

# Equine Infectious Diseases: systems for collecting & sharing epidemiological data

Richard Newton

Equine Infectious Disease Surveillance

<https://equinesurveillance.org/>



UNIVERSITY OF  
CAMBRIDGE

Department of Veterinary  
Medicine



EIDS

Equine Infectious  
Disease Surveillance

Generously  
supported by



THE  
THOROUGHBRED  
BREEDERS'  
ASSOCIATION



BHA BRITISH  
HORSERACING  
AUTHORITY



ITBF



# Introduction

- Equine infectious disease threats are a reality
  - Threats include endemic, re-emerging & exotic diseases
- It is possible to know **what, where & when is going on**
  - **Surveillance & horizon scanning** are feasible
- **Communicating** information on disease occurrence globally is **critical for awareness**
- It is possible to learn lessons from disease occurrence
  - Using this information appropriately can reduce risks from disease incursions



# Equine infectious diseases

- Infectious diseases are important to the global horse industry
  - Infections move with horses & horse-based commodities
  - Horses/commodities frequently move internationally
- Disease prevention is better than 'cure' (control)
  - Aim to prevent international disease transmission
- Effective prevention & control require
  - Good knowledge of disease epidemiology & ecology
  - **Effective disease 'surveillance' & 'horizon scanning'**



# Practical definitions

- **Surveillance**

- Close observation of disease occurrence
- Important at the national, regional & local level
- International trade relies on health certification
- Key to preventing movement of infectious animals

- **Horizon scanning**

- Identification of potential threats; more distant than surveillance
- Especially important at the international level
- Need to be prepared 'to think outside the box'!





# For EID the world is shrinking





# Global movers

- Horses the most widely travelled animal after humans
  - Temporary and permanent movements
  - Inter-continental movement for competition & breeding
- **But rapid movement of their infections as well....**





**EIDS**

# What does surveillance involve?

- Animal owners/keepers & their vets are the 'eyes and ears' of surveillance
  - Their awareness & knowledge are critical
- Timely monitoring, collation, exchange and wider dissemination of information on disease occurrence
  - Conducted nationally & internationally
  - Shared between responsible authorities
  - With industry & the veterinary profession
- Taking action in response to heightened threats
  - Not just idle gazing!



# What actions might be taken?

- Monitoring of animal movements
  - Restrictions may be warranted
- Enhanced screening – clinical, laboratory testing
- Codes of Practice drawn up & implemented
- Contingency planning/Control strategies
- Legislation
  - National
  - International (EU/WOAH standards)





EIDS

# International equine surveillance

## Resources available:

- WAHIS reports from WOAAH (OIE)
- ProMED mail alerts
- European Commission SCoPAFF
  - Animal Health & Welfare section
- European Centre for Disease Prevention & Control
- UK Defra preliminary outbreak reports
- *Individual country equine disease resources....*



World Organisation  
for Animal Health  
Founded as OIE



**ProMED**  
INTERNATIONAL SOCIETY  
FOR INFECTIOUS DISEASES



European  
Commission



Department  
for Environment  
Food & Rural Affairs



[← Return to dashboard](#)

## REPORT PREVIEW

### Greece – West Nile Fever – Follow up report 2

#### GENERAL INFORMATION

**COUNTRY/TERRITORY OR ZONE**

COUNTRY/TERRITORY

**ANIMAL TYPE**

TERRESTRIAL

**DISEASE CATEGORY**

OIE-listed

**EVENT ID**

4630

**DISEASE**

West Nile Fever

**CAUSAL AGENT**

West Nile virus

**GENOTYPE / SEROTYPE / SUBTYPE**

-

**START DATE**

2022/08/17

**REASON FOR NOTIFICATION**

Recurrence of an eradicated disease

**DATE OF LAST OCCURRENCE**

2018/12/31

**CONFIRMATION DATE**

2022/08/25

**EVENT STATUS**

On-going

**END DATE**

-

**SELF-DECLARATION**

NO

#### REPORT INFORMATION

**REPORT NUMBER**

Follow-up report 2

**REPORT ID**

FUR\_157906

**REPORT REFERENCE**

-

**REPORT DATE**

2022/11/17

**REPORT STATUS**

Validated

**NO EVOLUTION REPORT**

-



PRO/AH/EDR> West Nile virus (14): Europe (Greece) horse, WOAH Inbox x



**ProMED** <promed@isid.org> [Unsubscribe](#)  
to me ▾

WEST NILE VIRUS (14): EUROPE (GREECE) HORSE, WOAH

\*\*\*\*\*

A **ProMED**-mail post

<http://www.promedmail.org>

**ProMED**-mail is a program of the  
International Society for Infectious Diseases  
<http://www.isid.org>

Date: Mon 4 Oct 2022

Source: WOA-H-WAHIS (World Animal Health Information System) 2022  
[edited]  
<https://wahis.woah.org/#/in-review/4630>

West Nile fever, Greece

-----  
Summary

Report type: immediate notification

Started: 17 Aug 2022

Confirmed: 25 Aug 2022

Reported: 28 Sep 2022 [published by WOA-H 4 Oct 2022]

Reason for notification: recurrence

Last occurrence: 30 Dec 2018

Causal agent: West Nile virus [WNV]

Nature of diagnosis: laboratory

This event pertains to the whole country.

Outbreak location 1: Nea propontida, Central Macedonia, Macedonia and  
Thrace



Published Date: 2022-10-05 18:58:43 BST

Subject: PRO/AH/EDR> West Nile virus (14): Europe (Greece) horse, WOAH

Archive Number: 20221005.8705975

WEST NILE VIRUS (14): EUROPE (GREECE) HORSE, WOAH

\*\*\*\*\*

A **ProMED**-mail post

<http://www.promedmail.org>

**ProMED**-mail is a program of the  
International Society for Infectious Diseases  
<http://www.isid.org>

Date: Mon 4 Oct 2022

Source: WOA-H-WAHIS (World Animal Health Information System) 2022 [edited]  
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# European Commission SCoPAFF: Animal Health & Welfare section



EN English

## Food Safety

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## Animal Health and Welfare

Comitology register code: [C20402](#)

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## Agendas and Summary Reports

### Meetings 2022

29-30 November

- [Agenda](#) EN | ...

28 October

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21 October

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EN English

## Food Safety

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## Presentations

Presentations from the PAFF Animal Health and Welfare committee meetings.

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## Meetings 2022

### Presentations 21 October 2022

- [ADIS - EC](#) EN | ...
- [Animal Welfare Fitness Check - EC](#) EN | ...
- [ASF - Bulgaria](#) EN | ...
- [ASF - Germany](#) EN | ...
- [ASF - Hungary](#) EN | ...
- [ASF - Italy](#) EN | ...
- [ASF - Lithuania](#) EN | ...
- [ASF - Poland](#) EN | ...





Other sites: ECDC European Antibiotic Awareness Day



**European Centre for Disease Prevention and Control**  
An agency of the European Union



Infectious disease topics ▾

## European Antibiotic Awareness Day (EAAD)

EAAD is a yearly initiative held on 18 November to raise awareness about the threat of antibiotic resistance to human health and the importance of prudent antibiotic use.

[Learn more about this year's campaign](#)

European Antibiotic Awareness Day  
(EAAD) 2022

## News



News  
**Weekly COVID-19 country overview**  
Epidemiological update - 18 Nov 2022



West Nile virus infections in EU/EEA and EU-neighbouring... Week 2022-W45

Country Austria

### About the data

Data on human infections are sourced from [The European Surveillance System \(TESSy\)](#) managed by ECDC. Only locally-acquired infections with known place of infection are shown. The distribution of human infections covers EU/EEA countries and EU-neighbouring countries#.

Animal data are collected through the [Animal Disease Information System \(ADIS\)](#) of the European Commission. Notification of West Nile virus (WNV) outbreaks in equids and birds is mandatory at the EU/EEA level and outbreaks are only shown for EU/EEA countries.

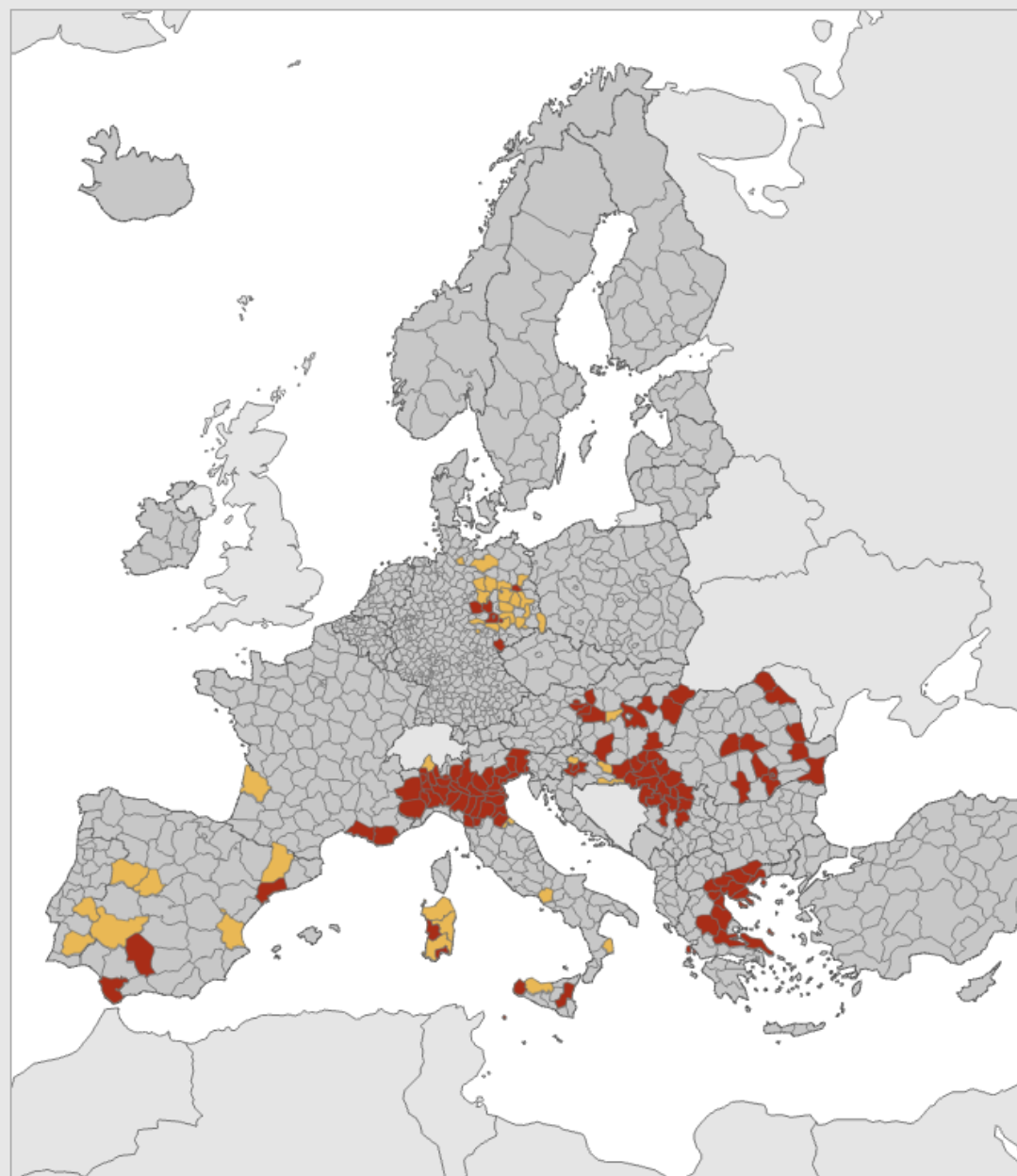
Human and animal infections displayed on the maps show all WNV infections reported to ECDC thus far and can be filtered by selecting the week number on the dashboard. The figures displaying the distribution of human WNV infections by week or by month groups the data according to a 'Time Code' variable\*. This variable is defined as the 'Date of Onset' or, if unavailable, the earliest reported date related to the infection (e.g. 'Date of Diagnosis').

The dashboard is updated on Friday during the WNV transmission season (expected to be June-November). Data behind the dashboard are available for [download](#).

A mobile-friendly view of this dashboard is available [here](#).

### Using the dashboard

- Select the week number to filter the maps
- Different maps can be viewed using the labelled tabs below the maps
- Select a country to show the distribution of WNV infections by week. Please note



Human cases, with or without outbreaks among equids and/or birds



Outbreaks among equids and/or birds



Human

Animal

Human and animal

Human: past 10 years



# Defra preliminary outbreak assessments



Department for Environment, Food and Rural Affairs  
Animal and Plant Health Agency  
Advice Services - International Disease Monitoring

[Home](#) > [Environment](#) > [Wildlife, animals, biodiversity and ecosystems](#) > [Animal and plant health](#)

[Home](#)

Collection

## Animal diseases: international and UK monitoring

Monitoring for major, notifiable or new and emerging animal disease outbreaks internationally and in the UK.

From: [Department for Environment, Food & Rural Affairs](#) and [Animal and Plant Health Agency](#)

Published 31 July 2014

Last updated 1 November 2022 — [See all updates](#)

Contents

- [Outbreak assessments 2022](#)
- [Outbreak assessments 2021](#)
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- [Outbreak assessments 2019](#)
- [Outbreak assessments 2018](#)
- [Outbreak assessments 2017](#)
- [Outbreak assessments 2016](#)
- [Outbreak assessments 2015](#)
- [Outbreak assessments 2014](#)

Research and analysis

## African horse sickness in Malaysia

Preliminary outbreak assessment for african horse sickness in Malaysia.

From: [Department for Environment, Food & Rural Affairs](#) and [Animal and Plant Health Agency](#)

Published 4 September 2020

[Get emails about this page](#)

## Documents



### [African Horse Sickness in Malaysia](#)

PDF, 287KB, 4 pages

Preliminary Outbreak Assessment

## African Horse Sickness in Malaysia

3 September 2020

Ref: VITT/1200 African Horse Sickness, Malaysia

### Disease report

Malaysia reported an outbreak of African Horse Sickness (AHS) on 02 September, in five backyard horses in Terengganu, in the east of the Malay Peninsula. This is the first time that AHS has been confirmed in Malaysia, a country which has OIE official free status for AHS and is on the approved list for exports of equines to the EU.



African horse sickness in SE Asia  
April - September 2020



# Individual country resources

- RESPE – France & International
- SEIN - Netherlands
- EFPB - Belgium
- Equinella - Switzerland
- EDCC – USA & Canada
- CAHSS - Canada



Un cas de gourme - Ottawa, Michigan - Etats-Unis (A case of strangles - Ottawa, Michigan - USA) Inbox x



RESPE via gmail.mcsv.net  
to me ▾

Thu, 17 Nov, 16:15 (3 days ago) ☆ ↩ ⋮

🌐 French ▾ > English ▾ [View original message](#)

[Don't automatically translate for: French](#)

RESPE health information

This message is not displayed correctly?  
[See web version](#) .



Alert message

A case of strangles - Ottawa, Michigan - USA - 11/16/2022

Sickness	<a href="#">strangles</a>
Number of positive case(s) (in this focus)	1
confirmed date	11/16/2022
Sex	Gelding
Age	10 years



S

Sein

to ▼

 Dutch ▼ > English ▼ [View original message](#)

Surveillance Equine Infectious diseases Netherlands

Dear colleague,

In the message below you will find information about reporting a case of strangles in the province of Limburg .

Dear colleague,

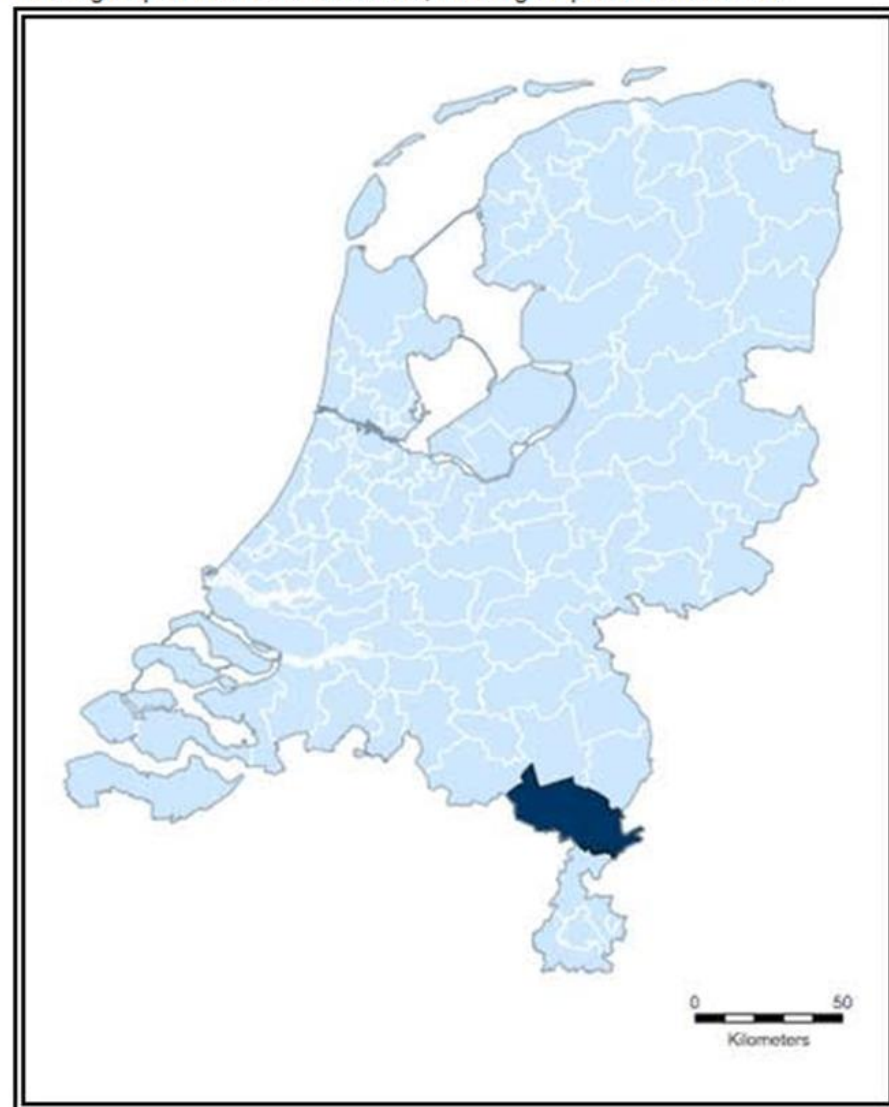
Please find the notification of a case of strangles in the province of Limburg in the message below.

Notification:

Illness/diagnosis	Strangles
Number of positive samples	1
Confirmation date	25-10-2022
sample type	Nasopharyngeal swab
Diagnostic method	PCR
Symptoms	Poor appetite, nasal discharge, lymph nodes swollen and painful
Vaccination	no
Number of sick horses	2
Total number of horses	15
Control measures	Insulation
Comments	Second horse now also with symptoms, test result not yet received

Notification:

Two-digit zip code area of outbreak | Two-digit Zip code of outbreak



Nieuwe melding - Geval van respiratoire stoornissen door gemengde infectie / Provincie Oost-Vlaanderen  
respiratory disorders due to mixed infection / Province of East Flanders / Belgium) [Inbox x](#)



**Equi Focus Point Belgium** [via gnld1007.siteground.eu](#)  
to me ▾

🌐 Dutch ▾ > English ▾ [View original message](#)



Dear colleague,

Please find the new notifications in the message below. These results were obtained thanks to the collaboration with the Zoolyx laboratory, Synlab and DGZ.

Case of respiratory disorders due to mixed infection / Province of East Flanders / Belgium

**Pathogen** : EHV4 (Ct 21), EHV2 (Ct 26)

**Type of sample** : nasal swab

**Diagnostics** : PCR

**Outbreak date** : 9/11/2022

**Confirmation date** : 10/11/2022

**Symptoms** : fever, several animals affected

**Age**: 6 months

**Vaccination**: no

**Province** : East Flanders



## Summary table of current announcements, public list

### Official announcements of epizootics


Please find [here](#) the **official epizootic announcements** (InfoSM) or the **summary** of equine epizootic cases announced since 2014 to the OSA.

Select the desired messages (attributes: Quantity, Announcements/symptoms or Diagnosis) with the filter options below or sort them directly in the table (Date of finding, Canton of operation, Announcements, Diagnosis).

#### Amount

#### Announcements/symptom

#### Diagnostic











 strangles

☐ 1 animal concerned

 EHV

☐ > 1 animal concerned

 Other confirmed diagnoses

	Date	Canton	Advertisement	Diagnostic	Lab Confirmation / Info
	03.11.2022	N/A	Fever, respiratory symptomatology	strangles	PCR positive
	01.11.2022	DV	Fever		Negative for EHV1/4, Strep equi equi, Equine Influenza Virus
	01.11.2022	DV	Fever, edema of the limbs		
	29.10.2022	ZH	Fever, Kolik		
	20.10.2022	DV	Fever, respiratory symptomatology	strangles	PCR positive
	19.10.2022	GR	Nerve symptomatology	TBEV	IgM Nachweis im Serum
	19.10.2022	D	Fever, Petechialfieber	strangles	PCR positive
	14.10.2022	READ	Fever	strangles	PCR positive
	12.10.2022	DV	Fever, leg edema		Negative for: EHV1/4, Strep equi equi, Equine Influenza Virus, Piroplasmosis, Anaplasmosis
	09.10.2022	DV	muscle abscess	Rhodococcosis	positive culture

Apply Filter

View Canada

## Equine Influenza in Kitsap County, WA: Outbreak Update Inbox x



EDCC [Unsubscribe](#)  
to me ▼

Sat, 19 Nov, 03:03 (1 day ago)

EDCC Disease Alert

[View this email in your browser](#)



Go to <https://equinediseasecc.org/alerts> to see an outbreak update for **Equine Influenza in Kitsap County, Washington.**



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Our mailing address is:  
4033 Iron Works Parkways  
Lexington, KY 40511

Want to change how you receive these emails?  
You can [update your preferences](#) or [unsubscribe from this list](#)

Source: Canadian Animal Health Surveillance System





# EQUINE DISEASES

Year

All

Disease

All

Province

All

Result Date

19/07/2011 21/10/2022

Clear Filters

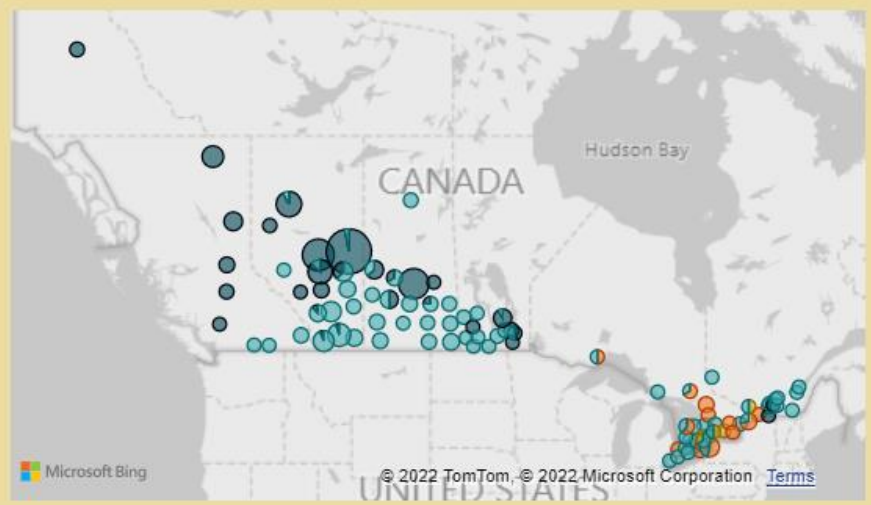
EEE and West Nile Data Updated 2022-09-29

EHV-1 Data Updated 2022-08-03

EIA Data Updated 2022-10-28

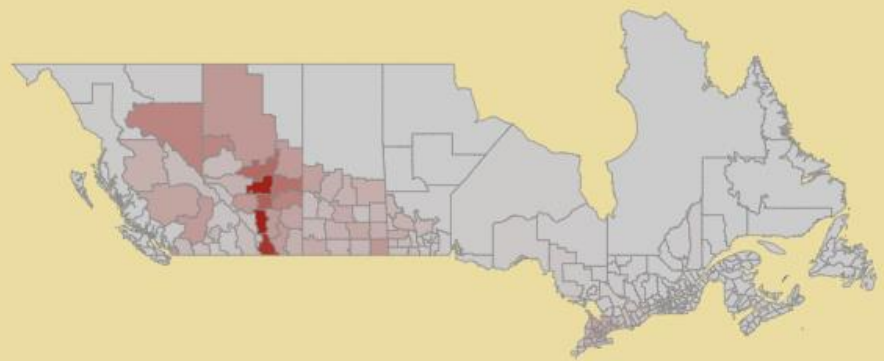
## Disease Cases by Census Division

Disease EEE EHV-1 EIA WNV



Note: In order to protect privacy, the dots are located in the centroid (geographic middle) of the given census sub-division/division and do not indicate a specific farm location.

## 2016 Horse Population by Census Division



Census Division

<>

Census Subdivision

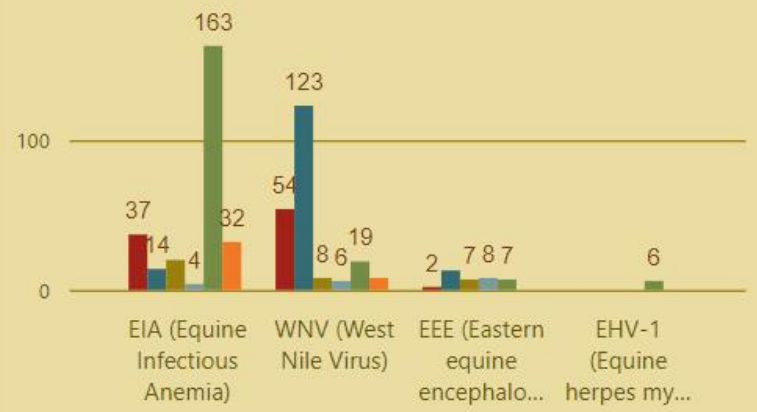
## Cases by Disease and Province

Disease EEE EHV-1 EIA WNV



## Cases by Disease and Year

Year 2017 2018 2019 2020 2021 2022



2020 Ontario: One WNV case likely travel related

2016 Census # of Farms Reported

39K

2016 Census # of Horses Reported

288K

# of Cases

531

EN <> FR



## EQUINE INFECTIOUS DISEASE SURVEILLANCE





**EQUINE INFECTIOUS DISEASE HELPLINE**

Veterinary epidemiologists at EIDS are able to provide **free advice** for veterinary surgeons dealing with **suspect or confirmed infectious disease occurrences in the UK**

 **01223 766496**

 **equinesurveillance@gmail.com**

We can help you every step of the way and assist with:

- how to make a diagnosis including the best samples to take and tests to run
- recommended control measures, tailor made to the population and premises set up
- if clearance testing is required and if so what, when and how to apply it
- prevention measures to consider in the future to protect the population

Equine Infectious Disease Surveillance (EIDS) is generously funded by the UK's Thoroughbred industry and is based at Cambridge University. The EIDS team collaborates with equine industry stakeholders to control and prevent equine infectious disease occurrences in the UK. They oversee numerous surveillance schemes to aid the identification and reporting of specific infectious disease occurrences and provide a disease control advice service for veterinary surgeons. EIDS also collate and share disease information, through platforms such as the International Collating Centre (ICC), EquiFluNet and the Equine Quarterly Disease Surveillance report, which is produced by EIDS in collaboration with BEVA and Defra/APHA.

# EIDS Equine Infectious Disease Surveillance

**SURVEILLANCE REPORT**  
Quarterly equine infectious disease reports

**INTERNATIONAL COLLATING CENTRE**  
Track international equine infectious disease reports

[ICC »](#)

**FLU SCHEME**  
Flu vaccination for horses and ponies



**International  
Collating Centre**

**INTERNATIONAL  
COLLATING CENTRE**

Track international equine infectious disease reports

[ICC »](#)

[Flu Scheme »](#)

# **EIDS International Collating Centre (ICC)**

- Concept of the ICC to disseminate equine infectious disease information was initiated at the International Breeders' Meeting held in California 29 October 1986
- ICC was established at the Animal Health Trust, Newmarket on 1 January 1987
- Before e-mail & web resources each subscribing country nominated a veterinary contact who reported quarterly to the ICC using dedicated reporting forms, usually faxed
- ICC distributed Quarterly Reports to subscribers worldwide, including only occasional interim reports





EIDS

# That was then – the ICC now....

Online web resource: <https://equinesurveillance.org/iccview/>

- Searchable with ICC data back to 1 January 2019
  - Period report tables
  - Country-level & regional-level maps with underlying summaries
  - Country-level reports
- **EIDS staff regularly monitor other equine & general surveillance resources to create almost daily reports**
  - Interim ICC e-mail with linked reports, created & sent to subscribers
- Quarterly summaries collated & e-mailed; archive available

EQUINE INFECTIOUS DISEASE  
SURVEILLANCE



INTERNATIONAL  
COLLATING CENTRE



## Gastrointestinal conditions

Country	Clostridial enterocolitis	Coronavirus	Lawsonia intracellularis	Rotavirus
France	-	-	-	3
Germany	-	1	-	-
Liechtenstein	-	-	1	-
Switzerland	1	1	-	-

## Neurological conditions

Country	EEE	EEV	EHV-1	EHV-4	Japanese Encephalitis	Rabies	Shuni virus	Tetanus	tick-borne encephalitis virus	WNV
Algeria	-	-	-	-	-	-	-	-	-	1
Argentina	-	-	1	-	-	-	-	-	-	-
Australia	-	-	-	-	1	-	-	-	-	-
Austria	-	-	1	-	-	-	-	-	-	-
Canada	-	-	3	-	-	-	-	-	-	-
Czechia	-	-	1	-	-	-	-	-	-	-
Finland	-	-	1	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-	8
Germany	-	-	3	-	-	-	-	-	-	5
Greece	-	-	-	-	-	-	-	-	-	1
Italy	-	-	2	-	-	-	-	-	-	23
Japan	-	-	-	-	-	-	-	1	-	-
Netherlands	-	-	2	-	-	-	-	-	-	-
South Africa	-	2	2	-	-	-	1	-	-	1
Switzerland	-	-	2	-	-	-	-	-	1	-
United Kingdom	-	-	3	-	-	-	-	-	-	1
United States of America	22	-	39	1	-	3	-	-	-	57

## Respiratory conditions

Country	EHV	EHV-1	EHV-1/-4	EHV-2	EHV-2 &-5	EHV-4	EHV-5	EHV co-infection	Influenza	Influenza/EHV-4 co-infection	Rhodococcus equi	Strangles	Strangles/Influenza
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Overview Period Report Tables - all diseases per country

Country and

Select Condition

WNV : Neurological

## Reports received from United Kingdom

Show 10 entries

Search:

On 6 November 2022, the Animal and Plant Health Agency (APHA) confirmed a case of WNV neurological disease in an unvaccinated seven-year-old Warmblood mare that started developing early clinical signs of muscle fasciculations and gait abnormalities during its return journey to the UK, after attending a competition event for several weeks in southern Spain. The case was admitted to a veterinary referral hospital in Hertfordshire on its return and clinical signs progressed to extensive muscle fasciculations most prominent over the face and shoulders, appearance of general discomfort and abnormal posture, reluctance to lower its neck and subsequently ataxia and hind limb weakness. After excluding neurological EHV-1, the positive diagnosis of WNV was confirmed by positive WNV IgM antibody detection ELISA in serum collected on 4 November 2022. Clinical signs quickly stabilised and gradually improved over subsequent days and the horse was discharged on 8 November for continued recuperation at home. Note of clarification: Given that the onset of signs was on the journey returning to the UK, this case most likely acquired WNV infection whilst located in southern Spain, an area of Europe that has previously recorded WNV infections in horses. As horses are incidental hosts for WNV and do not pose an infectious risk to other animals, humans, or mosquito vectors, there is no suggestion from this case that WNV is present and circulating in the UK. A case of suspected WNV neurological disease in a horse recently imported to the UK in October 2013 was previously reported [here](#) and [here](#). For further information about WNV, please see the [HBLB International Codes of Practice](#).

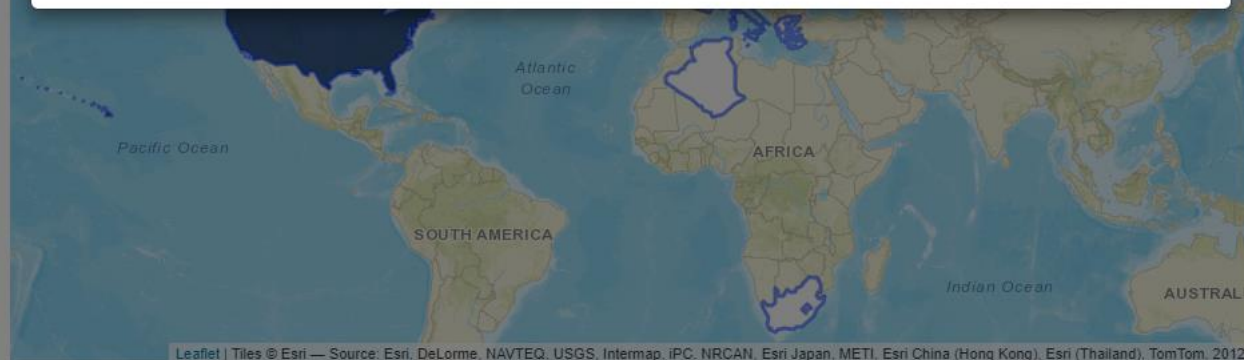
Showing 1 to 1 of 1 entries

Previous

1

Next

Dismiss



Leaflet | Tiles © Esri — Source: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012

all diseases Resources and Archive

per outbreak

Run Analysis





# International Collating Centre



[Overview](#)   [Period Report Tables - all diseases per country](#)   [Disease analysis - Country-level](#)   [Disease analysis - Region-level](#)   [Country Level Reports - all diseases](#)   [Resources and Archive](#)

## Region and period based spatial depiction of outbreaks reported with detailed information per outbreak

*NOTE: Not all outbreaks are reported on region level and outbreaks reported on a country level with no indication of the region will not feature in the region orientated analysis*

Select Condition

WNV : Neurological

Select report date range of interest

1 Jan 2022

to

21 Nov 2022

Run Analysis



Click on an affected area for total outbreak count and outbreak information







[Overview](#) [Period Report Tables - all diseases per country](#)

Period based on

Select report date range

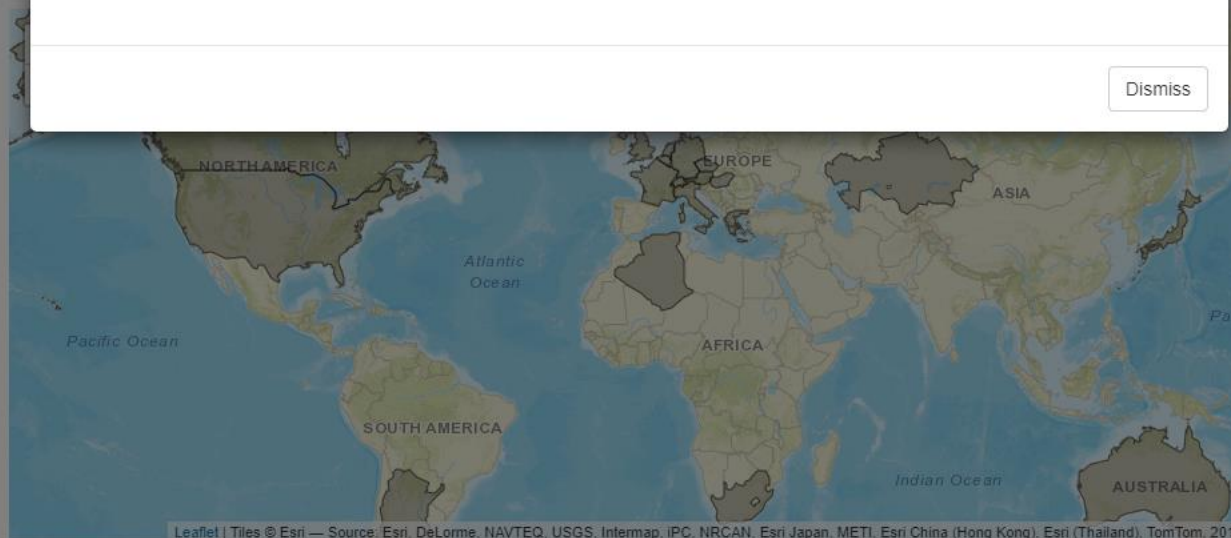
1 Jan 2022

to

## Reports received from United Kingdom for the period 01 Jan 2022 to 21 Nov 2022

Disease	Body system affected	Total outbreaks
CEM	Reproductive	2
EHV-1	Neurological	3
EHV-1	Reproductive	5
EHV-4	Reproductive	3
EHV-4	Respiratory	24
Influenza	Respiratory	19
Piroplasmosis	Miscellaneous	1
WNV	Neurological	1

Dismiss



[All diseases](#)

[Resources and Archive](#)

[Data by country](#)

[Data from this period](#)



## International Collatin



### Equine Surveillance

to Equine, bcc: me ▼

Dear all

Please find our recent notifications

If you would like to be removed from

#### Condition

**EHV-4 - Respiratory**

**WNV - Neurological**



## International Collating Centre Interim Notification

For full ICC event analysis please visit our [website](#)

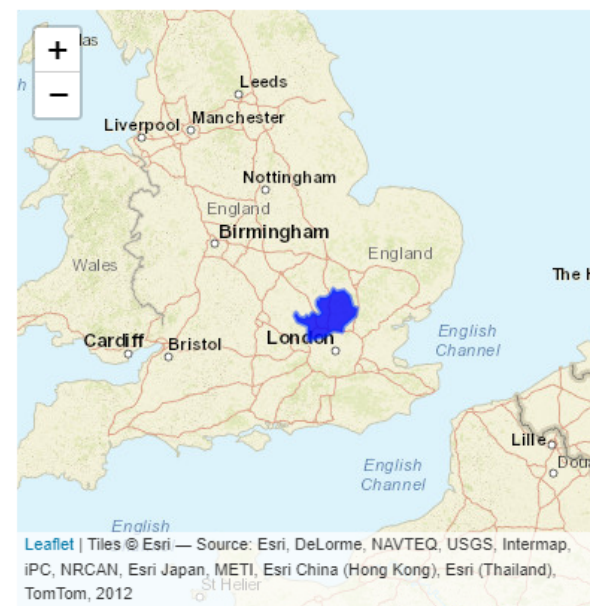
Report Date: 2022-11-06

Reported by: APHA

**United Kingdom - Hertfordshire**

**WNV - Neurological**

### Location of event



### Description

On 6 November 2022, the Animal and Plant Health Agency (APHA) confirmed a case of WNV neurological disease in an unvaccinated seven-year-old Warmblood mare that started developing early clinical signs of muscle fasciculations and gait abnormalities during its return journey to the UK, after attending a competition event for several weeks in southern Spain. The case was admitted to a veterinary referral hospital in Hertfordshire on its return and clinical signs progressed to extensive muscle fasciculations most prominent over the face and shoulders, appearance of general discomfort and abnormal posture, reluctance to lower its neck and subsequently ataxia and hind limb weakness. After excluding neurological EHV-1, the positive diagnosis of WNV was confirmed by positive WNV IgM antibody detection ELISA in serum collected on 4 November 2022. Clinical signs quickly stabilised and gradually improved over subsequent days and the horse was discharged on 8 November for continued recuperation at home. Note of clarification: Given that the onset of signs was on the journey returning to the UK, this case most likely acquired WNV infection whilst located in southern Spain, an area of Europe that has previously recorded WNV infections in horses. As horses are incidental hosts for WNV and do not pose an infectious risk to other



Welcome to the registration pages for TellTail, the Boehringer Ingelheim Animal Health text message alert service for Equine infectious diseases. This service will alert you to outbreaks of Equine Influenza and Equine Herpes Virus in the UK by text message to your mobile phone.

This is a free service for **UK-based** veterinary surgeons and professional keepers of horses.

Please complete the following fields:

☐ This service is for veterinary surgeons or professional keepers of horses only. Please confirm that you are a veterinary surgeon or professional keeper of horses in the UK.

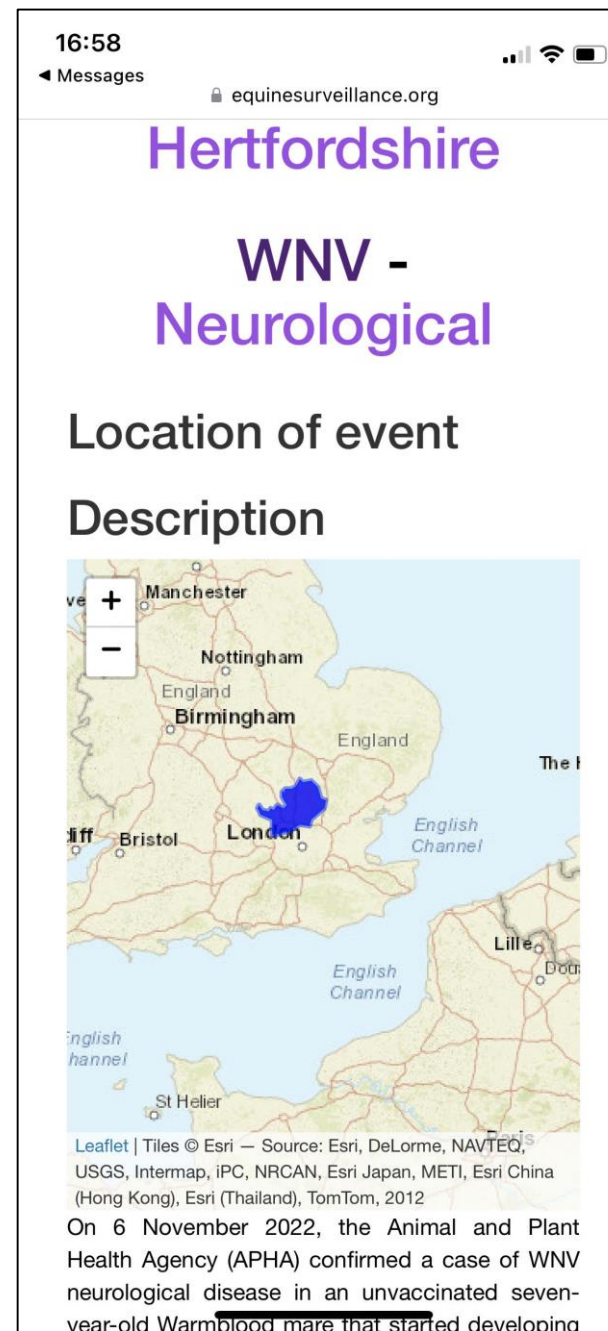
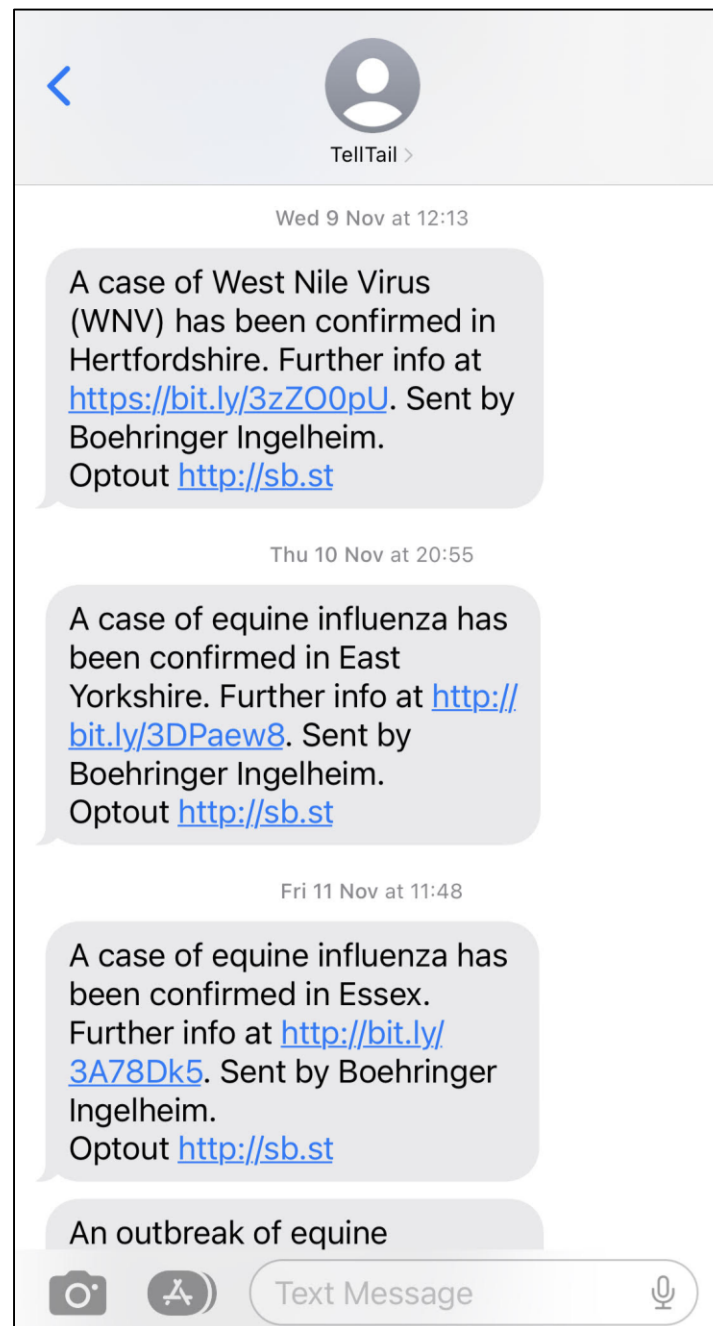
Please select your title

Please select

First Name

Last Name

Email Address







# EQUIFLUNET

[OVERVIEW](#)[ANALYSIS - UK](#)[ANALYSIS - GLOBAL](#)[RESOURCES - VETS](#)[RESOURCES - OWNERS](#)[HISTORICAL INFO](#)

## Summary of equine influenza outbreaks: UK and global focus

### Disclaimer

In this website an automated analysis of available data is made - the data should be treated in this regard and should not be utilised for any purpose beyond the exploratory viewing of equine influenza outbreaks. Please [email](#) us with any queries.

### Data considerations

We define **outbreaks** as discrete foci of infection, usually a premises, which may involve one or many animals. We avoid using the term **case(s)** due to a lack of firm data on the actual number of animals affected. Where multiple animals are reported to be clinically affected, we often receive a sample from only one of the clinically affected animals for laboratory testing. Please be aware that the outbreaks reported will only be reported if they have been **confirmed to be positive through laboratory testing of one or more of the affected animals**. Therefore there may be outbreaks that are not reported as they have not undergone laboratory testing or have not been sampled at an optimal time to obtain a positive test result.

The data presented 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 equine influenza frequency within the international equine population. A region with no reported outbreaks does not necessarily equate to the disease not being present in that region.

### Navigation

#### Analysis - UK and Global

- This section depicts where and when equine influenza occurred in the UK and the rest of the world respectively for the period selected.
- Use the date inputs to select a date range of interest and press the **ANALYSE** button to run the analysis
- The maps will show where, at region level for the UK and country level for the world, reported outbreaks have occurred and coloured by number of outbreaks reported
- Outbreak curves will show the progression of outbreaks.

#### Historical info

- This section contains links to reports, prior to 2019, on equine influenza occurrence in the UK

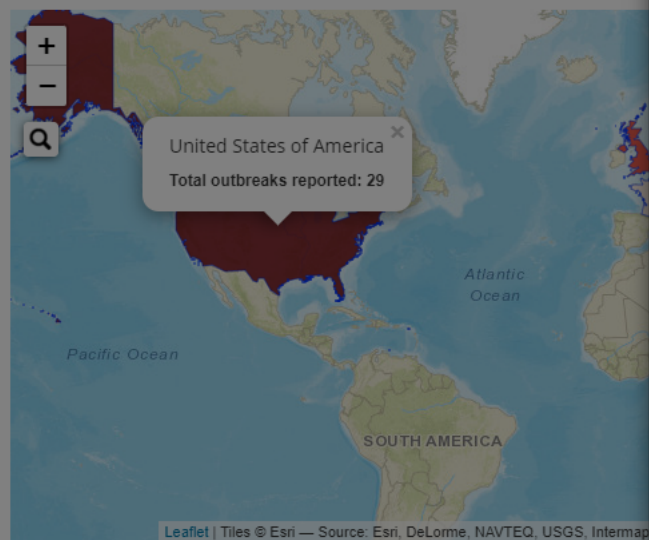




OVERVIEW

ANALYSIS - UK

Click on an affected area for total outbreaks



Country

Finland  
France  
Germany  
Netherlands

## Reports received from United States of America

Show 10 entries

Search:

On 17 November 2022, EDCC reported a case of EI in a recently purchased horse with an unknown vaccination history on a premises in King County, Washington. Voluntary quarantine measures are in place.

On 11 November 2022, EDCC reported an outbreak of EI in three animals on a premises in Kitsap County, Washington. One animal had recently returned from a show with clinical signs. Two further horses with clinical signs were tested and confirmed positive. Control measures including voluntary quarantine are in place.

On 10 November 2022, EDCC reported an outbreak of EI in two unvaccinated animals on a boarding facility in Grays Harbor County, Washington. Both animals are currently under private veterinary care.

On 9 November 2022, EDCC reported a case of EI on a premises in Thurston County, Washington. The animal is currently under private veterinary care.

On 8 November 2022, EDCC reported a case of EI on a premises in Thurston County, Washington. The affected animal was recently moved from a boarding, to a private facility.

On 27 October 2022, EDCC reported a case of EI on a quarantine facility in Providence County, Rhode Island. There is one further in-contact on the premises. Control measures including official quarantine are in place.

On 27 October 2022, EDCC reported an outbreak of EI in two animals on a premises in Sauk County, Wisconsin. One of the animals has also tested positive for EHV-4. The horses had participated in an out-of-state trail ride 10 days prior to the vet being called for examination and treatment. There are a further 2 in-contacts on the premises. Control measures including voluntary quarantine are in place.

On 26 October 2022, EDCC reported a case of EI in a 13-year-old Racking Horse gelding on a premises in Marion County, Alabama. Clinical signs included: inappetence, occasional coughing and bilateral nasal discharge. Control methods including voluntary quarantine are in place.

On 6 October 2022, EDCC reported a case of EI in a 17-month-old Saddlebred colt on a premises in Marquette County, Wisconsin. There are a further 22 in-contacts on the premises. Control measures including voluntary quarantine are in place.

On 15 August 2022, EDCC reported a case of equine influenza in a vaccinated 22-year-old Quarter Horse gelding on a premises in Benton County, Oregon. Clinical signs included unilateral nasal discharge. The animal is currently recovering and there is two further suspected cases on the premises. Control measures including voluntary quarantine are in place.

Showing 1 to 10 of 29 entries

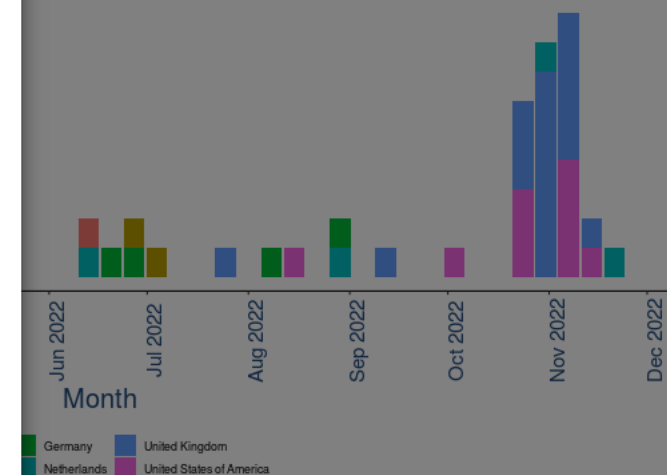
Previous 1 2 3 Next

Dismiss



HISTORICAL INFO

2022 in selected period



Total outbreaks

1  
1  
1  
1

1 Jan 2022 to 23 Oct 2022

Update analysis



# Surveillance of Equine Strangles

**01 Jan 22 to 23 Oct 22**

Chosen date range (data available from 05 Jan 15)

**135**

Total diagnoses with clinical signs represented

**46 %**

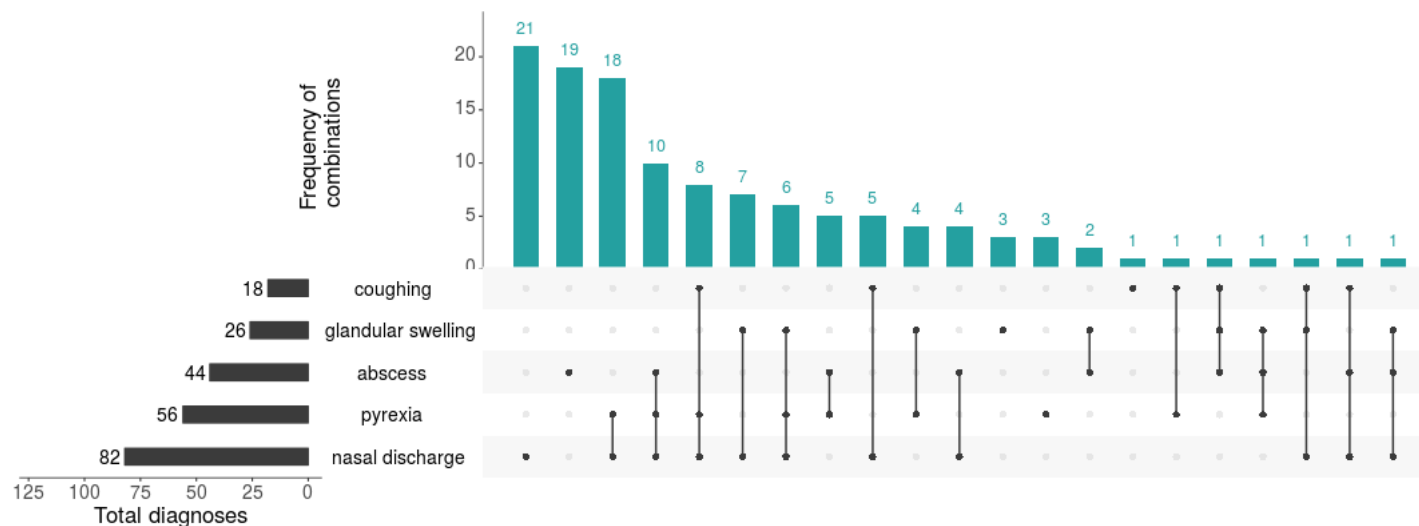
Percentage of diagnoses with clinical signs reported

**nasal discharge- 61 %**

Most commonly reported clinical sign



## Clinical signs reported- alone and in combination



## Evaluating this graphic

- This graph shows the clinical signs that have been reported for Strangles diagnoses
- Clinical signs are collated from all sampling events that each diagnosis is associated with (see home screen)
- The graph at the left shows the 5 clinical signs that are most frequently associated with diagnoses
- The graph on top shows the clinical signs that are reported together most often, with the linked dots below the graph indicating the associated combination
- Note that when one clinical sign is indicated in the top graph alone (i.e. no linking lines) this means that this clinical sign was reported alone and not in combination with any others for the diagnoses made
- For mobile users this graph is best viewed in landscape orientation

# EIDS Equine Infectious Disease Surveillance



## SURVEILLANCE REPORTS

Quarterly equine disease surveillance reports going  
back through 2004

[Reports »](#)

### ALERT SERVICE

Outbreak reports for vets, by text message, supported  
by Boehringer Ingelheim

[Sign up here »](#)

### HBLB FLU SCHEME

Horserace Betting Levy Board (HBLB) funded equine  
influenza surveillance scheme

[Flu Scheme »](#)



EQUIFLUNET

### EQUIFLUNET

Statistics of Equine Influenza outbreaks globally

[Equiflunet »](#)



### SURVEILLANCE OF EQUINE STRANGLES

UK diagnostic laboratory based surveillance network  
of positive diagnoses of Strangles

[Go to website »](#)

# EIDS Equine Infectious Disease Surveillance

[EIDS](#) [Home](#) [Surveillance reports](#) [ICC](#) [Equiflunet](#) [HBLB Flu Scheme](#) [Forms and Resources](#) [Vet CPD](#) [About](#) [News and Updates](#)



## SURVEILLANCE REPORTS

Quarterly equine disease surveillance reports produced by Equine Infectious Disease Surveillance (EIDS). To subscribe to these reports please [contact us](#)

### ARTICLES - CLICK QUARTER LINK TO VIEW REPORT

Show  entries

Search:

Quarter	Article type	Content
<a href="#">2022 Q3</a>	News	European-wide equine influenza vaccine shortage
<a href="#">2022 Q3</a>	Focus	Equine endoparasite resistance and its management – a veterinary practice perspective
<a href="#">2022 Q3</a>	News	Dechra launches ground-breaking strangles vaccine, Strangvac®
<a href="#">2022 Q2</a>	Focus	Virtual Eleventh International Equine Infectious Disease Conference (IEIDC XI) 2021 – A Brief Overview
<a href="#">2022 Q2</a>	News	Looking forward to the Twelfth International Equine Infectious Disease Conference (IEIDC XII) in Normandy, France in 2024 after a virtual IEIDC XI in 2021
<a href="#">2022 Q2</a>	News	Contagious Equine Metritis confirmed again in the United Kingdom
<a href="#">2022 Q2</a>	News	Equine herpes virus-1 neurological disease outbreak on a premises in Worcestershire
<a href="#">2022 Q1</a>	News	A case of contagious equine metritis in the United Kingdom
<a href="#">2022 Q1</a>	News	Consultation on Improvements to Equine Identification and Traceability in England is now open for responses until 28 June 2022
<a href="#">2022 Q1</a>	News	Japanese encephalitis in Australia 2022

Showing 1 to 10 of 208 entries

Previous [1](#) [2](#) [3](#) [4](#) [5](#) ... [21](#) Next

### HISTORICAL REPORTS

<a href="#">2022 Q3</a>	<a href="#">2020 Q4</a>	<a href="#">2017 Q4</a>	<a href="#">2014 Q4</a>	<a href="#">2011 Q4</a>	<a href="#">2008 Q4</a>	<a href="#">2005 Q4</a>
<a href="#">2022 Q2</a>	<a href="#">2020 Q3</a>	<a href="#">2017 Q3</a>	<a href="#">2014 Q3</a>	<a href="#">2011 Q3</a>	<a href="#">2008 Q3</a>	<a href="#">2005 Q3</a>
<a href="#">2022 Q1</a>	<a href="#">2020 Q2</a>	<a href="#">2017 Q2</a>	<a href="#">2014 Q2</a>	<a href="#">2011 Q2</a>	<a href="#">2008 Q2</a>	<a href="#">2005 Q2</a>
<a href="#">2021 Q4</a>	<a href="#">2020 Q1</a>	<a href="#">2017 Q1</a>	<a href="#">2014 Q1</a>	<a href="#">2011 Q1</a>	<a href="#">2008 Q1</a>	<a href="#">2005 Q1</a>
<a href="#">2021 Q3</a>	<a href="#">2019 Q4</a>	<a href="#">2016 Q4</a>	<a href="#">2013 Q4</a>	<a href="#">2010 Q4</a>	<a href="#">2007 Q4</a>	<a href="#">2004 Q4</a>
<a href="#">2021 Q2</a>	<a href="#">2019 Q3</a>	<a href="#">2016 Q3</a>	<a href="#">2013 Q3</a>	<a href="#">2010 Q3</a>	<a href="#">2007 Q3</a>	- Pilot
<a href="#">2021 Q1</a>	<a href="#">2019 Q2</a>	<a href="#">2016 Q2</a>	<a href="#">2013 Q2</a>	<a href="#">2010 Q2</a>	<a href="#">2007 Q2</a>	
	<a href="#">2019 Q1</a>	<a href="#">2016 Q1</a>	<a href="#">2013 Q1</a>	<a href="#">2010 Q1</a>	<a href="#">2007 Q1</a>	
	<a href="#">2018</a>	<a href="#">2015</a>	<a href="#">2012</a>	<a href="#">2009</a>	<a href="#">2006</a>	



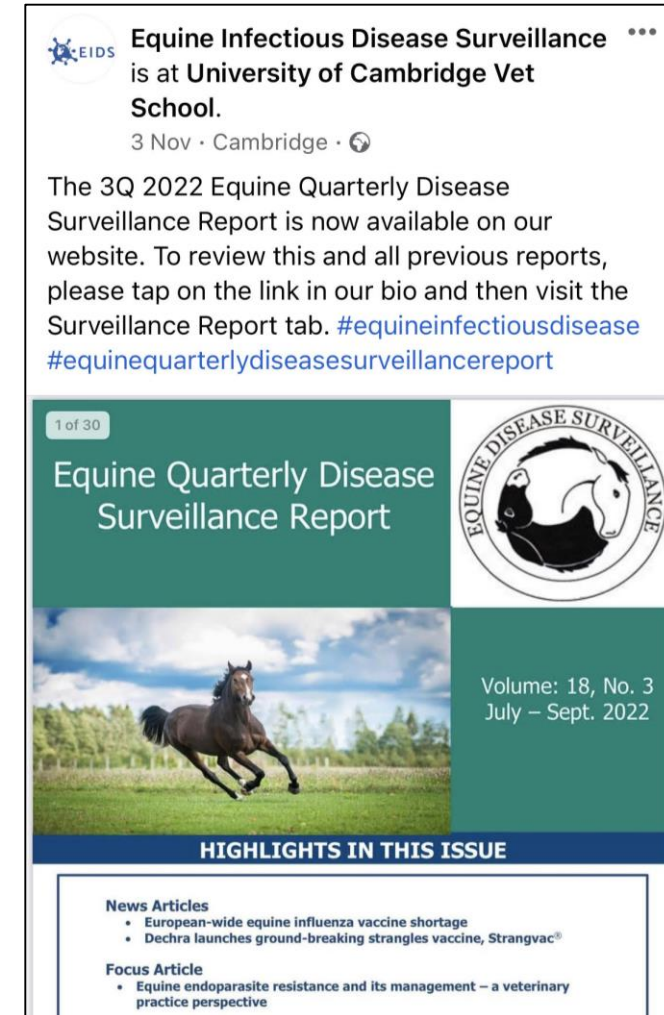
- UK disease reports issued since 2005
  - Equine Infectious Disease Surveillance (EIDS)
  - Defra/APHA (Government)
  - British Equine Veterinary Association (BEVA)
- Laboratory network
  - Veterinary practices with own laboratories
  - Government laboratories: APHA-SAC-AFBI
  - Commercial diagnostic laboratories
  - Veterinary schools





# What it involves

- **Network** of contributing laboratories
- **Reporting** of data on electronic forms
- **Collation** of reported laboratory data
- **Preparation** of quarterly reports
  - Including topical 'News' & 'Focus Articles'
- **Dissemination** of the information
  - Electronic mailing list & social media
  - BEVA e-news
  - EIDS website/ APHA Vet Gateway
  - Veterinary Record articles



**Vet Record**

# Equine Quarterly Disease Surveillance Report



Volume: 18, No. 2  
April – June 2022

## HIGHLIGHTS IN THIS ISSUE

### News Articles

- **Equine herpes virus-1 neurological disease outbreak on a premises in Worcestershire**
- **Contagious Equine Metritis confirmed again in the United Kingdom**
- **Looking forward to the Twelfth International Equine Infectious Disease Conference (IEIDC XII) in Normandy, France in 2024 after a virtual IEIDC XI in 2021**

### Focus Article

- **Virtual Eleventh International Equine Infectious Disease Conference (IEIDC XI) 2021 – A Brief Overview**

#### Important note:

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. For example they are influenced by factors such as owner attitude or financial constraints or are being conducted for routine screening as well as clinical investigation purposes. Consequently these data do not necessarily reflect true disease frequency within the equine population of UK.

## Surveillance

### Equine disease surveillance: quarterly update

#### News

##### Equine herpesvirus 1 neurological disease

An outbreak of equine herpesvirus 1 (EHV-1) neurological disease was confirmed on a thoroughbred training premises in Worcestershire on 7 June 2022. The index case was a nine-year-old unvaccinated thoroughbred gelding that presented on 1 June with clinical signs of bilateral conjunctivitis, lethargy and mild ataxia. It had been imported from mainland Europe and had arrived on the premises three weeks previously.

A nasopharyngeal swab tested for EHV-1 and EHV-4 by PCR was negative, but a blood sample tested by complement fixation confirmed recent exposure to EHV.

There were around 70 horses on the premises and these were split into discrete groups, with separate personnel and equipment, to stop the onward spread of the virus on the premises.

Movement restrictions were instigated to limit the spread of infection beyond the premises.

#### EQUINE DISEASE SURVEILLANCE HEADLINES, APRIL TO JUNE 2022

- Equine herpesvirus 1 neurological disease outbreak on a premises in Worcestershire
- Contagious equine metritis confirmed again in the UK
- Summary of UK disease surveillance for April to June 2022



#### EHV remains an ever-present threat to our equine population

An outbreak investigation, including tracings and diagnostic sampling of all horses on the premises, was undertaken. Equine Infectious Disease Surveillance (EIDS) advised on the outbreak investigation alongside the British Horseracing Authority (BHA) and the treating veterinary surgeon.

Investigatory testing was applied to the population to determine both current infectious status by nasopharyngeal swabs tested by PCR and prior (around 10–14 days) exposure status through complement fixation testing on serum samples. All horses were subject to daily clinical and temperature monitoring.

In total, 23 horses demonstrated clinical signs, with 16 horses showing neurological signs of varying severity, from mild ataxia through to recumbency, and two horses required euthanasia due to the severity of their signs. A number of the neurological horses also presented with an inability to urinate.

Additional diagnostic testing was conducted for clearance testing purposes, to determine if virus was no longer active on the premises and enable the lifting of movement restrictions. On 28 June the BHA, following consultation with EIDS about progress with laboratory testing and a satisfactory yard visit by a BHA vet, allowed the trainer to resume race entries for some horses

on the yard. On 5 July all restrictions were lifted.

EHV remains an ever-present threat to our equine population and the industry is reminded to take precautions to reduce the risk from occurrences of EHV. Practical information regarding the control and prevention of EHV is available at <https://bit.ly/3wgT73o>

#### Second case of contagious equine metritis in the UK this year

On 8 July 2022, for the second time this year and the fourth time since 2020, the UK's chief veterinary officer confirmed subclinical *Taylorella equigenitalis* infection, the cause of contagious equine metritis (CEM), in a non-thoroughbred stallion imported from mainland Europe.

The stallion is being treated with the assistance of a local veterinary surgeon listed as a BEVA-approved official veterinarian (OV), under the industry protocol for the control of CEM in accordance with the voluntary measures outlined in the Horserace Betting Levy Board (HBLB) International Codes of Practice and hence without the need for formal restrictions being served by Defra. In the UK, equine export OVs with reproduction experience and familiarity with the HBLB International Codes of Practice are eligible to register with BEVA to undertake this role.

The infection with *T. equigenitalis* was identified by qPCR assay by a BEVA-approved laboratory when samples were submitted for routine venereal infection screening before semen collection for artificial insemination, in accordance with the HBLB International Codes of Practice and BEVA Guide to the

#### ABOUT THIS REPORT

This report is produced by Equine Infectious Disease Surveillance (EIDS), based at the Department of Veterinary Medicine at the University of Cambridge. It is a shortened version of the full report for the quarter. The full report and all previous reports can be found at [www.equinesurveillance.org](http://www.equinesurveillance.org)

This report collates national equine disease data from multiple diagnostic laboratories and veterinary practices throughout the UK. The data presented are taken from various sources and must be interpreted with caution, as there is likely to be some bias in the way that samples are submitted for laboratory testing. For example, they are influenced by factors such as owner attitude or financial constraints, or are submitted for routine screening as well as clinical investigation purposes. Consequently, these data do not necessarily reflect true disease frequency in the UK equine population.



## Virology

The results of virological testing for April to June 2022 are summarised in Table 3. Please note, APHA's sample population is different to the other contributing laboratories as their tests are principally in relation to international trade.

Table 3: Results of virological testing, April to June 2022

	Samples tested (n)	Positive (n)	CLs (n)
<b>Serological Tests</b>			
<b>Reproductive/Systemic diseases</b>			
EVA ELISA	3167	28*	7
EVA VN	76	37*	3
EVA (APHA) VN	443	9*	1
EIA ELISA	2162	0	7
EIA Coggins	41	0	3
EIA (APHA) ELISA	0	0	1
EIA (APHA) Coggins	6293	0	1
EHV-3 VN	2	0	1
<b>Reproductive/Respiratory/Neurological disease</b>			
EHV-1/-4 CFT	589	11 <sup>†</sup>	1
EHV-1/-4 (APHA) CFT	4	1	1
<b>Respiratory diseases</b>			
ERV-A/-B CFT	27	0	1
Influenza HI	56	0	1
<b>Gastrointestinal disease</b>			
Adenovirus HI	56	1*	1
<b>Neurological disease</b>			
WNV (APHA) IgM ELISA	1	0	1
<b>Virus Detection</b>			
<b>Reproductive diseases</b>			
EHV-3 PCR	0	0	1
EVA VI	0	0	1
EVA (APHA) VI	4	0	1
EVA PCR	12	0	1
EVA (APHA) PCR	6	0	1
Papilloma virus PCR	1 <sup>©</sup>	0	1
<b>Reproductive/Respiratory/Neurological diseases</b>			
EHV-1 PCR	938	20	7
EHV-1 LAMP	49	0	2
EHV-1 VI	1	0	1
EHV-1 IFAT	4	3 <sup>d</sup>	1
EHV-4 PCR	938	19	7
EHV-4 LAMP	49	14	2
EHV-4 VI	1	0	1
<b>Respiratory diseases</b>			
EHV-2 PCR	33	1	1
EHV-5 PCR	33	1	1
ERV PCR	3	0	1
Influenza PCR	501	1	7
Influenza (APHA) PCR	51	0	1
Influenza LAMP	49	0	2
Influenza IFAT	1	0	1
<b>Gastrointestinal diseases</b>			
Equine coronavirus PCR	23	0	2
Rotavirus PCR	6	0	2
Rotavirus (strip test)	197	26	7
Hepacivirus & parvovirus PCR	4	0	1

## BOX 1: SUMMARY OF LABORATORY TESTING CARRIED OUT IN THE SECOND QUARTER OF 2022

Table A: Results of virological testing				Table B: Results of bacteriological testing				Table B: continued			
	Samples tested (n)	Positive (n)	CLs (n)		Samples tested (n)	Positive (n)	CLs (n)		Samples tested (n)	Positive (n)	CLs (n)
<b>Serological tests</b>				<b>Reproductive diseases</b>				<b>Miscellaneous continued</b>			
<b>Reproductive/systemic diseases</b>				<b>Reproductive diseases</b>				<b>Miscellaneous continued</b>			
EVA ELISA	3167	28*	7	CEMO <i>Taylorella equigenitalis</i> PCR	2675	1	9	<i>Borrelia burgdorferi</i> PCR	6	0	2
EVA VN	76	37*	3	BEVA				<i>B burgdorferi</i> ELISA	43	10	4
EVA VN APHA	443	9*	1	CEMO <i>T equigenitalis/asinenitalis</i> culture BEVA*	4247 <sup>†</sup>	0	17	<i>B burgdorferi</i> LF	3	0	1
EIA ELISA	2162	0	7	CEMO <i>T equigenitalis</i> PCR APHA	158	0	1	<i>Burkholderia mallei</i> (glanders) CFT APHA	8	0	1
EIA Coggins	41	0	3	CEMO <i>T equigenitalis</i> culture APHA	785	0	1	<i>Leptospira</i> PCR	6	2	3
EIA Coggins APHA	6293	0	1	CEMO <i>T asinenitalis</i> PCR APHA	158	0	1	* <i>Taylorella asinenitalis</i> and <i>Taylorella equigenitalis</i> are morphologically indistinguishable by culture so if a sample is positive by culture it should be screened for both species by multiplex PCR			
EHV-3 VN	2	0	1	CEMO <i>T asinenitalis</i> culture APHA	785	0	1	† The difference in numbers for <i>Taylorella equigenitalis/asinenitalis</i> , <i>Klebsiella pneumoniae</i> and <i>Pseudomonas aeruginosa</i> culture is due to the inclusion of general breeding endometrial swabs that required aerobic culture only			
<b>Reproductive/respiratory/neurological diseases</b>				<b>Reproductive/respiratory/neurological diseases</b>				# Reproductive tract samples only			
EHV-1/4 CFT	589	11 <sup>†</sup>	1	<i>Klebsiella pneumoniae</i> PCR <sup>‡</sup>	2675	27	9	§ Seropositivity may be attributed to disease exposure, vaccination, infection or carrier states			
EHV-1/4 CFT APHA	4	1	1	<i>K pneumoniae</i> culture <sup>‡</sup>	4415 <sup>†</sup>	27	18	# Seropositives include exposure to the virulent form of <i>R equi</i> or the presence of maternally derived antibodies			
<b>Respiratory diseases</b>				<i>K pneumoniae</i> capsule types 1,2,5 PCR	12	0	1	** Identified using PCR on faeces			
ERV-A/B CFT	27	0	1	<i>Pseudomonas aeruginosa</i> PCR <sup>‡</sup>	2675	19	9	†† Under the Zoonoses Order 1989, it is a statutory requirement to report and serotype positive cases for <i>Salmonella</i> species (a positive case may have repeat samples taken)			
Influenza HI	56	0	1	<i>P aeruginosa</i> culture <sup>§</sup>	4516 <sup>†</sup>	13	18				
<b>Gastrointestinal diseases</b>				<b>Respiratory diseases</b>							
Adenovirus HI	56	1 <sup>‡</sup>	1	<i>Streptococcus equi</i> PCR	1962	142	8				
<b>Neurological diseases</b>				<i>S equi</i> LAMP	87	32	2				
WNV IgM ELISA APHA	1	0	1	<i>S equi</i> culture	557	30	15				
<b>Virus detection</b>				<i>S equi</i> ELISA antigen A/C ISL <sup>§</sup>	4535	713	4				
<b>Reproductive diseases</b>				<i>S equi</i> ELISA M-protein IDVET	247	15	1				
EVA VI APHA	4	0	1	<i>Rhodococcus equi</i> culture	55	11	7				
EVA PCR	12	0	1	<i>R equi</i> PCR	35	11	6				
EVA PCR APHA	6	0	1	<i>R equi</i> ELISA	12	5 <sup>#</sup>	1				
Papilloma virus PCR	1 <sup>©</sup>	0	1	<b>Gastrointestinal diseases</b>							
<b>Reproductive/respiratory/neurological diseases</b>				<i>Campylobacter</i> culture	30	3	8				
EHV-1 PCR	938	20	7	<i>Clostridium perfringens</i> PCR	13	2	2				
EHV-1 LAMP	49	0	2	<i>C perfringens</i> culture	1	1	1				
EHV-1 VI	1	0	1	<i>C perfringens</i> toxin ELISA	345	6	4				
EHV-1 IFAT	4	3	1	<i>C perfringens</i> toxin LF	32	4	1				
EHV-4 PCR	938	19	7	<i>Clostridium difficile</i> PCR	14	2	2				
EHV-4 LAMP	49	14	2	<i>C difficile</i> toxin ELISA	341	29	4				
EHV-4 VI	1	0	1	<i>C difficile</i> LF	39	0	4				
<b>Respiratory diseases</b>				<i>Lawsonia intracellularis</i> PCR**	42	1	4				
EHV-2 PCR	33	1	1	<i>L intracellularis</i> IPMA	21	8	1				
EHV-5 PCR	33	1	1	<i>Salmonella</i> Typhimurium culture <sup>††</sup>	304	0	7				
ERV PCR	3	0	1	<i>Salmonella</i> Typhimurium PCR <sup>††</sup>	133	0	2				
Influenza PCR	501	1	7	<i>Salmonella</i> other species culture <sup>††</sup>	443	5	8				
Influenza PCR APHA	51	0	1	<i>Salmonella</i> other species PCR <sup>††</sup>	178	5	5				
Influenza LAMP	49	0	2	<i>Salmonella</i> Typhimurium APHA <sup>††</sup>	13	3	1				
Influenza IFAT	1	0	1	<i>Salmonella</i> other species APHA <sup>††</sup>	13	9	1				
<b>Gastrointestinal diseases</b>				<i>Escherichia coli</i> culture	2183	260	6				
Equine coronavirus PCR	23	0	2	<i>Enterobacter</i> culture	1789	93	5				
Rotavirus PCR	6	0	2	<b>Miscellaneous</b>							
Rotavirus (strip test)	197	26	7	MRSA culture	526	12	11				
Hepacivirus & parvovirus PCR	4	0	1								

\* Seropositives include vaccinated stallions  
† Ten of these were from one yard that had a neurological EHV-1 outbreak  
‡ Significant titre from single sample  
§ Sample submitted from ear

# SURVEILLANCE OF EQUINE STRANGLES

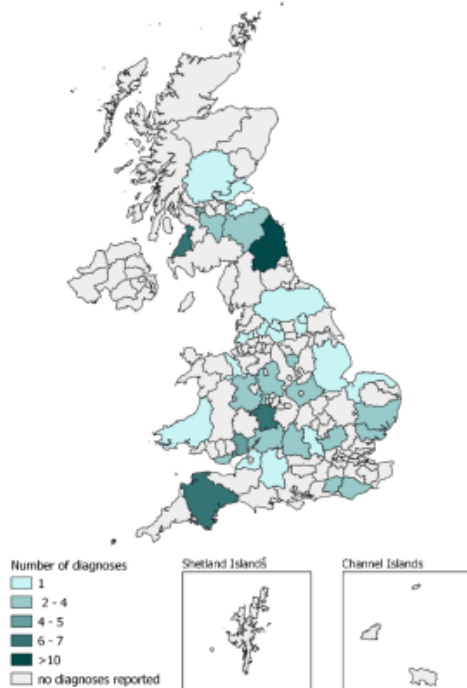
(1 April to 30 June 2022)



Q2 2022  
SES Laboratory

Surveillance of Equine Strangles (SES) is a Horse Trust funded surveillance project based at the Royal Veterinary College. The SES Laboratory network is comprised of ten diagnostic laboratories based across the UK.

A total of **87 positive diagnoses of *S. equi*** were reported by SES Laboratory during Q2 2022 from samples submitted by 48 veterinary practices in the UK. Information regarding reported samples is summarised in tabulated form.



**Fig. 1:** Frequency of reported laboratory diagnoses of *S. equi* across divisions of the UK from SES Laboratory during Q2 2022. Diagnoses are mapped by submitting vet practice location.

**Table 1:** *S. equi* samples reported 1 April to 30 June 2022

Total horses sampled	n	%
87	102	100%
<b>Sample type*</b>		
Swab	43	42%
Nasopharyngeal	31	72%
Abscess material	4	9%
Nasal	4	9%
Unspecified	4	9%
Guttural pouch lavage	49	48%
Chondroid	1	1%
Other	9	9%
<b>Diagnostic tests</b>		
PCR only requested	80	92%
PCR and culture requested	7	8%
Culture only requested	0	0%
<b>Signalment</b>		
Sex of horse indicated	64	74%
Female	37	58%
Male	27	42%
Breed of horse	52	60%
Native UK pony	12	23%
Native UK horse	15	29%
Sports horse	20	38%
Non-UK native horse/pony	2	4%
Crossbreed	2	4%
Donkey	1	2%
Age of Horse	40	46%
Range	1 month - 24 years	
(IQR)	(1 - 10 years)	
Median	5 years	
<b>Clinical signs reported***</b>	79	
Nasal discharge	22	28%
Pyrexia	17	22%
Coughing	5	6%
Other	5	6%
Abscess	14	18%
Chondroids	2	3%
Glandular swelling	8	10%
Respiratory noise	4	5%
Guttural pouch empyema	2	3%
<b>Reason for sampling reported</b>	60	69%
<b>Total reasons*</b>	71	
Clinically ill horse	26	37%
Seropositive strangles ELISA	10	14%
In contact	7	10%
Post infection screening	14	20%
Strangles suspected	12	17%
Other	2	3%

\*can include multiple entries per submission

\*\*\*From 44 diagnoses

Ayrshire. The affected case was an unvaccinated 12-year-old pregnant mare that presented with respiratory disease and there were eight in-contacts.

A second case was reported on 6 May 2022 on a premises in Ayrshire. The affected horse was an unvaccinated four-year-old sports horse mare that presented with a mucopurulent nasal discharge on 29 April 2022. There were approximately 20 horses on the premises.

A third case was reported on 11 May 2022 in an unvaccinated five-year-old warmblood mare on a premises in Ayrshire. Clinical signs included pyrexia, lethargy, cough and serous nasal discharge. Positive diagnosis was confirmed on 1 May 2022. There were 20 animals on the premises with eight direct in-contacts, two of which had clinical signs.

In all three cases, the positive diagnosis was confirmed by LAMP on a nasopharyngeal swab.

On 21 June 2022, Axiom Laboratories reported a case of EHV-4 respiratory infection in an unvaccinated 36-year-old Shetland pony mare on a premises in Kent. Clinical signs included inappetence, lethargy, lymphadenopathy and serous nasal discharge. Positive diagnosis was confirmed by PCR on a nasopharyngeal swab on 7 June 2022. There were a further 14 in-contacts, none of which was displaying clinical signs.

## Strangles

Surveillance of Equine Strangles (SES) is a Horse Trust-funded surveillance project based at the Royal Veterinary College. The SES Laboratory network comprises 10 diagnostic laboratories across the UK.

The frequency of reported laboratory diagnoses of *Streptococcus equi* across the UK in the second quarter of 2022 is shown in Fig 1. A total of 87 positive diagnoses were reported by SES laboratory between April and June 2022 from samples submitted by 48 veterinary practices in the UK. Details of the submitted samples and

## EQUINE INFLUENZA SURVEILLANCE SCHEME

The HBLB equine influenza sentinel practice testing scheme, through which veterinary surgeons suspecting equine influenza can submit samples for PCR testing with the cost of the laboratory testing covered by the scheme, has recently been restored, with testing conducted by arrangement by Rosdals Laboratories. Veterinary surgeons wishing to use this scheme can sign up at [www.equine-surveillance.org](http://www.equine-surveillance.org)

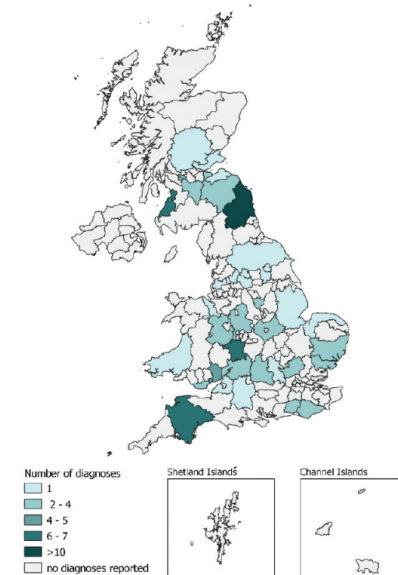
affected animals are summarised in Table 1.

## SES research update

Current research from the SES network is aiming to further understand how horse owners are managing their strangles outbreaks and what factors may have led to the transmission of *S. equi* through the UK's horse population.

Data collection is still underway, but while there are increased horse movements throughout the summer months, it is timely to share some preliminary results to help emphasise and remind colleagues to stay apprised of infectious disease dynamics and factors that may contribute to transmission.

**Fig 1:** Frequency of laboratory-reported diagnoses of *Streptococcus equi* across the UK during the second quarter of 2022. Diagnoses are mapped by the submitting veterinary practice



**Table 1:** Details of *Streptococcus equi* positive diagnoses reported by SES Laboratory in the second quarter of 2022

	Number
Total horses sampled	87
Total samples submitted*	102
<b>Sample type</b>	
Swabs	43
Nasopharyngeal	31
Nasal	4
Abscess material	4
Unspecified	4
Guttural pouch lavage	49
Chondroid	1
Other samples	9
<b>Testing requested</b>	
PCR only	80
PCR and culture	7
<b>Other details</b>	
<b>Sex reported</b>	64
Female	37
Male	27
<b>Breed reported</b>	52
UK native pony	12
UK native horse	15
Sports horse	20
Non-UK native horse/pony	2
Crossbreed	2
Donkey	1
<b>Age reported</b>	40
Median	5 years
<b>Clinical signs reported</b>	79 <sup>1</sup>
Nasal discharge	22
Pyrexia	17
Abscess	14
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Chondroids	2
Respiratory noise	4
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Coughing	5
Other	5
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\* Can include multiple per horse  
From 44 diagnoses



## Virtual Eleventh International Equine Infectious Disease Conference (IEIDC XI) 2021 - A Brief Overview

Dr Julia H. Kydd<sup>1</sup>, Professor Martin Nielsen<sup>2</sup>, Dr Andrew Waller<sup>3</sup>

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### Introduction

The Eleventh International Equine Infectious Diseases Conference (IEIDC XI) was due to be held in 2020, in the beautiful resort of Deauville, France. When planning began in 2016, who could have imagined that a coronavirus pandemic would force the International and Local Organising Committees to take the hugely disappointing decision to postpone the conference to 2021. But in the face of adversity, the equine infectious disease community rallied round and submitted over 130 high quality abstracts so that IEIDC XI went ahead, albeit on-line from 27 September to 1 October 2021. This was facilitated by generous financial support from sponsors, to which the International Committee would like to express their thanks <https://eidc2021.com/current-sponsors>.

### The challenges of a virtual format

Organising an on-line conference presented logistical challenges. These were overcome by the engagement of a specialist company (Omnipress) to develop a Virtual Meeting Platform and the decision to ask presenters to pre-record their oral presentations by following detailed instructions; this avoided internet glitches. Delegates could access the event via the Virtual Meeting Platform which included links to each abstract and video as well as a search facility (Fig. 6).

Feedback suggested that presenters liked the ease of recording their videos and the overall format of the virtual conference. Live question and answer sessions were limited to speakers and moderators, with delegates asking questions by an on-line chat facility; feedback highlighted this as a limitation, as most delegates preferred face-to-face discussions. Sponsor packages also required imagination to provide electronic publicity options e.g. direct links to a sponsor's website with short promotional videos (Fig. 7).



**Fig. 6** Screenshots to show examples of events during the on-line International Equine Infectious Diseases Conference (IEIDC XI) in 2021: a) virtual meeting platform. Note icons to view video, abstract or Q&A; b) pre-recorded video presentation of a research abstract. Note the on-line discussion box and c) a live panel discussion during the Practitioners' Day.



**Fig. 7** Example of publicity given to sponsors in recognition of their support of a Practitioners' Day plenary presentation.

## Surveillance Focus

## Reflecting on the 11th International Equine Infectious Diseases Conference

Julia Kydd, Martin Nielsen and Andrew Waller highlight some of the key presentations given at last year's 11th International Equine Infectious Diseases Conference, which was held virtually.

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### Challenges of a virtual format

Organising an online conference presented logistical challenges. These were overcome by engaging a specialist company to develop a virtual meeting platform and asking presenters to pre-record their oral presentations; this avoided internet glitches. Delegates accessed the event via the virtual meeting platform, which included links to each abstract and video as well as a search facility.

Feedback suggested that presenters liked the ease of recording their videos and the overall format of the virtual conference. Live question and answer sessions were limited to speakers and moderators, with delegates asking questions via an online chat facility; feedback highlighted this as a limitation, as

most delegates preferred face-to-face discussions.

Overall the feedback indicated that the conference was a success and it is likely that future conferences will consist of both in-person and online formats.

### Structure of the conference

IEIDC XI consisted of four days of scientific sessions involving plenary, oral and poster presentations and a practitioners' day, which included short plenary presentations and panel discussions. All abstracts were peer-reviewed. The abstracts and video recordings of all presentations and discussions are available to registered delegates until 30 September 2022. (It is still possible to register for either or both

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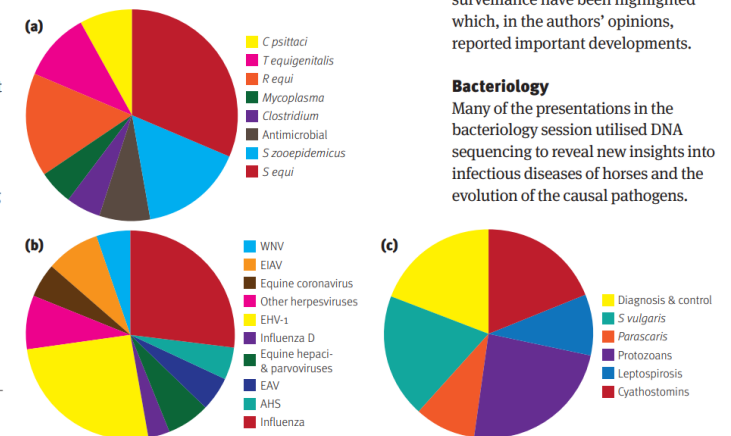
sessions; email Martin Nielsen, [martin.nielsen@uky.edu](mailto:martin.nielsen@uky.edu), for details.) In addition, the peer-reviewed scientific abstracts are now published (*Equine Vet J* 2021;53[suppl 56]:1–83) and are available open access at <https://bit.ly/3CkjjUQ>

### Content of the conference

A total of 130 abstracts described research findings related to bacteriology, parasitology and virology (Fig 1), with the remainder covering more general but still important topics such as disease diagnosis and reporting, in vitro models or multiple pathogens. Within this brief overview, it is impossible to mention every abstract, so for each discipline, a small number of oral presentations relating to disease surveillance have been highlighted which, in the authors' opinions, reported important developments.

### Bacteriology

Many of the presentations in the bacteriology session utilised DNA sequencing to reveal new insights into infectious diseases of horses and the evolution of the causal pathogens.



**Fig 1:** Topics of the abstracts presented at the conference by discipline; (a) bacteriology, (b) virology, (c) parasitology

Julia Kydd, School of Veterinary Medicine and Science, University of Nottingham, UK

Martin Nielsen, Gluck Equine Research Center, University of Kentucky, USA

Andrew Waller, Intervacc, Sweden



## 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.



International  
Collating Centre

National and international equine disease outbreaks are reported on a daily basis by the ICC, through email alerts. Please contact [equinesurveillance@gmail.com](mailto: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 <i>abortus equi</i>	S. zooepidemicus
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 Français 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 Holstein. Positive diagnoses were confirmed by PCR on genital swabs.

## UK Report on Post-Mortem Examinations

(1 April to 30 June 2022)

Details about post-mortem examinations were reported by four UK Veterinary and three other contributing laboratories. Data from each laboratory is organised by the laboratories' regional locations. There may be more than one laboratory reporting information for each region.

### East and South East of England

Nine **aborted fetuses** were reported as follows:

- One case of umbilical cord torsion.
- Two cases of bacterial placentitis; one due to *Escherichia coli* and the other with additional fetal pneumonia.
- Two cases of abortion related to EHV-4 infection.
- One case of congenital craniofacial malformation with carpal contracture and funisitis.
- One case of excessive umbilical cord length with urachal dilation, bladder distension and chorionic mineralisation as a result of ischaemia.
- Two cases were non-diagnostic as a result of the fetuses being incomplete.

Four **neonatal foal deaths** were reported as follows:

- Two cases reported as peri-partum death, suspected to be due to dystocia.
- One case of neonatal isoerythrolysis.
- One male pseudo-hermaphrodite with inguinal small intestinal herniation.

One **cardiovascular** case was reported as follows:

- Post-foaling uterine artery rupture with haemoabdomen and concurrent acute laminitis.

Six **gastro-intestinal** cases were reported as follows:

- One case of colic due to epiploic foramen entrapment.
- One case of gastroduodenal ulceration syndrome with duodenal stricture.
- One case of enterocolitis with evidence of mild endoparasitism (ascarids and small strongyles) but otherwise no specific aetiology was identified.
- One case of a gastric foreign body, (a wire), leading to peritonitis, abdominal abscessation and embolic pneumonia.
- One case of acute gastric impaction. Histopathology confirmed congestion in the lungs and oedema, congestion in the kidneys and spleen and ascending colon, mucosa and submucosa; diffuse moderate oedema.
- One case of volvulus of the right ventral colon with marked segmental mural oedema and necrosis.

Ten **musculoskeletal** cases were reported as follows:

- Three cases of acute fracture: one of the proximal sesamoid bone, one catastrophic pelvic fracture and one traumatic radial fracture.
- One fracture of the proximal phalanx with associated periosteal new bone formation.
- One chronic pelvic fracture which led to dystocia.
- One case of cervical intervertebral disc degeneration.
- A traumatic cervical vertebral fracture with pulmonary haemorrhage.
- One case of synovial sepsis with subsequent development of peritonitis and meningitis.
- One septic calcaneal bursa with cellulitis, embolic pneumonia and laminitis.
- One case of desmitis of the accessory ligament of the superficial digital flexor tendon with recurrent intrasynovial haemorrhage.

Four **respiratory** cases were reported as follows:

- One case of chronic septic pleuropneumonia with abscessation.
- One case of chronic guttural pouch empyema.



# Concluding remarks

- Many online resources are now available
- Can be used to (partially) monitor global equine disease occurrence
- The International Collating Centre tries to collate in real-time data from as many resources as possible
- ICC is happy to add new subscribers & especially new submitters from countries that are new to ICC
  - Just email us at [equinesurveillance@gmail.com](mailto:equinesurveillance@gmail.com)!