

**Second Quarter Summary Report: April – June 2019**

This article provides a summary of international infectious disease outbreaks reported during Q2. The ICC interim (real-time) reports can be found at [www.aht.org.uk/disease-surveillance/icc-reports](http://www.aht.org.uk/disease-surveillance/icc-reports)

The data presented in this report *must be interpreted with caution*, as there is likely to be some bias in the way that samples are submitted for laboratory testing and subsequently reported. Consequently these data do not necessarily reflect true infectious disease frequency within the international equine population. A country with no reported outbreaks of a disease does not necessarily equate to the disease not being present in that country. Each table below summarises the number of disease outbreaks reported by a country. Each reported outbreak may involve more than one animal.

**Reproductive Diseases**

Country	EHV-1 Abortion	EHV-3 (Coital Exanthema)	EHV-4 Abortion	Leptospirosis Abortion	CEM	Streptococcus zooepidemicus Abortion
Australia	1	-	-	-	-	-
Belgium	11	-	-	-	-	1
Canada	2	-	-	-	-	-
France	3	1	1	1	-	-
Germany	2	-	-	-	1	-
Japan	3	-	-	-	-	-
USA	1	-	-	-	-	-

**Equine Herpes Virus-1 (EHV-1) Abortion**

 A case was confirmed on a premises in Hunter Valley, New South Wales. During the 2018 breeding season, a number of EHV-1 abortion cases were reported to Hunter Local Land Services (LLS).

 Ten reports were of single cases on ten separate premises, seven had an unknown vaccination status, one case was vaccinated and one was confirmed as unvaccinated. One outbreak involved several unvaccinated horses. For all outbreaks, positive diagnoses were confirmed by PCR on fetal tissues. Two cases had a co-infection with leptospirosis and one had a coinfection with leptospirosis and *S zooepidemicus*.

 One outbreak involved two unvaccinated mares aborting amongst a group of 22 mares. One outbreak involved six mares aborting in a large group of late-term pregnant mares, followed by severe neurological diseases in five of the mares, resulting in euthanasia.

 Two reports involved single cases of abortion and one involved two vaccinated mares aborting, with a further three in contacts with clinical signs. For all, the positive diagnoses were confirmed by PCR on fetal tissue.

 Positive diagnoses were confirmed by PCR on fetal and placental tissues.

 Three separate outbreaks were reported and all were vaccinated Thoroughbreds.

 A single case of abortion in an unvaccinated mare, exposed to horses that had been to a recent equine event.

**Coital Exanthema (EHV-3)**

 A single case was confirmed in a non-Thoroughbred that had signs of pyrexia and clinical signs suggestive of the disease. The positive diagnosis was confirmed by PCR on a swab

**Equine Herpes Virus-4 (EHV-4) Abortion**

 The affected case was unvaccinated and the positive diagnosis was confirmed by PCR on fetal tissue.

**Leptospirosis Abortion**

 Positive diagnosis was confirmed by PCR on placenta.

### Contagious Equine Metritis (CEM)

 Outbreaks of CEM were confirmed on 22 Icelandic horses on several different premises. Cases included three mares and 19 stallions

### *Streptococcus zooepidemicus* Abortion

 The mare aborted at nine months gestation. The positive diagnosis was confirmed by PCR on fetal tissues.

## Respiratory Diseases

Country	EHV-1	EHV-4	EI	<i>Rhodococcus equi</i>	Strangles
<i>Belgium</i>	4	-	-	-	1
<i>France</i>	2	12	19	1	20
<i>Germany</i>	5	>2	11	-	3
<i>Ireland</i>	-	-	19	2	1
<i>Italy</i>	-	-	3	-	-
<i>Senegal</i>	-	-	1	-	-
<i>Sweden</i>	-	1	-	-	-
<i>UK</i>	1	8	97	-	-
<i>USA</i>	1	-	3	-	14

### Equine Herpes Virus-1/-4 (EHV-1/-4) Respiratory Infection

*International:* EHV remains endemic in most countries and outbreaks are thought to be under-reported. Outbreak reports for each country rely on confirmation of disease through laboratory testing and therefore numbers of reports are highly likely to not correlate with the true disease frequency in that country for this reason.

### Equine Herpes Virus-1 (EHV-1) Respiratory Infection

 All outbreaks involved single cases. Reported clinical signs included; coughing, nasal discharge, limb oedema, lymphadenopathy and pyrexia

 One outbreak involved one case and one involved five horses with clinical signs of coughing and nasal discharge.

 Outbreaks were confirmed on five separate premises.

 A case of EHV-1 and EHV-4 respiratory co-infection was confirmed and the affected horse presented with nasal discharge. The positive diagnosis was confirmed by PCR on a nasopharyngeal swab.

 The single reported outbreak had three horses affected.

### Equine Herpes Virus-4 (EHV-4) Respiratory Infection

 Clinical signs included coughing, nasal discharge pyrexia. Where reported, eight reports were of single cases being affected, two outbreaks involved two horses in each and one outbreak reported eight horses with clinical signs. For all, positive diagnoses were made by PCR on a nasopharyngeal swab.

 Outbreaks of EHV-4 affecting 11 horses on several premises were reported during second quarter 2019. Clinical signs included pyrexia and respiratory disease. Positive diagnoses were confirmed by PCR on nasal swabs.

 Three horses presented with clinical signs of pyrexia and mild purulent nasal discharge. One horse was positive for EHV-4 and three were positive for *Streptococcus zooepidemicus*.

 Four outbreaks involved single cases, one outbreaks involved two affected yearlings with bilateral nasal discharge, one outbreak involved four clinical cases, one involved five and one involved multiple horses.

## Equine Influenza (EI)

### Europe

 There have been 97 laboratory confirmed outbreaks of EI during Q2 and verbal reports of many unconfirmed outbreaks. Risk factors for outbreaks include mixing of horses at equine gatherings, new arrivals on premises and horses being unvaccinated. The combined Q1 and Q2 total is 160 outbreaks.

 There have been 19 laboratory confirmed outbreaks of EI during Q2. Where reported, one outbreak involved Thoroughbreds, two involved non-Thoroughbreds. Two outbreaks involved vaccinated horses and four outbreaks involved unvaccinated horses. One outbreak involved a foal that died. The combined Q1 and Q2 total is 45 outbreaks.



 There have been 11 laboratory confirmed outbreaks of EI during Q2. Where reported, one outbreak involved vaccinated horses and four outbreaks involved unvaccinated horses. The combined Q1 and Q2 total is 27 outbreaks.

 There have been three laboratory confirmed outbreaks of EI during Q2.

 There have been 19 reported laboratory confirmed outbreaks of EI during Q2. One outbreak involved a neonatal foal that presented with pneumonia. The dam was unvaccinated.

### Rest of World

 Almost 4000 cases have been reported and two deaths.

 Two of the outbreaks were reported to involve vaccinated horses.

### *Rhodococcus equi*

 A case was confirmed in a one-month-old foal and clinical signs included depression, pyrexia, cough, abscess and dyspnea. A pulmonary abscess was found on ultrasound examination and neutrophilia was also reported. There was one in contact with clinical signs.

 On 7 June 2019, the Irish Equine Centre confirmed that recent laboratory submissions suggested that conditions were conducive to the development of *R. equi* infection in foals both in Ireland and in England.

### Strangles

*International:* Strangles remains endemic in most countries.

## Neurological Diseases

Country	EEE	EEV	EHV-1 Neurological Disease	WNV
<i>Canada</i>	-	-	1	-
<i>Germany</i>	-	-	2	-
<i>South Africa</i>	-	Cases confirmed in six out of nine provinces	-	1
<i>UK</i>	-	-	1	-
<i>USA</i>	13	-	11	2

### Eastern Equine Encephalitis

 All outbreaks were reported in Florida. When reported, three horses were vaccinated, five were unvaccinated. Six cases required euthanasia and one was recovering with supportive care.

### Equine Encephalosis Virus

 Sporadic cases of EEV were reported from six of South Africa's nine Provinces

### Equine Herpes Virus-1 (EHV-1) Neurological Disease

 A single case was reported in an older aged horse that required euthanasia.

 Positive diagnoses were confirmed by PCR on nasopharyngeal swabs and/or EDTA-blood.

 The affected horse was an unvaccinated teenaged horse that presented with ataxia and a serous nasal discharge. The positive diagnosis was confirmed by PCR on a nasopharyngeal swab. There are around 30 unvaccinated in contacts and there has been a history of nasal discharge and coughing amongst the group during the last eight weeks. The neurological case recovered with supportive treatment

 Nine cases were reported to be recovering and one required euthanasia. Three outbreaks involved vaccinated horses, four involved horses that had an incomplete vaccination history or were unvaccinated and one outbreak involved horses with mixed vaccination statuses. Ages of affected animals ranged from seven to 24 years-old, with an average age of 16-years-old. Outbreaks were reported in Arizona, Idaho, Nevada, Pennsylvania, Texas, Washington and Wyoming. Six outbreaks involved horses that had attended recent equine events.

### West Nile Virus (WNV)

 One case was confirmed in the North West Province.

 Both outbreaks involved single cases on premises in Iowa. One case had not history of vaccination and one case was lapse vaccinated.

## Miscellaneous Diseases

Country	AHS	Atypical Myopathy	EIA	EVA	Hendra	Piroplasmosis	Rotavirus	Vesicular Stomatitis
<i>Australia</i>	-	-	-	-	1	-	-	-
<i>Belgium</i>	-	Yes	-	-	-	-	-	-
<i>Cameroon</i>	2	-	-	-	-	-	-	-
<i>Canada</i>	-	-	5	-	-	-	-	-
<i>Chad</i>	2	-	-	-	-	-	-	-
<i>Chile</i>	-	-	1	-	-	-	-	-
<i>Czechia</i>	-	Yes	-	-	-	-	-	-
<i>eSwatini</i>	4	-	-	-	-	-	-	-
<i>France</i>	-	Yes	1	-	-	-	24	-
<i>Germany</i>	-	Yes	-	-	-	-	1	-
<i>Netherlands</i>	-	Yes	-	-	-	-	-	-
<i>South Africa</i>	Cases confirmed in the endemic area	-	-	-	-	Endemic	-	-
<i>UK</i>	-	Yes	-	2	-	-	-	-
<i>USA</i>	-	-	13	-	-	-	-	3
<i>Uruguay</i>	-	-	1	-	-	-	-	-

## African Horse Sickness (AHS)

-  Two reports were made to the OIE. The first involved 148 cases, 8 deaths and the second involved 124 cases and 36 deaths. Positive diagnoses were confirmed by serology (ELISA).
-  Two reports were made to the OIE. The first involved 159 cases, 114 deaths and the second involved 217 cases and 206 deaths. Positive diagnoses were confirmed by serology (ELISA).
-  One outbreak involved one case with 35 in-contacts, one involved two cases with 56 in contacts, one involved one case that died, with two in contacts and one involved one case with seven in contacts.
-  AHS is endemic in South Africa except in the AHS controlled area in the Western Cape Province. AHS cases continued to occur at above average incidence in the endemic area of South Africa, with cases occurring in eight of the nine provinces. There were no cases of AHS in the Western Cape Province, either in the infected part of the province or in the AHS controlled area.

## Atypical Myopathy

*Europe:* On 3 June 2019, the University of Liege updated that there had been 109 cases of atypical myopathy confirmed in Europe since 1 April 2019. This included 45 cases in France.

## Equine Infectious Anaemia (EIA)

-  One case had clinical signs, the rest were subclinically infected.
-  A subclinical case was confirmed in an imported horse. All in contacts tested negative.
-  The confirmed case had clinical signs of disease.
-  The majority of reports involved a single case being confirmed positive.
-  There were 18 confirmed subclinical cases on one premises and all were euthanased.

## Equine Viral Arteritis

-  Three subclinical cases were confirmed in non-Thoroughbred stallions on one premises and one epidemiologically linked subclinical case was confirmed in a non-Thoroughbred stallion on a separate premises.

## Hendra

-  A case was confirmed in an unvaccinated 25-year-old mare near Scone. This is much further south in New South Wales compared to locations of previous cases. The case was euthanased.

## Piroplasmosis

-  Piroplasmosis is regarded as endemic in South Africa and sporadic cases were reported throughout the country.

## Rotavirus

-  Outbreaks were reported to involve between one to three cases. Clinical signs included diarrhoea and positive diagnoses were confirmed by PCR. When reported, cases were aged two-months old, two, three, 10, 22-years olds.
-  Two foals on one premises were reportedly affected.

## Vesicular Stomatitis

-  Two outbreaks were reported in Texas and one in New Mexico. Clinical signs included muzzle lesions. One outbreak involved a single affected case, one involved a few cases and one a number of cases.