SYNDROMIC SURVEILLANCE USING SAVSNET DATA

REAL-TIME SPATIO-TEMPORAL SURVEILLANCE

WITH APPLICATION TO SMALL COMPANION ANIMALS

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STUDY

This study aimed to provide real-time surveillance mapping for early detection of disease outbreaks in dogs and cats

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DATA

One million electronic health records collected from 458 veterinary surgeries taking part in SAVSNET

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$$\Phi^{-1}(p_{j,i,t}) = d^{T}_{j,i,t}\theta + S_{i,t}$$

METHOD

An MCMC algorithm generated samples from the Bayesian predictive distribution of the underlying spatio-temporal surface, allowing predictive probability of risk to be computed for each surgery on each day

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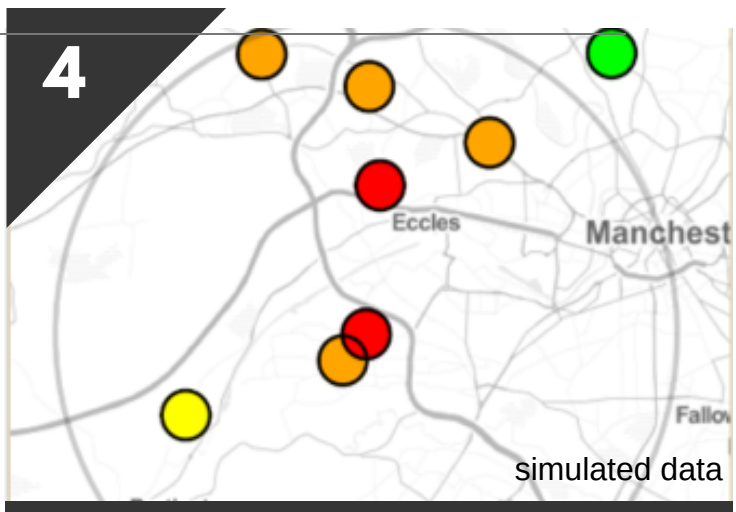

OUTBREAKS

On a daily basis this system can predict outbreaks of gastrointestinal disease among dogs and cats attending SAVSNET surgeries using a traffic light system. We hope to make this system available to practitioners soon

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CONCLUSION

This system generalises to other SAVSNET syndromes such as pruritus and respiratory disease, and also forms the basis of SAVSNet-Agile

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thank you

THANK YOU

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