

# Alaska State Virology Laboratory (ASVL) Weekly Report – Week #18

## April 28 – May 4, 2019

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

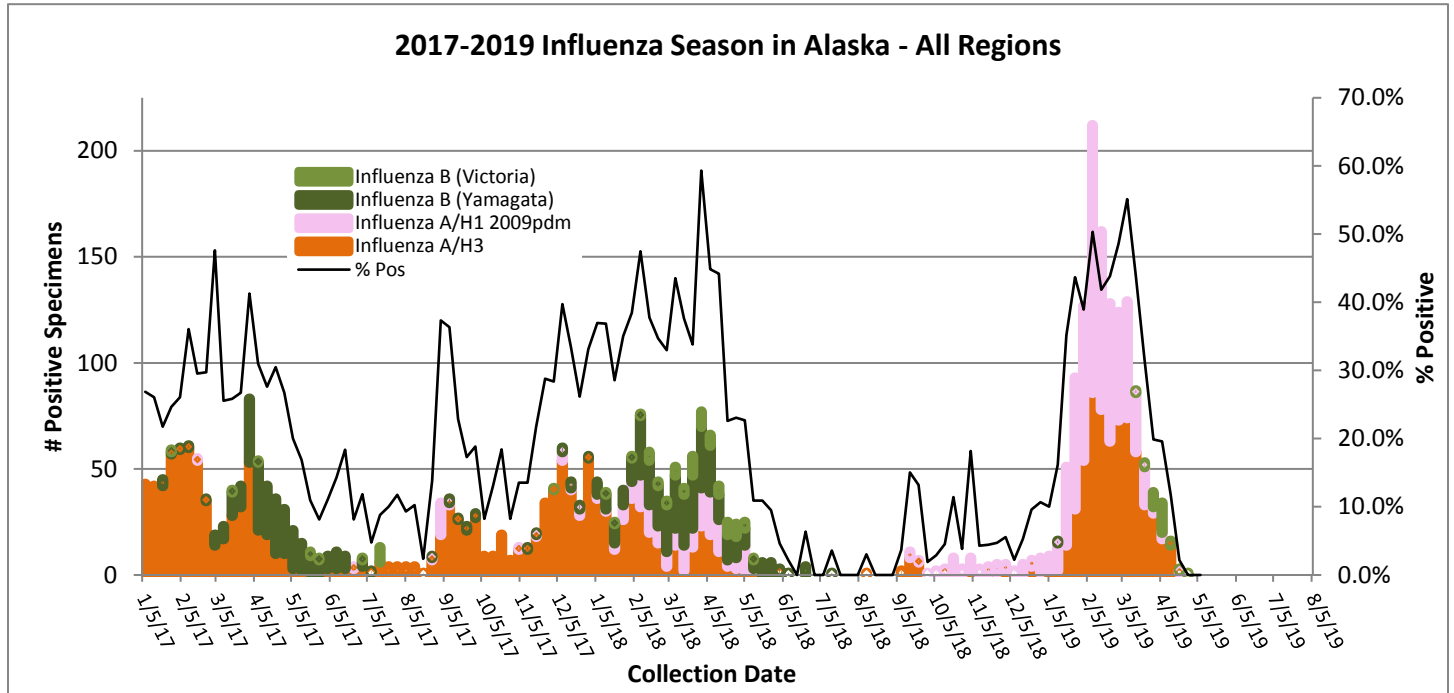
The Section of Epidemiology is the primary contact for consultation for the following potential active infections: rabies, norovirus, measles, mumps, rubella, varicella zoster, and novel influenza. Please direct your calls to the Epi-Team at 907-269-8000; or their 24 hour # 1-800-478-0084.

### 1. Influenza virus

PCR Testing for Week #2019-18 TP: true positive, FP: false positive, TN: true negative, FN: false negative. True = 2 tests concur, False = 2 tests do not concur		Corresponding Influenza Sentinel Providers Results								
Collection Date Range: 3/21/2019 – 4/29/2019		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	1					1				
Influenza A/H3 Positive	16					15				1
Influenza A (subtype pending)	15	1				13			1	
Influenza B Positive (Yamagata lineage)										
Influenza B Positive (Victoria lineage)	5					3				2
Influenza B (genotype pending)	11					3			1	7
Influenza Negative	83						73			10
<b>Total # Specimens Tested</b>	<b>131</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>73</b>	<b>0</b>	<b>2</b>	<b>20</b>
<b>Summary: Influenza vaccine strain match (specimens collected between 6/1/2018 – present)</b>										
# AK Specimens Tested by CDC	Results	Most closely related subtype			Clade	Match 2018–19 flu vaccine?				
<b>24 Influenza A/H3 viruses</b>	6 (25%)	A/SINGAPORE/INFIMH-16-0019/2016-LIKE (H3N2)			3C.2a	Yes				
	5 (20.8%)	A/SINGAPORE/INFIMH-16-0019/2016-LIKE (H3N2)			3C.2a1	Yes				
	13 (54.2%)	A/SINGAPORE/INFIMH-16-0019/2016-LIKE (H3N2)			3C.3a	Lower affinity*				
<b>20 Influenza A/H1N1 viruses</b>	20 (100%)	A/MICHIGAN/45/2015-LIKE (H1N1)pdm09			6B.1	Yes				
<b>2 Influenza B virus (Yamagata)</b>	2 (100%)	B/PHUKET/3073/2013-LIKE			Y3	Yes				
<b>0 Influenza B viruses (Victoria)</b>										
<b>Summary: Influenza antiviral resistance surveillance (specimens collected between 6/1/2018 – present)</b>										
# AK Specimens Tested by CDC	Results	Description								
<b>15 Influenza A/H3 virus</b>	15 (100%)	Susceptible; wild-type neuraminidase gene sequence at amino acid positions 119, 292, and 294								
<b>10 Influenza A/H1N1 virus</b>	10 (100%)	Susceptible; wild-type neuraminidase gene sequence at amino acid positions 223 and 275								
<b>0 Influenza B (Victoria)</b>										
<b>0 Influenza B (Yamagata)</b>										

\*Lower affinity: Viruses are characterized both by antigenic and genetic features. Antigenic matching refers to immunogenicity and similarity to the antibodies needed for virus neutralization which assigns the most closely related subtype. Genetic matching refers to similarities evident through whole genome sequencing and provides phylogenetic clade information. Although most influenza viruses circulating in Alaska antigenically match the current vaccine strain candidates, influenza A/H3 viruses from the 3C.3a clade have been shown to react poorly with antibodies produced by the vaccine in laboratory experiments. Nationally, the majority (67%) of influenza A/H3 viruses belong to this 3C.3a clade. For more information, visit the weekly U.S. influenza surveillance report at <https://www.cdc.gov/flu/weekly/index.htm>.

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For recent specimens collected in week #18 (April 28 – May 4, 2019): 0 of 10 respiratory specimens were positive for influenza (0.0% 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.

**2. 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](http://www.epi.alaska.gov/bulletins/docs/b2015_11.pdf)

HCV Antibody screening	Total Tested	Total Positive (%)
Week #2019-18	126	24 (19.0%)
Last 12 month period	5,581	802 (14.4%)
HCV RNA testing		
Week #2019-18	37	25 (67.6%)
Last 12 month period	924	617 (66.1%)

HCV Genotyping	Total Tested	Type 1a	Type 1b	Type 2a/c	Type 2b	Type 3	Type 4	Type 6	Unable to Genotype
Week #2019-18	25	15	1		3	6			
Last 12 month period*	617	389 (63.0%)	23 (3.7%)	4 (0.6%)	68 (11.0%)	118 (19.1%)	2 (0.3%)	0 (0.0%)	13 (2.1%)

\*HCV genotyping data includes 1 coinfection (1 specimen with subtypes 1a & 3)

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### 3. Human Immunodeficiency virus (HIV)

HIV Antibody screening (4 <sup>th</sup> Generation)	Total Tested	Total Confirmed Positive
Week #2019-18	108	2 (1.9%)
Last 12 month period	7,983	15 (0.19%)

### 4. Norovirus Outbreaks

- A specimen from a suspected outbreak in the Anchorage/Mat-Su region has tested **negative** for norovirus.
- A specimen from a suspected outbreak in the southeast region has tested **negative** for norovirus.

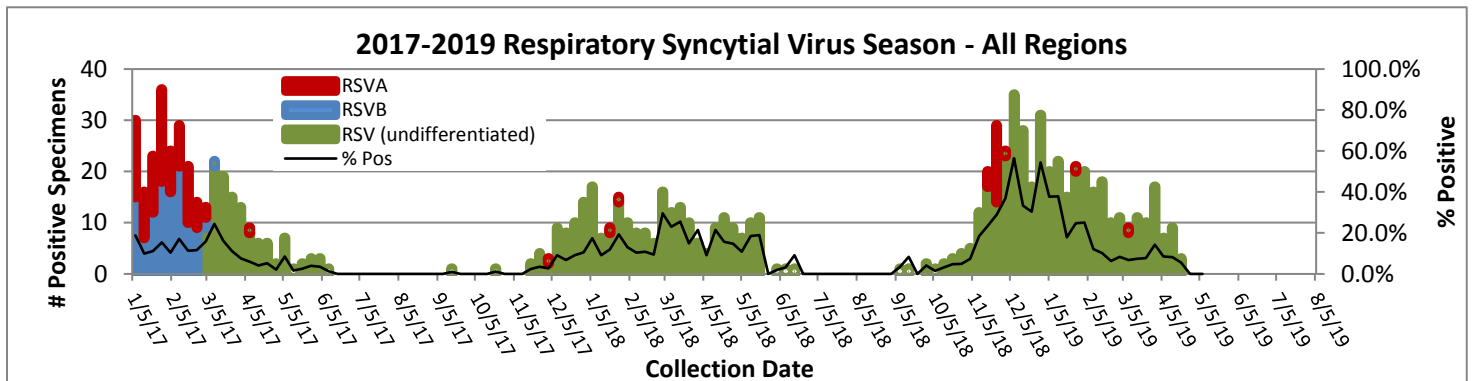
### 5. Rabies virus - Human Exposures

- No cases to report.

### 6. Respiratory Syncytial Virus (RSV)

\*Surveillance of RSV using a PCR assay that does not differentiate groups A from B began 2/27/2017. Seasons are calculated from October 1 – September 30.

PCR testing	Total Tested	Total Positives (% pos)	Total Positive RSV A (% of pos)	Total Positive RSV B (% of pos)	Total Positive (RSV undifferentiated)* (% of pos)
Week #2019-18	366	40 (10.9%)	0 (0.0%)	0 (0.0%)	40 (100.0%)
Season 2018-2019 (current)	2,604	430 (16.5%)	21 (4.9%)	0 (0.0%)	409 (95.1%)
Season 2017-2018	2,952	256 (8.7%)	3 (1.2%)	0 (0.0%)	253 (98.8%)
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%)



For recent specimens collected in week #18 (April 28 – May 4, 2019): 0 of 0 respiratory specimens was positive for RSV (0.0% positive). Additional specimens from this collection date range are pending due to transit delays, thus percent positivity will adjust as specimen results become available.

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**7. Respiratory Pathogen Panel Summary – by Region**

Numbers reflect the total positives detected within a particular time period. Current respiratory season is 10/1/2018 – 9/30/2019. NT = Not tested

	Influenza A/H3	Influenza A/H1pdm09	Influenza A (subtype pending)	Influenza B (Yamagata)	Influenza B (Victoria)	Influenza B (genotype pending)	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	
<b>All Regions</b>																									
<b>Week #2019-18</b>	16	1	15		15	11			40	1															<b>131</b>
<b>Season 2018-19 (current)</b>	641	677		1	28		21	0	409	11	0	0	1	0	3	0	2	0	0	2	0	0	2		<b>4,338</b>
<b>Season 2017-18</b>	647	179		322	60		2	0	245	23	5	1	0	1	1	1	2	3	0	0	3	1	0		<b>4,442</b>
<b>Season 2016-17</b>	946	22		262	15		109	158	125	197	77	9	32	136	31	140	79	3	0	175	1	1	0		<b>5,864</b>
<b>Season 2015-16</b>	94	622		226	0		146	254	0	706	183	97	2	70	43	272	25	86	82	115	NT	NT	NT		<b>5,036</b>
<b>Anchorage/MatSu Region</b>																									
<b>Week #2019-18</b>	6		4			1			12	1															<b>39</b>
<b>Season 2018-19 (current)</b>	247	243		1	2		1	0	74	8	0	0	1	0	1	2	0	0	0	2	0	0	2		<b>1,476</b>
<b>Season 2017-18</b>	246	82		82	34		1	0	62	9	1	1	0	0	0	2	0	2	0	0	1	0	0		<b>1,702</b>

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<b>Season 2016-17</b>	317	1		49	2		53	24	35	70	52	0	11	37	14	21	32	1	0	64	1	1	0	<b>2,178</b>	
<b>Season 2015-16</b>	33	203		87	0		25	107	0	253	37	30	0	29	16	102	12	30	22	40	NT	NT	NT	<b>1,903</b>	
<b>Gulf Coast Region</b>																									
<b>Week #2019-18</b>	2		5		1	1			3															<b>18</b>	
<b>Season 2018-19 (current)</b>	45	103		0	5		0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>534</b>
<b>Season 2017-18</b>	49	28		79	4		0	0	48	3	0	0	0	0	0	0	2	0	0	0	0	0	0	<b>810</b>	
<b>Season 2016-17</b>	109	2		43	1		12	16	18	9	1	7	5	19	7	2	14	0	0	19	0	0	0	<b>853</b>	
<b>Season 2015-16</b>	7	54		10	0		4	11	0	47	15	9	0	3	2	9	2	9	1	9	NT	NT	NT	<b>480</b>	
<b>Interior Region</b>																									
<b>Week #2019-18</b>	1	1			4	9																		<b>33</b>	
<b>Season 2018-19 (current)</b>	228	119		0	21		19	0	141	2	0	0	0	0	2	1	2	0	0	0	0	0	0	<b>1,078</b>	
<b>Season 2017-18</b>	189	27		112	16		0	0	58	9	4	0	0	1	1	0	0	1	0	0	2	0	0	<b>933</b>	
<b>Season 2016-17</b>	269	1		44	4		19	65	43	51	19	0	8	44	2	36	16	2	0	42	0	0	0	<b>1,298</b>	

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<b>Season 2015-16</b>	14	164		72	0		101	62	0	210	75	34	1	19	8	96	6	28	37	31	NT	NT	NT	<b>1,396</b>	
<b>Northern Region</b>																									
<b>Week #2019-18</b>									1															<b>0</b>	
<b>Season 2018-19 (current)</b>	48	20		0	0		0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>162</b>
<b>Season 2017-18</b>	19	0		3	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	<b>35</b>	
<b>Season 2016-17</b>	4	17		4	0		4	1	4	0	0	0	0	0	0	2	0	0	0	1	0	0	0	<b>32</b>	
<b>Season 2015-16</b>	1	35		1	0		0	11	0	2	3	1	0	0	1	3	1	0	0	1	NT	NT	NT	<b>59</b>	
<b>Southeast Region</b>																									
<b>Week #2019-18</b>	3		4						8															<b>24</b>	
<b>Season 2018-19 (current)</b>	53	131		0	0		0	0	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>740</b>	
<b>Season 2017-18</b>	120	11		15	1		0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>648</b>	
<b>Season 2016-17</b>	195	1		114	8		18	49	12	37	2	2	5	17	7	69	11	0	0	33	0	0	0	<b>1,235</b>	
<b>Season 2015-16</b>	37	130		39	0		10	38	0	117	42	18	1	11	7	28	4	8	17	29	NT	NT	NT	<b>921</b>	

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<b>Southwest Region</b>																								
<b>Week #2019-18</b>	4		2						16															<b>17</b>
<b>Season 2018-19 (current)</b>	20	61		0	0		1	0	72	1	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>348</b>
<b>Season 2017-18</b>	24	31		31	4		1	0	39	1	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>314</b>
<b>Season 2016-17</b>	52	0		8	0		3	3	13	15	3	0	3	19	1	6	6	0	0	16	0	0	0	<b>268</b>
<b>Season 2015-16</b>	2	36		17	0		6	25	0	77	11	5	0	8	9	34	0	11	5	5	NT	NT	NT	<b>277</b>