



Yates, J., Mellor, D.J., Reid, S. W. J. and Parkin, T. D. H.

j.yates@vet.gla.ac.uk

Boyd Orr Centre for Population and Ecosystem Health, Institute of Comparative Medicine, Faculty of Veterinary Medicine, University of Glasgow, UK

Introduction

- There is limited research detailing the precise reason for foals failing to achieve different life-stages from birth to racing, even though almost 50% of foals do not reach flat race training in the UK (Wilsher et al., 2006).
In order to increase the proportion of the Thoroughbred foal population that reach the racecourse, a better understanding of the reasons behind failure, and associated risk factors is, required.

AIMS

- Identify veterinary reasons for foals failing to reach training and racing.
Identify early-year veterinary problems associated with reduced race performance.

Methods

- Content analysis (Wordstat: Provalis Research, Canada) was used to extract information from a free-text dataset that included the histories of 1044 foals born within a large breeding operation between 2000 and 2004, inclusive.
Chi-squared tests were used to identify associations between type of early career injury and entry into training
Racing career profiles were collected using Racing Post online (www.racingpost.com).
Random effects (accounting for sire and dam) multiple linear regression models were developed to examine the association between limb fracture and subsequent performance.

Results

Figure 1. Flow diagram showing the final status of all horses in the cohort (percentages are of the level above and not of the whole cohort).

Of the original cohort:

- 61% (590) of horses entered full training while still owned by the stud.
37% (357) of horses did not enter full training while still owned by the stud.
3% (27) of horses were still in pre-training at the endpoint in the dataset.

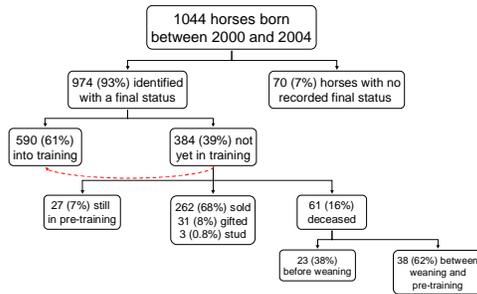


Figure 2. The most common veterinary problems identified prior to reaching training age (MSK = musculoskeletal injury or disease (excluding fracture)).

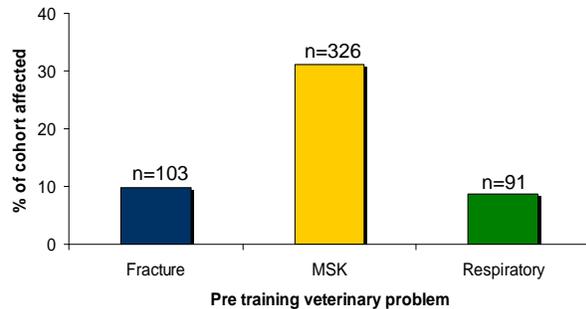


Figure 3. The most common locations of limb fracture identified prior to training age.

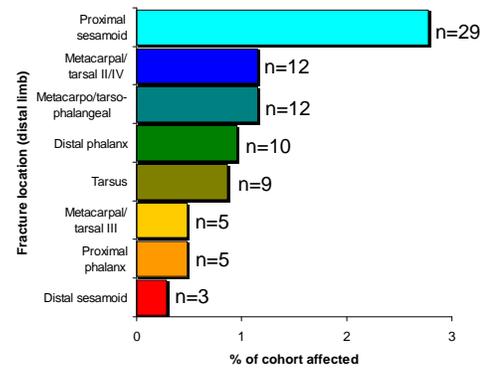


Figure 4. Flow diagram showing the percentage of horses with and without non-fatal limb fractures that did not enter training.

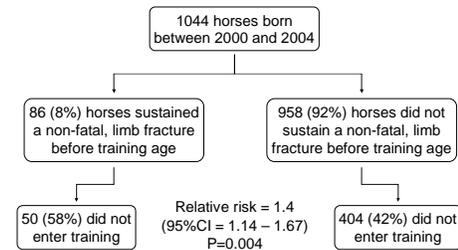


Table 1. Multiple linear regression models demonstrating the association between non-fatal limb fracture before training age and two measures of racing performance. (S.E. = Standard error).

- Maximum and mean Official ratings were significantly reduced in horses that sustained a limb fracture prior to reaching training age.
Gender was also significantly associated with the outcome (including either sire or dam as a random effect did not significantly alter any of the models)

Table with 7 columns: Measure of performance, Career maximum official rating (Coefficient, S.E., P-value), Career mean official rating (Coefficient, S.E., P-value). Rows include Non-fatal limb fracture before training age (Yes/No), Gender (Male/Female).

Conclusions

- These analyses demonstrate the importance of avoiding limb fracture during the first two years of life for Thoroughbred racehorses.
This study has also identified the major causes of loss in the pre-training Thoroughbred.
Further work is required to identify and initiate potential management techniques that may help to minimise the risk of injury, and therefore reduce loss, and potentially improve racing performance.

References

Wilsher, S., Allen, W. R., Wood, J. L. N., 2006. Equine Veterinary Journal, 38, 113-118.

Acknowledgments

I would like to thank Defra and the Scottish Funding Council for providing funding for this project as part of the VTRI programme

