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Lameness in the working equid: How lame can they get?

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INTRODUCTION AND AIMS
Lameness is one of the most common problems seen in working equids from developing countries. Pritchard et al. (2005) reported gait abnormalities in 91% of 4903 working equids examined in 5 developing countries. Maranhão et al. (2006) reported high prevalences of multiple pathological abnormalities of limbs in a study of 58 draught equids in Brazil; the pathological abnormalities developed were reported as due to the type of work undertaken. Lameness can cause suffering directly through pain (Whay et al. 2005), and indirectly by altering the stresses on the body (Weishaupt et al. 2004; Alvarez et al. 2007); slower progression can lead to beating. Here, we describe a study undertaken to investigate the prevalence of lameness in working draught horses and donkeys from India and Pakistan. The objective was to identify the range and prevalence of pathological conditions contributing to lameness in these working equids. The results will be used to inform future work identifying risk factors for lameness and to help develop interventions to reduce lameness prevalence and severity.

METHODS
Data were collected from 227 horses (India, n = 110; Pakistan, n = 117) and 102 donkeys (Pakistan, n = 102) between June 2006 and July 2007. This provided 326 animals for analysis, due to incomplete data in 3 cases. Horses employed to transport goods and people by cart, and donkeys employed to transport goods by cart were examined. A standardised lameness examination was developed for field use to record gait, conformation, foot, limb and spinal pathology. Each leg was subjectively assessed for lameness at the walk (0 = sound to 4 = nonweightbearing) using scores modified from Busschers et al. (2001). Conformation traits were described categorically, using an assessment described by Mawdsley et al. (1996). Foot examination included aspects of shoeing, balance, pathology, and pain detected by digital pressure, hoof testers and a percussion hammer; foot measurements previously shown to be related to lameness (Turner 2003) were recorded. Palpation and manipulation of the limbs and spine detected swellings, wounds and pain, and joint flexion tests were used as further tests for pain. Horses were walked in a small circle to detect subtle increases in lameness and reversed to detect foot drag and/or hesitation of steps. A foot placement test was carried out whereby each foot was placed on the contralateral, noting if the foot was replaced immediately to the ground. Observations were made directly by 4 trained veterinary assessors; one of the assessors (CEB) was present at every examination to ensure standardisation.

RESULTS, CONCLUSIONS AND PRACTICAL SIGNIFICANCE
Lameness was seen in at least one limb in all horses and donkeys examined. The results reveal a high prevalence of multiple pathological abnormalities in the limbs of these working equids. The extremely high prevalence of lameness and associated pain is of great welfare concern in working equids who are often required to work for long hours, in harsh conditions (Pritchard et al. 2005). The next stage of this study is to implement changes in the working and management practices of these working equids to investigate the potential for reducing lameness and associated pathological abnormalities. This will also allow a longitudinal analysis of the relationship between variables and lameness in these animals.

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