

University of Prince Edward Island

Faculty of Veterinary Medicine
Summary of Dissertation

Submitted in Partial Fulfilment
of the Requirements for the

DEGREE OF MASTER OF SCIENCE

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Epidemiology of Musculoskeletal Injuries in Standardbred Racehorses on Prince Edward Island

Musculoskeletal injuries (MSI) are an important contributor to poor performance and wastage in Standardbred racehorses and a source of pain and discomfort. The purpose of the study was to determine associations between risk factors and MSI. A longitudinal epidemiological study of MSI in a population of Standardbred racehorses on PEI was designed. A total of 10 trainers were recruited and their horses were observed over one year.

Monthly information was collected from 153 Standardbred horses. Most of the horses (85%) included in the study were between 2 and 4 years of age, and there were 73 females, 66 geldings and 12 males in the study population. Forty-five injury events were recorded over a total of 799 visits (visit prevalence=5.6%). Seventeen new injuries occurred representing a horse level incidence of 11.1%. The incidence rate of injury was 2.19 per horse-month at risk. Forty-one percent of injuries occurred during a race, with 53% occurring during training and 6% during jogging. The 17 new injuries consisted of 7 bone, 8 soft tissue, and 2 joint. Horses with mild to moderate injuries had between 3 and 90 days off from training.

General Estimating Equations (GEE) models were built to investigate associations of horse, track and trainer factors with the probability of injury. Due to the low sample size and the low number of injuries recorded, only predictors that had an unconditional association with a p-value ≤ 0.2 were discussed. Significant risk factors identified included: training, previous injury, offset knees, and pelvic asymmetry.

The results from this study provide new information for trainers and owners and can be used to improve management practices. As the present study was completed in one province with a small study population, further studies are required to continue to identify risk factors for injury in Standardbred racehorses.