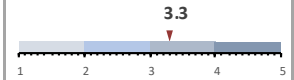


## SUMMARY: RELEVANT SIGNALS (includes all signals rated ≥3.0)

### Highly Pathogenic Avian Influenza

Over the last week, **Canada** has reported outbreaks of HPAI H5N1 in commercial poultry in: **Quebec (1)**; and in non-commercial poultry in: **Quebec (1)**

[Read More](#)



### Influenza A H5

A sample from the human influenza A H5 case in **Chile** contained two genetic mutations (both in the PB2 gene) that are signs of a adaptation to mammals; PB2 mutations have been found in other mammals infected with this virus, and most likely emerged in the Chilean patient over the course of his infection

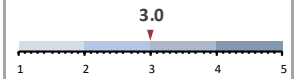
[Read More](#)



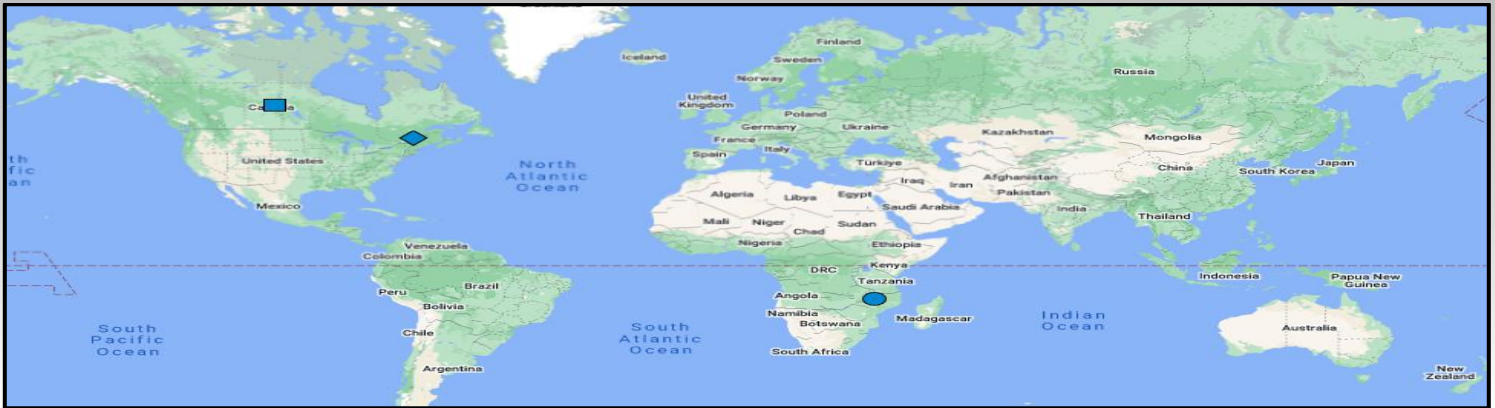
### Salmonella

PHAC is investigating a *Salmonella* outbreak linked to snakes and feeder rodents; as of April 13, 2023, there are 45 confirmed cases of *Salmonella* illness reported in the following provinces: **British Columbia (1), Alberta (5), Saskatchewan (1), Manitoba (3), Ontario (22), Quebec (11), New Brunswick (1) and Newfoundland and Labrador (1)**

[Read More](#)



## NEW EVENTS: (events rated > 2)



### Salmonella outbreak across Canada

**Pathogen:** bacteria; **Transmission:** direct contact; **Species affected in event:** human

PHAC is investigating a *Salmonella* outbreak linked to snakes and feeder rodents. As of April 13, 2023, there are 45 confirmed cases of *Salmonella* illness reported in the following provinces: British Columbia (1), Alberta (5), Saskatchewan (1), Manitoba (3), Ontario (22), Quebec (11), New Brunswick (1) and Newfoundland and Labrador (1). Individuals became sick between February 2022 and March 2023. Nine individuals have been hospitalized. One person has died. Individuals who became ill are between 0 and 96 years of age. Nine of 45 (20%) of the cases are under 5 years of age. Approximately half of the cases (51%) are male.

[Read More](#)

Avg. Rating	3.0
No. of Signal	1
No. of Ratings	2

### Suspected case of Marburg virus in Malawi

**Pathogen:** unknown; **Transmission:** unknown; **Species affected in event:** human

Health authorities say there is another suspected case of Marburg virus at Songwe border in Karonga, Malawi. Samples from the individual have been sent to South Africa to determine the cause of disease. Last week, Mzuzu Central Hospital isolated five people who presented symptoms similar to those of Marburg but were later cleared; two of which were being treated for typhoid while the other three are being treated for adult measles.

[Read More](#)

Avg. Rating	2.7
No. of Signal	1
No. of Ratings	3

### Streptococcus A in Quebec

**Pathogen:** bacteria; **Transmission:** direct contact; **Species affected in event:** human

From August 28, 2022 to February 11, 2023, 347 cases of invasive infections were reported in Quebec against 223 cases on average for the same period between 2015 and 2019. This is a 55% increase in infections compared to previous years. This increase is particularly marked among children aged 6 months to 9 years and is observed across the province. The current investigation does not indicate any epidemiological link between these individuals.

[Read More](#)

Avg. Rating	2.3
No. of Signal	1
No. of Ratings	3

## CONTINUED EVENTS: (events rated ≥ 2.4)

<b>Highly Pathogenic Avian Influenza in North America</b>	<b>No. of Signals: 06</b>	<b>No. of weeks in report: 65</b>	<b>Avg. Rating: 2.0 – 3.3</b>
<ul style="list-style-type: none"> <li>Over the last week, <a href="#">Canada</a> has reported outbreaks of HPAI H5N1 in commercial poultry in: Quebec (1); and in non-commercial poultry in: Quebec (1)</li> <li>In Ontario, a pair of wild geese from Elgin Pond, <a href="#">Uxbridge</a>, have tested positive for HPAI H5N1</li> <li>Over the last week, the <a href="#">USDA</a> has reported outbreaks of HPAI H5N1 in WOAHP poultry in: New York, and in WOAHP non-poultry in: Kansas, Colorado, California, Nebraska, and Montana</li> <li>As of April 17, 2023, a total of 20 condors have died in the <a href="#">Arizona-Utah</a> flock; HPAI has been confirmed for 10 of those condors</li> </ul>			
<b>Influenza A (H5) in Chile</b>	<b>No. of Signals: 01</b>	<b>No. of weeks in report: 03</b>	<b>Avg. Rating: 3.0</b>
<ul style="list-style-type: none"> <li>A sample from the human influenza A H5 case in <a href="#">Chile</a> contained two genetic mutations (both in the PB2 gene) that are signs of adaptation to mammals; PB2 mutations have been found in other mammals infected with this virus, and most likely emerged in the Chilean patient over the course of his infection</li> </ul>			
<b>African Swine Fever in the Caribbean</b>	<b>No. of Signals: 01</b>	<b>No. of weeks in report: 19</b>	<b>Avg. Rating: 2.5</b>
<ul style="list-style-type: none"> <li>The <a href="#">Dominican Republic</a> has shifted the focus of its ASF surveillance strategy to one of disease management and control rather than quick eradication</li> </ul>			
<b>Marburg virus in Equatorial Guinea</b>	<b>No. of Signals: 03</b>	<b>No. of weeks in report: 04</b>	<b>Avg. Rating: 2.0 – 2.5</b>
<ul style="list-style-type: none"> <li>As of April 17, 2023, a total of 15 laboratory-confirmed and 23 probable cases of Marburg virus have been reported in <a href="#">Equatorial Guinea</a>; among the laboratory-confirmed there are 11 deaths and all probable cases are dead</li> <li>The most affected district is Bata in Litoral province, with nine laboratory-confirmed Marburg virus cases reported</li> </ul>			
<b>Influenza A (H3N8) in China</b>	<b>No. of Signals: 05</b>	<b>No. of weeks in report: 44</b>	<b>Avg. Rating: 2.0 – 2.3</b>
<ul style="list-style-type: none"> <li>WHO has provided additional details on the recent H3N8 case in Zhongshan City, <a href="#">Guangdong</a> province: <ul style="list-style-type: none"> <li>The 56-year-old female experienced onset of illness on February 22, 2023, was hospitalized for severe pneumonia on March 3, 2023, and subsequently died March 16, 2023</li> <li>The case had multiple underlying conditions and an exposure to live poultry prior to disease onset; environmental samples collected from the patient's residence and the wet market where the patient was exposed before the onset of illness were positive for H3</li> </ul> </li> </ul>			
<b>Highly Pathogenic Avian Influenza in Europe</b>	<b>No. of Signals: 09</b>	<b>No. of weeks in report: 121</b>	<b>Avg. Rating: 2.0 – 2.3</b>
<ul style="list-style-type: none"> <li><a href="#">Belgium</a>, <a href="#">Hungary</a>, <a href="#">Germany</a> have reported HPAI H5N1 in domestic poultry</li> <li><a href="#">Czech Republic</a>, <a href="#">Hungary</a>, <a href="#">Belgium</a>, <a href="#">Sweden</a>, and <a href="#">Lithuania</a> have reported HPAI H5N1 in wild birds</li> <li>A summary of the overall HPAI situation in Europe is available <a href="#">here</a></li> </ul>			
<b>Highly Pathogenic Avian Influenza in Asia</b>	<b>No. of Signals: 05</b>	<b>No. of weeks in report: 98</b>	<b>Avg. Rating: 2.0 – 2.3</b>
<ul style="list-style-type: none"> <li><a href="#">Japan</a>, <a href="#">Taiwan</a>, <a href="#">Indonesia</a>, <a href="#">South Korea</a>, and <a href="#">Vietnam</a> have reported outbreaks of HPAI H5N1 in domestic poultry</li> </ul>			

## SCIENTIFIC FINDINGS & REPORTS:

### Coronavirus

- Human-to-Animal Transmission of SARS-CoV-2, South Korea, 2021 [Read More](#)

### Influenza

- Avian Influenza Virus Tropism in Humans [Read More](#)
- Environmental Samples Test Negative for Avian Influenza Virus H5N1 Four Months after Mass Mortality at A Seabird Colony [Read More](#)
- H7N9 influenza A virus transmission in a multispecies barnyard model [Read More](#)
- Avian influenza AH5N1: are we really sure it is a spillover? [Read More](#)
- Protective efficacy of a bivalent H5 influenza vaccine candidate against both clades 2.3.2.1 and 2.3.4.4 high pathogenic avian influenza viruses in SPF chickens [Read More](#)

### Vector and Vector Borne Diseases

- Phylogeographic reconstruction of the emergence and spread of Powassan virus in the northeastern United States [Read More](#)

### Other

- Climate warming and increasing *Vibrio vulnificus* infections in North America [Read More](#)
- Pre-print: National Surveillance for Novel Diseases: A Systematic Analysis of 195 Countries [Read More](#)

### Disclaimer

This intelligence report is intended to provide information to risk managers about emerging and zoonotic disease events that could pose a threat to Canada. It is based on information signals acquired and selected from twenty-one distinct disease surveillance sources via the Knowledge Integration using Web-based Intelligence (KIWI) tool hosted on the Canadian Network for Public Health Intelligence (CNPHI) informatics platform. The report is based on the activities of the CEZD Community of Practice and subject to change based on evolving user needs.