

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

April 29 – May 5, 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 – 4/25/2018

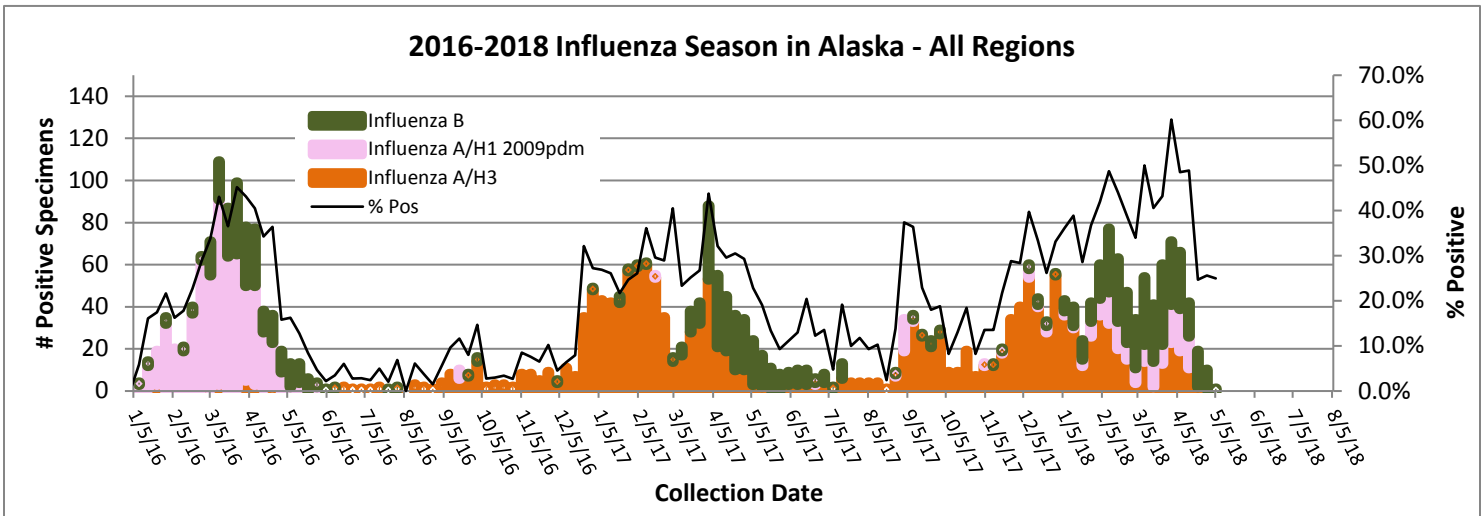
| # AK Specimens Tested by APHL/CDC Reference Center | Mumps RNA Detected | Genotype G |
|--|--------------------|------------|
| 746 | 271 (36.3%) | 111 |

*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 #2018-18 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: 3/31/2018 – 5/1/2018 | | 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 | 10 | 2 | | | | 8 | | | | |
| Influenza A/H3 Positive | 6 | 1 | | | | 5 | | | | |
| Influenza A (subtype pending) | 6 | | | | | 6 | | | | |
| Influenza B Positive | 28 | 4 | | | | 23 | | | | 1 |
| Influenza Negative | 92 | | 8 | | | | 80 | | | 4 |
| Influenza Inconclusive (PCR inhibitive) | | | | | | | | | | |
| Total # Specimens Tested | 142 | 7 | 8 | 0 | 0 | 42 | 80 | 0 | 0 | 5 |
| 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 oseltamivir, zanamivir, and peramivir) | | | | | | | | |
| 29 Influenza A/H3 viruses | 29 (100%) | Wild-type neuraminidase gene sequence at amino acid positions 119, 292, and 294 | | | | | | | | |
| 16 Influenza A/H1N1 virus | 16 (100%) | Wild-type neuraminidase gene sequence at amino acid positions 223 and 275 | | | | | | | | |
| 2 Influenza B (Victoria) | 2 (100%) | Susceptible to oseltamivir, zanamivir, and peramivir | | | | | | | | |
| 6 Influenza B (Yamagata) | 6 (100%) | Susceptible to oseltamivir, zanamivir, and peramivir | | | | | | | | |

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For recent specimens collected in week #18 (April 29 – May 5, 2018): 1 of 4 respiratory specimens were positive for influenza (25.0% 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.

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 #2018-18 | 72 | 20 (27.8%) |
| Last 12 month period | 5,882 | 799 (13.6%) |
| HCV RNA testing | | |
| Week #2018-18 | 26 | 12 (46.2%) |
| Last 12 month period | 923 | 632 (68.5%) |

| HCV Genotyping | Total Tested | Type 1a | Type 1b | Type 2a/c | Type 2b | Type 3 | Type 4 | Type 6 | Unable to Genotype |
|-----------------------|--------------|-------------|-----------|-----------|------------|-------------|----------|----------|--------------------|
| Week #2018-18 | 12 | 6 | 1 | | 1 | 2 | 1 | | 1 |
| Last 12 month period* | 632 | 352 (55.7%) | 26 (4.1%) | 4 (0.6%) | 85 (13.4%) | 125 (19.8%) | 7 (1.1%) | 0 (0.0%) | 33 (5.2%) |

*HCV genotyping data includes 4 coinfections (34 specimens with subtypes 1a & 3, 1 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 #2018-18 | 181 | 0 (0.0%) |
| Last 12 month period | 8,063 | 17 (0.21%) |

5. Norovirus Outbreaks

- No new outbreaks to report.

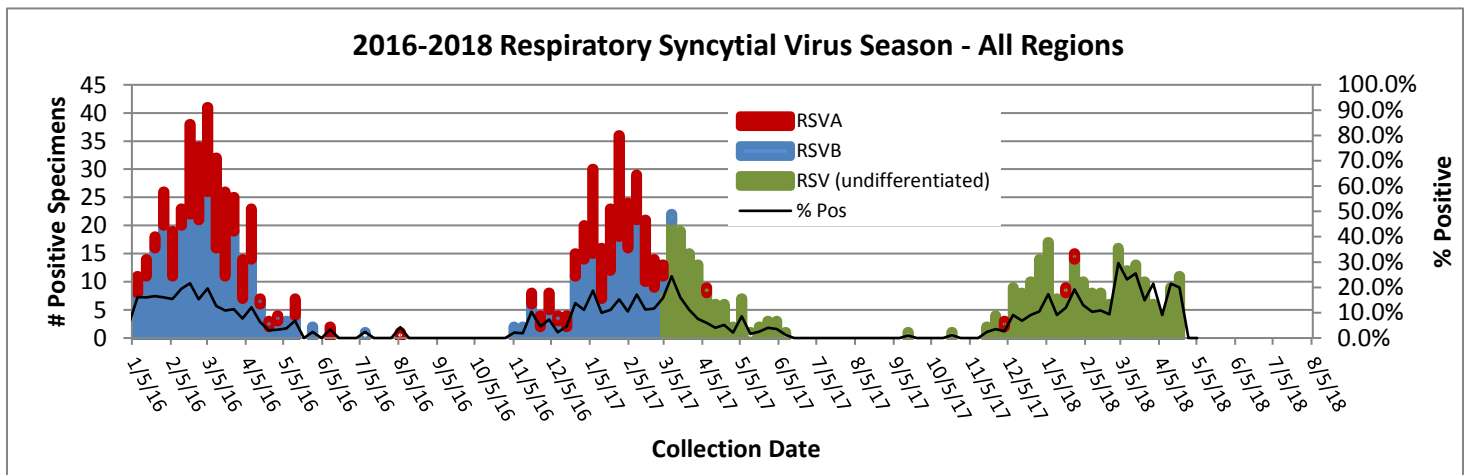
6. Rabies virus - Human Exposures

- No new cases to report.

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 #2018-18 | 77 | 11 (14.3%) | 0 (0.0%) | 0 (0.0%) | 11 (100.0%) |
| Season 2017-2018 (current) | 2,156 | 212 (9.8%) | 3 (1.4%) | 0 (0.0%) | 209 (98.6%) |
| 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%) |



For recent specimens collected in week #18 (April 29 – May 5, 2018): 0 of 0 respiratory specimens were positive for RSV (0.0% positive). Additional specimens from his collection date range are pending due to transit delays, thus percent positivity will adjust as specimen results become available.

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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 #2018-18 | 6 | 10 | 6 | 28 | | | 11 | | | | | | | | | | | | | | | 142 |
| Season 2017-18 (current) | 621 | 153 | | 353 | 2 | 0 | 201 | 12 | 5 | 1 | 0 | 1 | 1 | 1 | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 3,299 |
| 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 #2018-18 | 3 | 7 | 2 | 9 | | | 1 | | | | | | | | | | | | | | | 64 |
| Season 2017-18 (current) | 239 | 74 | | 96 | 1 | 0 | 52 | 4 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1,128 |
| 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 #2018-18 | | 1 | 1 | 3 | | | | | | | | | | | | | | | | | | 22 |

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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) | 42 | 28 | | 83 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 558 |
| Season 2016-17 | 109 | 2 | | 46 | 12 | 16 | 18 | 9 | 1 | 7 | 5 | 19 | 7 | 2 | 14 | 0 | 0 | 19 | 0 | 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 | NT | 480 |
| Interior Region | | | | | | | | | | | | | | | | | | | | | | | |
| Week #2018-18 | 1 | | | 10 | | | | | | | | | | | | | | | | | | | 18 |
| Season 2017-18 (current) | 188 | 27 | | 123 | 0 | 0 | 47 | 6 | 4 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 782 |
| Season 2016-17 | 269 | 1 | | 51 | 19 | 65 | 43 | 51 | 19 | 0 | 8 | 44 | 2 | 36 | 16 | 2 | 0 | 42 | 0 | 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 | NT | 1,396 |
| Northern Region | | | | | | | | | | | | | | | | | | | | | | | |
| Week #2018-18 | | | | | | | | | | | | | | | | | | | | | | | 0 |
| Season 2017-18 (current) | 19 | 0 | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 35 |
| Season 2016-17 | 4 | 17 | | 4 | 4 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 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 | 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 #2018-18 | | | | 3 | | | | | | | | | | | | | | | | | | 9 |
| Season 2017-18 (current) | 111 | 7 | | 16 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 556 |
| 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 #2018-18 | 2 | 2 | 3 | 3 | | | 10 | | | | | | | | | | | | | | | 29 |
| Season 2017-18 (current) | 22 | 17 | | 32 | 1 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 240 |
| 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 |