EQUINE DISEASE SURVEILLANCE

2025 Q2 QUARTERLY REPORT

Produced by:

EIDS
Equine Infectious Disease Surveillance

UNIVERSITY OF CAMBRIDGE
Department of Veterinary Medicine

EQUINE DISEASE SURVEILLANCE QUARTERLY REPORT

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INTRODUCTION

Welcome to the equine disease surveillance report for the second quarter of 2025, produced by Equine Infectious Disease Surveillance (EIDS), based in the Department of Veterinary Medicine at the University of Cambridge.

National disease data are collated through multiple diagnostic laboratories and veterinary practices throughout the United Kingdom, providing a more focused insight into the occurrence of equine infectious disease. Due to the global mixing of the equine population through international trade and travel, collaboration on infectious disease surveillance between countries occurs on a frequent basis to inform and alert. Both national and international information will be summarised within this report.

Any comments and feedback on the report are welcomed and we encourage contributions on focus articles. To view previous reports, see www.equinesurveillance.org and to receive reports free of charge, via email on a quarterly basis, please contact equinesurveillance@vet.cam.ac.uk.

HIGHLIGHTS IN THIS ISSUE

NEWS ARTICLES:

- Enhancing equine infectious disease surveillance in the UK: Launch of a new online case reporting platform
- Important update: Changes to the West Nile fever 'Test To Exclude' (TTE) scheme
- Equip Artervac - back in stock
- Making the BEST of Strangles Awareness Week

FOCUS ARTICLE:

- West Nile virus in horses: The latest on surveillance, diagnosis and prevention in a changing landscape

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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.

WITH THANKS TO THE FOLLOWING SUPPPORTERS

Department for Environment Food & Rural Affairs

BEVA

Llywodraeth Cymru Welsh Government

Department of Agriculture, Environment and Rural Affairs

Scottish Government Riaghaltas na h-Alba gov.scot

NEWS ARTICLES

ENHANCING EQUINE INFECTIOUS DISEASE SURVEILLANCE IN THE UK: LAUNCH OF A NEW ONLINE CASE REPORTING PLATFORM

Equine influenza (EI) and equine herpes virus -1 and 4 (EHV-1 and EHV-4) remain endemic in the UK, with ongoing potential to significantly impact equine health, welfare and industry operations. Timely and robust surveillance is critical to support early outbreak detection, inform disease control strategy and guide the development of future preventive measures. However, comprehensive epidemiological data have historically been limited, in part due to challenges in accessible reporting mechanisms.

In response, the Equine Infectious Disease Surveillance (EIDS) team at the University of Cambridge has developed and launched a new online case reporting platform designed to streamline the submission of confirmed EI and EHV-1/-4 cases by veterinary professionals. The system is mobile-optimised and can be completed in under two minutes, enabling efficient reporting by veterinary surgeons and nurses in clinical settings.

Cases may be reported following either laboratory confirmation or in-house diagnostic testing. In addition, for samples tested at participating diagnostic laboratories, positive results will include embedded reporting links, further simplifying the process.

An important feature of the system is the option to consent to anonymous, county-level case notification via the International Collating Centre (ICC). Where consent is provided, cases may also contribute to the Tell-Tail alert system - a free service that notifies UK veterinary professionals of recent UK equine infectious disease activity. No identifiable data regarding individual horses, clients or premises are ever published. All submitted data are held securely and used exclusively for surveillance, educational and research purposes.

WHAT HAPPENS TO THE OUTBREAK DATA?

- Information is logged in a secure, encrypted database & access is restricted to the EIDS surveillance team
- Outbreak information is anonymised and reported at the county level only
- An example of an anonymous, county level outbreak report:

Equine influenza: Essex, UK

On [insert date], EIDS reported a case of equine influenza in an unvaccinated three-year-old non-Thoroughbred that had recently arrived onto a premises in Essex. Clinical signs include: pyrexia, inappetence, mucopurulent nasal discharge and a dry harsh cough. Positive diagnosis was confirmed by PCR on a nasopharyngeal swab tested by [insert laboratory].

NEWS ARTICLES

The platform is designed to enhance the quality and timeliness of epidemiological data collected, supporting both national and international surveillance frameworks. Veterinary practices across the UK are encouraged to contribute to this initiative, thereby supporting evidence-based biosecurity planning and outbreak management across the sector.

- Submit confirmed cases: www.equinesurveillance.org/diseasereporting
- Watch a video introducing this new system: https://vimeo.com/1098423625
- Infographic for owner awareness around surveillance here: https://equinesurveillance.org/landing/resources/EIDS_Contribute_to_disease_surveillance.pdf
- Enquiries: equinesurveillance@vet.cam.ac.uk

The EIDS team acknowledges the continued collaboration of the UK veterinary community and welcomes feedback to further enhance the utility of this reporting tool.

IMPORTANT UPDATE: CHANGES TO THE WEST NILE FEVER 'TEST TO EXCLUDE' (TTE) SCHEME

Private Veterinary Surgeons (PVS) in Great Britain can now submit samples directly to APHA Weybridge under the West Nile virus (WNV) Test to Exclude (TTE) scheme without the need to telephone APHA in advance. This change streamlines the submission process, making it easier for veterinary professionals to rule out West Nile fever (WNF) as part of their differential diagnoses. Given the increasing frequency of WNV outbreaks across Europe and the presence of competent mosquito vectors in the UK, heightened awareness among veterinary professionals is essential, particularly during the summer and autumn months when vector activity is most pronounced.

It is essential to note that the TTE scheme is only appropriate where WNF is considered highly unlikely and the intention is to exclude it, rather than where it is clinically suspected. In suspected cases of WNF or any other notifiable disease, PVSs must continue to report directly to APHA using the standard notifiable disease reporting procedures.

This update complements the focus article in this edition of the EQDSR:
'West Nile virus in horses: The latest on surveillance, diagnosis and prevention in a changing landscape'. The article provides a timely overview of WNV's epidemiology, clinical features, and the evolving risks posed by changing climatic and ecological conditions.

It also outlines current UK and international surveillance strategies, highlights the role of vaccination and biosecurity, and discusses recent changes to the TTE scheme in greater detail. To read the full article, see the Focus Section of this EQDSR.

Further information on the WNV TTE can be found here: www.gov.uk/government/publications/horses-west-nile-virus-test-wnv02/test-to-exclude-west-nile-virus-in-horses

EQUIP ARTERVAC - BACK IN STOCK

With Zoetis announcing the re-availability of the Equip Artervac vaccine for Equine Viral Arteritis (EVA) in the UK in June 2025, new guidance has been released to support equine veterinary professionals in the re-vaccination and testing of stallions and teasers whose vaccination status has lapsed. The guidance, compiled by EIDS, outlines best-practice protocols to ensure compliance with current EVA control measures and to support the responsible use of Equip Artervac. It includes a practical decision tree to assist veterinary surgeons in determining the correct vaccination and testing pathway.

Key requirements include:

- Blood sampling at the time of the first dose in the restarted primary course, with this sample being paired with a stored sample to confirm negative or stable positive titres, thus assuring that the horse has not had exposure to equine arteritis virus (EAV)
- A second vaccine dose administered three to six weeks later
- Continuation of six-monthly boosters in accordance with the vaccine datasheet

This approach ensures accurate monitoring and documentation of serological status, supporting both disease control and breeding clearance requirements. Veterinary surgeons are strongly encouraged to review the full guidance to ensure appropriate certification and biosecurity practices are maintained.

Access the full guidance document: www.equinesurveillance.org/landing/resources/June2025-EIDS-Artervac-Vaccine-Update.pdf

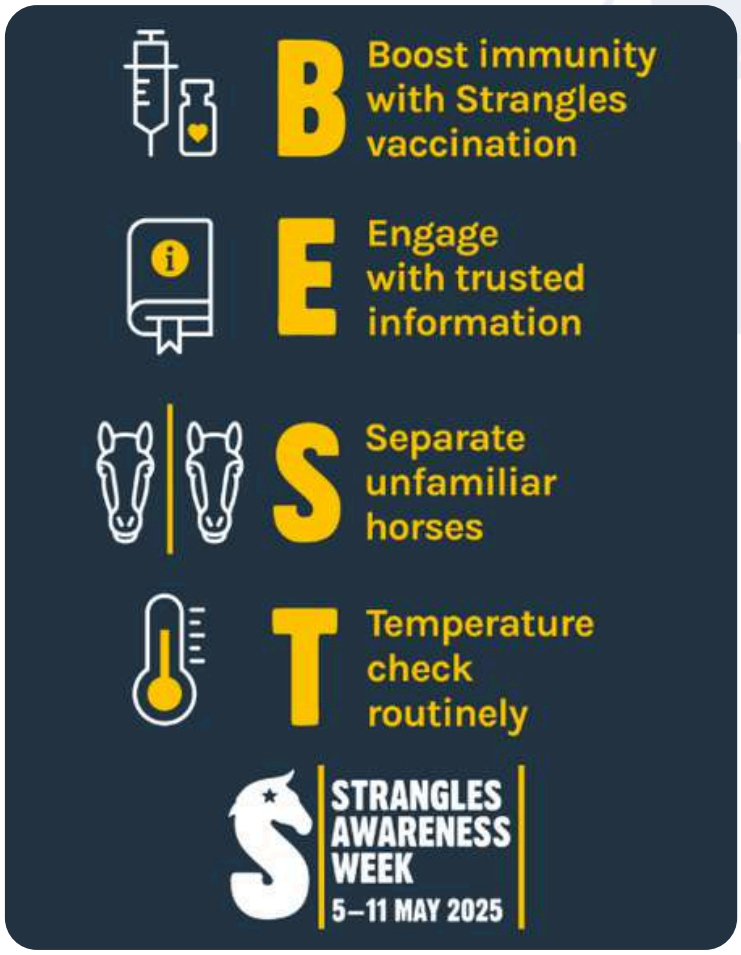
For further enquiries, contact the EIDS team at: equinesurveillance@vet.cam.ac.uk

NEWS ARTICLES

MAKING THE BEST OF STRANGLES AWARENESS WEEK

While our understanding of strangles prevention, diagnosis and treatment continues to improve thanks to ongoing research, the gap between knowledge and action remains a challenge as we seek to reduce cases of *Streptococcus equi* infections in the UK equine population.

Strangles Awareness Week (SAW) aims to bridge that gap by sharing positive, accessible content in the first week of May each year to encourage wider adoption of good biosecurity habits. In 2025, SAW again adopted its BEST actions, developed for SAW 2024 and based around practical, adaptable steps proven to help reduce the spread of strangles.



SAW 2025 reached more than 5 million people on social media, with additional engagement achieved through print articles and in-person events such as veterinary client evenings. Digital content included a simple 'Strang-facts' quiz that achieved a reach of over 170,000 on Instagram; and a video of budding dressage horse Indigo receiving his first strangles vaccine, which has been viewed more than 30,000 times on YouTube and been translated into six languages!

In addition to the team of 10 SAW Collaborators, the success of SAW lies in active support from almost 1,000 SAW Ambassadors, many of whom share posts, or create their own content. More than 40 equine veterinary practices helped spread the word this year, alongside farriers, equine dental technicians, professional riders, equestrian sporting organisations, yard managers and horse owners. This diversity of support reflects the fact that infectious disease is vital to the whole sector and is a topic that can and should bring people together.

Rooting the campaign in achievable actions and acknowledging the range of circumstances affecting grass-roots biosecurity choices is key to moving beyond information-sharing to encourage wider adoption of the BEST steps. As always, understanding the people who live and work with horses is as important as understanding strangles itself if we are to be effective in tackling the continued prevalence of the disease.

To find out more and become a SAW Ambassador, go to www.redwings.org.uk/strangles/strangles-awareness-week

WEST NILE VIRUS IN HORSES: THE LATEST ON SURVEILLANCE, DIAGNOSIS AND PREVENTION IN A CHANGING LANDSCAPE

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*Equine Infectious Disease Surveillance (EIDS), †University of Cambridge, Department of Veterinary Medicine student, ^Animal and Plant Health Agency (APHA)

Introduction

West Nile virus (WNV), the cause of West Nile fever (WNF) is a vector-borne flavivirus transmitted by mosquitoes. First identified in Uganda in 1937, WNV has since emerged across Africa, West and Central Asia, the Middle East, North America and South America, and parts of Europe. With changing patterns of distribution driven by climatic, ecological, and anthropogenic factors. The increasing frequency and geographic spread of WNV outbreaks across Europe has heightened concern about potential incursion into the UK, particularly as competent mosquito vectors are already present and environmental conditions continue to shift to support WNV vectorial capacity. For UK horse owners, veterinary practitioners, and public health officials, awareness and vigilance are essential, especially during the summer and autumn months when vector activity establishes and peaks, respectively.

This article provides a timely reminder of WNV in horses, including its epidemiology, clinical presentation, diagnostic approach and the status of UK and international surveillance. It also outlines key preventive measures, including the role of vaccination and biosecurity and highlights recent changes to the 'Test to Exclude' (TTE) system, available to veterinary practitioners in Great Britain.

Overview of epidemiology, transmission and surveillance

WNV is primarily maintained through a bird–mosquito–bird transmission cycle, with birds serving as the reservoir/primary amplifying hosts. The risk of WNV introduction and spread is closely linked to climatic and ecological factors, such as temperature, rainfall and mosquito abundance, which influence vector activity and virus amplification. When mosquitoes bite an infected bird, they can acquire the virus and subsequently transmit it to other birds during feeding. This transmission cycle has major implications for the global spread of WNV as subclinically infected migratory birds can introduce the virus to new areas over long distances. If they arrive in a region where competent mosquito vectors are present, the virus can be passed to the local mosquito and non-migratory bird populations, creating the conditions for endemic persistence and spillover events into other species, including horses and humans (Figure 1).

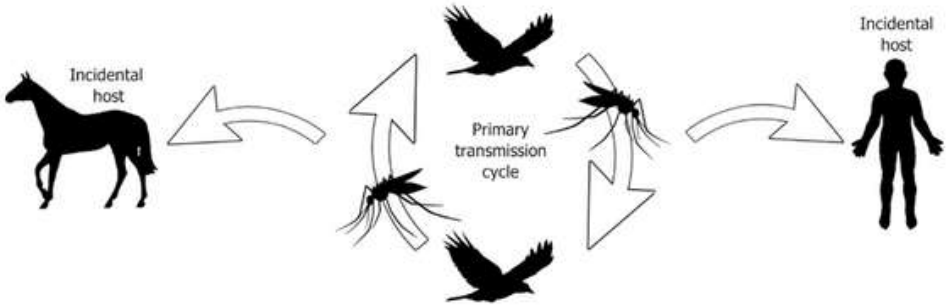


Figure 1: The transmission cycle of West Nile Virus (WNV) between birds as reservoir hosts, mosquitoes as viral vectors and horses and humans as incidental or 'dead end' hosts

This was most clearly demonstrated with the emergence of WNV in New York, USA in 1999, followed by the rapid trans-continental transfer of the virus from the eastern to western seaboards of North America in a matter of only a few years (Figure 2, [1]). WNV is now a well-established endemic vector-borne infection in the USA.

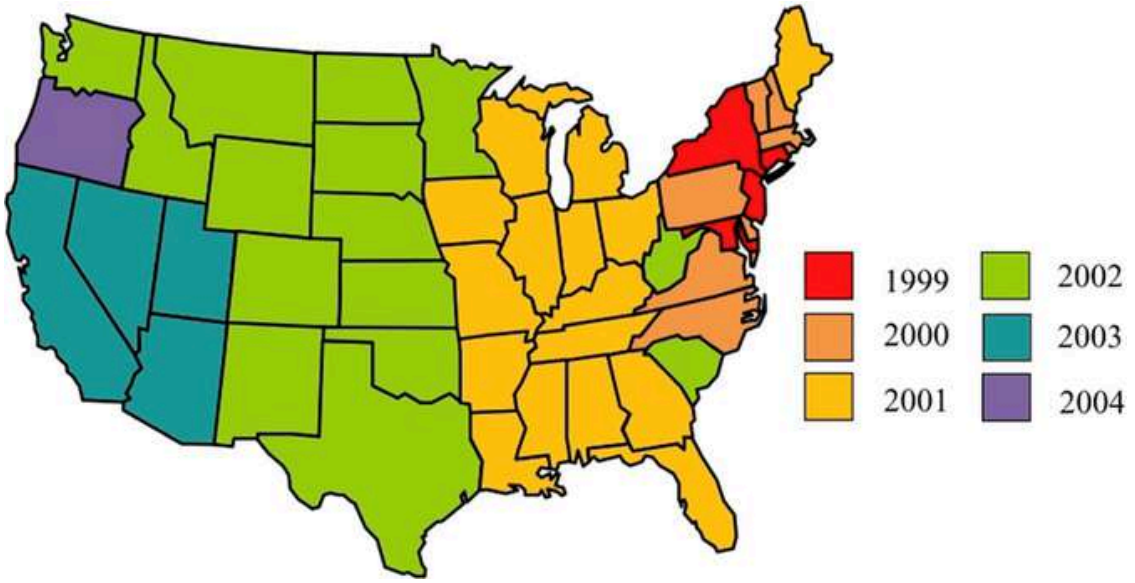


Figure 2: Representation of the transfer of West Nile Virus (WNV) across the United States of America between 1999 and 2004. Reproduced from Murray *et al.* (2010) under the terms of the Creative Commons Attribution License (CC BY 2.0).

Although Europe has not experienced an equivalent overt and rapid continental migration of WNV, there is some evidence that the disease in horses has been changing its geographical distribution in the past few years. Data from the 1,477 equine WNV cases officially recorded with the European Centre for Disease Prevention and Control (ECDC) through the EU's Animal Disease Information System (ADIS) were used to explore these spatial changes [2]. These cases were aggregated in two four-year blocks for 2017-20 and 2021-24 and mapped to the second spatial level of the Nomenclature of Territorial Units for Statistics (NUTS2) using QGIS open-source software [3]. A 2021 NUTS2 shapefile (polygon type, scale 1:20M, CRS: EPSG:3035) was obtained from the Geographic Information System of the Commission (GISCO) via Eurostat [4].

Panels A and B in Figure 3 illustrate the separate NUTS2-level spatial distributions and densities of aggregated equine WNV cases, for the two four-year periods of 2017-20 and 2021-24. Panel C summarises the regions that recorded equine WNV cases in either one (2017-20: shaded green and 2021-24: shaded blue) or both (shaded red) periods, thereby comparing and contrasting the distributions of equine WNV cases in the two four-year periods. Overall, there were few regions that had cases in 2017-20 that did not subsequently record WNV during the following four years (shaded green). WNV recorded in both periods (shaded red) indicates areas where endemic WNV is likely to have been established, and includes southern regions of Spain and France, northern Italy, Hungary and central Germany, which recorded its first equine WNV cases in 2018. Of particular note, however, are the regions that first recorded WNV in the period 2021-24 (shaded blue) and suggest the recent spatial expansion of WNV on the European continent – this includes expansion into western France along the Atlantic coast and further north in Germany, as well as bridging between central and eastern Spain.

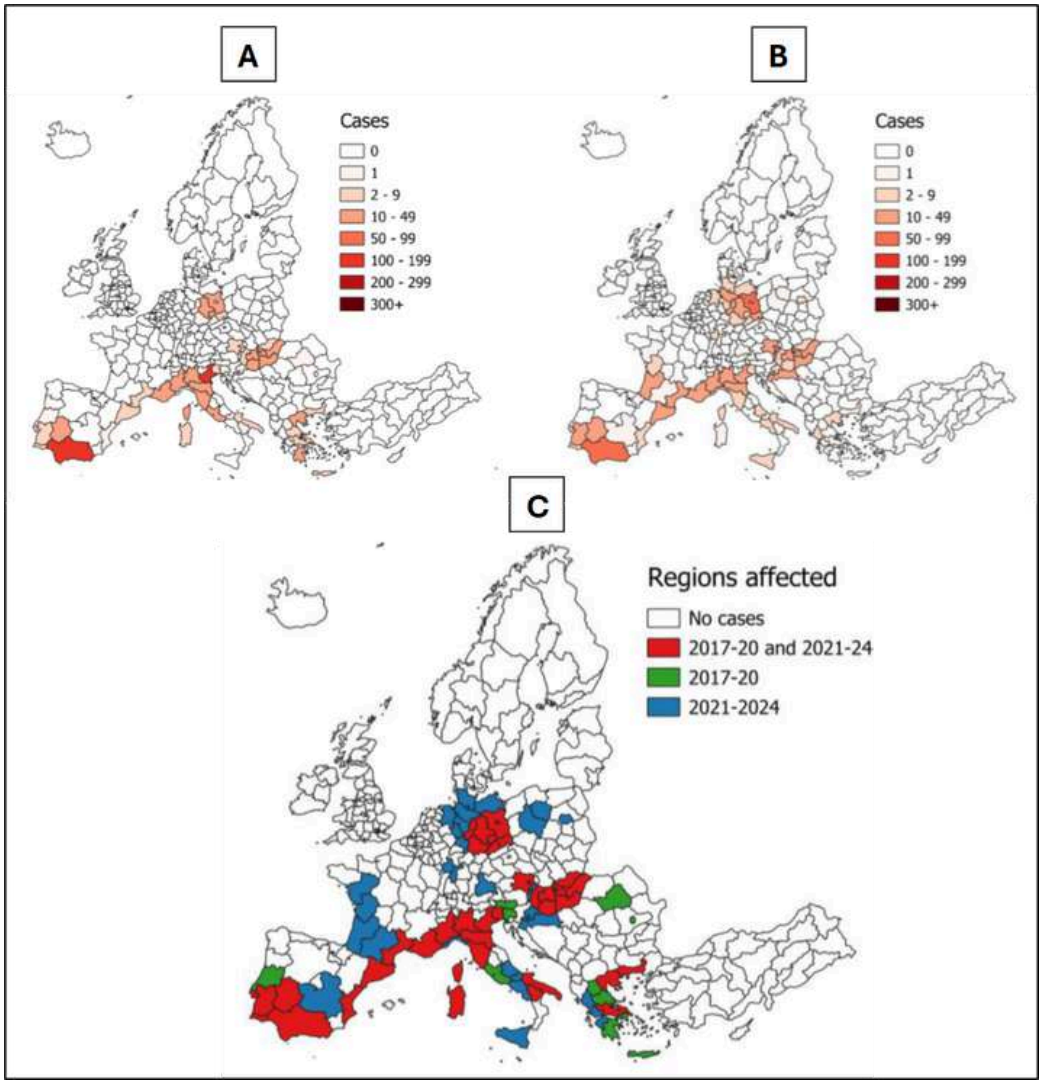


Figure 3: Separate NUTS2-level spatial distributions and densities of aggregated equine WNV cases for the periods of 2017-20 (A; n=686) and 2021-2021 (B; n=791) and summary of the relative distributions of regions recording WNV in one or both periods (C).

Horses and humans are considered incidental, dead-end hosts of WNV. They can become infected following the bite of an infected mosquito, but do not develop high enough levels of virus in the blood (viraemia) to infect feeding mosquitoes. As such, neither humans nor horses contribute to ongoing transmission and play no role in maintaining the natural cycle of WNV. Nonetheless, infection in horses is of veterinary and wider public health importance, as it can lead to severe neurological disease and may serve as an early indicator of WNV activity in a region, especially in the absence of other targeted surveillance initiatives.

Clinical presentation and differential diagnoses

The type and severity of clinical signs in equine WNV infection vary widely. Early indicators may include lethargy, inappetence, mild fever, lameness or colic. As the disease progresses, ataxia, either symmetrical or asymmetrical, along with generalised weakness and muscle fasciculations are the most frequently observed signs. Less common manifestations, such as cranial nerve deficits or abnormal behaviour (for example, sudden aggressiveness), can also occur. Despite this, most infected horses are subclinical, with only around ten percent of clinically affected animals displaying neurological signs.

When assessing a horse with suspected WNV, it is important to consider other causes of neurological disease. In Europe differentials include viral agents such as equine herpesvirus myeloencephalopathy (EHM), rabies, louping ill, tick borne encephalitis or Borna virus infection. Verminous meningoencephalomyelitis and bacterial meningitis can also be included on the differential list, as well as toxic exposures and traumatic injury. Chronic onset conditions, including equine degenerative myeloencephalopathy or cervical vertebral malformations, typically develop more gradually than WNV does. At present, no specific antiviral therapy exists for equine WNV, and management is limited to supportive care.

Notifiable disease reporting and the test to exclude (TTE) process

Suspicion of WNV or another notifiable disease in Great Britain requires immediate notification to the Animal and Plant Health Agency (APHA). This is a legal obligation, and failure to report, even if only suspicion, constitutes an offence.

However, when WNV is low on the differential list, veterinary surgeons may instead utilise the West Nile Virus Test to Exclude (TTE) scheme [5]. **Under the revised June 2025 TTE protocol, private veterinary surgeons (PVS's) can submit samples directly to the APHA Weybridge laboratory WITHOUT first telephoning APHA.** All costs associated with sample collection, transport and laboratory testing remain the responsibility of the submitting veterinary surgeon. Official restrictions are generally not applied during a TTE investigation unless test results return positive, in which case an APHA field investigation will follow. As horses are incidental/dead-end hosts for WNV, confirmation of infection does not mandate euthanasia unless warranted on welfare grounds.

Test to exclude (TTE) protocol for West Nile virus in horses in GB: Key changes since June 2025

- Private Veterinary Surgeons (PVS) can now **submit TTE samples directly to APHA Weybridge for WNV testing WITHOUT prior consultation with APHA.**
- TTE is **only appropriate when WNV neurological disease is very low on the differential list** and not strongly suspected. If WNV or another notifiable disease is suspected, it must be reported immediately by calling APHA.
- The **PVS must cover all costs** related to sample collection, submission, carriage and laboratory testing.
- **Official restrictions are not typically applied** during a TTE. However, **positive results for WNV infection will trigger an APHA field investigation** and appropriate restrictions may be implemented.
- As horses are **dead-end hosts for WNV**, confirmation of infection **would not lead to euthanasia** unless considered necessary for welfare reasons

www.gov.uk/government/publications/horses-west-nile-virus-test-wnv02/test-to-exclude-west-nile-virus-in-horses

APHA helplines:

England: 03000 200 301
Wales: 03003 038 268
Scotland: Contact your local Field Services Office

Diagnostic approach

When a veterinary surgeon submits blood or serum under the TTE scheme, the APHA national reference laboratory first performs an IgM ELISA to detect WNV-specific antibodies. With a positive result indicating acute infection or recent vaccination. Samples that test IgM-positive then undergo total flavivirus antibody testing to determine broader exposure history (often referred to as IgG or pan-flavivirus ELISA). Should results prove inconclusive or suspicious, a plaque reduction neutralisation test (PRNT) serves as the definitive confirmatory assay. Molecular WNV detection testing via polymerase chain reaction (PCR) and amplicon sequencing is technically feasible but is often limited in live horses by low viraemia. In contrast, post-mortem tissue, particularly brain, can reliably detect virus by PCR if positive. Gross lesions at post-mortem examination are usually minimal, restricted to meningeal congestion and small haemorrhagic foci, and histopathology typically identifies a multifocal lymphocytic polioencephalomyelitis.

Ancillary diagnostic tests performed by the PVS, such as biochemistry, complete blood counts (CBC) and cerebrospinal fluid (CSF) analysis, can help to exclude alternative causes e.g. elevated liver enzymes. Mild lymphopenia may mirror other viral infections, and CSF often shows elevated protein, increased nucleated cell count and mild xanthochromia.

While WNV serology confirms exposure or recent vaccination, it does not by itself prove causation of clinical disease. Therefore, final confirmation by the Chief Veterinary Officer (CVO) of the country in Great Britain where the horse is resident, will depend on the combination of seasonality, clinical signs, vaccination status, travel history, and laboratory results.

National and regional surveillance frameworks

Equine WNV surveillance in Great Britain operates primarily through passive surveillance by reporting disease directly to APHA and via testing through the TTE scheme. All test data is compiled by the APHA national reference laboratory and summarised in the Equine Quarterly Disease Surveillance reports, produced by EIDS, in collaboration with the British Equine Veterinary Association (BEVA) and APHA. There is currently no import related surveillance for horses, as they do not transmit WNV onward to mosquitoes and other hosts.

Vector surveillance is conducted jointly by the UK Health Security Agency (UKHSA) and APHA. Mosquito trapping and testing occur at high-risk locations, such as transport hubs and wetlands, to monitor populations of potential WNV vectors e.g. *Culex pipiens*. Surveillance is used to monitor the types of mosquitoes present and ensure that invasive insects can be detected and eradicated before they disseminate more widely. Public reporting of nuisance mosquito biting provides supplementary information on species distribution and abundance. If people experience this, they can report through the UKHSA mosquito surveillance scheme [6].

Wild bird surveillance combines passive testing of dead bird carcasses from Garden Wildlife Health (Zoological Society of London) and the APHA Diseases of Wildlife Scheme with active sampling under the Vector-Borne RADAR (Real-time Arbovirus Detection And Response) project. Together, these programmes form an early warning network, so that disease surveillance and control activities can be enhanced. To provide real time reporting, in the future the publicly available APHA wild bird and wild mammal surveillance dashboard will include WNV figures alongside its avian influenza data [7].

To date, only one study has assessed WNV seroprevalence in the UK equine population, with the dual aims of evaluating vaccination coverage and detecting recent infections [8]. Conducted by APHA on serum samples collected in 2019, this investigation found no evidence of cryptic (previously unrecognised) WNV exposure among the cohort of horses tested.

Vector-borne RADAR surveillance findings

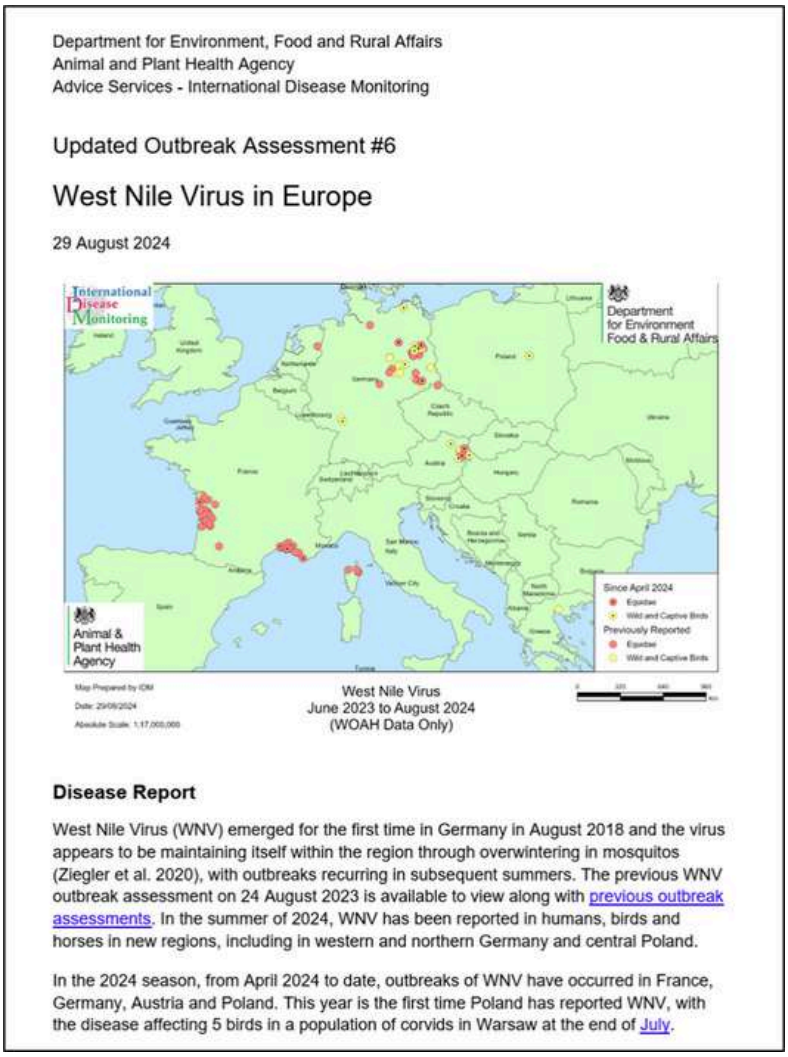
The Vector-Borne RADAR programme is a UK Research and Innovation (UKRI) and Department for Environment, Food and Rural Affairs (Defra) funded One Health project, collaborating with APHA, UKHSA, ZSL's Institute of Zoology and the British Trust for Ornithology [9]. It was formed to help understand the emergence and transmission of zoonotic mosquito-borne viruses of wild birds that may impact public health in the United Kingdom. A component of its research involved testing mosquito samples, gathered both from new collections and archived material from earlier research, for the presence of WNV genetic material. To date, 32,000 mosquitoes have been tested so far through the scheme. WNV genetic material was detected for the first time from two pools of *Aedes vexans* mosquitoes collected in July 2023 from wetlands on the River Idle near Gamston, Nottinghamshire [10]. An additional 198 pools from the same site tested negative.

International data sharing

APHA's Infectious Disease Monitoring (IDM) team continuously horizon scans to monitor for major, notifiable or new and re-emerging animal disease outbreaks worldwide. This provides an early warning and assesses the risks the diseases may pose to the UK, particularly those which impact on animal health and welfare, international trade, public health or wider society, such as WNV. IDM collates global data from a range of sources within their horizon scanning, including official reports from the World Organisation for Animal Health (WOAH), European Commission, reference laboratories and scientific articles, to government websites and media articles which may provide early indicators of official disease reports. Using established risk assessment methodologies, the risk of disease introduction is estimated, which considers all viable routes. This information is then disseminated via various reports produced for ministers, Defra, APHA, and other departments, both routinely (weekly to quarterly), as well as on an *ad hoc* basis, many of which are published [11]. An example of one of these IDM reports for equids is for WNV in Europe, updated in August 2024 (Figure 4).

Recent European flavivirus cases and outbreaks

Historically, the UK had been considered relatively free of mosquito-borne diseases. Until, in 2020 when Usutu virus (USUV), a mosquito-borne flavivirus, was detected for the first time in wild birds in this country [12]. This marked an important point in national biosecurity, as it was the first mosquito-borne viral zoonosis to emerge in animal hosts. The virus was detected again in 2021 and 2022, and molecular analysis highlighted these UK detections were closely related to each other, suggesting that USUV is persisting in the UK [13]. This has implications for the native blackbird populations which is the primary USUV host and indicates the UK's climate could be permissive for the establishment of other mosquito-borne viruses that have comparable climatic requirements.



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

Updated Outbreak Assessment #6

West Nile Virus in Europe

29 August 2024

International Disease Monitoring

Department for Environment Food & Rural Affairs

Animal & Plant Health Agency

Since April 2024
Equidae
Wild and Captive Birds
Previously Reported
Equidae
Wild and Captive Birds

West Nile Virus
June 2023 to August 2024
(WOAH Data Only)

Disease Report

West Nile Virus (WNV) emerged for the first time in Germany in August 2018 and the virus appears to be maintaining itself within the region through overwintering in mosquitos (Ziegler et al. 2020), with outbreaks recurring in subsequent summers. The previous WNV outbreak assessment on 24 August 2023 is available to view along with previous outbreak assessments. In the summer of 2024, WNV has been reported in humans, birds and horses in new regions, including in western and northern Germany and central Poland.

In the 2024 season, from April 2024 to date, outbreaks of WNV have occurred in France, Germany, Austria and Poland. This year is the first time Poland has reported WNV, with the disease affecting 5 birds in a population of corvids in Warsaw at the end of July.

Figure 4: A screen shot of the first page of an International Disease Monitoring (IDM) outbreak assessment report for West Nile virus in Europe, updated in August 2024.

USUV and WNV are both flaviviruses and have seen a similar pattern of expansion across Europe over recent years. Although WNV has been detected as far north as The Netherlands (albeit not in horses) in 2020 and in horses close to the Danish border in Germany in 2024, no locally acquired (autochthonous) WNV cases have been identified in animal hosts in the UK to date. However, WNV is likely to have a greater impact on animal and public health. The ***European Centre for Disease Prevention and Control (ECDC)*** publishes weekly summaries of WNV activity [14]. In 2020 the European Union (EU) and European Economic Area (EEA) Member States and EU-neighbouring countries reported a total of 316 locally-acquired human cases of WNV infection in eight countries, and 183 equine outbreaks. This compares to 2024 when 1,436 human cases across 19 countries were recorded, as well as 494 equine outbreaks – representing increases of 354% and 170% in human and equine recorded WNV cases, respectively. Significantly, these figures also likely underestimate true incidence, given the high proportion of asymptomatic or pauci-symptomatic infections (very few/mild symptoms), as well as the disproportionate amount of surveillance and reporting undertaken in different areas of Europe. With the ongoing expansion of WNV infection across Europe (Figure 3), in addition to USUV persistence in the UK, it is progressively more likely that WNV could emerge in the UK.

Prevention and control measures

Prevention of WNV in horses centres on two key strategies: vaccination and vector control. Although there is no firm evidence that WNV is currently circulating in the UK, the presence of competent mosquito vectors and increasing risk of incursion highlight the importance of both individual and population-level preparedness. There are currently three licensed WNV vaccines available for use in horses in the UK, offering the prospect of effective protection against disease (Table 1).

Table 1: Summary of three West Nile virus vaccine brands available for use in the United Kingdom (from https://equinesurveillance.org/landing/resources/UK_equine_vaccines_January_2024.pdf)

Brand Name	Manufacturer	Licensed for*	Datasheet vaccine schedule
Equip WNV	Zoetis	Active immunisation of horses of 6 months of age or older against West Nile Virus (WNV) disease by reducing the number of viraemic horses after infection with WNV lineage 1 or 2 strains and to reduce duration and severity of clinical signs against WNV of lineage 2 strains. **Onset of immunity:** 3 weeks after primary vaccination course. **Duration of immunity:** 12 months after primary vaccination course for WNV lineage 1 strains. For WNV lineage 2 strains the duration of immunity has not been established.	**V1:** From 6 months of age. **V2:** 3-5 weeks later **Revaccination:** A sufficient degree of protection should be achieved after an annual booster injection with a single dose although this schedule has not been fully validated.
Proteq West Nile	Boehringer Ingelheim	Active immunisation of horses from 5 months of age against West Nile disease by reducing the number of viraemic horses. If clinical signs are present, their duration and severity are reduced. **Onset of immunity:** 4 weeks after the first dose of the primary vaccination course. In order to achieve full protection, the full vaccination course of two doses must be given. **Duration of immunity:** 1 year after a full primary vaccination course of two injections.	**V1:** First injection from 5 months of age. **V2:** 4-6 weeks later. **Revaccination:** A sufficient degree of protection should be achieved after an annual booster injection with a single dose although this schedule has not been fully validated.
Equilis West Nile	MSD Animal Health	Active immunisation of horses against West Nile virus (WNV) to reduce clinical signs of disease and lesions in the brain and to reduce viraemia. **Onset of immunity:** 2 weeks after primary vaccination course of two injections. **Duration of immunity:** 12 months.	**V1:** 6 months of age onwards **V2:** 3 to 5 weeks later **Revaccination:** Annual booster should be sufficient to achieve a reduction of fever, lesions in the brain and viraemia.

*Source: NOAH Compendium of Data Sheets for Animal Medicines https://www.noahcompendium.co.uk/

However, vaccination is not currently routinely promoted for UK-resident horses and is primarily recommended for those travelling to or through WNV-endemic regions, such as parts of southern and central Europe. In 2022, an unvaccinated horse, usually resident in the UK, was returning from southern Spain and developed severe clinical signs, with disease being fatal [15]. This case highlights the potential consequences of WNV infection and the importance of preventive vaccination in at-risk animals.

If WNV were to become established in the UK, demand for vaccination would likely rise sharply. However, the current low uptake of vaccination has led to limited vaccine supply within the UK and scaling up production would take time. Veterinary practitioners should ensure they are familiar with the available vaccine brands, schedules and booster requirements (Table 1).

Should WNV begin circulating in the UK, vector control would become a critical line of defence. Horse owners would need to take proactive measures to reduce mosquito exposure, including:

- Eliminating standing water (e.g. buckets, troughs, tyres, or puddles) to reduce breeding sites
- Stabling horses at dawn and dusk, when mosquito activity is highest
- Using protective physical barriers, such as mesh screens on stabling and/or fly rugs;
- Applying equine-safe insect repellents as an additional layer of protection

The role of owners and veterinary surgeons in surveillance

Veterinary surgeons and horse owners are critical to the early detection of WNV in the UK. Unlike mosquitoes and birds, there is currently no subsidised routine surveillance programme for horses. As a result, the detection of equine cases depends entirely on owner vigilance and prompt veterinary involvement. Early recognition of neurological signs suggestive of WNV should prompt timely clinical investigation and consideration of WNV in the differential diagnosis, especially during periods of heightened vector activity. Early reporting and diagnostic testing not only inform appropriate case management but also contribute vital data to national surveillance efforts. Veterinary surgeons can also encourage owners to engage in supporting surveillance efforts by:

- Reporting unusually high mosquito activity in their local area, as seen in Nottinghamshire in 2023, which triggered targeted APHA mosquito sampling

- Noting and reporting wild bird mortality to APHA, who may collect samples for WNV testing

- Staying up to date with disease risk communications, particularly during periods of environmental change when vector presence or activity may expand – sign up for Tell-Tail alerts at www.telltail.co.uk to receive free text notifications of UK outbreaks and quarterly summaries of equine infectious disease activity

Increased awareness and action at the owner–vet interface are essential to prevent undetected incursion. Proactive case recognition not only protects individual horses but also supports the wider epidemiological understanding of WNV and other emerging equine infectious disease threats in the UK.

Conclusion

As the distribution and frequency of WNV outbreaks continue to shift, the risk of WNV incursion into the UK cannot be overlooked. In the absence of structured equine surveillance, engagement from horse owners and veterinary surgeons is vital. Prompt recognition and testing of neurological cases can provide critical early warning signals. Looking ahead, UK preparedness will depend on continued vigilance, improved awareness and proactive prevention, including appropriate vaccination of at-risk horses. The recent updates to the TTE system provide a valuable route for vets to readily exclude potential WNV cases and should be used early in the diagnostic workup of neurological presentations, thereby widening the surveillance of this emerging threat. Maintaining momentum in surveillance, diagnosis and prevention will be key to managing the threat of WNV and safeguarding both equine and public health in a changing landscape.

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The views expressed in this focus article are those of the author and independent of the Equine Quarterly Disease Surveillance Report.

UK Infectious Disease Reports

This section summarises notifiable disease investigations followed by laboratory confirmed endemic infectious disease outbreaks reported in the United Kingdom during the second quarter of 2025. Each reported outbreak may involve more than one animal. To view current outbreak reports, see www.equinesurveillance.org/iccview.

No reported outbreak(s) in a region does not necessarily mean the area is free from the disease. When a particular disease is reported as 'endemic', disease outbreaks are common and at an expected level.

NOTIFIABLE DISEASES

The APHA Veterinary Exotic Notifiable Disease Unit (VENDU) co-ordinates the investigation of suspected exotic notifiable disease in Great Britain on behalf of Defra, Welsh Government and Scottish Government. Further information about notifiable diseases is available on https://www.gov.uk/government/collections/notifiable-diseases-in-animals.

It should be noted that all information relating to equine notifiable disease investigations (including suspect cases that are subsequently negated) will appear in this section and are not broken down by body system. APHA non-negative test results that are referred to below do not equate to confirmed positive cases and are therefore not included in quarterly laboratory results tables. Confirmed positive results are based on APHA investigations and follow confirmation on official samples. Non-notifiable diseases will appear in their relevant system section.

AFRICAN HORSE SICKNESS (AHS):

Clinical suspicion of AHS was reported in a 9-year-old gelding with lethargy, pyrexia, bilateral periorbital and nasal swelling, chemosis, nasal discharge and exophthalmos of the right eye. An APHA investigation was undertaken, and samples were taken for African horse sickness and equine infectious anaemia. All official testing returned negative results and in combination with the history, improving clinical picture and an alternative differential diagnosis, suspicion of notifiable disease was negated.

GLANDERS:

Non-negative serology results were reported from one horse during routine pre-export testing. Following an APHA investigation, all official samples tested negative, thereby clearing the horse for export.

WEST NILE VIRUS

There were four test to exclude (TTE) cases for WNV, three tested negative and one was non-negative for WNV total Ab cELISA (total flavivirus antibodies). A subsequent APHA investigation was conducted for the non-negative horse and official samples were negative on IgM ELISA and PCR for WNV enabling suspicion of WNV to be negated.

Equine Herpes Virus

EHV-1 NEUROLOGICAL INFECTION

In Q2 2025 there were no reported outbreaks of EHV-1 neurological infection.

EHV-1 RESPIRATORY INFECTION

In Q2 2025 there were no reported outbreaks of EHV-1 respiratory infection.

One outbreak of EHV-1 respiratory infection with a co-infection of EHV-4 respiratory infection was notified to EIDS, however, no epidemiological data could be obtained. This was either due to the submitting veterinary practice not providing the necessary data or a request for the information not to be circulated. ***EIDS encourages veterinary surgeons receiving positive laboratory results to complete EIDS' online reporting form*** *and provide additional details allowing for anonymised reporting of disease occurrence, thereby greatly enhancing the level of ongoing surveillance of equine infectious diseases in the UK.*

EHV-1 REPRODUCTIVE INFECTION

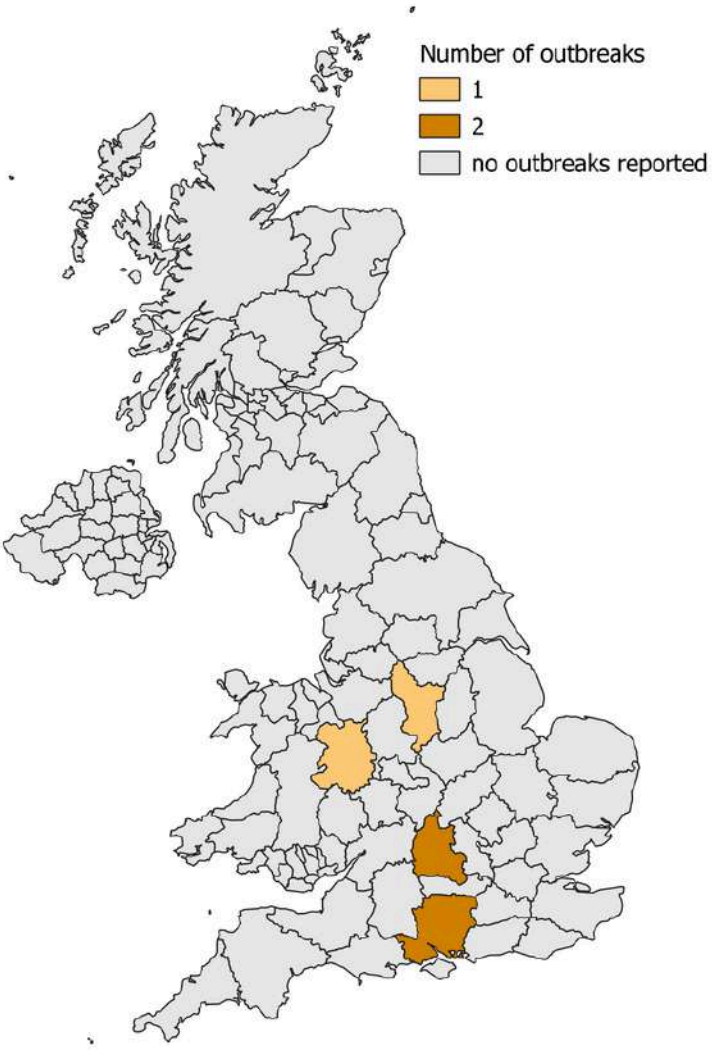
In Q2 2025 there were no reported outbreaks of EHV-1 reproductive infection.

EHV-4 RESPIRATORY

SUMMARY

Six outbreaks of Equine Herpes Virus-4 (EHV-4) respiratory infection were reported to EIDS during Q2 2025, two in May and four in June.

Information regarding these six reported outbreaks is summarised in Table 1.



Frequency of reported laboratory diagnosed outbreaks of EHV-4 respiratory infection across the UK during 2025 Q2.

Table 1: EHV-4 respiratory infection outbreaks reported 1 Apr to 30 Jun 2025.

Total outbreaks reported	**6**	
	n	**%**
Total horses sampled	6	100%
Sample type		
Swab	6	100%
Nasopharyngeal	6	100%
Signalment		
Sex of horse indicated	6	100%
Female	1	17%
Male	5	83%
Breed of horse	4	66%
Native UK pony	2	50%
Crossbreed	2	50%
Age of horse	6	100%
Range	3 - 11 years	
IQR	4 - 9 years	
Median	5 years	
Clinical signs reported*	13	
Lethargy	3	23%
Nasal discharge	3	23%
Pyrexia	3	23%
Coughing	3	23%
Lymphadenopathy	1	8%
Vaccination status	5	83%
Unvaccinated	5	100%
Month		
April	0	
May	2	
June	4	

*From 6 diagnoses

Eight additional outbreaks of EHV-4 respiratory infection were notified to EIDS, however, no epidemiological data could be obtained. This was either due to the submitting veterinary practice not providing the necessary data or a request for the information not to be circulated. ***EIDS encourages veterinary surgeons receiving positive laboratory results to complete EIDS' online reporting form*** *and provide additional details allowing for anonymised reporting of disease occurrence, thereby greatly enhancing the level of ongoing surveillance of equine infectious diseases in the UK.*

NB: *Figures in the UK Infectious Disease Report may differ, due to EIDS lacking permission to report some outbreaks or not receiving real-time epidemiological data*

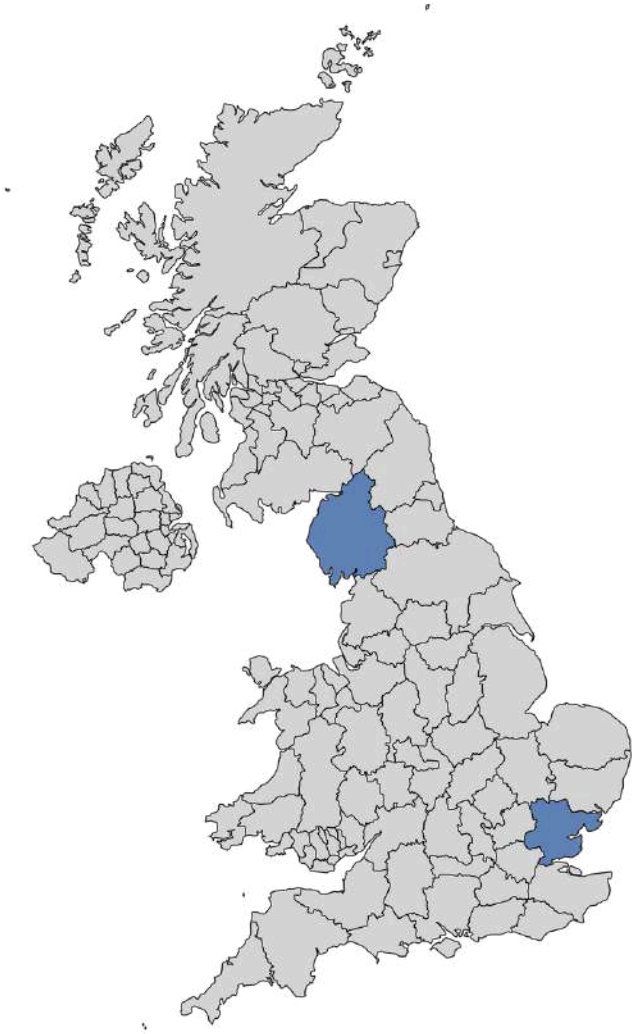
Equine Influenza

SUMMARY

Two outbreaks of equine influenza (EI) were reported to EIDS during Q2 2025, one in May and one in June.

Both outbreaks were reported to have involved animal movements prior to the first diagnosis.

Information regarding these two reported outbreaks is summarised in Table 2.



Frequency of reported laboratory diagnoses of EI across the UK during Q2 2025, totalling two diagnoses from two outbreaks.

Two additional EI outbreaks were notified to EIDS, however, no epidemiological data could be obtained. This was either due to the submitting veterinary practice not providing the necessary data or a request for the information not to be circulated.

Table 2: Equine influenza outbreaks reported 1 Apr to 30 Jun 2025.

Total outbreaks reported	2	
	n	%
Total horses sampled	2	100%
Sample type		
Swab	2	100%
Nasopharyngeal	2	100%
Signalment		
Sex of horse indicated	2	100%
Female	1	50%
Male	1	50%
Breed of horse	1	50%
Sports horse	1	100%
Age of horse	50%	100%
Age	3 years	
Clinical signs reported*	8	
Coughing	2	25%
Lethargy	1	12.5%
Nasal discharge	2	25%
Pyrexia	1	12.5%
Inappetence	1	12.5%
Lymphadenopathy	1	12.5%
Vaccination status	2	100%
Unvaccinated	1	50%
Unknown	1	50%
Month		
April	1	
May	1	
June	0	

*From 2 diagnoses

NB: *Figures in the UK Infectious Disease Report may differ, due to EIDS lacking permission to report some outbreaks or not receiving real-time epidemiological data.*

HBLB SURVEILLANCE SCHEME

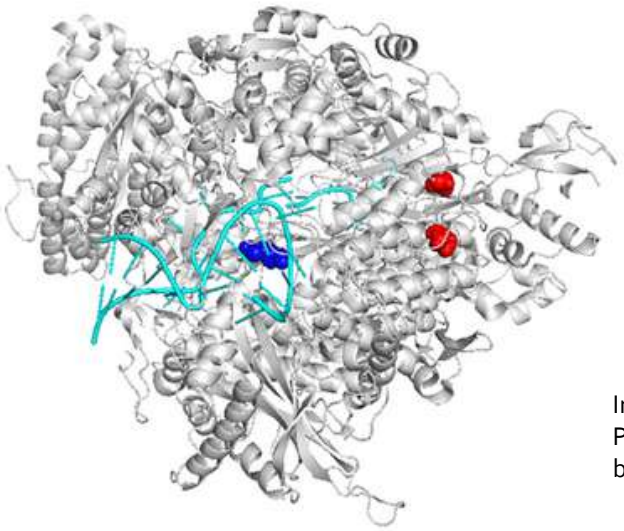
Veterinary surgeons suspecting EI can submit samples for PCR testing with **the scheme covering the cost of the laboratory testing**. Veterinary surgeons wishing to use this scheme can sign up here: www.equinesurveillance.org

2025 Q2 EI SEQUENCE ANALYSIS

Six equine influenza virus (EIV) samples have been received and characterised by RT-PCR and genomic sequence analysis in Q2 2025. In contrast to the previous two years there has been no sudden change in the genomic sequence so far this year compared to the previous year. The viruses continue to belong to the Florida Clade 1 lineage and show only incremental changes to the sequence of the eight viral segments of the genome. This indicates that EIV has likely continued to circulate at very low levels in the UK over the course of the first half of the year, with the infection level in the population too low for surveillance to pick up more than a single sample in Q1.

Two of the viral proteins show consistent amino acid changes among the viruses sequenced in 2025 compared to the previous consensus sequence from 2024. These are located in the viral polymerase basic proteins 2 and 1 (PB2 and PB1). There are two amino acid changes in PB2; A672V and G682S, and one change in PB1; I645V. Polymerase amino acid changes have been previously been associated with viral replication, host adaptation and pathogenicity, with key changes in PB2 important for viral adaptation between avian and mammalian hosts.

Significantly, PB2 residue 682 has been found to be important for host switching between avian and human viruses. This area of the PB2 protein binds to host proteins including importins, which are involved in the transport of the viral polymerase into the cell nucleus, where viral transcription and RNA replication take place, both essential for successful viral replication. PB1 645 is within the viral RNA binding domain and may play a role in polymerase activity in different species. Avian viruses tend to have isoleucine (I) at this position, with mammalian viruses often having methionine. In the 2025 equine viruses we see a change from isoleucine to valine. The significance of this novel change for viral host range remains uncertain.



Influenza polymerase bound to viral RNA (light blue) Positions of PB2 672 and 682 (red) and PB1 645 (dark blue) are highlighted.

Equine influenza virus sequence analysis updates are provided by the HBLB funded Equine Virology team based at the University of Cambridge's Department of Veterinary Medicine.

Surveillance of Equine Strangles

Table 3: *S. equi* samples reported 1 Apr to 30 Jun 2025.

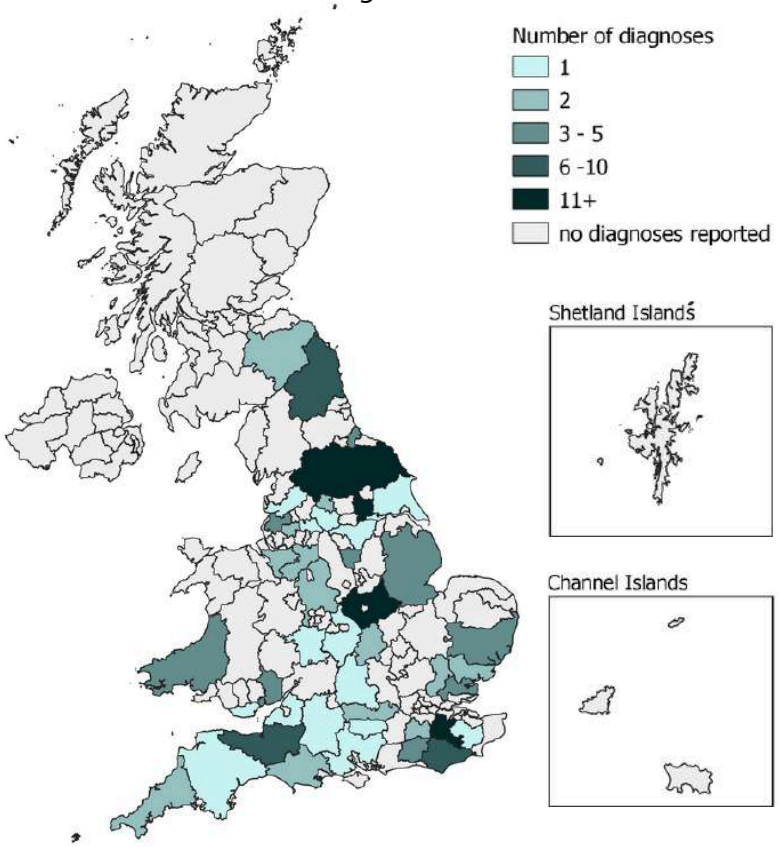
	n	%
Total horses sampled	134	100%
Sample type*	139	
Swab	44	31%
Nasopharyngeal	32	74%
Nasal	7	16%
Abscess	3	7%
Unspecified	1	2%
Guttural pouch lavage	83	60%
Other	12	9%
Diagnostic tests		
PCR only requested	109	81%
PCR and culture requested	5	4%
iiPCR	15	11%
Culture only requested	4	3%
LAMP and qPCR	1	0.7%
Signalment		
Sex of horse indicated	95	71%
Female	41	43%
Male	54	57%
Breed of horse	66	49%
Native UK pony	16	24%
Sports horse	19	29%
Crossbreed	8	12%
UK native horse	20	30%
Non-UK native horse	3	5%
Age of horse	62	46%
Range	3 weeks - 30 years	
IQR	5 - 11 years	
Median	5	
Clinical signs reported**	78	
Nasal discharge	35	32%
Pyrexia	17	22%
Glandular swelling	5	6%
Abscess	12	15%
Other	8	10%
Coughing	2	3%
Lethargy	3	4%
Chondroids	2	3%
Guttural pouch empyema	4	5%
Reason for sampling reported		
Total reasons*	80	
Clinically ill horse	23	29%
Post infection screening	22	28%
Strangles suspected	21	26%
Post seropositive ELISA	6	8%
Pre/post movement screening	4	5%
Other	4	5%

*can include multiple entries per submission
**From 46 diagnoses

The Surveillance of Equine Strangles (SES) network enables the ongoing assessment of the disease's true welfare impact, highlighting trends over time and different geographical areas. The SES network is comprised of twelve diagnostic laboratories based across the UK.

A total of 134 cases with positive diagnoses of *S. equi* were reported by SES Laboratory during Q2 2025 from samples submitted by 63 veterinary practices in the UK. Information regarding reported samples is summarised in Table 3.

NB: *Figures in the UK Infectious Disease Report may differ, due to EIDS lacking permission to report some outbreaks or not receiving real-time lab data.*

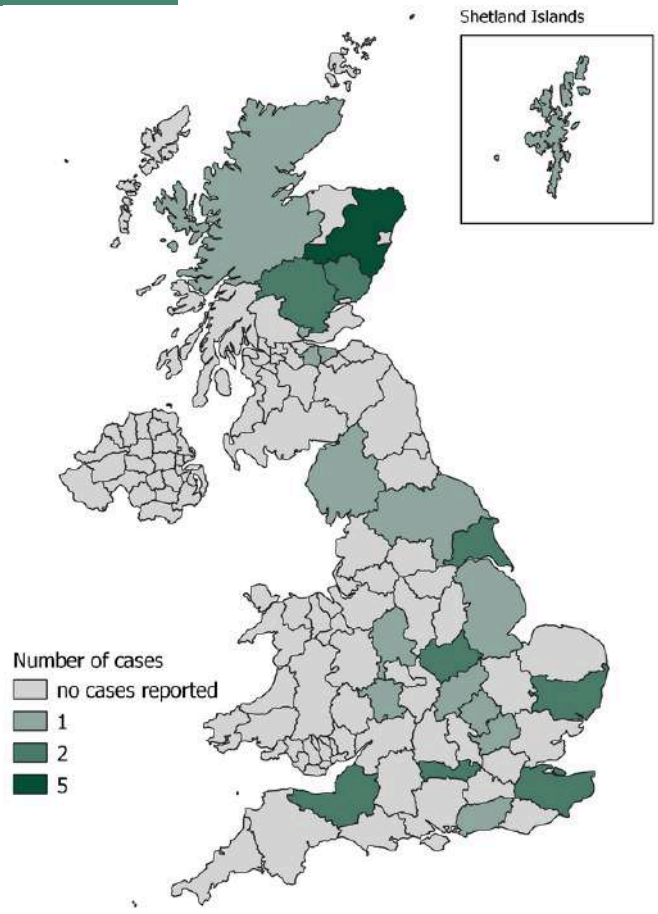


Frequency of reported laboratory diagnoses of *S. equi* across the UK from SES during Q2 2025. Diagnoses are mapped by submitting vet practice location.

Equine Grass Sickness

An equine grass sickness (EGS) surveillance scheme was established in spring 2008 facilitating the investigation of changes in geographical distribution and incidence of EGS in Great Britain. Having up to date anonymised reports from across the country provide accurate representation of EGS cases nationwide and is vital to help continue epidemiological research into the disease.

Reporting cases of EGS to the Equine Grass Sickness Fund (EGSF) can be done by either the attending veterinary surgeon or the owner, at http://grasssickness.org.uk/casereports.



Frequency of EGS cases reported to the EGSF across the UK during Q2 2025.

In Q2 2025 36 cases of EGS were reported to EGSF. Cases were reported across England (n= 21, 58%) and Scotland (n= 14, 39%), location was unavailable for one case (3%). Information regarding reported cases is summarised in Table 4.

Table 4: Equine Grass Sickness cases reported to the EGSF 1 Apr to 30 Jun 2025.

	n	%
Total cases reported	36	100%
EGS presentation	34	94%
Acute	19	56%
Subacute	12	35%
Chronic	3	9%
EGS outcome	36	100%
Survivor	1	3%
Non-survivor	32	89%
Unreported	3	8%
EGS diagnoses	28	77%
Clinical signs alone	17	61%
Histological confirmation	11	39%
Month of diagnosis	36	100%
April	10	28%
May	18	50%
June	8	21%
Signalment		
Sex of horse indicated	32	88%
Female	15	47%
Male	17	53%
Breed of horse	29	80%
Native UK pony	9	31%
Native UK horse	11	38%
Non-native UK horse	1	3%
Sports horse	8	28&
Age of horse	27	75%
Range	1 - 22 years	

Please note that figures for EGS contained in the laboratory report may differ to the number of cases reported here, which are reported by both owners and veterinary surgeons.

RedWatch

A targeted surveillance scheme for cyathostominosis and *Strongylus vulgaris* was launched by EIDS in December 2024 under the name RedWatch. This initiative aims to support the equine industry in monitoring potential changes in the incidence and presentation of clinical parasite-associated disease, particularly in the context of reduced anthelmintic use. National reporting of anonymised clinical cases is essential to gain a clearer understanding of current disease patterns and inform future control strategies.

No cases were reported during Q2 2025. Cases can be submitted by the attending veterinary surgeon via the RedWatch online form.

REPORT A CLINICAL CASE OF REDWORM

www.equinesurveillance.org/redwatch

VIROLOGY

The results of virological testing for April to July 2025 are summarised in Tables 6 to 9. Please note, APHA's sample population is different to the other contributing laboratories as their tests are principally in relation to international trade.

GASTROINTESTINAL DISEASE

Table 6: Results of virological testing for gastrointestinal diseases between 1 Apr to 30 Jun 2025.
CLs = laboratories contributing tested samples

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Adenovirus HI	Antibody	25	0	1
Coronavirus PCR	Agent	44	2	1
Rotavirus ELISA	Antibody	5	0	1
Rotavirus-A PCR	Agent	137	11	2
Rotavirus-B PCR	Agent	137	0	2
Rotavirus antigen ELISA/Strip test/LFT	Agent	40	2	4

HI Haemagglutination inhibition, LFT Lateral flow test

RESPIRATORY DISEASE

Table 7: Results of virological testing for respiratory diseases between 1 Apr to 30 Jun 2025.
CLs = laboratories contributing tested samples

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
EHV-2 PCR	Agent	67	21	1
EHV-5 PCR	Agent	67	18	1
Influenza HI	Antibody	24	0	1
Influenza PCR (APHA)	Agent	132	0	1
Influenza PCR	Agent	491	7*	7
Influenza LAMP	Agent	12	0	1
ERV-A/B CFT	Antibody	5	0	1
ERV PCR	Agent	1	0	1

CFT Complement fixation test, EHV Equine herpes virus, ERV Equine rhinitis virus, HI Haemagglutination inhibition, IFAT immunofluorescent antibody test, LAMP loop mediated isothermal amplification, *Figures reported here may differ to the endemic diseases section due to EIDS not receiving details from the submitting veterinary practice or the owner requesting details not to be circulated, ^ no laboratories reporting tested samples this quarter

Table 8: Results of virological testing for multiple/miscellaneous/neurological diseases between 1 Apr to 30 Jun 2025. CLs = laboratories contributing tested samples

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
EHV-1 LAMP	Agent	13	0	1
EHV-1/-4 PCR (APHA)	Agent	0	0	^
EHV-1 PCR	Agent	948	6*	7
EHV-1 VI	Agent	0	0	^
EHV-4 PCR	Agent	944	25*	7
EHV-4 LAMP	Agent	13	0	1
EHV-4 VI	Agent	0	0	^
EHV-1 IFAT - Ag	Agent	0	0	^
EHV-1/-4 CFT	Antibody	177	2	1
EHV-1/-4 CFT (APHA)	Antibody	4	1	1
EHV-1/-4 IFAT - Ag	Agent	0	0	^
EHV-8 PCR	Agent	0	0	^
EIA ELISA	Antibody	1875	0	6
EIA Coggins (APHA)	Antibody	6462	0	1
EIA Coggins	Antibody	28	0	3
Hepacivirus PCR	Agent	27	2	1
Parvovirus PCR	Agent	27	1	1
Papilloma virus PCR	Agent	3	2	1
WNV IgM ELISA (APHA)	Antibody	4	0	1
WNV IgG ELISA (APHA)	Antibody	4	1**	1
WNV PCR (APHA)	Agent	0	0	^

CFT Complement fixation test, EHV Equine herpes virus, EIA Equine infectious anaemia, IFAT immunofluorescent antibody test, LAMP loop mediated isothermal amplification, VI Virus isolation, WNV West Nile Virus
*EHV figures reported here may differ to the endemic section figures due to non-reporting by vets,
^ no laboratories reporting tested samples this quarter **negated following APHA investigation - see notifiable disease section of this report

Table 9: Results of virological testing for reproductive diseases between 1 Apr to 30 Jun 2025.
CLs = laboratories contributing tested samples

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
EHV-3 PCR	Agent	5	1	1
EHV-3 VI	Agent	0	0	^
EHV-3 VN	Antibody	2	0	1
EVA ELISA*	Antibody	5872	23	6
EVA PCR (APHA)	Agent	1	0	1
EVA PCR	Agent	23	0	1
EVA VN (APHA)**	Antibody	340	7	1
EVA VN**	Antibody	73	31	3

EVA Equine viral arteritis, EHV Equine herpes virus, VI Virus isolation, VN Virus neutralisation
*Positive samples then undergo VN testing as the confirmatory test
** EVA Artervac vaccine is now available (June 2025) but due to the unavailability since March 2023, all stallions will have lapsed vaccination status at the time of re-vaccination. If sero-positivity at the time of first vaccination cannot be attributed to prior vaccination and confirmed by testing alongside archived serial samples that show a stable or declining titre, the case must be reported to APHA for investigation under the EVA Order 1995. Additionally, mares that are sero-positive within two weeks of mating must also be investigated.
^ no laboratories reporting tested samples this quarter

BACTERIOLOGY

A summary of the diagnostic bacteriology testing undertaken by different contributing laboratories is presented in Tables 10 to 13. The BEVA laboratory registering scheme is for the testing of CEM (*Taylorella equigenitalis*), *Klebsiella pneumoniae* and *Pseudomonas aeruginosa*. Granting and maintenance of approval depends on a laboratory achieving correct results in quality assurance tests and reporting data to this report. BEVA publishes a list of approved laboratories annually. Fifteen BEVA approved laboratories in the UK contributed data.

REPRODUCTIVE DISEASE

Table 10: Results of bacteriological testing for reproductive diseases between 1 Apr to 30 Jun 2025.
CLs = laboratories contributing tested samples

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
CEM *Taylorella equigenitalis* PCR (BEVA)	Agent	2260	0	8
CEM *Taylorella equigenitalis/asinigenitalis* culture* (BEVA)	Agent	4092	0	15
CEM *Taylorella equigenitalis* PCR (APHA)	Agent	50	0	1
CEM *Taylorella asinigenitalis* PCR (APHA)	Agent	50	0	1
CEM *Taylorella equigenitalis/asinigenitalis* culture* (APHA)	Agent	880	0	1
Klebsiella pneumoniae PCR (BEVA)	Agent	2260	44	8
Klebsiella pneumoniae culture (APHA)	Agent	21	0	1
Klebsiella pneumoniae culture (BEVA)	Agent	4300	42	15
Klebsiella pneumoniae capsule types 1 PCR	Agent	32	0	1
Klebsiella pneumoniae capsule types 2 PCR	Agent	32	0	1
Klebsiella pneumoniae capsule types 5 PCR	Agent	32	0	1
Pseudomonas aeruginosa PCR (BEVA)	Agent	2260	32	8
Pseudomonas aeruginosa culture (APHA)	Agent	0	0	^
Pseudomonas aeruginosa culture (BEVA)	Agent	4350	15	15

BEVA British Equine Veterinary Association approved laboratories, CEM contagious equine metritis (*Taylorella equigenitalis*), **Taylorella asinigenitalis* and *Taylorella equigenitalis* are morphologically indistinguishable by culture and therefore if a sample is positive by culture, it should be screened for both species by multiplex PCR,
^ no laboratories reporting tested samples this quarter

RESPIRATORY DISEASE

Table 11: Results of bacteriological testing for respiratory diseases between 1 Apr to 30 Jun 2025.
CLs = laboratories contributing tested samples

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Streptococcus equi ELISA Antigen A/C (ISL)†	Antibody	3894	422	5
Streptococcus equi ELISA M-protein (IDVET)†	Antibody	570	151	1
Streptococcus equi PCR	Agent	2014	191	8
Streptococcus equi LAMP	Agent	16	1	1
Streptococcus equi culture	Agent	831	32	9
Rhodococcus equi ELISA#	Antibody	19	16	2
Rhodococcus equi PCR	Agent	17	2	2
Rhodococcus equi culture	Agent	594	5	7
Streptococcus zooepidemicus PCR	Agent	397	146	2
Streptococcus zooepidemicus culture	Agent	498	63	5

LAMP loop mediated isothermal amplification, †seropositivity may be attributed to disease exposure, infection or carrier states, #seropositives include exposure to the virulent form of *R. equi* or the presence of maternally derived antibodies, the *S. equi* agent detection tests presented here are for individual tests, not individual horses. Therefore, they differ from the SES data presented in Table 3, which represents individual cases

MISCELLANEOUS DISEASE

Table 12: Results of miscellaneous bacteriological testing between 1 Apr to 30 Jun 2025.
CLs = laboratories contributing tested samples

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
MRSA culture	Agent	882	3	8
Borrelia burgdorferi ELISA	Antibody	81	17	3
Borrelia burgdorferi PCR	Agent	0	0	^
Burkholderia mallei (Glanders) CFT (APHA)	Antibody	207	0	1
Leptospira MAT	Antibody	0	0	^
Leptospira PCR	Agent	31	6	1
Anaplasma ELISA	Antibody	81	26	3
Anaplasma PCR	Agent	0	0	^

CFT Complement fixation test, LFT Lateral flow test, MAT microagglutination testing antibody, MRSA methicillin resistant *Staphylococcus aureus,* ^ no laboratories reporting tested samples this quarter

GASTROINTESTINAL DISEASE

Table 13: Results of bacteriological testing for gastrointestinal diseases between 1 Apr to 30 Jun 2025. CLs = laboratories contributing tested samples

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Campylobacter culture	Agent	40	4	6
Clostridium perfringens ELISA	Toxin	262	6	2
Clostridium perfringens LFT	Toxin	62	8	3
Clostridium perfringens PCR	Agent	17	2	1
Clostridium difficile ELISA	Toxin	209	21	2
Clostridium difficile LFT	Toxin	110	0	4
Clostridium difficile PCR	Agent	20	0	2
Lawsonia intracellularis IPMA	Antibody	20	9	1
*Lawsonia intracellularis*** PCR	Agent	25	0	2
Salmonella Typhimurium‡ PCR	Agent	23	0	3
Salmonella Typhimurium‡ WGS (APHA)	Agent	17	17	1
Salmonella Typhimurium‡ culture	Agent	75	3	5
Salmonella Other *spp*‡ PCR	Agent	135	2	5
Salmonella Other *spp*‡ WGS (APHA)	Agent	20	18	1
Salmonella Other *spp*‡ culture	Agent	484	19	8
Enterobacter culture	Agent	2216	119	5
E. coli culture	Agent	2605	378	7

LFT Lateral flow test, IPMA immunoperoxidase monolayer assay, WGS whole genome sequencing, **identified using PCR applied to faeces, ‡Under the Zoonoses Order 1989, it is a statutory requirement to report and serotype positive cases for *Salmonella spp*. A positive case may have repeat samples taken.

APHA SALMONELLA RESULTS

Thirty-seven samples were submitted this quarter to the Animal and Plant Health Agency (APHA) and 35 were positive for Salmonella. Of these, the serovars reported were *S*.Typhimurium (17 isolates), *S*. Enteritidis (8 isolates), *S*. Agama (3 isolates), *S*. Newport (3 isolates) and single isolations of *S*. Bovismorbificans, *S*. Kentucky, Monophasic *Salmonella* Typhimurium and *S*. 4,12:b:-.

A large proportion of the *S*. Typhiumurium reports this quarter have arisen from horses at rescue centres (65%). This serovar has been associated with a number of different sources including livestock, dogs, wildlife and feed. *S*. Bovismorbificans and Monophasic *S*. Typhimurium are often attributed to pigs. *S*. Newport and *S*. Agama are found in wildlife including badgers and *S*. Enteritidis is typically associated with humans and poultry. This wide range of associations highlights the zoonotic potential of Salmonella infections which is particularly important in companion animals such as horses. For more information from APHA about Salmonella in Great Britain, please see the 2023 Salmonella in animals and feed surveillance report https://www.gov.uk/government/publications/salmonella-in-animals-and-feed-in-great-britain

PARASITOLOGY

A summary of parasitology testing undertaken by contributing laboratories is presented in Tables 14 and 15.

ECTOPARASITES AND OTHER SKIN PATHOGENS

Table 14: Results of ectoparasitology testing between 1 Apr to 30 Jun 2025.
CLs = laboratories contributing tested samples

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Mange *Sarcoptes scabiei*	Agent	182	0	9
Mange *Chorioptes spp*	Agent	182	1	9
Mange *Trombicula spp*	Agent	164	0	7
Mange *Demodex equi*	Agent	172	0	8
Lice *Damalinia equi*	Agent	274	26	7
Lice *Haematopinus asini*	Agent	169	3	6
Ringworm PCR	Agent	71	20	3
Ringworm culture	Agent	53	4	5
Ringworm microscopy	Agent	211	54	7
Dermatophilosis culture	Agent	32	1	2
Dermatophilosis microscopy	Agent	26	2	3
Candida culture	Agent	47	2	2
Candida microscopy	Agent	0	0	^

^ no laboratories reporting tested samples this quarter

Table 15: Results of endoparasitology testing between 1 Apr to 30 Jun 2025.
CLs = laboratories contributing tested samples

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Ascarids faecal exam	Agent	46107	165	13
Strongyles (large/small) faecal exam	Agent	47580	10067	15
Strongyloides faecal exam	Agent	46298	206	12
Strongylus edentatus culture	Agent	6	1	1
Strongylus equinus culture	Agent	6	1	1
Strongylus vulgaris culture	Agent	6	1	1
Tapeworm ELISA saliva	Antibody	11840	3787	1
Tapeworm ELISA serum	Antibody	1205	629	1
Tapeworm faecal exam	Agent	44066	200	9
Oxyuris equi faecal exam	Agent	41803	0	6
Oxyuris equi tape strip	Agent	340	20	5
Dictyocaulus arnfieldi Baermanns	Agent	49	0	5
Fasciola hepatica faecal exam	Agent	99	2	6
Fasciola hepatica sedimentation	Agent	37	0	2
Fasciola hepatica serology	Antibody	0	0	^
Cryptosporidia mZN	Agent	5	1	1
Cryptosporidia PCR	Agent	1	1	1
Cryptosporidia snap test	Agent	145	3	4
Cryptosporidia faecal exam	Agent	6	2	2
Cryptosporidia strip test	Agent	11	0	1
Giardia snap test	Agent	113	7	2
Giardia smear test	Agent	16	0	1
Coccidia faecal exam	Agent	2213	1	5

mZN Modified Ziehl-Neelsen stain , ^ no laboratories reporting tested samples this quarter

TOXICOSIS

A summary of diagnostic toxicosis testing undertaken by contributing laboratories is presented in Table 16. Results for toxicosis are based on histopathology or clinical signs.

Table 16: Results of toxicosis testing between 1 Apr to 30 Jun 2025.
CLs = laboratories contributing tested samples

Test	Samples tested (n)	Positive (n)	CLs (n)
Grass Sickness*	21	15	1
Atypical myopathy/Seasonal Pasture Associated Myopathy	1	1	1
Hepatic Toxicosis - Ragwort	48	14	1
Hepatic Lipidosis	7	2	1
Hepatic Encephalopathy	6	3	1
Tetanus	0	0	^
Botulism	0	0	^

*Figures for EGS contained in the EGSF Report may differ to the number of cases reported here, which are laboratory reported cases only. ^ no laboratories reporting tested samples this quarter

MISCELLANEOUS

A summary of miscellaneous testing undertaken by contributing laboratories is presented in Table 17.

Table 17: Results of miscellaneous testing between 1 Apr to 30 Jun 2025.
CLs = laboratories contributing tested samples

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Babesia caballi cELISA (APHA)	Antibody	151	1	1
Babesia caballi IFAT (APHA)	Antibody	289	0	1
Babesia caballi cELISA	Antibody	68	2	1
Theileria equi cELISA (APHA)	Antibody	272	8	1
Theileria equi IFAT (APHA)	Antibody	289	7	1
Theileria equi cELISA	Antibody	68	1	1
Dourine CFT* (APHA)	Antibody	191	1**	1
Dourine IFAT (APHA)	Antibody	3	0	1

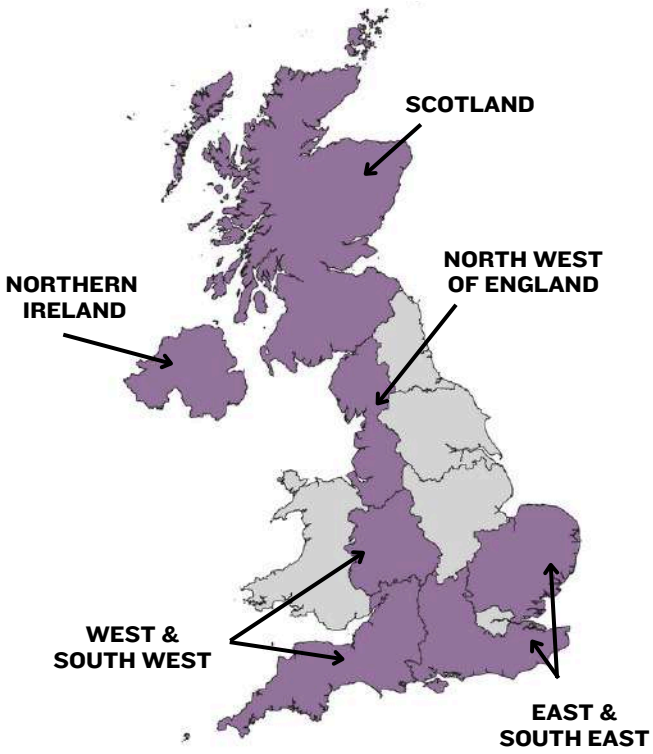
CFT Complement fixation test, IFAT Immunofluorescent antibody test, *CFT suspect/positive samples are then tested by IFAT as a confirmatory test for Dourine, **tested by IFAT and confirmed negative

LABORATORY REPORT END

UK Post-Mortem Examination Reports

Details about *post-mortem* examinations (PME) were reported by **three UK Veterinary Schools and three other contributing laboratories**. In this section PME cases are summarised by age stage and the main body system involved. Over time, it is hoped that additional temporal and spatial data will be made available for inclusion.

During this quarter, PME reports were provided for seven abortions, six neonates and 31 adult horses.



Right: Regional locations of PME surveillance contributors. Purple shading indicates regions where contributing laboratories are located

ABORTIONS

Between April and June 2025 there were a total of seven abortions reported. A summary of their details are provided below in Table 18 and 19.

Table 18: Post-Mortem Examination (PME) details for abortions reported between 1 Apr to 30 Jun 2025.

PME Diagnosis	Diagnostic certainty		Region of PME contributor
	Suspect	Certain	
Congenital	**-**	**1**	
Omphalocoele	-	1	East & South East
Placental	**-**	**2**	
Placentitis – bacterial, fetal sepsis	-	1	East & South East
Placental villous atrophy secondary to resolving placentitis	-	1	East & South East

ABORTIONS CONT...

Table 19: Post-Mortem Examination (PME) details for abortions reported between 1 Apr to 30 Jun 2025.

PME Diagnosis	Diagnostic certainty		Region of PME contributor
	Suspect	Certain	
Umbilical	**-**	**2**	
Umbilical – excessive cord length, placentitis, placental mineralistion	-	1	East & South East
Umbilical – excessive cord length, ischaemic necrosis of cervical pole	-	1	East & South East
Intrapartum stillbirth	**-**	**2**	
Dystocia (no specific cause reported)	-	2	East & South East

NEONATAL DEATHS

Between April and June 2025 there were six neonatal deaths reported.

A summary of their details are provided below in Table 20.

Table 20: Post-Mortem Examination (PME) details for neonatal deaths reported between 1 Apr to 30 Jun 2025.

PME Diagnosis	Total	Region of PME contributor
Gastrointestinal	**2**	
Cryptosporidiosis	1	Northern Ireland
Septic peritonitis	1	West & South West
Miscellaneous	**2**	
Sepsis	2	East & South East
Musculoskeletal	**1**	
Fracture of metatarsal	1	East & South East
Urogenital	**1**	
Urinary bladder rupture	1	Northern Ireland

ADULT DEATHS

Between April and June 2025 there were a total of 31 adults deaths reported.

A summary of their details are provided below in Table 23 and 24.

Table 23: Post-Mortem Examination (PME) details for adult deaths relating to cardiovascular and gastrointestinal reports between 1 Apr to 30 Jun 2025.

PME Diagnosis	Total	Region of PME contributor
Cardiovascular	**3**	
Ventricular fibrofatty cardiomyopathy	1	East & South East
Sudden death, exercise related, suspected cardiac abnormality	2	East & South East
Gastrointestinal	**10**	
Gastric		
Gastroduodenal ulceration, gastric rupture, septic peritonitis	2	East & South East
Small intestinal		
Small intestinal strangulating/pedunculated lipoma	2	East & South East
Intestinal necrosis - post operative complication	1	East & South East
Enterocolitis	1	East & South East
Large intestinal		
Colon torsion, colitis	1	East & South East
Intestinal displacement - left dorsal/nephrosplenic entrapment	1	Scotland
Chronic necrotising colitis, septic emboli	1	East & South East
Cyathostominosis	1	Northern Ireland
Hepatic	**3**	
Hepatic necrosis, suspected hepatotoxicity	2	East & South East
Hepatopathy, hepatic encephalopathy	1	East & South East
Miscellaneous	**1**	
Salmonellosis - systemic	1	East & South East
Musculoskeletal system	**5**	
Fracture of skull	1	East & South East
Fracture of vertebral column - second cervical vertebra	1	East & South East
Cervical vertebral stenotic myelopathy (CVSM, Wobbler disease)	1	East & South East
Fracture of pelvis, haemoperitoneum	1	East & South East
Fracture of metacarpal III	1	East & South East

ADULT DEATHS CONT...

Table 24: Post-Mortem Examination (PME) details for adult deaths relating to hepatic, miscellaneous, musculoskeletal and neoplasia reports between 1 Apr to 30 Jun 2025.

PME Diagnosis	Total	Region of PME contributor
Neoplasia	**2**	
Phaeochromocytoma, neoplastic metastases, haemoabdomen	1	East & South East
Haemangiosarcoma	1	East & South East
Neurological	**1**	
Meningioencephalitis, cholelithiasis	1	West & South West
No diagnosis reached	**3**	
Sudden death - cause unknown (unexplained), skull fracture	1	East & South East
Sudden death - cause unknown (unexplained), cranial haemorrhage	1	East & South East
Sudden death - cause unknown (unexplained), fracture of vertebral column - second cervical vertebra	1	West & South West
Reproductive	**1**	
Uterine artery rupture, haemoabdomen	1	East & South East
Respiratory	**1**	
Pleuropneumonia, rhabdomyolysis - exertional	1	East & South East
Welfare	**1**	
Emaciation, parasite - cyathostominosis, anoplocephalidae	1	East & South East

ICC 2025 Q2 SHORT REPORT

The International Collating Centre (ICC) Q2 2025 report has been circulated to subscribers. A short summary is presented below with the full version available online (https://equinesurveillance.org/iccview/resources/2025Q2summ.pdf), countries are coded according to ISO 3166 international standard. The ICC provides almost daily email updates on national and international equine disease outbreaks, contact equinesurveillance@vet.cam.ac.uk to subscribe. Current and previous outbreak reports can be found online in an interactive platform www.equinesurveillance.org/iccview/.

ICC 2025 Q2

534 reports issued
averaging 8 reports per working day

RESPIRATORY CONDITIONS (347 reports)

EHV-1
(n=59)

EHV-4
(n=79)

RHODOCOCCUS EQUI
(n=29)

STRANGLES
(n=159)

S. ZOOEPIDEMICUS
(n=1)

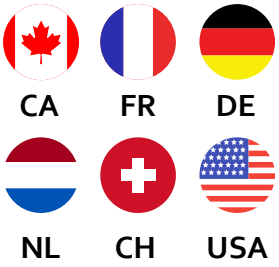
EQUINE INFLUENZA
(n=20)

NEUROLOGICAL CONDITIONS (27 reports)

EEE
(n=4)

EEV
(n=1)

EHV-1
(n=21)



WNV
(n=1)

REPRODUCTIVE CONDITIONS (43 reports)

CEM
(n=20)

DE

EHV-1
(n=19)

BE FR DE IE

JP NL SE USA

EHV-3
(n=1)

FR

EHV-4
(n=2)

IE UK

KLEBSIELLA PNEUMONIAE
(n=1)

IE

GASTROINTESTINAL CONDITIONS (24 reports)

SALMONELLOSIS
(n=14)

IE NL

ROTAVIRUS
(n=2)

CA

CORONAVIRUS
(n=4)

NL

CLOSTRIDIAL ENTEROCOLITIS
(n=3)

CA

RHODOCOCCUS EQUI
(n=1)

FR

MISCELLANEOUS CONDITIONS (93 reports)

PIROPLASMOSIS
(n=8)

IT NL CH ZA

AHS
(n=2)

NA ZA

POTOMAC HORSE FEVER
(n=1)

USA

NEW WORLD SCREW WORM
(n=1)

MX

EGS
(n=33)

UK

EIA
(n=31)

BE BG CA

CL FR IT USA

ANAPLASMOSIS
(n=10)

DE NL CH

LEPTOSPIROSIS
(n=1)

IT

PIGEON FEVER
(n=5)

USA

MRSA
(n=1)

SE

International Collating Centre

The ICC continues to be a vital resource in the ongoing monitoring and management of equine health worldwide.

ACKNOWLEDGEMENTS

We are extremely grateful to the following 32 laboratories for contributing data for this report

- Agri-Food & Biosciences Institute of Northern Ireland
- Animal and Plant Health Agency
- Ashbrook Equine Hospital
- Austin Davis Biologics Ltd
- Axiom Veterinary Laboratories Ltd
- B&W Equine Group Ltd
- Biobest Laboratories Ltd
- BioTe
- The Donkey Sanctuary
- Donnington Grove Veterinary Group
- Hampden Veterinary Hospital
- The Horse Trust
- IDEXX Laboratories
- Langford Veterinary Services
- Liphook Equine Hospital
- MBM Equine
- Nationwide Laboratories
- Newmarket Equine Hospital
- Rainbow Equine Hospital
- Rossdales Laboratories
- Royal Veterinary College
- Sussex Equine Hospital
- Three Counties Equine Hospital
- University of Cambridge
- University of Edinburgh
- University of Glasgow
- University of Liverpool
- University of Surrey
- Valley Equine Hospital
- VPG (Veterinary Pathology Group) Exeter
- VPG (Veterinary Pathology Group) Leeds
- Westgate Laboratories Ltd

All laboratories contributing to this report operate Quality Assurance schemes. These schemes differ between laboratories; however, all the contagious equine metritis testing reported was accredited by BEVA, with the exception of the APHA, which acts as the reference laboratory.

We are extremely grateful to the Horserace Betting Levy Board (HBLB), Racehorse Owners Association (ROA) and Thoroughbred Breeders' Association (TBA) for their continued combined contribution to Equine Infectious Disease Surveillance.

We welcome feedback including contributions on focus articles to the following address:

Email: equinesurveillance@vet.cam.ac.uk
Website: www.equinesurveillance.org

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