National Equine Health Surveys: update from NEHS 2013

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Introduction

Disease prevalence data are not easy to capture outside of reports from diagnostic laboratories and as a result there are relatively few examples of comprehensive endemic disease surveillance programmes world-wide. Data can potentially be gathered from a variety of sources including real time reports from sentinel veterinary practices, data mining from veterinary practice records, equine insurance company records and owner-reported prevalence of disease. Each has its own merits and biases that represent a balance between ease of data collection, accuracy of the data collected and how representative the data are of the overall horse population. The National Equine Health Surveys (NEHS) were introduced in 2010 by the Blue Cross and the British Equine Veterinary Association (BEVA) in response to a perceived need in the UK for some form of syndromic endemic disease surveillance. NEHS collects data on a wide range of disease syndromes on an annual snap-shot or census basis directly from horse owners as opposed to gathering diagnostic data from veterinary practices. This article provides an update from NEHS 2013 and follows an initial report by the same author that outlined NEHS 2010-2012, which appeared in the Volume 8, No. 4 edition of the AHT/BEVA/Defra Equine Quarterly Disease Surveillance Report. (http://www.aht.org.uk/skins/Default/pdfs/defraoct-dec12focus.pdf).

NEHS 2013: what it involved

As in previous years, NEHS 2013 was conducted as an online, snapshot survey hosted by the Blue Cross based on the principal of national census weeks for the UK horse, pony, donkey and mule population, with owners/keepers reporting their horse’s health status on one day of their choosing in the survey week during May 2013. The survey used a tick-box type approach with drop down menus to facilitate data entry and asked owners/keepers to report the number of horses under their care exhibiting each of 31 different syndromes covering the presenting signs for common diseases and the major body systems. New for 2013, NEHS included questions on anthelmintic use, in particular treatment for encysted/overwintering cyathostomin larvae and vaccination, in particular for influenza, tetanus, equine herpesviruses (EHV) and strangles (Streptococcus equi).

NEHS 2013: what it found

Records for 4,730 horses were submitted during NEHS 2013 by 1,246 respondents, an increase of 3.5% from NEHS 2012.

![Fig. 1: NEHS 2013 horse returns summary data for a) location where horses are kept (n=4,658), b) horses’ main activities (n=5293) and c) horses’ age distribution (n=4,690)](http://www.aht.org.uk/skins/Default/pdfs/defraoct-dec12focus.pdf)
The majority of horses (54%) for which responses were received were kept either in livery yards or private yards with 21% kept by equine welfare charities and a minority of returns from the competition (3%) and racing (0.06%) sectors (Fig. 1a). Among horses’ main activities (for which some were noted in multiple categories giving the higher total of n=5,293), 37% were recorded as being used for leisure, 18% were retired or non-ridden companions (probably reflecting the relatively large cohort of returns from equine welfare charities), 15% were recorded as being used mainly for equestrian disciplines and 23% of horses were returned non-specified as ‘other’ use (Fig. 1b). There was a broadly normal distribution of ages of horses included in the survey where their age was known (Fig. 1c).

Overall, 62% of horses were recorded as having one or more of the disease syndromes surveyed (Fig. 2).

Lameness was one of the most prevalent syndromes (18.6% of horses) with degenerative joint disease being the most prevalent cause of lameness (14.8%), with foot lameness recorded in a further 3.8% of horses, which broadly mirrored findings in previous NEHS surveys. Among other orthopaedic syndromes laminitis had a prevalence of 4.4%, with 25% of these being first occurrences and 75% being recurrent episodes of disease and back problems were recorded in 5% of horses.

Skin disease was again frequently recorded (14.6% of horses) as had been noted in previous NEHS surveys, with sarcoids (2.8%) and melanoma (1%) again being prevalent among tumours. Wounds were reported less frequently than in NEHS 2010-12 (1.4% compared to 3.6%). The overall prevalence of colic was also lower in NEHS 2013 compared with NEHS 2010-12 (2.1% compared to 5.6%) although the ratio of medical to surgical colic cases was broadly similar at 6 to 1 in NEHS 2013 compared with 7 to 1 in NEHS 2010-12. Equine grass sickness was again reported at a low prevalence (0.1%) as were myopathies (0.3%).

Headshaking was recorded in 1% of returns and stereotypies were recorded in 1.2% of horses, which was lower than the 4.1% recorded in NEHS 2010-12. Eye problems were more frequently recorded in NEHS 2013 at 2.6% with an equal prevalence of uveitis as corneal disease (both at 0.3%) but a higher prevalence of cataract (0.9%). Respiratory diseases were relatively common with an overall prevalence of 5%, the same as in NEHS 2010-12. Allergic respiratory disease was reported among 4.2% of horses and more frequently than infectious respiratory disease (0.3%).
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Confirmed or suspected PPID (commonly referred to as equine Cushing’s disease) was reported relatively frequently (3.3%) whereas equine metabolic syndrome (EMS) was recorded less frequently (0.9%). The low prevalence of EMS recorded may reflect the relatively low proportion of horses recorded as being overweight (7.8%) in NEHS 2013, with most horses (41%) recorded as ideal/normal weight and 4.1% recorded as being underweight. This is, however, a consistent trend in NEHS surveys, which is markedly different to previously published data from UK horses. This may reflect a combination of factors related to owners’ inherent underestimation of their horses’ condition score, difficulties in owners performing condition scoring accurately and differences in the sample populations contributing to these various studies.

Overall, 78% of horses in NEHS 2013 were reported as being vaccinated for influenza with most of these vaccinated for both flu and tetanus, giving a much higher vaccine coverage estimate than those derived from vaccines sales figures which suggest vaccination rates of only 40-50%. Whilst vaccination rates are not straightforward to calculate from vaccine sales, it is possible that the cohort of owners who are sufficiently motivated by equine health to take part in NEHS are more likely to be diligent about preventive health plans, including vaccination, than some other sections of the horse owning community. The most frequent reason given by owners electing not to vaccinate against influenza were that that their horse did not live in a yard with other other animals or did not travel or mix with other horses. Use of EHV and strangles vaccines was much lower with only 3% of horses vaccinated against EHV and 2.6% of horses vaccinated against strangles.

The small number of donkey returns in NEHS 2013 (n=126) make meaningful interpretation difficult; however, broadly similar trends were seen as in horses and ponies with a greater proportion of returns in donkeys made for equine metabolic syndrome and being overweight.

NEHS 2013: now and into the future
NEHS continues to generate disease prevalence data from its annual ‘snap shot’ of owner-reported syndromic surveillance. Lameness associated with degenerative joint disease continues to be the most frequently reported syndrome along with skin disease. Although the number of owners taking part has increased each year since NEHS began in 2010, to maximise any benefit of NEHS to the industry it will be important that all sectors of the industry support NEHS and encourage their members to take part. NEHS strives to achieve its goal of gathering data from 10% of the UK equine population, approximately 100,000 animals.