

National Equine Health Survey (NEHS) 2016

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NEHS 2016 in numbers

- 5635 people took part (13.8% increase on 2015) and returned records for 16751 horses (12% increase on 2015).
- 62% of horses were healthy (i.e. had no health problems recorded) and 38% of horses had one or more health problems recorded.
- The most frequent disease syndrome recorded was lameness, accounting for one third of all problems reported.
- The Top Five disease syndromes recorded were lameness, laminitis, sweet itch, mud fever and PPID ('Equine Cushing's Disease').
- Degenerative joint disease was the most frequently reported single cause of lameness (41.2% of all lameness and 13.5% of all syndromes recorded).
- Diseases of the foot, excluding laminitis, accounted for 31.9% of all lameness (10.5% of all syndromes reported) with white line disease (pus in the foot) the most common single cause of foot lameness reported (10.4% of all lameness and 3.4% of all syndromes).
- Laminitis was commonly reported with a prevalence of 6.8% of all syndromes (20.7% of all lameness); 42% of laminitis cases were first episodes and 58% were repeat episodes. These data are similar to previous years. There was a higher prevalence of laminitis in native pony breeds compared to other breeds and types (12.7%), with approximately equal proportions of first and repeat episodes.
- Flexor tendon injuries and suspensory ligament injuries were reported with a prevalence of 1.6% and 2% respectively (accounting for 5% and 6.1% of all lameness reported).
- The prevalence of different causes of lameness was consistent across different disciplines with a similar prevalence of laminitis, foot lameness, flexor tendon injury, suspensory ligament injury and degenerative joint disease in horses used mainly for hacking, leisure riding and dressage.
- Skin diseases were commonly reported (25.5% of all syndromes) with sweet itch and mud fever accounting for 53% of all skin disease (13.6% of all syndromes). Fig.13.
- Sarcoids and melanoma were commonly reported (5.1% and 1.7% prevalence respectively).
- The two most commonly reported medical problems were PPID/Equine Cushing's Disease (6.6% of all syndromes) and Recurrent Airway Obstruction/Heaves/Equine Asthma (6% of all syndromes).
- Infectious respiratory was reported in only 0.6% of returns, with strangles accounting for 57% of infectious disease syndromes recorded
- 76% of horses were recorded as having a body (fat) score of 2.5-3.5, with just 5.5% recorded as being thin (score 0-2.5) and 18.6% recorded as overweight (score 3.5-5)
- 77.4% of responders had administered treatments for encysted cyathostomin larvae and almost all (88.9%) could remember which products had been used. Two thirds (68.4%) had used an

appropriate product and one third had used products that are either not licensed for use against encysted larvae or for which cyathostomin resistance has been reported

Survey method

- The eighth NEHS survey ran in May 2016. As in previous years, the survey was led by the Blue Cross, was conducted on-line and was open to respondents to complete for one week
- The survey used the same format as previous years with owner-reported syndromic surveillance capturing a snap-shot of the spectrum of problems noted by owners for each horse under their care on the day they chose to complete the survey
- The 2016 survey used the same disease syndrome descriptors to provide continuity of data with previous years. The survey included the same supplementary questions from 2015 about anthelmintic use for encysted cyathostomins. Supplementary questions were also included about which feed products respondents used.
- The disease syndrome descriptors were grouped into broad categories (eye problems, respiratory problems, internal medical problems, dental problems, lameness and laminitis, skin problems and back problems) to facilitate completion of the survey by respondents and a free text category to allow respondents to report other problems not listed in the syndrome descriptors
- New for 2016, additional questions were included about specific causes of foot lameness, of soft tissue injuries to the distal limb (flexor tendon, manica flexoria and suspensory ligament injuries) and of degenerative joint disease in the distal limb (knee, fetlock and hock)
- 44 disease syndrome descriptors covering the presenting signs for common diseases and the major body systems were used.
- Owners were asked to report their horses' fat (body score) using the 0-5 scoring system by assigning their horse to one of three descriptors: overweight (score > 3.5), ideal/normal weight (score 2.5-3.5); underweight (score 0-2.5).
- As in the 2015 and 2014 surveys, a question was included on atypical myopathy with respondents asked to record the number of confirmed Atypical Myopathy cases they had had in the previous year.

Results (demographic information)

- 5635 people took part in the 2016 survey, a 13.8% increase on 2015 (4,951 in 2015; 3,675 in 2014 and 1,246 in 2012) continuing the upward trend in participation
- Records were returned for 16,751 horses, a 12% increase on 2015 (14,952 horses in 2015; 11,002 in 2014; and 4,730 in 2012)
- Most respondents kept or owned a single horse (39.6%), 29.8% kept or owned 2 horses, 14.2% 3 horses and 16.3% of respondents returned records for more than 3 horses, with 3.2% more than 5 horses. The data are similar to previous years and reflect previous data from the National Equine Database records showing that the majority of UK horses and ponies are single ownership (Fig. 1).
- Most horses (90%) were kept in livery yards (46.7%) or private yards (43.3%). These are similar figures to last year, which suggests that NEHS continues to sample a population representative of the general UK horse and pony population. Only 0.3% of returns were from welfare charities and 0.2% from RDA establishments which suggests that data from these sectors are not a source of bias in the overall dataset (Fig. 2). Dealer yards made up just 0.1% of returns and there were some sectors not represented.

- The most frequent activity horses were used for was leisure and hacking (36.8%; 37.4% in 2015 and 37% in 2014). 10.7% of horses were used for equestrianism (21.7% in 2015 and 18% in 2014), 4.1% used for showing, 3.5% were riding club horses, 2.5% were pony club and 1.2% were from racing (0.5% in 2015) (Fig. 3).
- Broad geographical coverage of the UK was achieved, again an important point when extrapolating NEHS data to the national herd.
- The distribution of ages of animals included in the survey was similar to previous years and was normally distributed (Fig. 4) with ages being recorded for almost all returns (97.5%). As in previous years, the majority of animals were in the age range 5-10 years old suggesting that the NEHS dataset is broadly representative of the national equine population.
- Native ponies formed the biggest single breed/type group (36%). 17% of horses were recorded as Thoroughbred types, 14% were Warmbloods and a further 14% were recorded as 'other horse types' (Fig. 5).
- Taken together, these results suggest that NEHS 2016 collected data that were valid and representative of the majority of the UK horse industry in the three key areas of age, type of use and geographical distribution.
- As with the previous surveys, the majority 62% (64% in 2015; 63% in 2014 and 62% in 2013) of horses were returned as healthy, reinforcing a consistent overall picture that a snapshot of equine health is that around two thirds of horses are disease free at any particular time.

Results (disease syndrome information)

- For the broad syndrome categories, lameness (including laminitis) was most frequently reported (32.9%), followed by skin disease (25.5%), internal medicine problems (20.9%), respiratory disease 7%, dental problems (5.1%) and eye problems (3.1%) Fig.6.
- The five most frequently recorded individual disease syndromes were lameness (not laminitis) (26.1%), laminitis (6.8%), sweet itch (6.8%), mud fever (6.8%) and PPID (6.6%). Other common syndromes were recurrent airway obstruction (5.6%), back problems (5.5%), sarcoids (5.1%), wounds (3%) and medical colic (2.9%). Lameness, sweet itch and PPID also featured in the 'Top 5' for 2015 with similar prevalence as in 2016.
- **Lameness**
 - Lameness (all causes) was the largest category of problems reported (32.9%) (Figs. 6 & 7) .
 - The prevalence of laminitis (first episodes and repeat episodes) was 6.8% of all syndromes reported and accounted for 20.7% of all lameness. The overall prevalence of laminitis was similar to previous years (6.4% in 2015 and 7.1% in 2014).
 - Repeat episodes of laminitis were more frequently reported than first episodes. First episodes of laminitis were reported as 2.9% of all syndromes (8.7% of all lameness) and repeat episodes were reported as 3.9% of all syndromes (12% of all lameness). This is similar to previous years with repeat episodes more frequently reported than first episodes (41% first episodes, 60% repeat episodes in 2015; 43% first episodes, 67% recurrent episodes in 2014).
 - The prevalence of laminitis was similar in all breed/type groups except for native ponies which had a higher prevalence of reported laminitis episodes than others (12.7% overall prevalence with 6.2% first episodes and 6.5% repeat episodes).
 - Foot lameness not due to laminitis accounted for 10.5% of all syndromes reported (31.9% of all lameness) (Fig. 7). White line disease ('pus in the foot') was the most frequently reported

foot problem (3.4% of all syndromes, 10.4% of lameness), followed by bruising and corns (1.6% and 4.9%), navicular syndrome (1.3% and 3.9%), coffin joint degenerative joint disease (1.7% and 5.3%) with other foot problems accounting for 2.5% of all syndromes and 7.5% of all lameness (Fig. 8 & 9).

- Lameness due to problems in the more proximal limb accounted for 15.6% of all syndromes reported (47.4% of all lameness) (Fig. 10). Flexor tendon and suspensory ligament problems had an overall prevalence of 3.6% (11.5% of all lameness). Flexor tendon injuries were reported at 1.6% of all syndromes (5% of all lameness), manica flexoria injuries at 0.2% and 0.5%, and suspensory ligament injuries were reported at 2% and 6.1%. Degenerative joint disease (arthritis) was more frequently reported than flexor tendon and suspensory ligament problems (13.5% of all syndromes reported and 41.2% of all lameness). The most frequently reported joint affected by DJD was the hock (5% and 15.3%), followed by the fetlock (1.4% and 4.2%) and then the knee (carpus) (1% and 3%) (Fig. 11).
- The prevalence of different causes of lameness was similar in horses used for different activities. In horses whose main use was hacking, laminitis had a prevalence of 10.5%, foot lameness (not laminitis) was 18.5%; flexor tendon and suspensory ligament injuries had a prevalence of 4.9% and proximal limb DJD had a prevalence of 16.8%. For leisure riding, these figures were 9.8% (laminitis), 15.9% (foot, not laminitis), 4.7% (flexor tendon and suspensory) and 26.5% (proximal limb DJD). For dressage, these figures were 7.9% (laminitis), 20% (foot, not laminitis), 3.8% (flexor tendon and suspensory) and 17.5% (proximal limb DJD).
- Overall, as in previous years, lameness due to problems in the limbs proximal to the foot were more common causes of lameness than problems in the foot (not including laminitis) (15.6% vs 10.5%) and the most prevalent lameness syndrome was proximal limb degenerative joint disease (11.8%).

- **Internal medical problems**

- The overall prevalence of individual internal medical problems was similar to previous years (Fig. 12) with PPID ('Equine Cushing's Disease) the most prevalent syndrome reported (6.6% of all syndromes, 31.6% of all internal medicine problems). This is similar to the high prevalence of PPID reported in 2015 (6.4%) and 2014 (5.6%) and possibly reflects increased surveillance through sponsored testing programmes as opposed to true increases in prevalence from the pre-2014 surveys.
- The most frequently reported internal medical syndromes were PPID (6.6%), medical colic (2.9%), gastric ulceration (2.7%), equine metabolic syndrome (2.3%) and headshaking (1.8%).
- The ratio of medical (those which required medical intervention only) to surgical colics (those which required interventions other than medical management) was 6 medical: 1 surgical, a similar proportion to previous years.
- Stereotypical behaviours were reported with a prevalence of 1.4% making them a relatively common problem.
- Liver disease was reported with an overall prevalence of 0.7% of all syndromes, tying up and other muscle problems as 0.5% and neurological problems as 0.4%.
- Diseases with high impact such as equine grass sickness (EGS) and atypical myopathy (AM) were reported with low frequency. EGS had an overall reported prevalence of 0.1% (0.14% in 2015, 0.2% in 2014) and an approximate prevalence of AM of 0.2% (0.4% in 2015 and

0.1% in 2014), although it should be noted that the AM are for a full year rather than the snapshot from the NEHS data collection week in May.

- **Respiratory diseases**
 - Recurrent airway obstruction was again the most frequently recorded respiratory problem (5.6% of all syndromes reported) and accounted for 79% of all respiratory problems. RAO has been reported with high prevalence in each NEHS survey (6.7% in 2015 and 6.9% in 2014) confirming the importance of this respiratory problem to the UK horse population.
 - Infectious respiratory disease was much less frequently reported (0.6% of all syndromes) with strangles accounting for 58% of all reported infectious respiratory disease (0.3% of all syndromes). Other infectious diseases were reported in 0.9% of returns.
- **Skin diseases**
 - As in previous years, skin diseases were commonly reported (25.5% of all syndromes)
 - Sweet itch and mud fever were the most frequently reported individual syndromes accounting for 53.2% of all skin disease (Fig. 13).
 - Sweet itch and mud fever each accounted for 6.8% of all returns, making them as prevalent as laminitis and more common than the individual internal medical and respiratory syndromes reported.
 - Sarcoids were again frequently reported (5.1% of all returns), a similar figure to previous years (5.6% in 2015). Melanoma was reported in 1.7% of returns, again a similar figure to previous years (1.7% in 2015).
 - Wounds were again a commonly reported problem, accounting for 3% of all returns (4% in 2015 and 3.9% in 2014).
- **Eye diseases**
 - Ocular problems accounted for 3.2% of all syndromes returning, reinforcing the importance of eye disease in the equine population.
 - Corneal problems were the most frequently reported individual syndrome (0.4% of all syndromes reported), with cataract reported in 0.9% and uveitis in 0.5% of returns (Fig. 14).
- **Back problems**
 - As in previous years, back problems were frequently reported and accounted for 5.5% of all returns (7% in 2015, 7.7% in 2014).
- **Body score**
 - Consistent with previous years, respondents reported that the majority of horses had a body score (fat score) in the ideal range of 2.5-3.5 (76% of horses). 5.5% were reported as being thin (score <2.5) and 18.6% were reported as being overweight (score >3.5) (Fig. 15).
- **Anthelmintic use**
 - As in 2015 and 2014, the majority of respondents (77.4%) of respondents intended to treat their horses for encysted cyathostomins over the winter of 2015 and almost all of these (88.9%) knew which product they had used. A variety of products had been used although the majority (68.4%; 64% in 2015 and 71% in 2014) had used moxidectin either as solo therapy or in combination with praziquantel. Of the remainder, 19% had used ivermectin (22.5% in 2015 and 18% in 2014), 6.8% had used benzimidazoles (7% in 2015 and 10% in 2014), 4.7% had used either pyrantel or Praziquantel (6.3% in 2015) (Fig. 16) and 1.2% had used herbal products.

- Approximately one quarter of treatments (26.5%) used products that did not have a marketing authorisation for treatment of encysted cyathostomin larvae (Ivermectin, Praziquantel, Pyrantel and herbal products [24.9%] or benzimidazole products without a marketing authorisation for mucosal stages of cyathostomins [1.6%]). 5.2% used a product for which cyathostomin resistance has been widely documented (fenbendazole). (Fig. 17).

Fig. 1. Number of horses kept

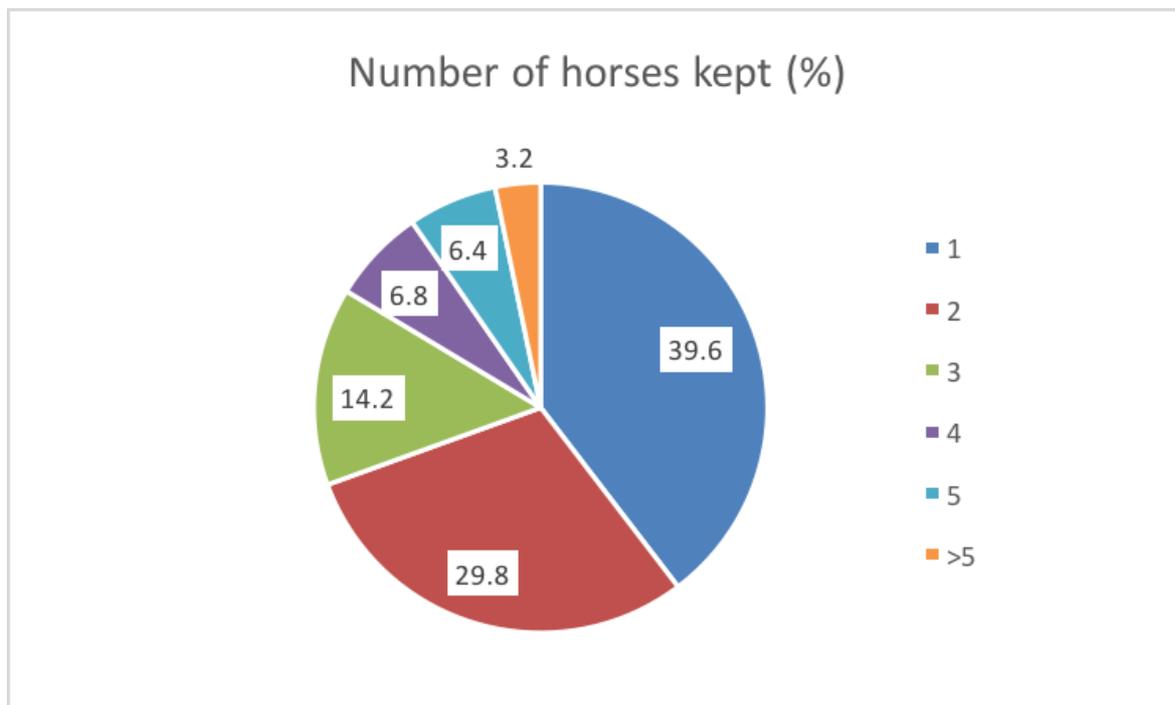


Fig. 2. Where horses are kept

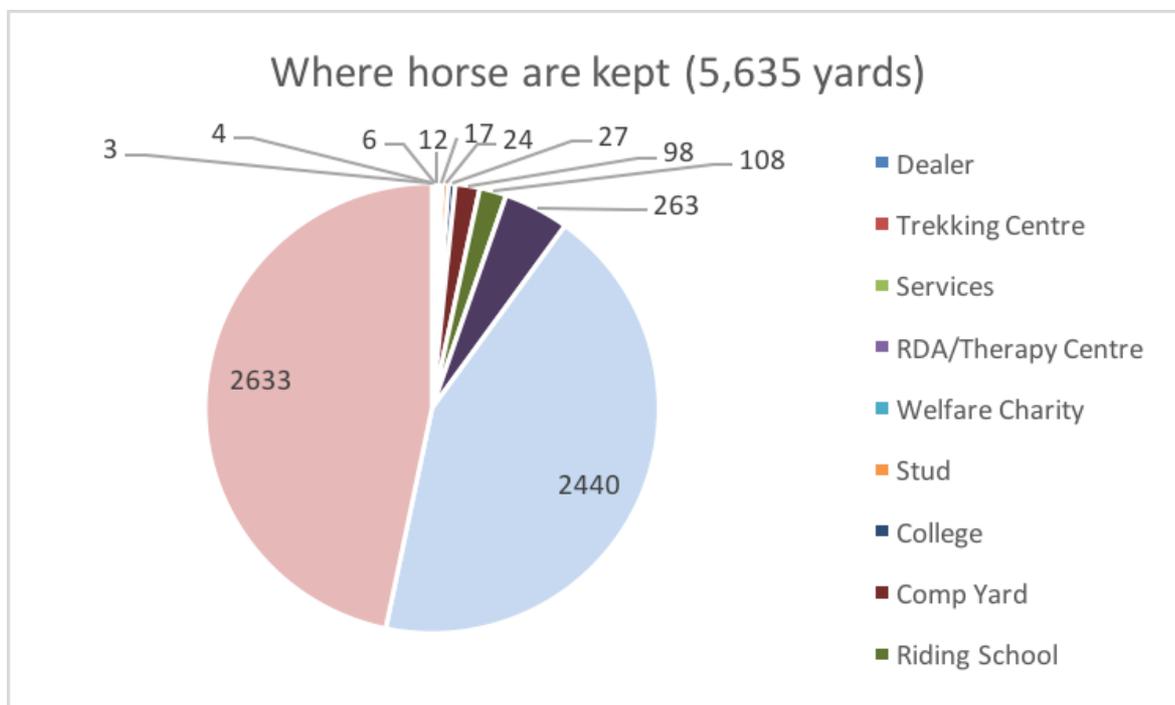


Fig. 3. Main activity

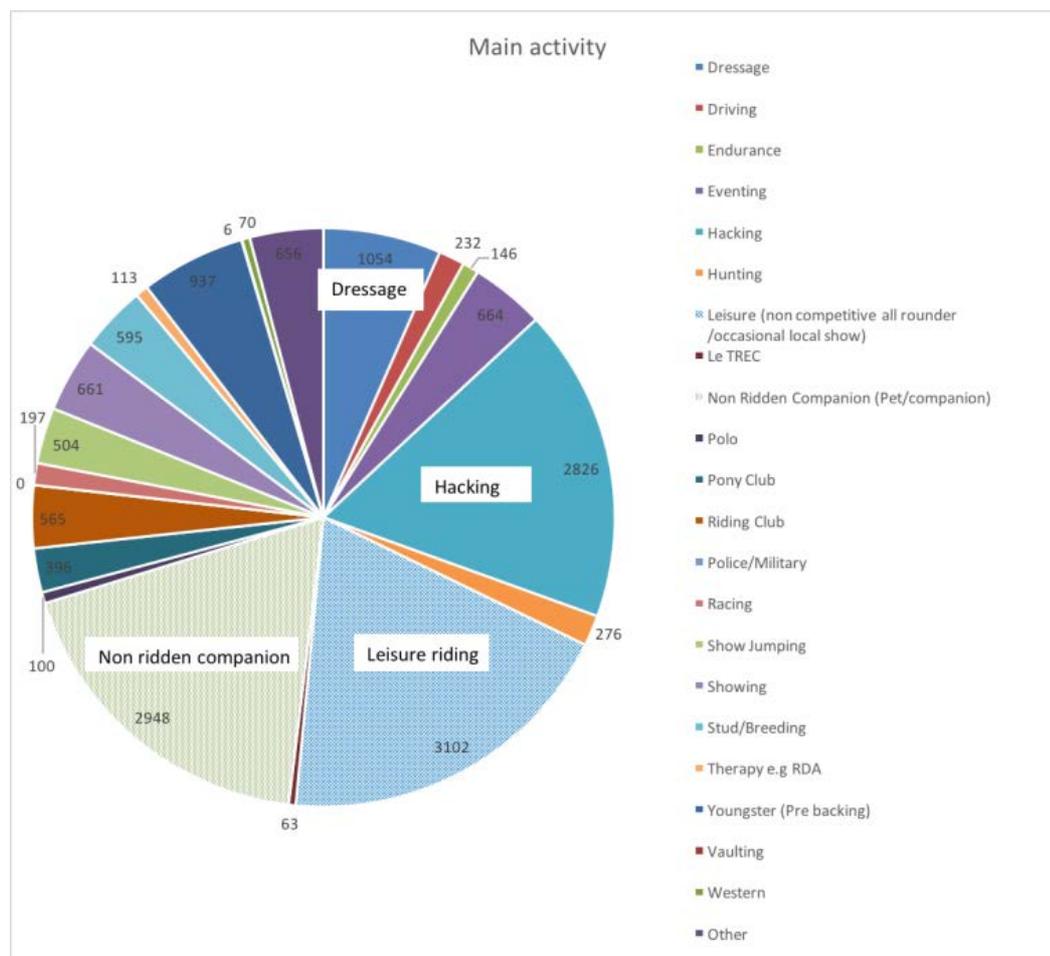


Fig. 4. Age distribution

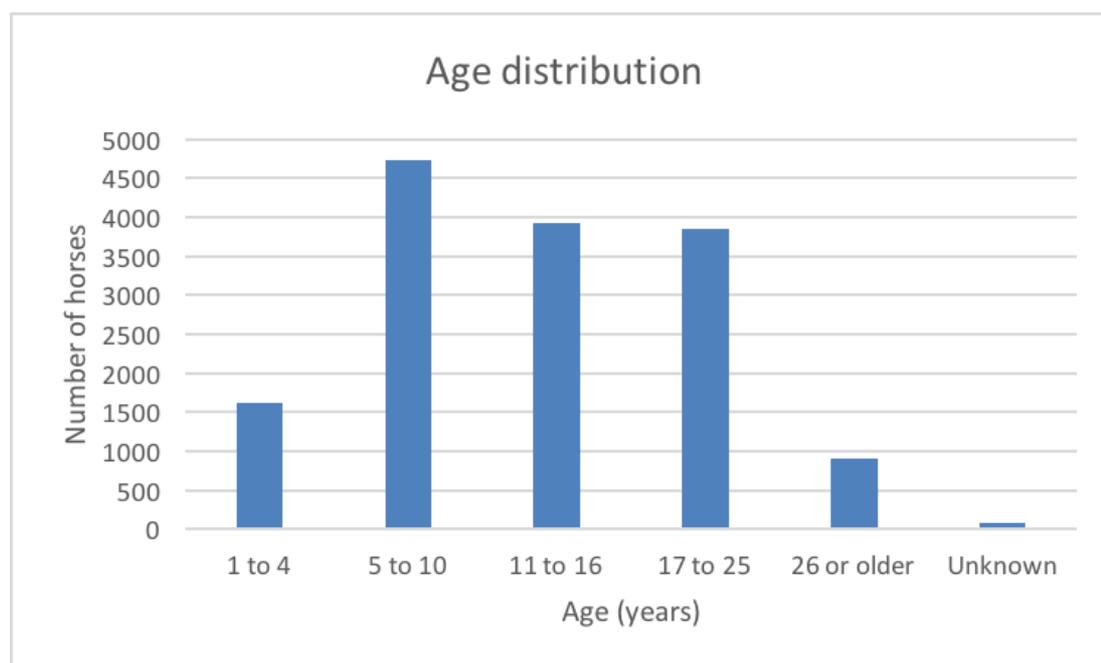


Fig. 5 Breed and type

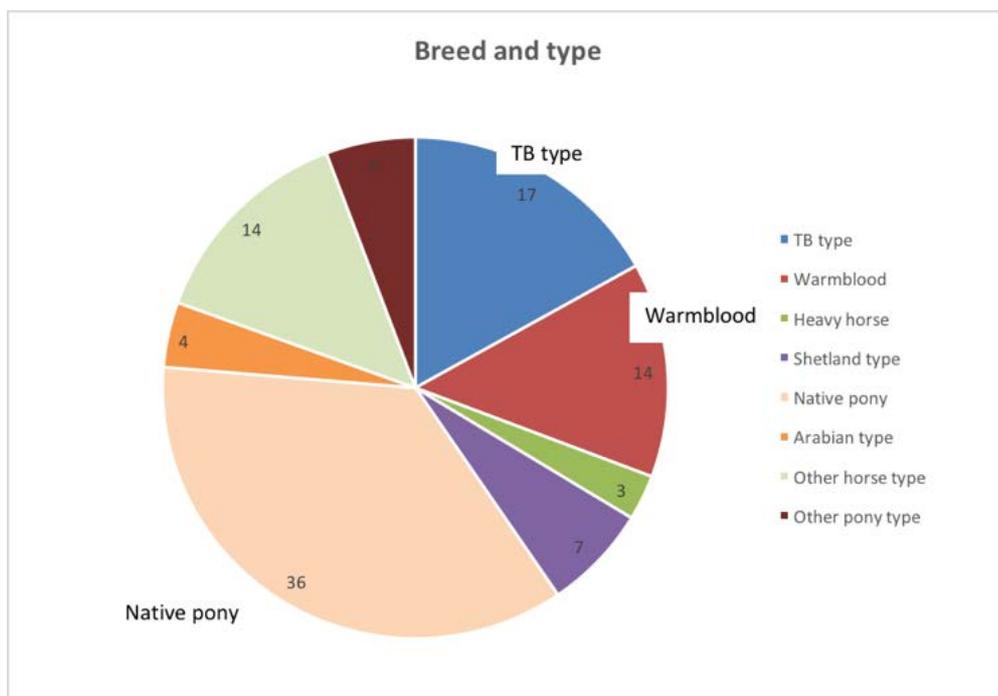


Fig. 6. Overall syndrome prevalence

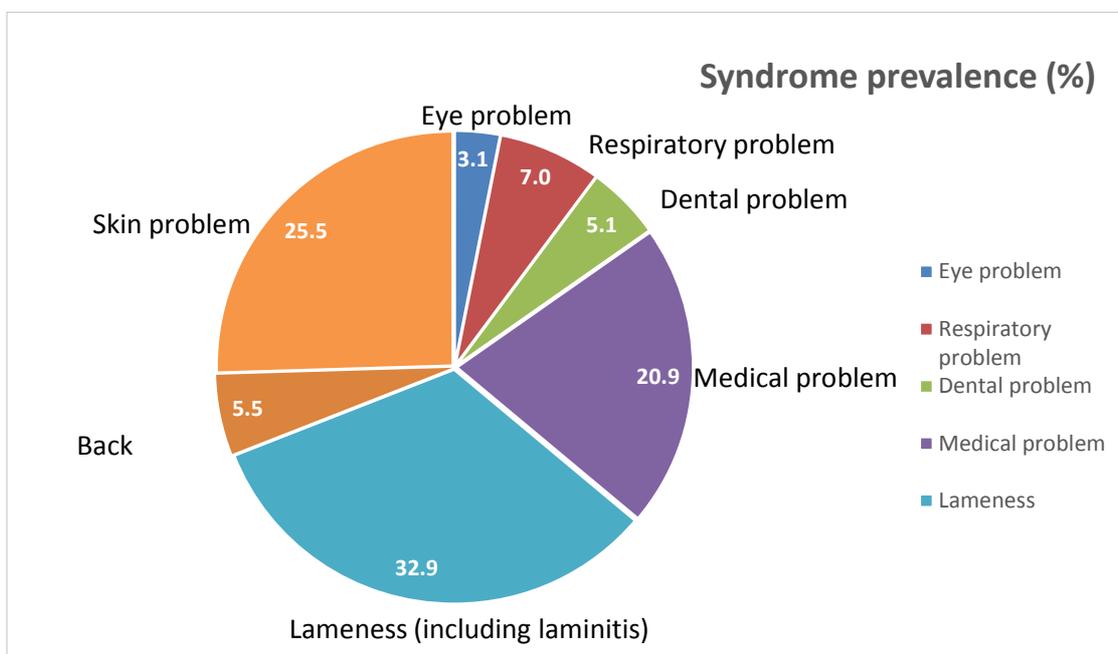


Fig.7. Causes of lameness

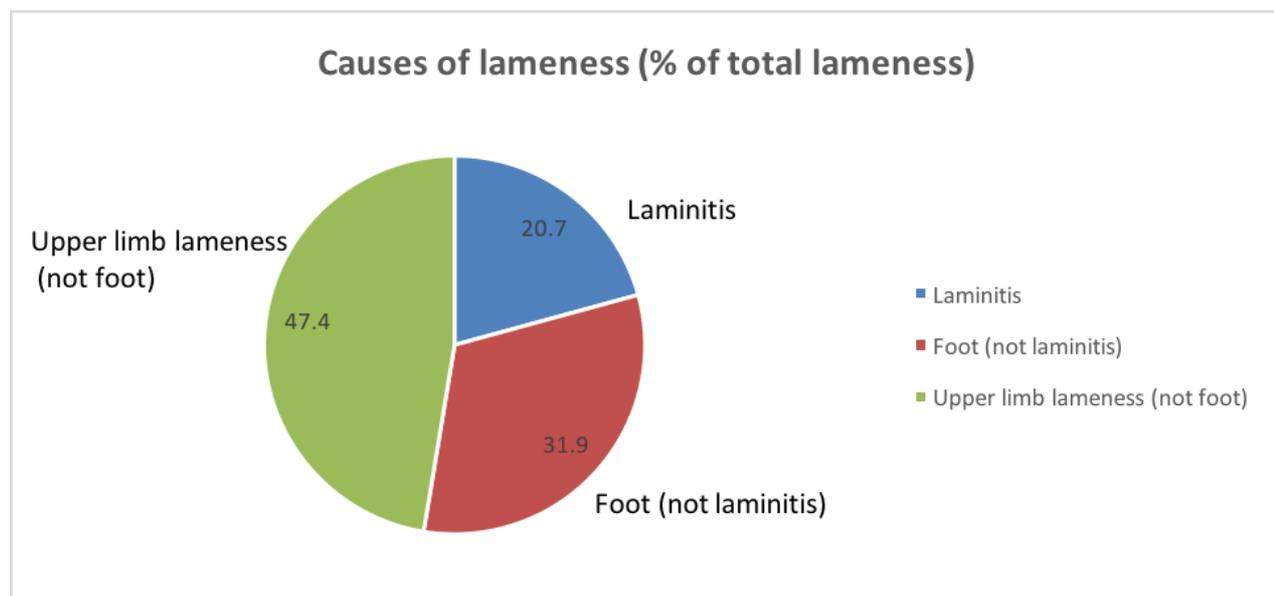


Fig. 8. Causes of foot lameness (including laminitis)

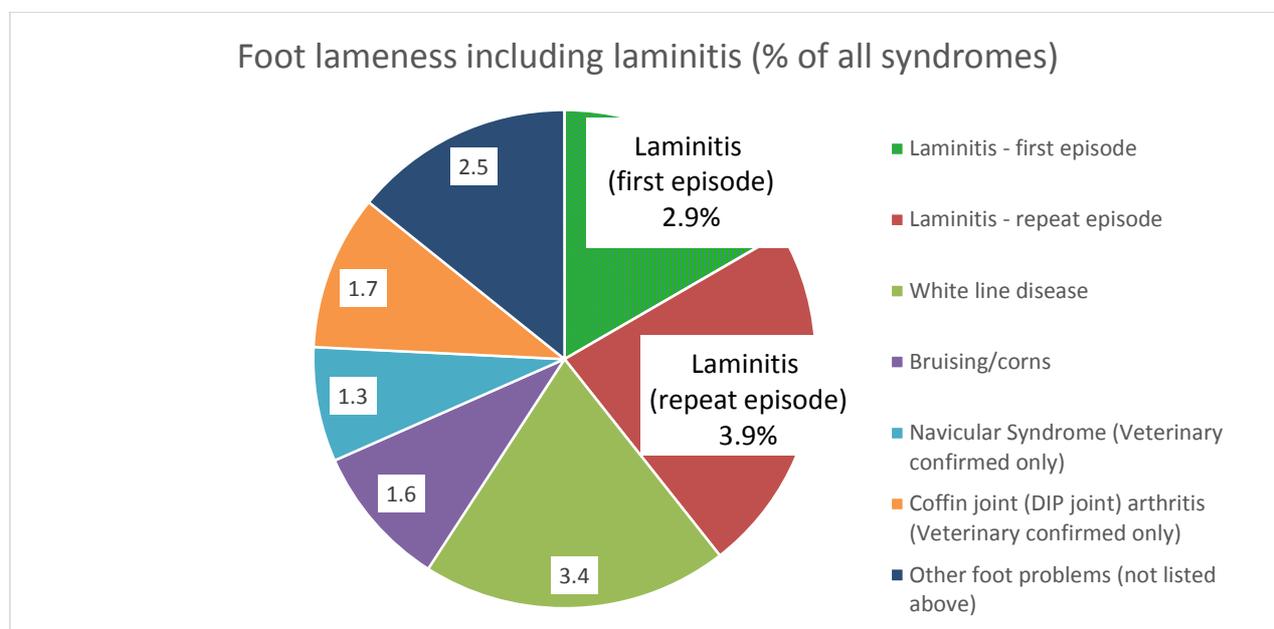


Fig. 9. Ranked causes of foot lameness (including laminitis) as % of all syndromes reported

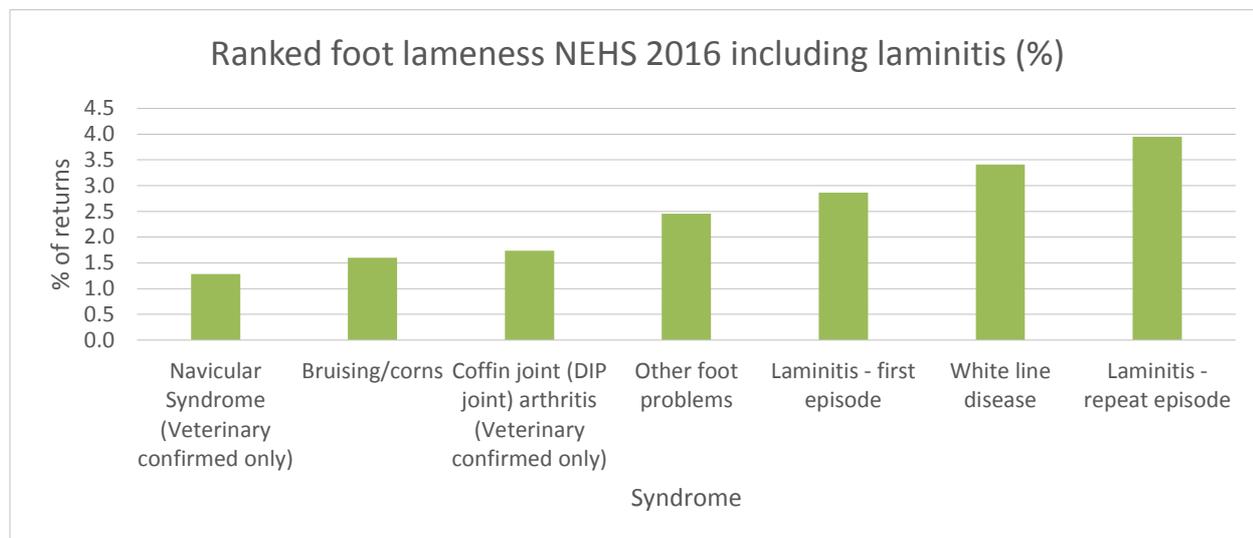


Fig. 10. Causes of proximal limb lameness

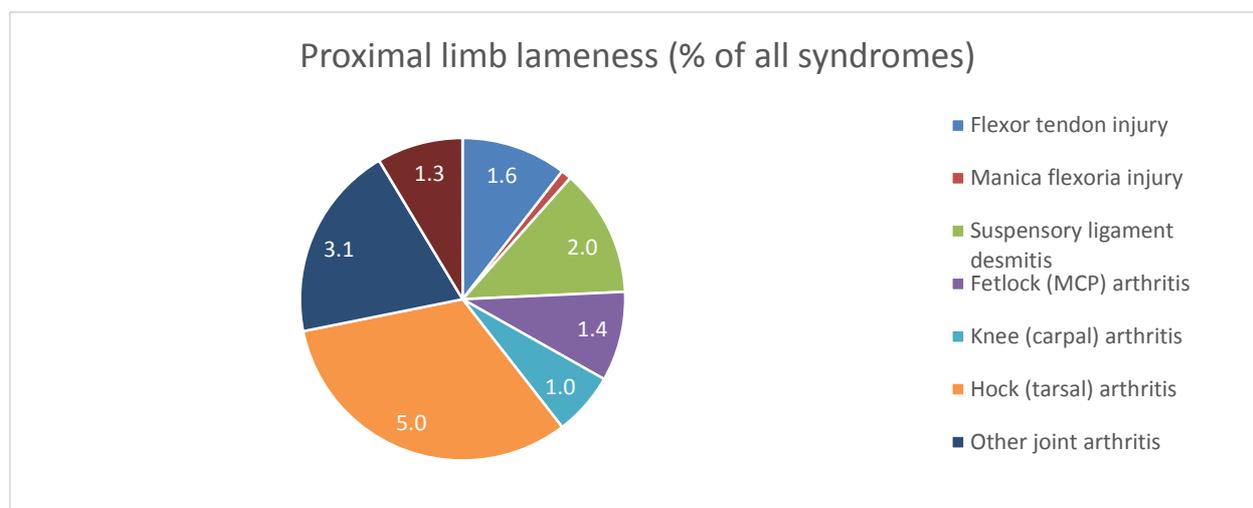


Fig. 11. Ranked causes of proximal limb lameness as % of all syndromes reported

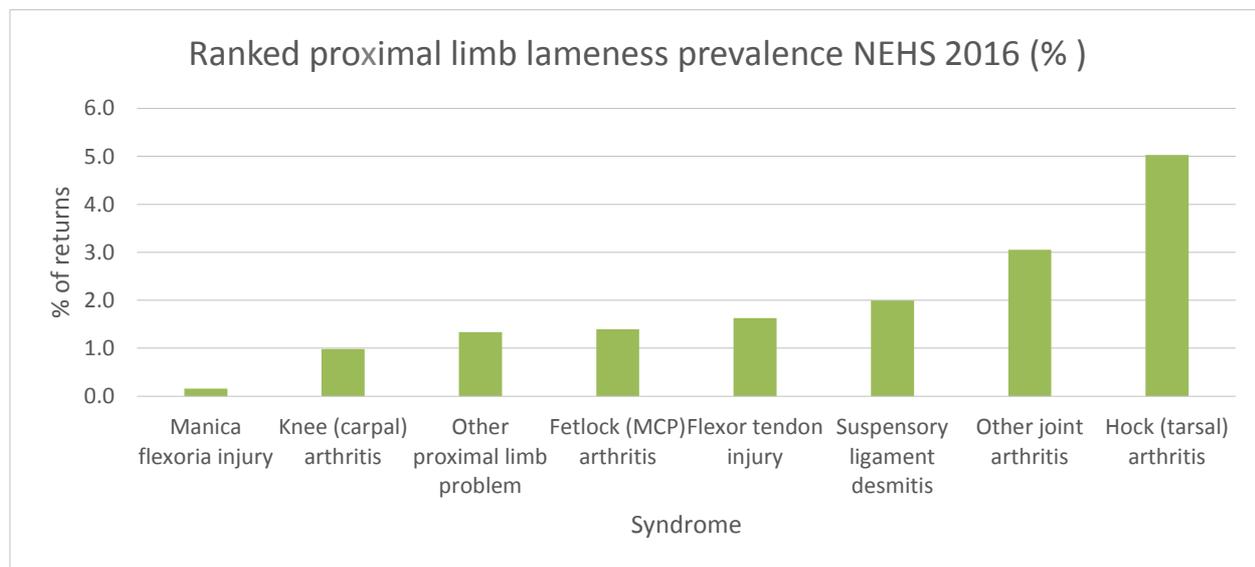


Fig.12. Ranked internal medical syndromes (as % of all syndromes reported)

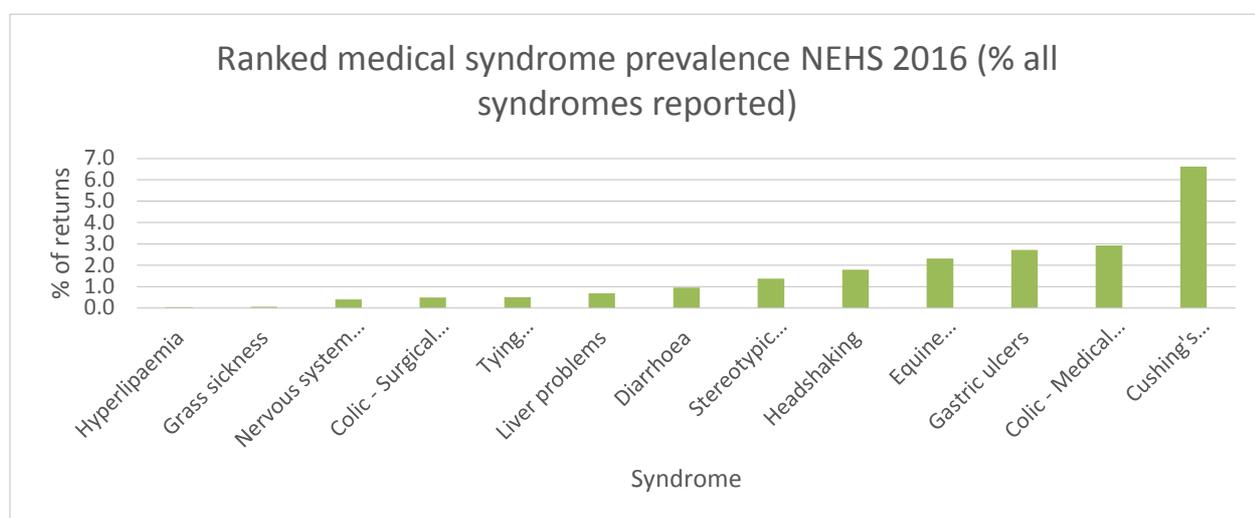


Fig. 13. Skin diseases (as % of all syndromes reported)

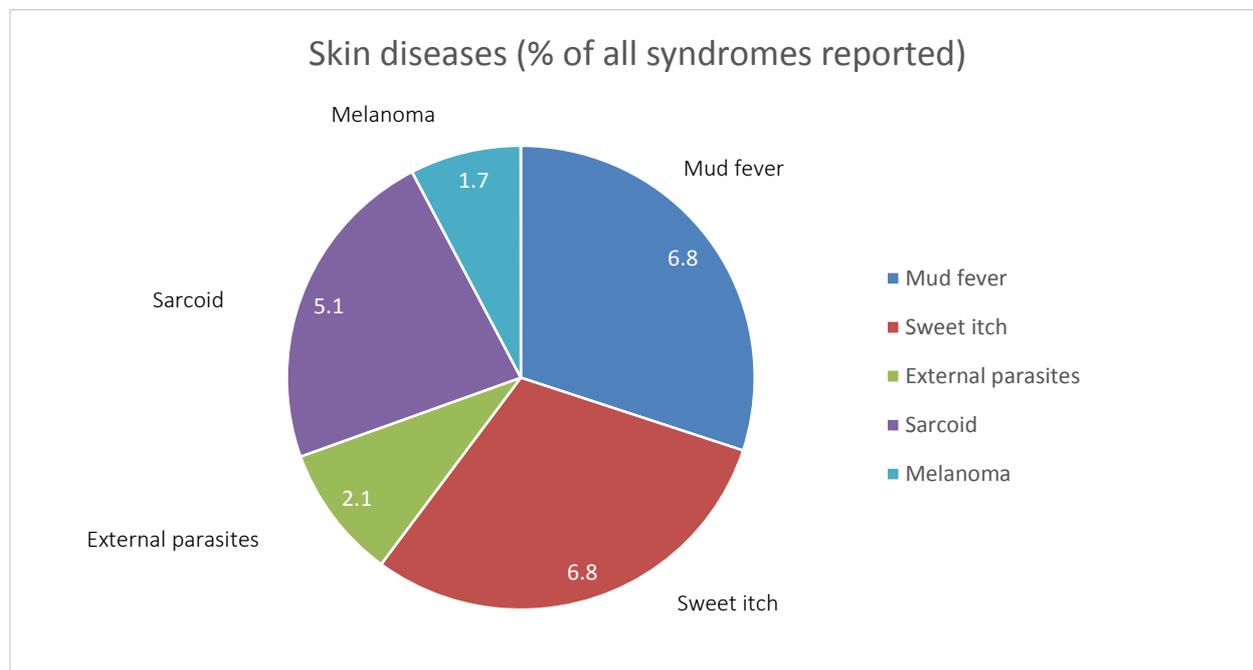


Fig. 14. Eye diseases (as % of all syndromes reported)

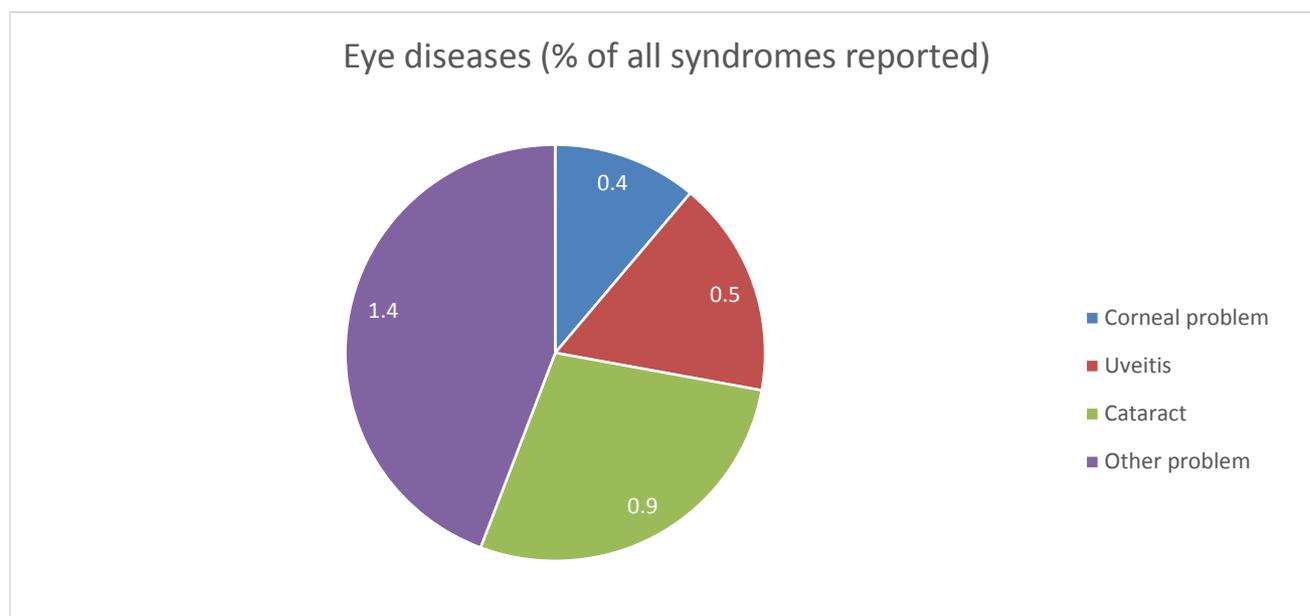


Fig. 15. Body (fat) score

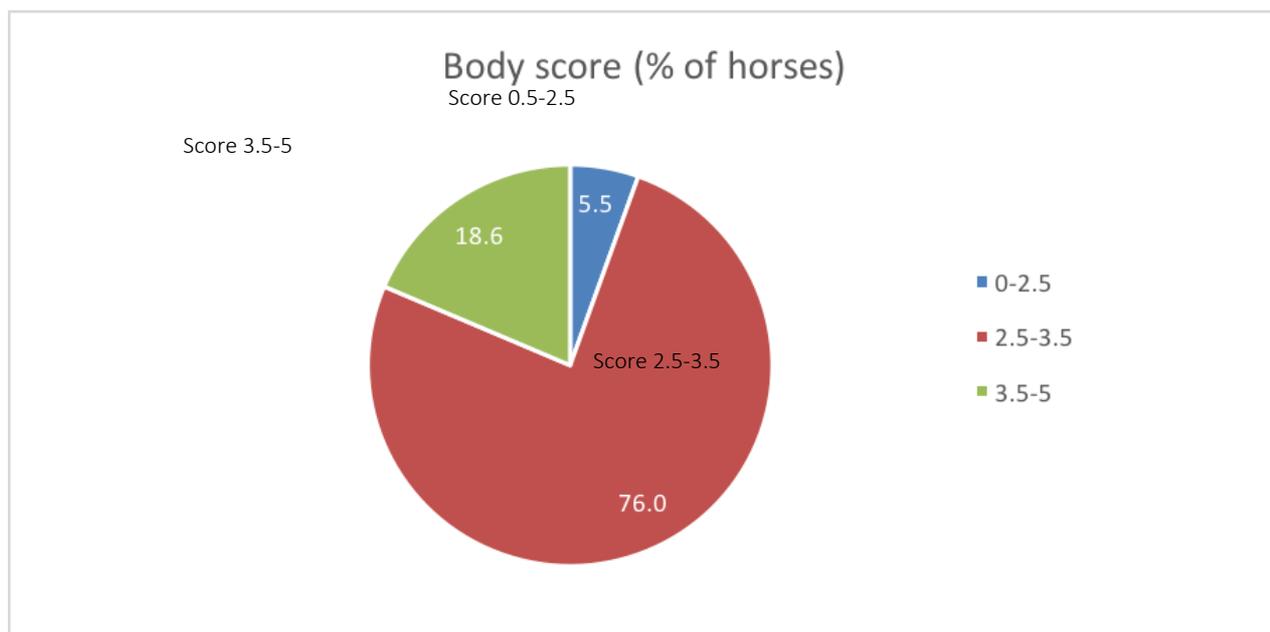


Fig. 16. Anthelmintics used to treat encysted cyathostomins

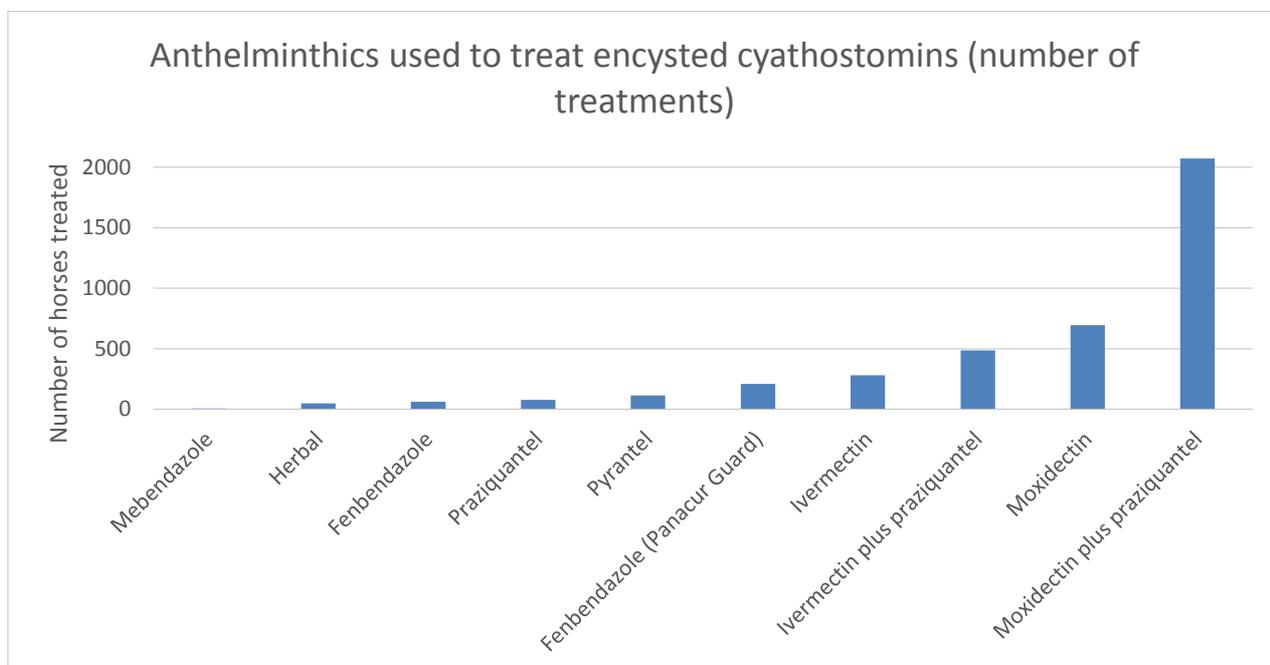


Fig. 17.

