The Impact of Respiratory Disease on Post-weaning Mortality in Pigs

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Introduction

PhD Aims

- Look for patterns of infection and disease of endemic diseases
- Determine those endemic diseases that are of biological importance
- Analyse risk factors associated with their transmission using statistical techniques

Current Work

- Prevalence, incidence and pattern of respiratory infections and disease
- Associations between respiratory pathogens
- The impact of infection and disease on mortality

Background

- Respiratory diseases are the most important endemic diseases of modern pig farming
- Transmission is affected significantly by herd size and stocking density
- Hypothesis: Mortality attributable to infection will depend on respiratory pathogen interactions

Materials and Methods

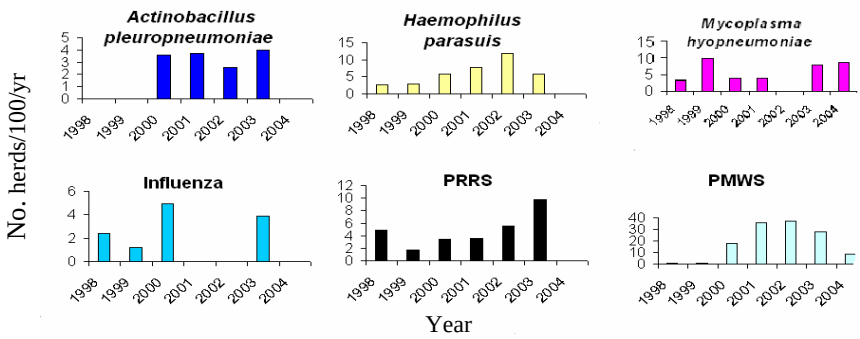
Vet Questionnaire:

- Disease ever seen on this unit?
- Disease still on farm?
- Clinical signs last seen
- Current treatment or control
- Mortality

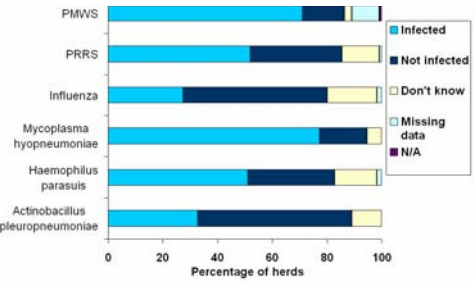
64 veterinarians, 113 units throughout England, Scotland and Wales

Results

Incidence of Respiratory Diseases 1998-2004

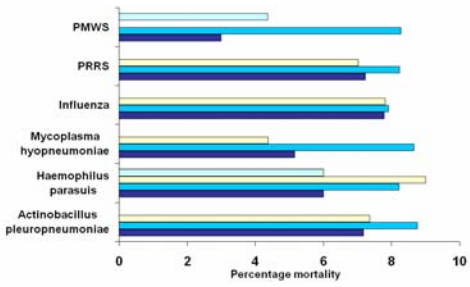


Percentage of herds infected with respiratory pathogens



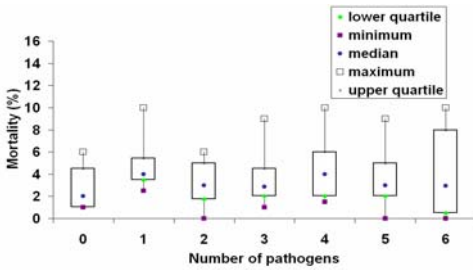
Many herds were also infected but not diseased

Mortality of uninfected and infected herds



Herds infected with *Actinobacillus pleuropneumoniae*, *Haemophilus parasuis* and *Mycoplasma hyopneumoniae* had 2.73% higher mortality than herds without all 3 pathogens

Box and whisker plot: Mortality of herds infected with an increasing number of pathogens in 2004



Conclusions

- **Herds had a variable number of infections**
- **Associations between different respiratory pathogens was evident**
- **Presence of infection significantly increased mortality**
- **An increased number of infections was associated with a non-linear increase in mortality**
- **Herds infected with *Actinobacillus pleuropneumoniae*, *Haemophilus parasuis* and *Mycoplasma hyopneumoniae* had a significantly higher mortality than herds not infected with all 3**

Future Work

Are risk factors for respiratory infections the same?

What factors keep disease subclinical?

Acknowledgements

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MLC

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