



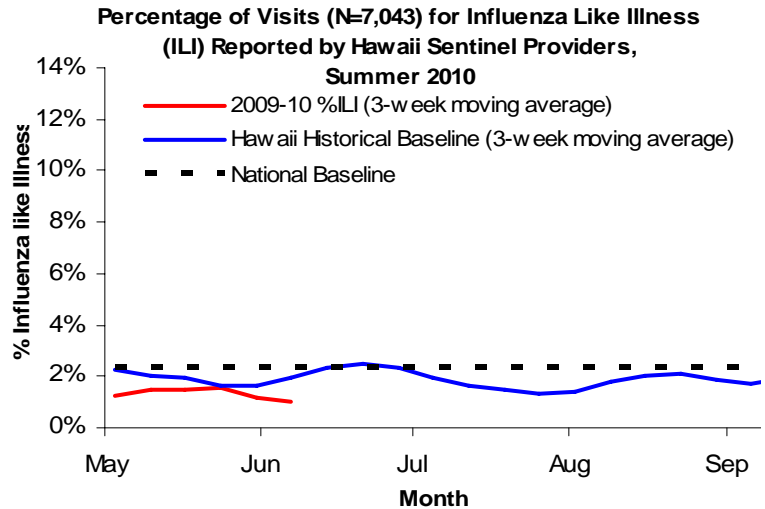
HAWAI'I STATE DEPARTMENT OF HEALTH DISEASE OUTBREAK CONTROL DIVISION

Influenza Surveillance Report

June 20 – July 3, 2010: MMWR¹ Weeks 24-25, 2010

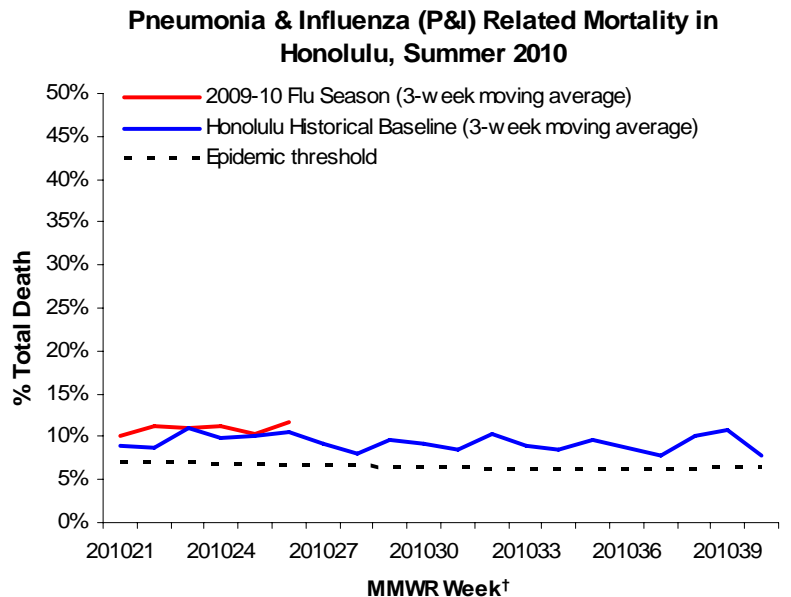
I. Surveillance of Influenza-like Illness (ILI):

During weeks 24 and 25 of the 2009-10 influenza year, 1.45% (95% CI 0.7-2.2%) and 1.18% (95% CI 0.5-1.8%) respectively of outpatient visits to Hawai'i Sentinel Providers were due to influenza-like illness (ILI). Outpatient ILI reported during weeks 24 and 25 were comparable to the historical baseline in Hawai'i ($p < 0.05$)^{2,3}.



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

During weeks 24 and 25 of the 2009-10 influenza year, 7.7% (95% CI 1.2-14.2%) and 9.1% (95% CI 2.7-15.5%) of all deaths in Honolulu, Hawai'i were due to pneumonia or influenza. The P&I for both weeks were comparable to the historical P&I baseline⁴ in Hawai'i.



*Influenza Associated Pediatric Mortality*⁵

There have been no influenza-associated pediatric deaths in Hawaii since week 21, 2010.

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 (2004-05, 2005-06, 2006-07, 2007-08 and 2009-10).

³ Based on comparison of actual outpatient ILI to the historical baseline, which only captured outpatient ILI. No historical baseline for urgent care, emergency and inpatient visits exists, since this category represents a new class of ILINet providers. The chart above represents a 3-week moving average and not the actual ILI by week.

⁴ 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 (2004-05, 2005-06, 2006-07, 2007-08 and 2009-10). P&I values were not available for a few weeks in previous influenza seasons.

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

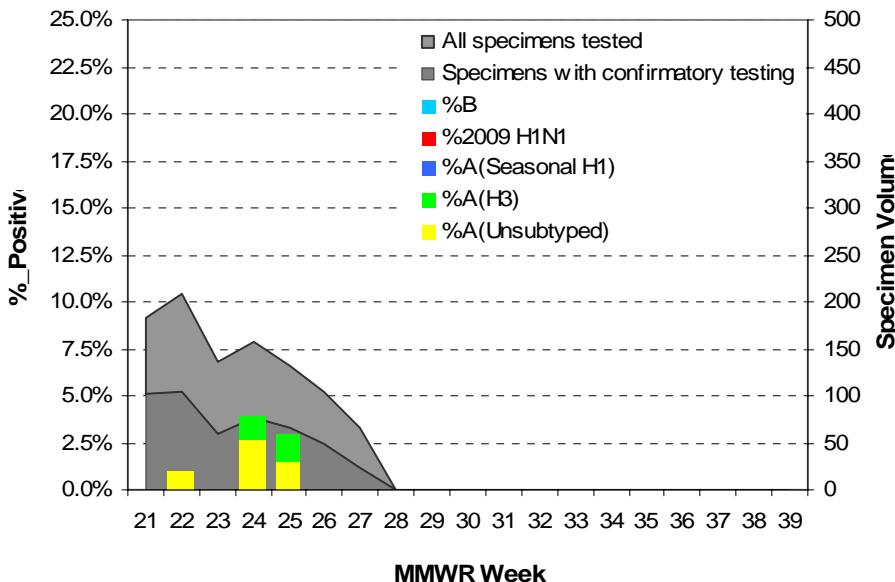
III. Laboratory Surveillance

Since the beginning of summer 2010 (MMWR week 21, 2010), a total of 989 specimens have been tested statewide for influenza viruses. Of these, 507 (51.3%) were screened only by rapid antigen tests, whereas the remaining 482 (48.7%) received some type of confirmatory testing (either RT-PCR or viral culture). Altogether, a total of 7 (0.7%) cases of influenza A, and 2 (0.2%) cases of influenza B were detected using any method. Of the influenza A cases detected, none were 2009 H1N1, and 2 (28.6%) were influenza A(H3); the remaining (N = 5, 71.4%) were influenza A of unknown subtype⁶.

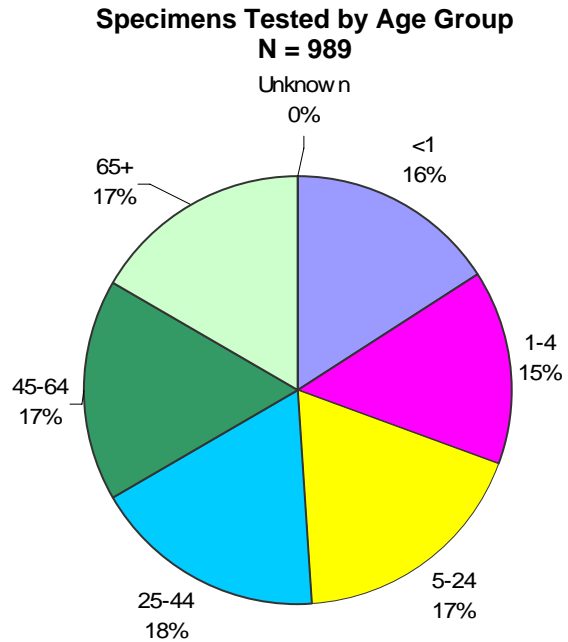
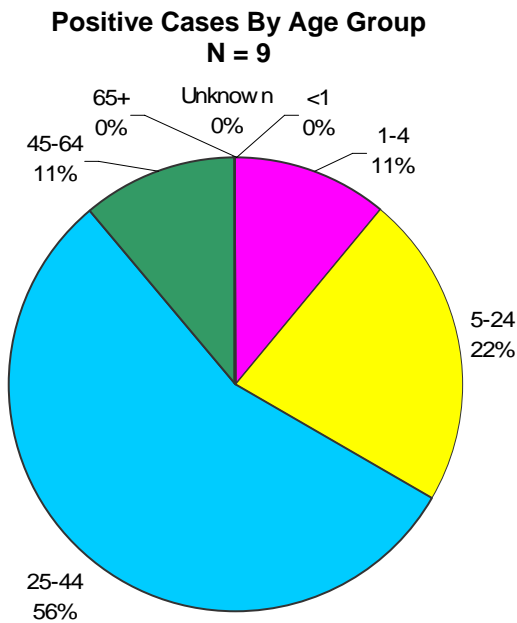
The chart to the right displays the total volume of specimens tested for influenza by MMWR week during the 2009-10 influenza season, as well as the sub-set receiving confirmatory testing. Proportion of specimens positive for influenza viruses by type and sub-type is only presented for specimens tested 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 Hawai'i by age group since summer 2010. Persons 25-44 years were most likely to test positive when influenza was suspected (56% positive influenza cases versus 18% of specimens tested). Persons 65 years and older were least likely to be positive for influenza and likely to have other etiologies for their respiratory illness.

Volume of Specimens Tested (N = 989) & Percentage Positive of those with Confirmatory Testing, 2009-10



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.



IV. Clustered ILI Activity

No clustered influenza like illness activity was reported to HDOH since week 21, 2010.

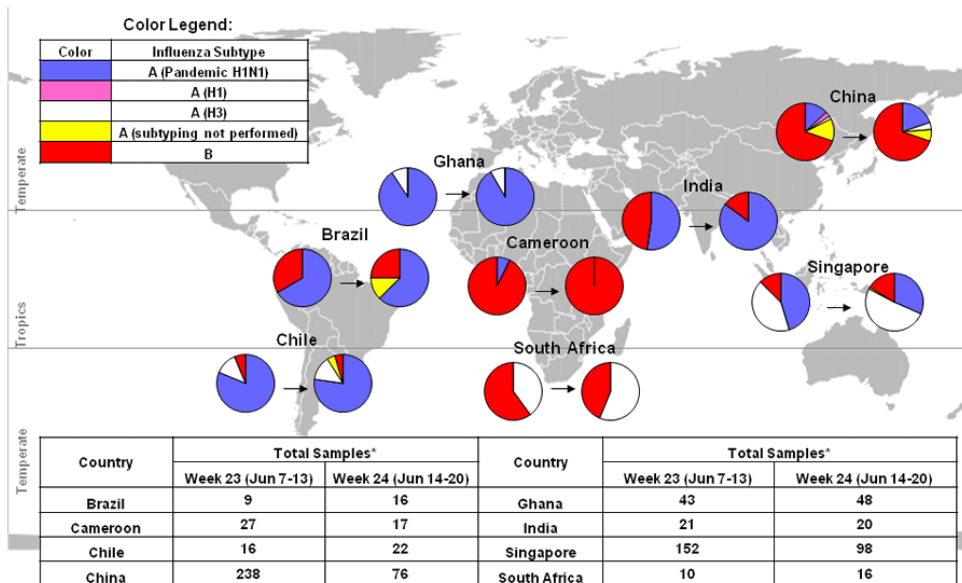
V. Novel Influenza A(H1N1) Virus Activity

As of July 4, 2010, according to the World Health Organization (WHO), more than 214 countries have reported laboratory confirmed cases of novel influenza A(H1N1), including at least 18,311 deaths.

Proportion of Influenza Subtypes in Select Countries

Week 23 to 24

Data Source: FluNet (<http://gamapservr.who.int/GlobalAtlas/home.asp>)



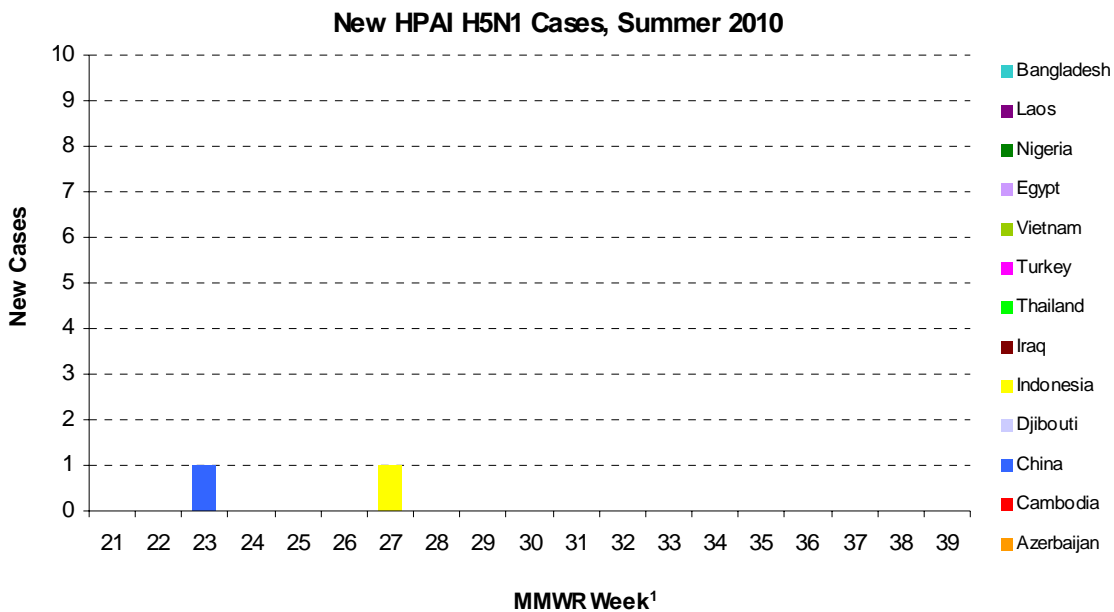
*Total Samples = Sum of samples positive for A(H1), A(H3), A(Pandemic H1N1), A (subtyping not performed), and B.

<http://www.cdc.gov/h1n1flu/updates/international/map.htm>

VIII. Avian Influenza – Last Updated July 5, 2010

Country	2003		2004		2005		2006		2007		2008		2009		2010		Total	
	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	8	5
Bangladesh	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
Cambodia	0	0	0	0	4	4	2	2	1	1	1	0	1	0	1	1	10	8
China	1	1	0	0	8	5	13	8	5	3	4	4	7	4	1	1	39	26
Djibouti	0	0	0	0	0	0	1	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	19	7	109	34
Indonesia	0	0	0	0	20	13	55	45	42	37	24	20	21	19	4	3	166	137
Iraq	0	0	0	0	0	0	3	2	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	2	2
Myanmar	0	0	0	0	0	0	0	0	1	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	1	1
Pakistan	0	0	0	0	0	0	0	0	3	1	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	25	17
Turkey	0	0	0	0	0	0	12	4	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	119	59
Total	4	4	46	32	98	43	115	79	88	59	44	33	73	32	32	14	500	296

Total number of cases (C) includes number of deaths (D). WHO 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.

Week Ending	MMWR	Week Ending	MMWR
10/4/2009	40	4/4/2010	14
10/11/2009	41	4/11/2010	15
10/18/2009	42	4/18/2010	16
10/25/2009	43	4/25/2010	17
11/1/2009	44	5/2/2010	18
11/8/2009	45	5/9/2010	19
11/15/2009	46	5/16/2010	20
11/22/2009	47	5/23/2010	21
11/29/2009	48	5/30/2010	22
12/6/2009	49	6/6/2010	23
12/13/2009	50	6/13/2010	24
12/20/2009	51	6/20/2010	25
12/27/2009	52	6/27/2010	26
1/3/2010	1	7/4/2010	27
1/10/2010	2	7/11/2010	28
1/17/2010	3	7/18/2010	29
1/24/2010	4	7/25/2010	30
1/31/2010	5	8/1/2010	31
2/7/2010	6	8/8/2010	32
2/14/2010	7	8/15/2010	33
2/21/2010	8	8/22/2010	34
2/28/2010	9	8/29/2010	35
3/7/2010	10	9/5/2010	36
3/14/2010	11	9/12/2010	37
3/21/2010	12	9/19/2010	38
3/28/2010	13	9/26/2010	39
4/4/2010	14	10/3/2010	40