

The prevalence of antibiotic resistant *E.coli* in wild rodents in a woodland habitat.

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The maintenance of antibiotic resistance within animal populations in non-clinical environments is poorly understood. To start to rectify this a woodland based population of wild rodents was trapped, live tagged and individually monitored over a period of two years. Each time a rodent was trapped it was tested for faecal carriage of *E.coli* resistant to each of several different antibiotics. A Bayesian analysis of this repeated measures presence/absence data was performed using MCMC. The analysis reveals a seasonal cycle superposed on a gradual increase in prevalence. These are consistent across the antibiotics but different for different species. Strong positive correlations between subject level random effects may indicate further important but unmeasured covariates or alternatively that several drug resistance genes occur on the same genetic element.