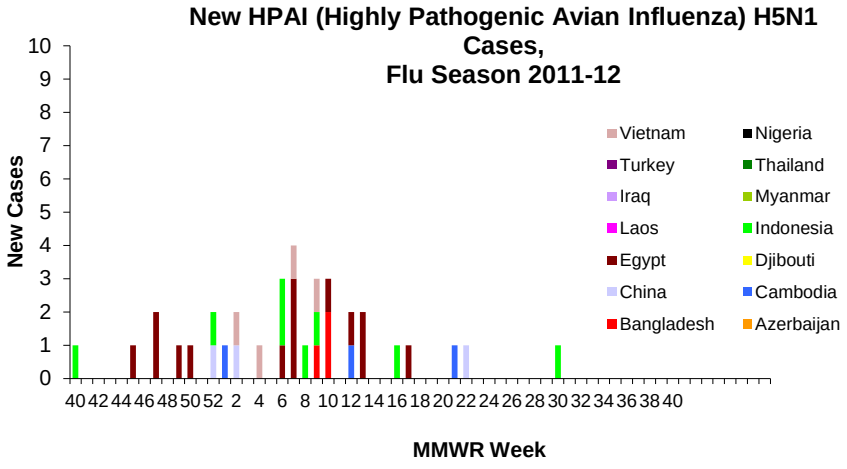
- *Influenza-Associated Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *There was one influenza-associated pediatric death reported to CDC during week 49. The death was associated with an influenxa B virus and occurred during week 48 (week ending December 1). Total national influenza-associated pediatric deaths for the 2012–13 season is currently 6.*
  - *There have been no flu-related deaths in Hawaii during the 2012–13 season.*

VI. 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).

A. Variant Viruses: Since August 2011, 321 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (4), Maine (2), Maryland (12), Michigan (6), Minnesota (5), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

One human infection with an influenza A variant virus (H3N2v) was reported to the CDC during week 49. The case occurred in Minnesota and the patient had close contact with swine prior to illness onset. A total of 2 H3N2v infections have been reported for 2012-13 flu season.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on August 10, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	0	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	10	5	168	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	8	8	191	159
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**608**	**359**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance: http://www.flu.hawaii.gov/surveillance.html To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		

January 3, 2013 | Volume 2012 (50-51)

HAWAII STATE DEPARTMENT OF HEALTH
DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

Morbidity and Mortality Weekly Report (MMWR)[1]

December 9–22, 2012: Weeks 50-51

Overview: The Hawaii State Department of Health (HDOH) monitors influenza and other respiratory pathogens 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.**

Report Snapshot:

- **The 2012–13 influenza season officially began on week 40, 2012 (week ending October 6, 2012)**
  - The 2012–13 vaccine includes the following influenza virus selection**:**
    - an A/California/7/2009 (H1N1)pdm09-like virus;
    - an A/Victoria/361/2011 (H3N2)-like virus;
    - a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).
- During week 50, ILI outpatient visits (2.9%) in Hawaii was higher (i.e., outside 95% confidence intervals) than week 49 (1.0%). During week 51, ILI outpatient visits (3.3%) in Hawaii was comparable (i.e., within 95% confidence intervals) to week 50 (2.9%).
- 145 (10.0%) of laboratory specimens have tested positive for influenza
- There were no ILI clusters reported during weeks 50-51.
- There were no influenza-associated deaths reported to HDOH this week.
- Two influenza-associated pediatric deaths were reported nationwide to the Centers for Disease Control and Prevention (CDC) during week 50 and eight pediatric deaths were reported to CDC during week 51.
- No new human infection with a novel influenza virus was reported to CDC during weeks 50-51.
- Worldwide there have been no additional reported avian influenza cases since December 17, 2012.

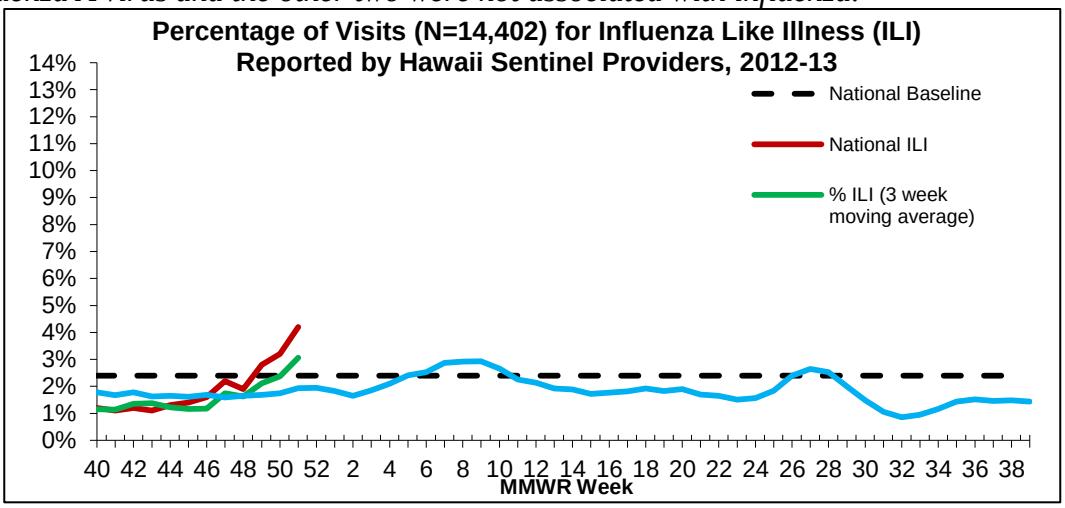
[1] MMWR stands for "Morbidity and Mortality Weekly Report," conventionally used by the Centers for Disease Control and Prevention (CDC). The weeks of a flu season are often referred to by their respective MMWR week. **See appendix 2 for interpretation of MMWR weeks.**

INFLUENZA SURVEILLANCE

I. Influenza-Like Illness (ILI): HDOH collaborates with recruited doctors and healthcare providers who report the total number of outpatient visits 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 greater than 100°F AND a cough and/or 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 from sentinel providers. Nevertheless, 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 weeks 50-51 of the current influenza season:

- *2.9% (week 50) and 3.3% (week 51) of outpatient visits to Hawaii sentinel providers were attributable to ILI*
- *ILI visits were higher than the historical baseline in Hawaii[2,3] ($p<0.05$) for week 50 but lower than the historical baseline for week 51.*
- *Hawaii's ILI outpatient visits were comparable to the national baseline (2.2%)[4] and the national ILI (3.2% and 4.2%) (i.e., inside the 95% confidence interval) for both week 50 and 51.*
- *ILI Cluster Activity: There were no ILI clusters reported to HDOH for weeks 50-51. For the 2012–13 influenza season there have been three influenza-like clusters reported to HDOH. One was associated with an influenza A virus and the other two were not associated with influenza.*



[2] The Hawaii historical baseline (%ILI and %P&I) is the average of five 3-week moving averages over the preceding five flu seasons of historical data (2005–06, 2006–07, 2007–08, 2008–09, and 2009–10).

[3] Based on comparison of actual outpatient ILI with the historical baseline, which only captured outpatient ILI. There is no historical baseline for urgent care, emergency, and inpatient visits exists since these comprise a new class of ILINet providers. 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.

II. Laboratory Surveillance: SLD, the HDOH public health laboratory, and Hawaii's major private laboratories report results through confirmatory testing (i.e., RT-PCR or viral culture). Only specimens meeting priority criteria (those from hospitalized patients with acute respiratory distress syndrome, or 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 infections) are forwarded to SLD for 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 were not subtyped. For more information on influenza tests and types, please visit the CDC website (here).

***HDOH DOCD is currently switching laboratory data transfer applications so the following data do not reflect the current specimen volumes. Final completion of the project should be no later than January 31, 2013.*

A. Influenza: The following reflects laboratory findings since the beginning of the 2012–13 flu season:

- *A total of 1,452 specimens have been tested statewide for influenza viruses*
  - *921 (63.4%) were screened only by rapid antigen tests with no confirmatory testing*
  - *531 (36.6%) underwent some type of confirmatory testing (either RT-PCR or viral culture)*
- *105 (7.2%) cases of influenza A and 40 (2.8%) cases of influenza B were detected using any method*
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    - *0 (0.0%) were 2009 H1N1,*
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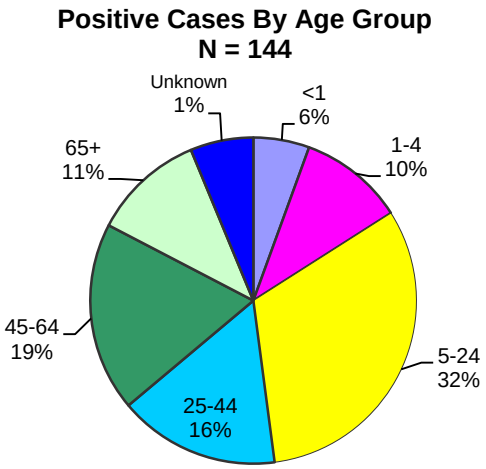
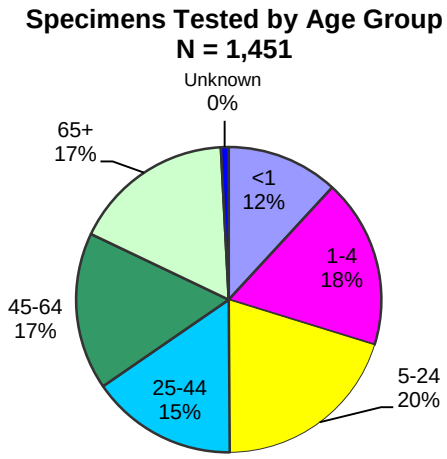
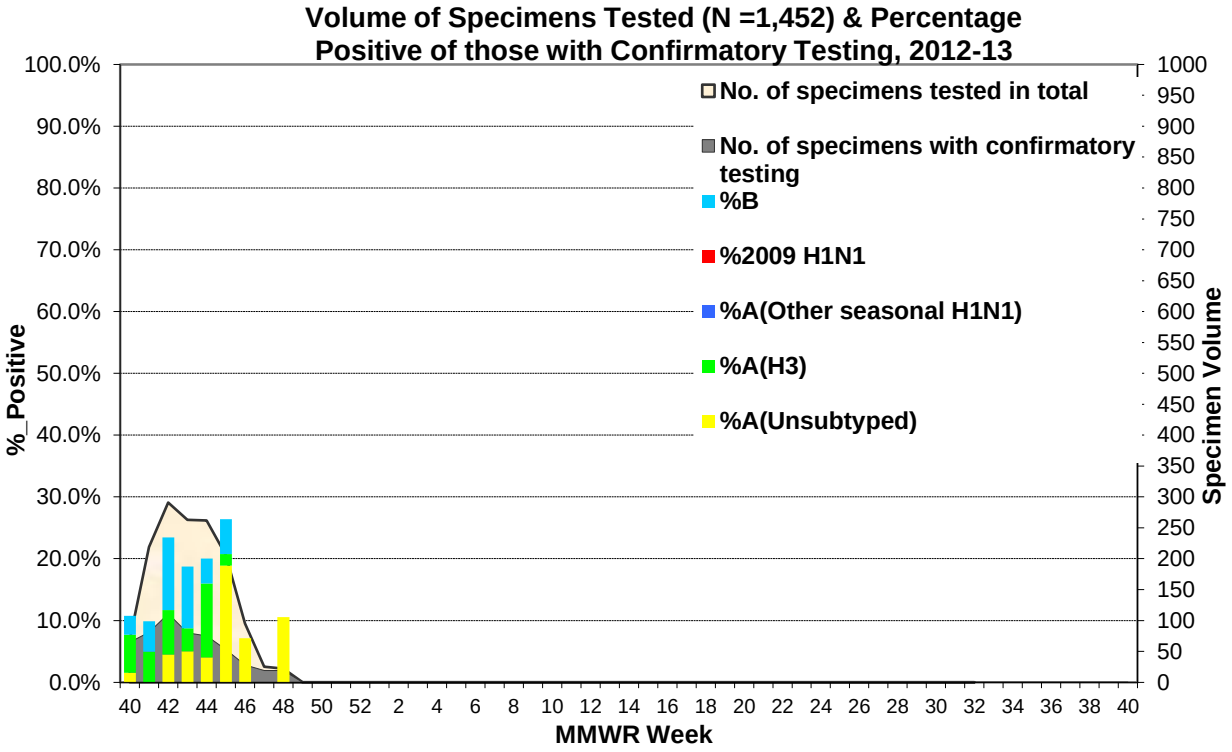
    - *and the remaining (n = 76, 72.4%) were influenza A of undetermined subtype.*

The pie charts on the next page indicate the distribution of specimens tested and positive influenza cases in Hawaii by age group during the 2012–13 influenza season. Of the *9.9% of specimens* that tested positive for influenza, more were likely to be aged 5–24 years than any other age group.





The chart below displays the total volume of specimens tested for influenza by MMWR week during the 2012–13 influenza season as well as the sub-set receiving confirmatory testing. Proportions of specimens positive for influenza viruses by type and sub-type are only presented for specimens tested by confirmatory tests (i.e., RT-PCR or viral culture).



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 on a limited basis 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**.

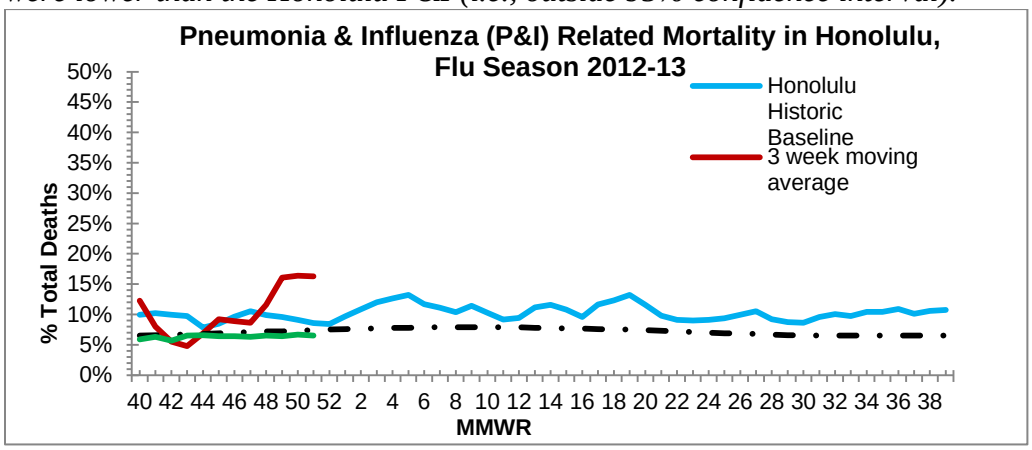
All Respiratory Isolates Identified during the 2012–13 Flu Season

	MMWR Week																																																						
Isolates	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Adenovirus																																																							
Coxsackie Virus																																																							
Cytomegalovirus																																																							
Echovirus																																																							
Enterovirus																																																							
Herpes Simplex Virus, Type 1																																																							
Metapneumovirus																																																							
Parainfluenza Virus			X		X																																																		
Respiratory Syncytial Virus	X	X	X	X	X	X	X	X																																															
Rhinovirus	X	X	X	X	X	X																																																	
Varicella Zoster Virus																																																							
Influenza 2009 H1N1																																																							
Influenza A (H3)				X	X	X	X	X																																															
Influenza A (Other seasonal H1N1)																																																							
Influenza A (unsubtyped)				X	X	X	X	X																																															
Influenza B																																																							

III. Pneumonia and Influenza (P&I) Related Mortality: P&I mortality surveillance is collected by CDC using two methods–122 cities and pediatric mortality. Each week the HDOH OHSM reports Honolulu specific data to the CDC along with 121 other cities from across the United States. CDC collects the following information by age group: the total number of deaths, total deaths from pneumonia, and total deaths related to influenza. Studies have suggested that P&I is a good indicator of influenza-related deaths and therefore P&I is one method for influenza surveillance.

For weeks 50 and 51 of the current influenza season:

- *118.4% (week 50) and 10.8% (week 51) of all deaths that occurred in Honolulu were related to pneumonia or influenza.*
- *The P&I was higher than the historical baseline in Hawaii (p<0.05) during week 50 but lower than the historical baseline during week 51*
- *Both the national 122 city P&I mortality (6.7% and 6.5%) and epidemic threshold (7.0% and 7.1%) were lower than the Honolulu P&I (i.e., outside 95% confidence interval).*



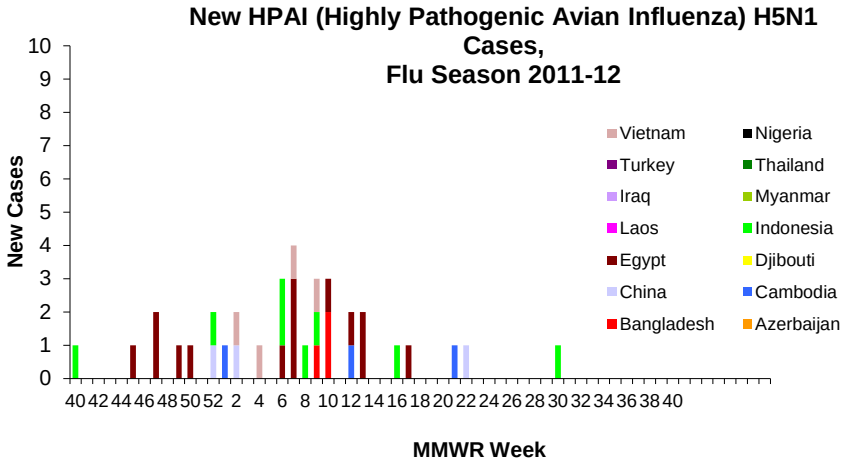
- *Influenza-Associated Pediatric Deaths:*
  - Influenza-associated deaths are considered pediatric in persons aged less than 18 years.
  - Influenza-associated pediatric mortality has been a nationally notifiable condition since October 2004.
  - All pediatric influenza-associated deaths are laboratory confirmed.
  - *Nationally, there were two influenza-associated pediatric deaths reported to CDC during week 50. The deaths were associated with influenza A viruses; one was associated with influenza A (H3), and the other was associated with an influenza A virus for which the subtype was not determined. The deaths occurred during week 46 (week ending November 17) and week 48 (week ending December 1). Eight influenza-associated pediatric deaths were reported to CDC during week 51. Three were associated with influenza B viruses, another 3 were associated with influenza A (H3) viruses, and 2 were associated with influenza A viruses for which the subtype was not determined. The deaths all occurred during week 50 (week ending December 15). Total national influenza-associated pediatric deaths for the 2012–13 season is currently 16.*
  - *No flu-related pediatric deaths have been reported in Hawaii during the 2012–13 season.*

VI. 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).

A. Variant Viruses: Since August 2011, 321 human infections with a variant A (H3N2v) virus have been detected throughout the United States. Human infections with the H3N2v virus were first identified in the northeastern United States in the summer of 2011 and have since spread to 13 states including Hawaii. The following states have reported cases: Hawaii (1), Illinois (4), Indiana (140), Iowa (4), Maine (2), Maryland (12), Michigan (6), Minnesota (5), Ohio (107), Pennsylvania (14), Utah (1), West Virginia (5), and Wisconsin (20). Most cases have reported contact with swine before illness onset, but some cases were likely the result of human-to-human transmission. There have been 16 hospitalizations and one death associated with the H3N2v virus. In September 2012, Minnesota reported three human cases of influenza A H1N2 variant (H1N2v) virus infection, and Missouri reported one case of influenza A H1N1 variant (H1N1v) virus. The cases all had exposure to swine before illness and have all recovered.

A total of 2 H3N2v infections have been reported for 2012-13 flu season.

B. H5N1: Avian (or bird) influenza is one zoonotic disease of public health concern and is therefore monitored globally by the World Health Organization (WHO). Most avian influenza viruses do not cause disease in humans, but a few subtypes may pass the species barrier and cause sickness in humans. One well known avian influenza subtype is H5N1 virus, which circulates globally among poultry. 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. **WHO avian influenza case data were last updated on December 17, 2012.**



H5N1: Total Cases (C) and Deaths (D) by Country*

Country	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	0	6	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	8	8	3	3	21	19
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	2	1	1	1	2	1	43	28
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	8	4	39	4	29	13	39	15	11	5	169	60
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	9	7	12	10	9	9	192	160
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2
Laos	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	6	5	5	5	7	2	0	0	4	2	123	61
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	48	24	62	34	30	19	**610**	**360**

* All dates refer to onset of illness.

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: http://www.cdc.gov/flu/about/disease/index.htm National ILI and P&I Data: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm Vaccine Virus Selection: http://www.cdc.gov/flu/about/season/vaccine-selection.htm
Flu.gov	General Influenza Information: flu.gov
HDOH Flu and Pneumonia	General Influenza: http://www.flu.hawaii.gov/ Surveillance: http://www.flu.hawaii.gov/surveillance.html To become part of the sentinel physicians, email: brittany.winston@doh.hawaii.gov
World Health Organization	General Global and Local Influenza: http://www.who.int/topics/influenza/en/ Avian Influenza: http://www.who.int/influenza/human_animal_interface/en/

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	*2011*	*2012*	*2013*	*2014*	*2015*
1	1/8/2011	1/7/2012	1/5/2013	1/4/2014	1/10/2015
2	1/15/2011	1/14/2012	1/12/2013	1/11/2014	1/17/2015
3	1/22/2011	1/21/2012	1/19/2013	1/18/2014	1/24/2015
4	1/29/2011	1/28/2012	1/26/2013	1/25/2014	1/31/2015
5	2/5/2011	2/4/2012	2/2/2013	2/1/2014	2/7/2015
6	2/12/2011	2/11/2012	2/9/2013	2/8/2014	2/14/2015
7	2/19/2011	2/18/2012	2/16/2013	2/15/2014	2/21/2015
8	2/26/2011	2/25/2012	2/23/2013	2/22/2014	2/28/2015
9	3/5/2011	3/3/2012	3/2/2013	3/1/2014	3/7/2015
10	3/12/2011	3/10/2012	3/9/2013	3/8/2014	3/14/2015
11	3/19/2011	3/17/2012	3/16/2013	3/15/2014	3/21/2015
12	3/26/2011	3/24/2012	3/23/2013	3/22/2014	3/28/2015
13	4/2/2011	3/31/2012	3/30/2013	3/29/2014	4/4/2015
14	4/9/2011	4/7/2012	4/6/2013	4/5/2014	4/11/2015
15	4/16/2011	4/14/2012	4/13/2013	4/12/2014	4/18/2015
16	4/23/2011	4/21/2012	4/20/2013	4/19/2014	4/25/2015
17	4/30/2011	4/28/2012	4/27/2013	4/26/2014	5/2/2015
18	5/7/2011	5/5/2012	5/4/2013	5/3/2014	5/9/2015
19	5/14/2011	5/12/2012	5/11/2013	5/10/2014	5/16/2015
20	5/21/2011	5/19/2012	5/18/2013	5/17/2014	5/23/2015
21	5/28/2011	5/26/2012	5/25/2013	5/24/2014	5/30/2015
22	6/4/2011	6/2/2012	6/1/2013	5/31/2014	6/6/2015
23	6/11/2011	6/9/2012	6/8/2013	6/7/2014	6/13/2015
24	6/18/2011	6/16/2012	6/15/2013	6/14/2014	6/20/2015
25	6/25/2011	6/23/2012	6/22/2013	6/21/2014	6/27/2015
26	7/2/2011	6/30/2012	6/29/2013	6/28/2014	7/4/2015
27	7/9/2011	7/7/2012	7/6/2013	7/5/2014	7/11/2015
28	7/16/2011	7/14/2012	7/13/2013	7/12/2014	7/18/2015
29	7/23/2011	7/21/2012	7/20/2013	7/19/2014	7/25/2015
30	7/30/2011	7/28/2012	7/27/2013	7/26/2014	8/1/2015
31	8/6/2011	8/4/2012	8/3/2013	8/2/2014	8/8/2015
32	8/13/2011	8/11/2012	8/10/2013	8/9/2014	8/15/2015
33	8/20/2011	8/18/2012	8/17/2013	8/16/2014	8/22/2015
34	8/27/2011	8/25/2012	8/24/2013	8/23/2014	8/29/2015
35	9/3/2011	9/1/2012	8/31/2013	8/30/2014	9/5/2015
36	9/10/2011	9/8/2012	9/7/2013	9/6/2014	9/12/2015
37	9/17/2011	9/15/2012	9/14/2013	9/13/2014	9/19/2015
38	9/24/2011	9/22/2012	9/21/2013	9/20/2014	9/26/2015
39	10/1/2011	9/29/2012	9/28/2013	9/27/2014	10/3/2015
40	10/8/2011	10/6/2012	10/5/2013	10/4/2014	10/10/2015
41	10/15/2011	10/13/2012	10/12/2013	10/11/2014	10/17/2015
42	10/22/2011	10/20/2012	10/19/2013	10/18/2014	10/24/2015
43	10/29/2011	10/27/2012	10/26/2013	10/25/2014	10/31/2015
44	11/5/2011	11/3/2012	11/2/2013	11/1/2014	11/7/2015
45	11/12/2011	11/10/2012	11/9/2013	11/8/2014	11/14/2015
46	11/19/2011	11/17/2012	11/16/2013	11/15/2014	11/21/2015
47	11/26/2011	11/24/2012	11/23/2013	11/22/2014	11/28/2015
48	12/3/2011	12/1/2012	11/30/2013	11/29/2014	12/5/2015
49	12/10/2011	12/8/2012	12/7/2013	12/6/2014	12/12/2015
50	12/17/2011	12/15/2012	12/14/2013	12/13/2014	12/19/2015
51	12/24/2011	12/22/2012	12/21/2013	12/20/2014	12/26/2015
52	12/31/2011	12/29/2012	12/28/2013	12/27/2014	1/2/2016
53			1/3/2015		