

Alaska State Virology Laboratory (ASVL) Weekly Report – Week #9

February 25 – March 3, 2018

(This report was prepared by Jayme Parker, Public Health Microbiologist III at the Alaska State Virology Lab in Fairbanks, Alaska)

The Section of Epidemiology is the primary contact for consultation for the following potential active infections: rabies, norovirus, measles, mumps, rubella, varicella zoster, and novel influenza. Please direct your calls to the Epi-Team at 907-269-8000; or their 24 hour # 1-800-478-0084. **For information regarding mumps infections in Alaska, please visit:**

<http://dhss.alaska.gov/dph/Epi/id/Pages/Mumps.aspx>

1. Mumps virus

Specimens collected from patients with suspected mumps infections (or any vaccine preventable infection) are tested by the APHL/CDC Vaccine Preventable Disease Reference Center in California. If Mumps RNA is detected, genotyping is attempted at the California laboratory. Please see additional information regarding mumps and mumps genotypes at cdc.gov/mumps.

Collection Date Range: 6/28/2017 – 2/13/2018

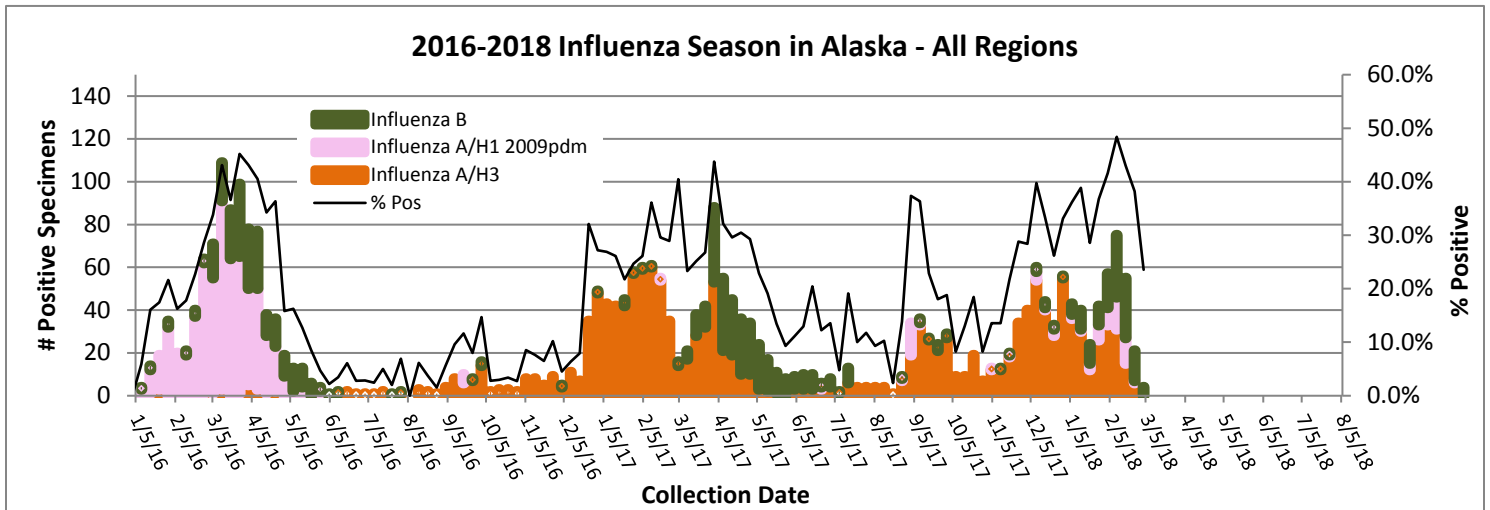
# AK Specimens Tested by APHL/CDC Reference Center	Mumps RNA Detected	Genotype G
577	257 (44.5%)	91

*These mumps numbers are not the official numbers for the outbreak and only represent specimens routed through the Alaska State Public Health Laboratories. They are presented for illustrative purposes only and should not be reported in any external reports or media.

2. Influenza virus

PCR Testing for Week #2018-9 TP: true positive, FP: false positive, TN: true negative, FN: false negative. True = 2 tests concur, False = 2 tests do not concur Collection Date Range: 11/29/2017 – 2/27/2018		Corresponding Influenza Sentinel Providers Results								
		Rapid Influenza Test Results				PCR Test Results				No Data
ASVL PCR Results		TP	TN	FP	FN	TP	TN	FP	FN	
Influenza A/H1 2009 pdm Positive	15	6				9				
Influenza A/H3 Positive	15	4			1	10				
Influenza A (subtype pending)	11	4			2	5				
Influenza B Positive	47	19				25				3
Influenza Negative	104		35	1			50	4		14
Influenza Inconclusive (PCR inhibitive)										
Total # Specimens Tested	192	33	35	1	3	49	50	4	0	17
Summary: Influenza vaccine strain match (specimens collected between 6/1/2017 – present)										
41 AK Specimens Tested by CDC	Results	Most closely related subtype				Match with 2017–2018 flu vaccine?				
27 Influenza A/H3 viruses	27 (100%)	A/HONG KONG/4801/2014-LIKE (H3N2)				Yes				
4 Influenza A/H1N1 viruses	4 (100%)	A/MICHIGAN/45/2015-LIKE (H1N1)pdm09				Yes				
4 Influenza B virus (Yamagata)	4 (100%)	B/PHUKET/3073/2013-LIKE				Yes; quadrivalent vaccines only				
6 Influenza B viruses (Victoria)	6 (100%)	B/BRISBANE/60/2008-LIKE				Yes				
Summary: Influenza antiviral resistance surveillance (specimens collected between 6/1/2017 – present)										
# AK Specimens Tested by CDC	Results	Description (Wild-type = susceptible to neuraminidase inhibitors)								
9 Influenza A/H3 viruses	9 (100%)	Wild-type neuraminidase gene sequence at amino acid positions 119, 292, and 294								
1 Influenza A/H1N1 virus	1 (100%)	Wild-type neuraminidase gene sequence at amino acid positions 223 and 275								

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For recent specimens collected in week #9 (February 25 – March 3, 2018): 4 of 17 respiratory specimens were positive for influenza (23.5% positive). Additional specimens from this collection date range are pending due to transit delays or further subtyping, thus percent positivity will adjust as specimen results become available.

3. Hepatitis C virus (HCV)

For recommendations on types of Hepatitis C testing, test interpretation and post-test patient counseling:

- CDC MMWR: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6104a1.htm>
- 5/27/15 AK Epidemiology Bulletin: http://www.epi.alaska.gov/bulletins/docs/b2015_11.pdf

HCV Antibody screening	Total Tested	Total Positive (%)
Week #2018-9	61	6 (9.8%)
Last 12 month period	5,890	808 (13.7%)
HCV RNA testing		
Week #2018-9	23	12 (52.2%)
Last 12 month period	936	627 (67.7%)

HCV Genotyping	Total Tested	Type 1a	Type 1b	Type 2a/c	Type 2b	Type 3	Type 4	Type 6	Unable to Genotype
Week #2018-9	12	6	1		1	3			1
Last 12 month period*	627	352 (55.6%)	27 (4.3%)	4 (0.6%)	82 (13.0%)	129 (20.4%)	7 (1.1%)	0 (0.0%)	32 (5.1%)

*HCV genotyping data includes 6 coinfections (4 specimens with subtypes 1a & 3, 2 specimens with subtypes 1a & 2b)

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4. Human Immunodeficiency virus (HIV)

HIV Antibody screening (4 th Generation)	Total Tested	Total Confirmed Positive
Week #2018-9	169	2 (1.18%)
Last 12 month period	8,037	16 (0.20%)

5. Norovirus Outbreaks

- No new outbreaks to report.

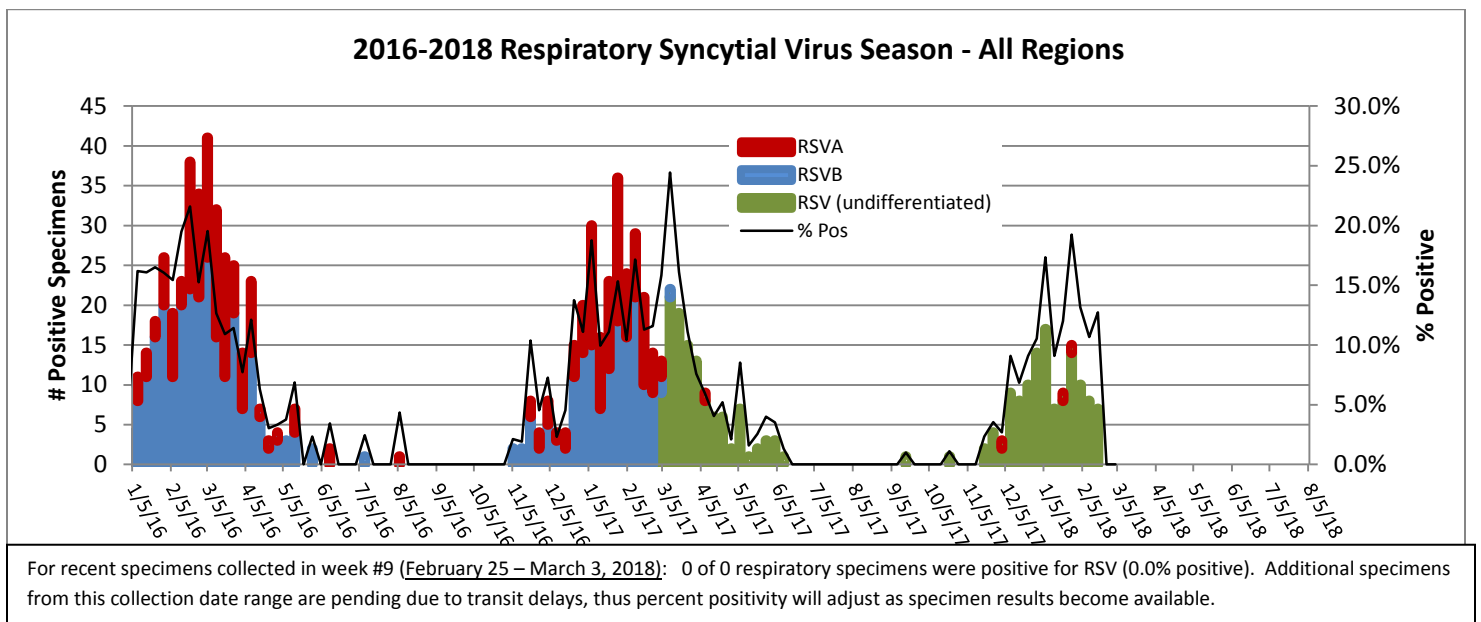
6. Rabies virus - Human Exposures

- A red fox from the southwestern region has tested **positive** for rabies.
- Three dogs from the southwestern region have tested **negative** for rabies.
- An arctic fox from the northern region has tested **negative** for rabies.

7. Respiratory Syncytial Virus (RSV)

*Surveillance of RSV using a PCR assay that does not differentiate groups A from B began 2/27/2017.

PCR testing	Total Tested	Total Positives (% pos)	Total Positive RSV A (% of pos)	Total Positive RSV B (% of pos)	Total Positive (RSV undifferentiated)*
Week #2018-9	64	7 (10.9%)	0 (0.0%)	0 (0.0%)	7 (100.0%)
Season 2017-2018 (current)	1,690	124 (7.3%)	3 (2.4%)	0 (0.0%)	121 (97.6%)
Season 2016-2017	5,550	383 (6.9%)	108 (28.2%)	158 (41.3%)	117 (30.5%)
Season 2015-2016	4,987	388 (7.8%)	145 (37.4%)	243 (62.6%)	0 (0.0%)



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8. Respiratory Pathogen Panel Summary – by Region

Numbers reflect the total positives detected within a particular time period. Current respiratory season is 10/1/2017 – 9/30/2018. NT = Not tested

	Influenza A/H3	Influenza A/H1pdm09	Influenza A (subtype pending)	Influenza B	RSV A	RSV B	RSV (undifferentiated)	Rhino/Enterovirus	Metapneumovirus	Parainfluenza 1	Parainfluenza 2	Parainfluenza 3	Parainfluenza 4	Adenovirus	Coronavirus 229E	Coronavirus NL63	Coronavirus HKU1	Coronavirus OC43	Human Bocavirus	<i>Chlamydia pneumoniae</i>	<i>Mycoplasma pneumoniae</i>	Total Specimens Tested
All Regions																						
Week #2018-9	15	15	11	47			7		1			1							1			192
Season 2017-18 (current)	514	56		124	2	0	113	9	5	1	0	1	1	1	0	3	0	0	3	1	0	2,318
Season 2016-17	946	22		287	109	158	125	197	77	9	32	136	31	140	79	3	0	175	1	1	0	5,864
Season 2015-16	94	622		226	146	254	0	706	183	97	2	70	43	272	25	86	82	115	NT	NT	NT	5,036
Anchorage/MatSu Region																						
Week #2018-9	7	9	3	9			3															62
Season 2017-18 (current)	192	33		34	1	0	35	2	1	1	0	0	0	1	0	2	0	0	1	0	0	782
Season 2016-17	317	1		51	53	24	35	70	52	0	11	37	14	21	32	1	0	64	1	1	0	2,178
Season 2015-16	33	203		87	25	107	0	253	37	30	0	29	16	102	12	30	22	40	NT	NT	NT	1,903
Gulf Coast Region																						
Week #2018-9	2	6	2	17			2															37

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	Influenza A/H3	Influenza A/H1pdm09	Influenza A (subtype pending)	Influenza B	RSV A	RSV B	RSV (undifferentiated)	Rhino/Enterovirus	Metapneumovirus	Parainfluenza 1	Parainfluenza 2	Parainfluenza 3	Parainfluenza 4	Adenovirus	Coronavirus 229E	Coronavirus NL63	Coronavirus HKU1	Coronavirus OC43	Human Bocavirus	<i>Chlamydomphila pneumoniae</i>	<i>Mycoplasma pneumoniae</i>	Total Specimens Tested
Season 2017-18 (current)	29	14		41	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	352
Season 2016-17	109	2		46	12	16	18	9	1	7	5	19	7	2	14	0	0	19	0	0	0	853
Season 2015-16	7	54		10	4	11	0	47	15	9	0	3	2	9	2	9	1	9	NT	NT	NT	480
Interior Region																						
Week #2018-9	3		3	7					1			1							1			38
Season 2017-18 (current)	153	8		27	0	0	23	5	4	0	0	1	1	0	0	1	0	0	2	0	0	556
Season 2016-17	269	1		51	19	65	43	51	19	0	8	44	2	36	16	2	0	42	0	0	0	1,298
Season 2015-16	14	164		72	101	62	0	210	75	34	1	19	8	96	6	28	37	31	NT	NT	NT	1,396
Northern Region																						
Week #2018-9				1																		1
Season 2017-18 (current)	19	0		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	33
Season 2016-17	4	17		4	4	1	4	0	0	0	0	0	0	2	0	0	0	1	0	0	0	32
Season 2015-16	1	35		1	0	11	0	2	3	1	0	0	1	3	1	0	0	1	NT	NT	NT	59

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	Influenza A/H3	Influenza A/H1pdm09	Influenza A (subtype pending)	Influenza B	RSV A	RSV B	RSV (undifferentiated)	Rhino/Enterovirus	Metapneumovirus	Parainfluenza 1	Parainfluenza 2	Parainfluenza 3	Parainfluenza 4	Adenovirus	Coronavirus 229E	Coronavirus NL63	Coronavirus HKU1	Coronavirus OC43	Human Bocavirus	<i>Chlamydomphila pneumoniae</i>	<i>Mycoplasma pneumoniae</i>	Total Specimens Tested
Southeast Region																						
Week #2018-9	3		3				1															32
Season 2017-18 (current)	107	0		2	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	455
Season 2016-17	195	1		129	18	49	12	37	2	2	5	17	7	69	11	0	0	33	0	0	0	1,235
Season 2015-16	37	130		39	10	38	0	117	42	18	1	11	7	28	4	8	17	29	NT	NT	NT	921
Southwest Region																						
Week #2018-9				13			1															22
Season 2017-18 (current)	14	1		18	1	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140
Season 2016-17	52	0		6	3	3	13	15	3	0	3	19	1	6	6	0	0	16	0	0	0	268
Season 2015-16	2	36		17	6	25	0	77	11	5	0	8	9	34	0	11	5	5	NT	NT	NT	277