



1. Background

Leptospira are an important bacterial pathogen of dogs. Clinical disease presents classically as renal or hepatic dysfunction. Diagnosis of leptospirosis presents a challenge to clinicians due to the large number of tests available with confusion over when to use and how to interpret results. The distribution and frequency of cases of leptospirosis in the UK has not been previously reported.

2. Research Questions

Which serovars are most common in UK dogs?

Are these changing over time?

Does serovar distribution vary across the UK?

?

What clinical signs do cases present with?

How are cases currently being diagnosed?

Are current vaccines adequate & is our usage of vaccines changing over time?

3. Methods

VetCompass™ study

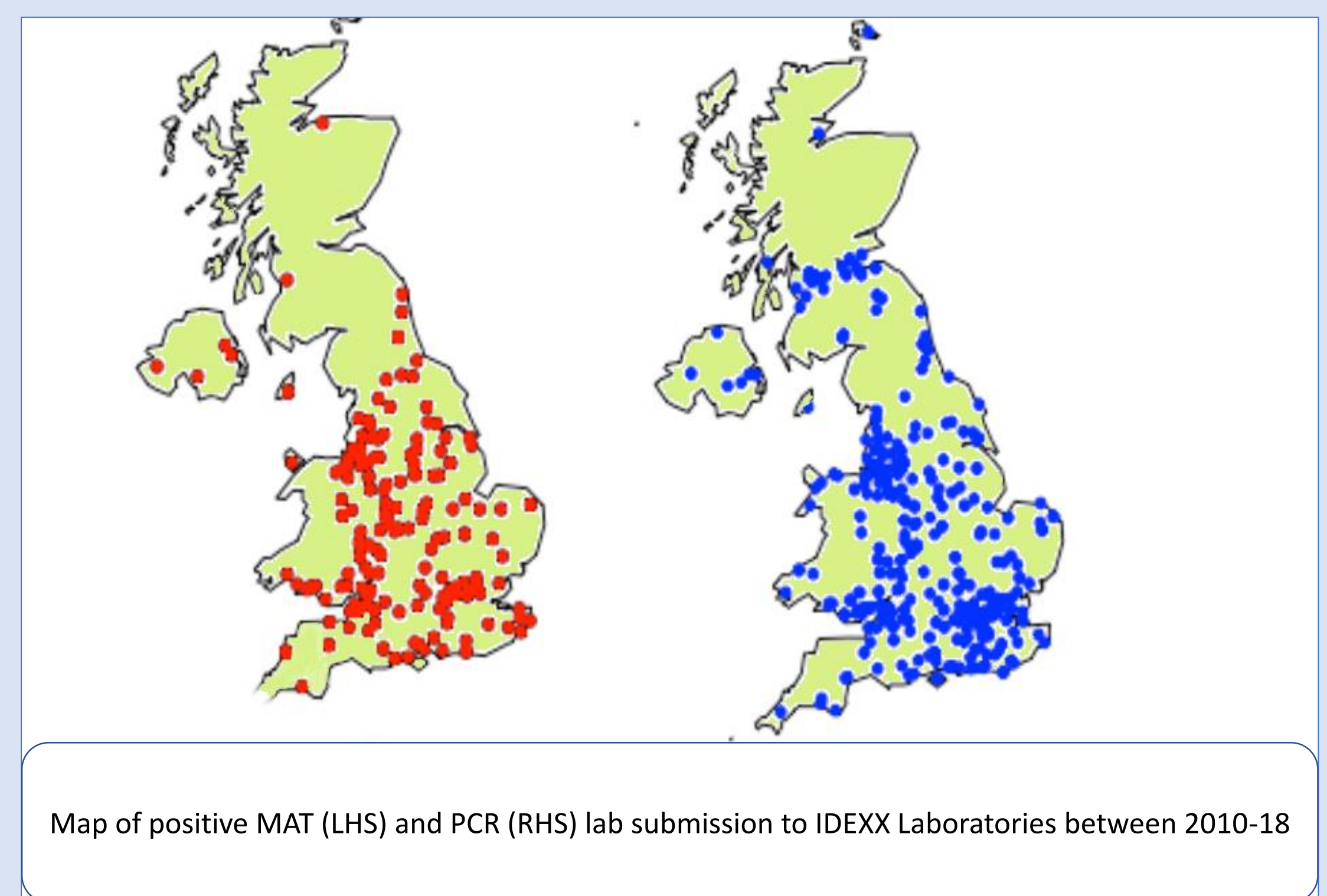
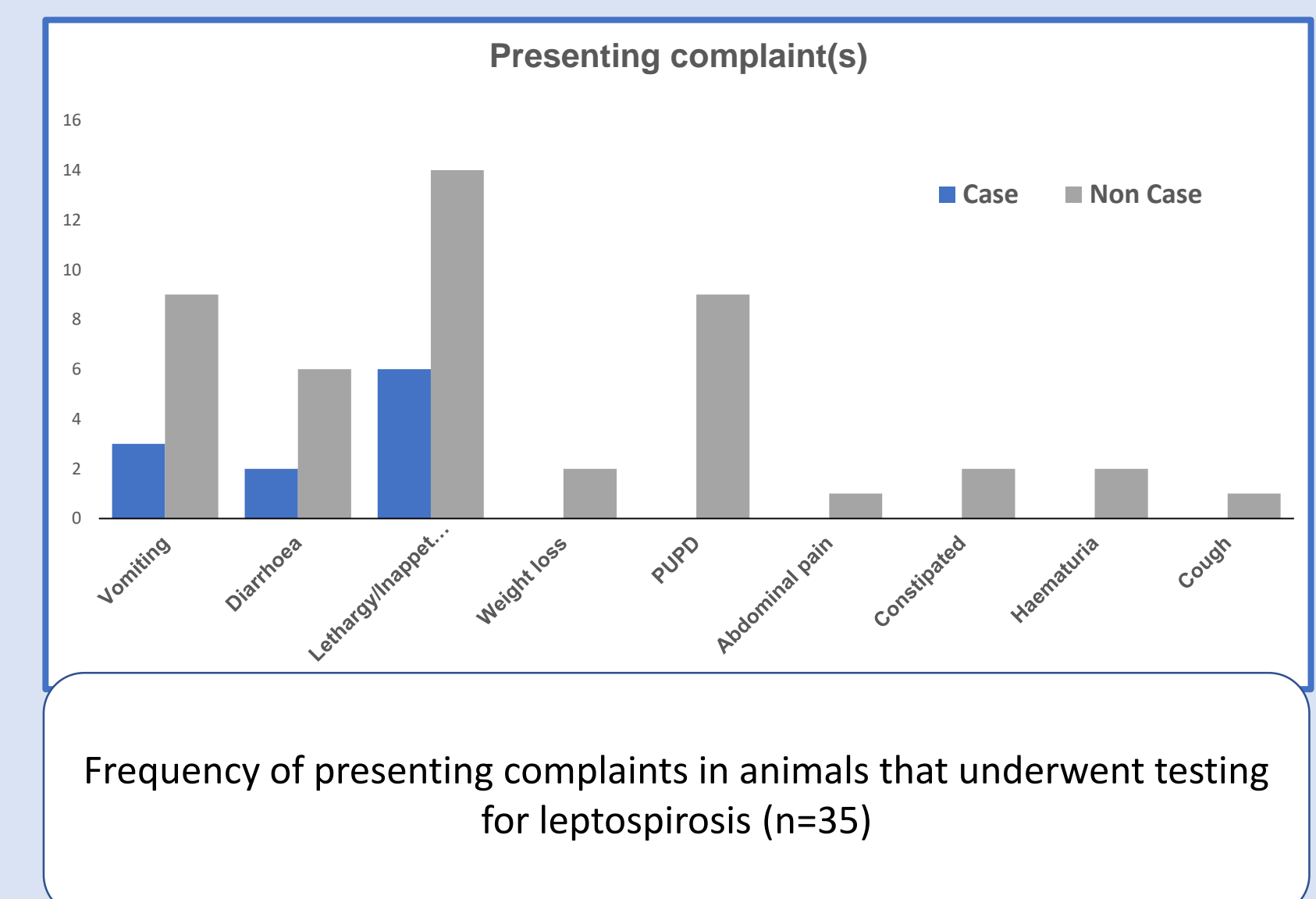
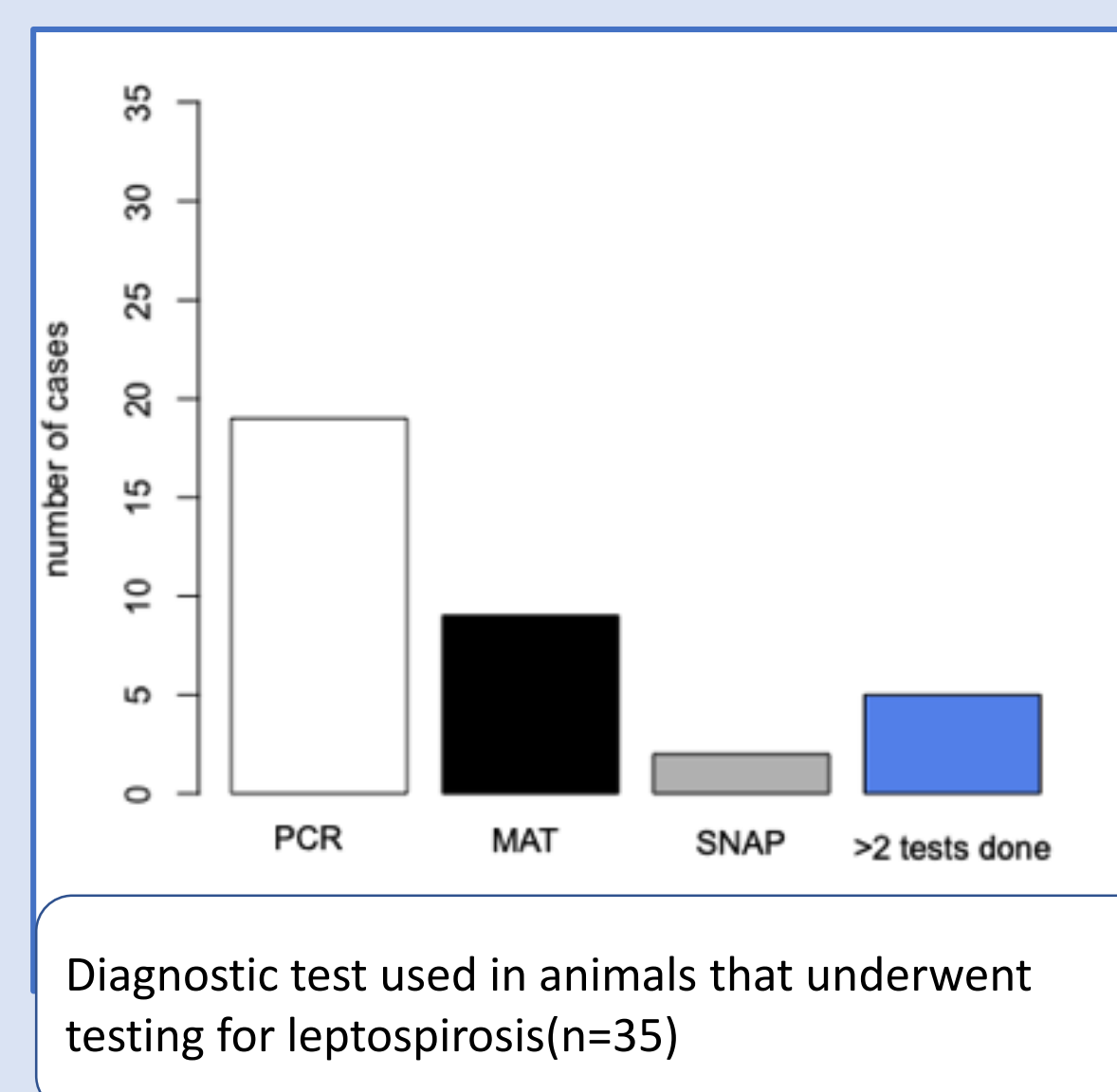
- VetCompass™ database was utilised to identify a 2016 primary care denominator dog population (n= 905,544).
- Cohort then followed through 2016 and 2017
- Electronic patient records (EPRs) were examined in further detail to provide a descriptive case series(n=35)
- Diagnostic tests included were : MAT test, PCR or SNAP Lepto

IDEXX data

- Retrospective data from IDEXX Laboratories of MAT test results (n= 1509) and PCR results (n=2334) between 2010-2017

4. Results

- In 2016 and 2017 35 of 905,544 dogs underwent testing for leptospirosis (35/905,544, 0.038%) and of these 7 were confirmed cases i.e. those with one or more positive test result (7/905,544, 0.007%)



5. Conclusions

- Very few animals receive confirmatory testing for leptospirosis
- Majority of cases are not being diagnosed according to ECVIM guidelines (of using MAT and PCR tests in conjunction)
- Clinical signs are generally vague & non specific

6. Future Work

Spatial analysis of test results from major diagnostic laboratories (IDEXX Laboratories & APHA)
PCR & MAT tests from 2010-17

Circulating serovars, geographical distribution, risk factors

Evaluate LIPS(Luciferase Immunoprecipitation System) assay as a novel serological method for leptospirosis diagnosis

Test to distinguish vaccinated vs infected dogs

Detailed understanding of leptospirosis in UK dogs

Analysis of VetCompass™ database for trends in vaccine usage & uptake from 2010-19

Assess whether vaccine use adequate for leptospirosis in UK

