International Collating Centre: Summary Report

(1 April to 30 June 2022)

The International Collating Centre (ICC), is overseen by Equine Infectious Disease Surveillance (EIDS) and is generously supported by contributions from Fédération Equestre Internationale (FEI), International Thoroughbred Breeders' Federation (ITBF) members, Japanese Racing Association and Lanwades Stud.

National and international equine disease outbreaks are reported on a daily basis by the ICC, through email alerts. Please contact equinesurveillance@gmail.com to receive these. There is also a website available that provides an interactive interface of these infectious disease reports and can also be used to view current outbreak reports, https://equinesurveillance.org/iccview/.

This article provides a summary of international disease outbreaks during second quarter 2022. It should also be noted that additional summary reports were kindly received that included further information on disease occurrence for that country but which had not been reported in previous real-time ICC reports. This additional information is identified by *or # in the tables and text where relevant throughout this report.

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.

An overview of Q2 2022

During the second quarter 2022, the ICC reported 191 disease outbreaks from 13 countries; two in North America, 10 in Europe and one in Asia. Reports covered 18 diseases/infections, of which strangles (n=77) was the most prevalent, followed by neurological EHV-1 (n=19).

Reproductive Diseases

Country	CEM	EHV-1	EHV-4	*Salmonellosis abortus equi*	*S. Zoo*
Belgium	-	2	1		2
France	1	2	-		-
Germany	14	-	-		-
Japan	-	1*		1*	
Netherlands	-	1	-		-
UK	-	2	2		-
USA	-	1	-		-

**relates to additional summary information reported at the end of the quarter, but which was not reported via ICC interim reports*

Contagious Equine Metritis (CEM)

France

One case of CEM was reported in a 12-year-old Selle Francais on a premises in Calvados. Positive diagnosis was confirmed by bacterial culture on a genital swab.

Germany

Fourteen outbreaks of CEM were reported, one outbreak with three cases and 13 outbreaks with one

case on premises in Bavaria, Hessen, Lower Saxony, North Rhine-Westphalia and Schleswig Hostein. Positive diagnoses were confirmed by PCR on genital swabs.

Equine Herpes Virus-1 (EHV-1) Abortion

Belgium

Two outbreaks of EHV-1 abortion were reported with single cases in each on a premises in Antwerp and Hainaut. In both cases the animals aborted at 10 months gestation. Positive diagnoses were confirmed by PCR on fetal lung and liver tissue.

France

Two outbreaks of EHV-1 abortion were reported with single cases in each; the first in a nine-year-old French Trotter mare and the second in a vaccinated six-year-old Trotter mare on premises in Calvados and Manche. Positive diagnoses were confirmed by PCR on fetal and placental tissue

Japan

*One outbreak of EHV-1 abortion was reported in two vaccinated Thoroughbreds on a single premises. Positive diagnoses were confirmed by LAMP.

Netherlands

One case of EHV-1 abortion was reported on a premises in Gelderland. Positive diagnosis was made by PCR on fetal lung tissue. There were three further breeding mares on site which had also aborted.

United Kingdom

Two outbreaks of EHV-1 abortion were reported with single cases in each, the first was in an unvaccinated 13-year-old Sports Horse mare and the second in an unvaccinated 14-year-old Dutch Warmblood mare on premises in Somerset and Banffshire. Positive diagnoses were confirmed by PCR on placental and fetal tissues. It was noted that on the premises in Banffshire, there were a total of 25 in-contacts, including seven pregnant mares of which two aborted and one died of colic prior to this abortion.

United States of America

One case of EHV-1 abortion was reported in an unvaccinated Standardbred mare on a premises in Wisconsin. Positive diagnosis was confirmed by PCR on fetal tissues and placenta. It was noted that several other mares had aborted and the owner had since commenced a herd vaccination plan.

Equine Herpes Virus-4 (EHV-4) Abortion

Belgium

One case of EHV-4 abortion was reported on a premises in Flemish Brabant. Abortion took place at nine months gestation. Positive diagnosis was confirmed by PCR on fetal liver and lung tissue.

United Kingdom

Two outbreaks of EHV-4 abortion were reported with single cases in each in a non-vaccinated Suffolk Punch mare and a non-vaccinated five-year-old non-Thoroughbred mare on premises in Suffolk and Wiltshire. Positive diagnoses were confirmed by PCR on fetal and placental tissues. It was noted that both premises had further pregnant mares and biosecurity measures were implemented.

Salmonellosis abortus equi

Japan

*One case of Salmonella abortus equi was reported in a non-Thoroughbred. Positive diagnosis was confirmed by agent isolation.

Streptococcus zooepidemicus **abortion**

Belgium

Two outbreaks of *Streptococcus zooepidemicus* abortion were reported with single cases in each on a premises in Hainaut and Limburg. The animals aborted at eight and 10 months gestation. Positive diagnoses were confirmed by PCR on fetal lung and liver tissue.

Respiratory Conditions

Country	EHV-1	EHV-4	EHV-5	EHV co-infection	Flu	Strangles
Belgium	-	-	2	3	-	-
Finland	-	-	-	-	1	-
France	-	6	-	-	-	12
Germany	-	-	-	-	1	-
Italy	-	2	-	-	-	-
Netherlands	-	4	-	-	2	22
Switzerland	1	-	-	-	-	8
UK	-	6	-	-	-	-
USA	1	-	-	-	8	35

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

Switzerland

One outbreak of EHV-1 respiratory infection was reported on a premises in the Canton of Clarus. Clinical signs included pyrexia and respiratory tract signs. Positive diagnoses were confirmed by PCR.

United States of America

One case of EHV-1 respiratory infection was reported on premises in North Carolina. Clinical signs included pyrexia, lethargy and decreased appetite.

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

France

Six outbreaks of EHV-4 respiratory infection were reported with single cases in each on premises in Aude, Haut-Rhiin, Loire Atlantique, Rhône, Vendée and Yvelines. Clinical signs included pyrexia, cough, nasal discharge and lymphadenopathy. Positive diagnoses were made by PCR on nasopharyngeal swabs in the majority of cases and by PCR on a trachael lavage in one case.

Italy

Two outbreaks of EHV-4 respiratory infection were reported with singles cases in each on premsies in the Province of Lecce and the Province of Perugia.

Netherlands

Four outbreaks of EHV-4 respiratory infection were reported in mainly unvaccinated animals; with one outbreak with two cases and three outbreaks with single cases on premises in Drenthe, Limburg and North Holland. Clinical signs included cough, dyspnoea, enlarged lymph nodes, nasal discharge, letharthy, pyrexia, and poor colostrum production. Positive diagnoses were confirmed by PCR on nasopharyngeal swabs. It was noted that in the outbreak with two cases, both mares had lost foals four days after birth.

United Kingdom

Six outbreaks of EHV-4 respiratory infection were reported with one outbreak involving two cases and five outbreaks with single cases on premises in Ayrshire, Gloucestershire, Kent and

Worcestershire. Clinical signs included cough, inappetence, lethargy, lymphandeopathy, pyrexia and nasal discharge. Positive diagnoses were confirmed either by LAMP on nasopharyngeal swabs or by PCR on nasophayrngeal swabs.

Equine Herpes Virus-5 (EHV-5) Respiratory Infection

Belgium

Two separate cases with single cases in each of EHV-5 respiratory infection were reported; one with a co-infection with EHV-2, on premises in Antwerp and East Flanders. Clinical signs included cough and nasal discharge. Positive diagnoses were confirmed by PCR on nasal swabs.

Equine Herpes Virus (EHV) co-infection

Belgium

Three outbreaks of EHV co-infection were reported with single cases in each on premises on Hainaut and East Flanders. The first case was a co-infection of EHV-1, EHV-2, EHV-4 and EHV-5 in a yearling, the second in a 10-month-old with a co-infection of EHV-2 and EHV-5 and the third case in a 12-year-old with a co-infection of EHV-2 and EHV-5. Clinical signs included cough, lymphadenopathy, nasal discharge and pyrexia. Positive diagnoses were confirmed by PCR on nasopharyngeal swabs.

Equine Influenza (EI)

Finland

One case of EI was reported in a recently imported six-year-old gelding on a premises in Uusimaa. Positive diagnosis was confirmed by qPCR.

Germany

One outbreak of EI with 17 cases was reported on a premises in North Rhine-Westphalia. Clinical signs included pyrexia and nasal discharge. Positive diagnoses were confirmed by PCR on nasal swabs. Initially seven cases were reported on 24 June 2020, with an update on a further 10 cases reported on 30 June 2022.

Netherlands

Two outbreaks of EI were reported with single cases in each in non-vaccinated animals on premises in Gelderland. Clinical signs included cough, pyrexia, enlarged lymph nodes and nasal discharge. Positive diagnoses were confirmed by PCR on nasophayrngeal swabs. One of the animals had been imported one month previously and sold by a trader to its current owner.

United States of America

Eight outbreaks of EI were reported with one outbreak at a wild horse and burro holding facility in Colorado confirming 129 deaths, there were three outbreaks with single cases in each reported in separate counties in Wisconsin and a further six single cases on premises in Kansas, New York, Oregon, Rhode Island and Wyoming. Clinical signs included cough, dyspnoea, inappetence nasal discharge and pyrexia.

Strangles

France

Twelve outbreaks of strangles were reported with one outbreak with two cases and 11 outbreaks with single cases on premises in Ardennes, Aude, Charente Maritime, Côte-d'Amor, Essonne, Eure-et-Loire, Ger, Isère, Loire-Atlantique, Nord and Saône-et-Loire. Clinical signs included abscessation, cough, lymphadenopathy, nasal discharge and pyrexia. Positive diagnoses were confirmed by PCR on nasopharyngeal swabs, swabs from undefined sites or guttural pouch lavage.

Netherlands

Twenty-two outbreaks of strangles were reported with one outbreak with five cases, three outbreaks with two cases and 18 outbreaks with single cases on premises in Drenthe, Flevoland, Gelderland, Groningen, Limburg, North Brabant, Overijssel, South Holland and Utrecht. Clinical signs included

abscessation, cough, enlarged mandibular and pharyngeal lymph nodes, lethargy, nasal discharge, pyrexia and poor appetite Positive diagnoses were confirmed by PCR on nasopharyngeal swabs or swabs and in one case by PCR on a guttural pouch lavage.

Switzerland

Eight outbreaks of strangles were reported with one outbreak with multiple cases and seven with single cases. Clinical signs include emaciation, pyrexia and respiratory tract signs and submandibular abscess. Positive diagnoses were confirmed by PCR or LAMP.

USA

Thirty-five outbreaks of strangles were reported on premises Florida, Michigan, Ohio, Washington, Wisconsin. Clinical signs included abscessed and draining lymph nodes, cough, decreased appetite, enlarged submandibular lymph nodes, lethargy, lymphadenopathy, nasal discharge, pyrexia, submandibular abscess and upper respiratory signs.

Gastrointestinal Diseases

Country	Equine Coronavirus	Lawsonia intracellularis	Rotavirus
France	-	-	2
Liechtenstein	-	1	-
Switzerland	1	-	-

Equine Coronavirus (EcoV)

Switzerland

One case of EcoV was reported on a premises in the Canton of Schaffhausen. Clinical signs included pyrexia. Positive diagnosis was confirmed by PCR on faeces.

Lawsonia intracellularis

Liechtenstein

One ourbreak of Lawsonia intracellularis was reported in the Principality of Liechtenstein on the border with Switzerland. Clinical signs included pyrexia and respiratory tract signs. Positive diagnosis was confirmed by PCR.

Rotavirus

France

Two outbreaks of rotavirus with single cases in each were reported on premises in Mayenne and Orne. Clinical signs included diarrhoea, depression, inappetence and pyrexia. Positive diagnoses were confirmed by PCR on a rectal swab or faeces.

Neurological Diseases

Country	EEE	EEV	EHV-1	Japanese Encephalitis	Rabies	WNV
Australia	-	-	-	Multiple	-	-
Austria	-	-	1	-	-	-
Germany	-	-	1	-	-	-
Italy	-	-	1	-	-	-
South Africa	-	1*	1*	-	-	1*
Switzerland	-	-	1	-	-	-
UK	-	-	2	-	-	-
USA	4		13	-	1	1

**relates to additional summary information reported at the end of the quarter, but which was not reported via ICC interim reports*

Eastern Equine Encephalitis (EEE)

USA

Four outbreaks of EEE with single cases in each were reported on premises in Florida, the majority in non or lapsed vaccinated animals. Clinical signs included apprehension, depression, head pressing, incoordination, muscle twitching, pyrexia, recumbency with dull mentation and nystagmus, seizures, weakness in hind limbs and inability to stand.

Eastern Encephalosis Virus (EEV)

South Africa

*Outbreaks of EEV, which is regarded as endemic in South Africa, were reported from six of the nine provinces in South Africa. Cases reported after the quarter end as follows: Free State (one case), Gauteng (17 cases), Kwa-Zulu Natal (five cases), Mpumalanga (two cases), North West Province (one case) and Western Cape (seven cases).

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

Austria

One case of EHV-1 neurological disease was reported on a premises on the border of Austria and Switzerland. Clinical signs included pyrexia and CNS signs. Positive diagnosis was confirmed by PCR.

Germany

One case of EHV-1 neurological disease was reported on a premises in the federal state of North Rhine-Westphalia. Clinical signs included cauda-equine syndrome and ataxia. Positive diagnosis was confirmed by PCR on a nasopharyngeal swab.

Italy

One case of EHV-1 neurological disease was reported on a premises in the province of Treviso.

South Africa

*One case of EHV-1 neurological disease was reported on a premises in the province of Gauteng, after the quarter end.

Switzerland

An outbreak of EHV-1 neurological disease was reported on a premises in the Canton of Schwyz. Clinical signs included pyrexia and central nervous system signs. Positive diagnosis was confirmed by PCR.

United Kingdom

Two outbreaks of EHV-1 neurological disease were reported on premises in Worcestershire and Wiltshire. The index case in Worcestershire was a nine-year-old unvaccinated Thoroughbred gelding that had recently arrived on the premises. The animal presented with bilateral conjunctivitis, lethargy and mild ataxia. A nasopharyngeal swab tested for EHV-1 and EHV-4 was negative, but a blood sample tested by complement fixation confirmed recent exposure to EHV. In total there were 23 out of a total of 70 resident horses with clinical signs on the premises and 16 of these demonstrated varying severities of neurological signs. Two horses required euthanasia. The animal on the Wiltshire premises was a vaccinated seven-year-old Thoroughbred gelding that presented with hind limb weakness and bladder paresis. Positive diagnosis was confirmed by PCR on a nasopharyngeal swab.

United States of America

Thirteen outbreaks of EHV-1 neurological disease were reported with two outbreaks with two cases, one of which was in two donkeys, one outbreak with two separate cases and 10 single cases on premises in California, Michigan, New York, Ohio, Oregon, Pennsylvania and Texas. Clinical signs included ataxia, bladder haemorrhage, colic, inability to rise, limb oedema, neurological signs, pyrexia,

recumbency and urine dribbling

Japanese Encephalitis (JE)

Australia

In May 2022, the New South Wales government noted evidence of JE virus infection in horses from the North Coast, Hunter, Greater Sydney, Central West and Riverina Local Land Services regions of NSW. Australia has a number of mosquito species that are capable of transmitting the virus, however, horses are a dead-end host.

Rabies

United States of America

One case of rabies was reported in an unvaccinated Quarter Horse gelding on a premises in Oklahoma. Clinical signs included severe neurological signs. The animal was euthanased. Three additional animals on the same pasture were placed under a six-month official quarantine

West Nile Virus (WNV)

South Africa

*One case of WNV was reported in the Free State Province, after the quarter end.

United States of America

One case of WNV in an under-vaccinated 22-year-old Paint Horse gelding was reported on a premises in Tennessee. Clinical signs included progressive ataxia and recumbency. The animal was euthanased.

Miscellaneous Diseases

Country	AHS	Anthrax	EIA	Leptospirosis	Pigeon Fever	Piroplasmosis
Canada	-	-	4	-	-	-
Finland	-	-	-	-	-	1
France	-	-	-	1	-	-
Germany	-	-	-	-	-	1
Italy	-	-	3	-	-	-
Kazakhstan	-	1	-	-	-	-
South Africa	1*	-	-	-	-	1*
USA	-	-	8	-	1	-

relates to additional summary information reported at the end of the quarter, but which was not reported via ICC interim reports

South Africa

African Horse Sickness (AHS)

*AHS is endemic in South Africa except in the AHS controlled area in Western Cape Province. Cases were reported from all provinces in the country. The case in the Western Cape Province was outside the AHS Controlled area. Cases reported after the quarter end as follows: Eastern Cape (six cases), Free State (six cases), Gauteng (50 cases), Kw-Zulu Natal (12 cases, Mpumalanga (three cases), Northern Cape (five cases), North West Province (nine cases), Western Cape (one case) and Limpopo (one case).

Anthrax

Kazakhstan

A case of anthrax was reported on a premises in Zhambyl Region, Karoy Village. It was noted that the animal has since died. Positive diagnosis was confirmed by bacterial culture. There were 40 in-contacts on site.

Equine Infectious Anaemia (EIA)

Canada

Four outbreaks of EIA were reported with one outbreak with five cases and three outbreaks with single cases on premises in Alberta and Saskatchewan. One of these animals was tested as it was exhibiting clinical signs, the other three were being tested prior to breeding, event pre-entry requirement or to fulfil export requirements.

Italy

Three outbreaks of EIA were reported with one outbreak with two separate cases and two outbreaks with single cases, one of which was a mule, on premises in Lazio and Abruzzo.

USA

Eight outbreaks of EIA were confirmed with one outbreak with 24 cases and seven outbreaks with single cases on premises in California, Iowa, Texas and Ohio. Three of these animals were euthanased.

Leptospirosis

France

One case of leptospirosis was reported in a six-year-old Selle Francais pony mare on a premises in Orne. Positive diagnosis was confirmed by PCR on aqueous humour.

Pigeon Fever

United States of America

One case of Pigeon Fever was reported on a premises in King County, Washington.

Piroplasmosis

Finland

One case of piroplasmosis was reported in a five-year-old Lusitano mare on a premises in Pornainen. Positive diagnosis was confirmed by ELISA.

Germany

One case of piroplasmosis was reported on a premises on the German/Swiss border. Clinical signs included pyrexia. Positive diagnosis was confirmed by PCR and serology.

South Africa

*Piroplasmosis is regarded as endemic in South Africa and cases were reported from eight of the nine provinces of South Africa, the exception being North West Province. Case numbers reported after the quarter end as follows: Gauteng (one case - *B. Caballi*), all other cases were *T. equi* Eastern Cape (one case), Free State (two cases), Gauteng (25 cases), Kwa-Zulu Natal (three cases), Mpumalanga (two cases), Northern Cape (four cases), Western Cape (eight cases) and Limpopo (three cases).