



Background

Issues around methodology and leadership have delayed successful implementation of large-scale collection of primary-care veterinary data for research^{1,2}. RVC VetCompass™ now has an online research resource of primary-care veterinary data with an international research programme providing evidence to improve animal welfare³.



Fig. 1

VetCompass Clinical data

VetCompass™³ collates de-identified electronic clinical record data from primary-care veterinary practices for epidemiological research. Practitioners can record VeNom Code standardised terms. VetCompass™ data includes patient demographic (species, breed, date of birth, sex, neuter status, insurance status and bodyweight) and clinical information (free-form text clinical notes, VeNom diagnosis terms and treatment, with relevant dates).

Data curation

Practices display VetCompass™ posters and leaflets (Fig. 1). Client consent is 'Opt Out'; all animals and episodes of care are included as default. Data are extracted automatically daily and cleaned data are automatically uploaded to the VetCompass™ database for immediate access and research.



Methodology

All studies have an animal welfare objective and ethics approval. Accredited researchers access the VetCompass™ online <https://www.vetcompass.org>. Sophisticated methods search hundreds of millions of data entries in fractions of a second (Fig. 2) and the data are read to answer be-spoke study questions.

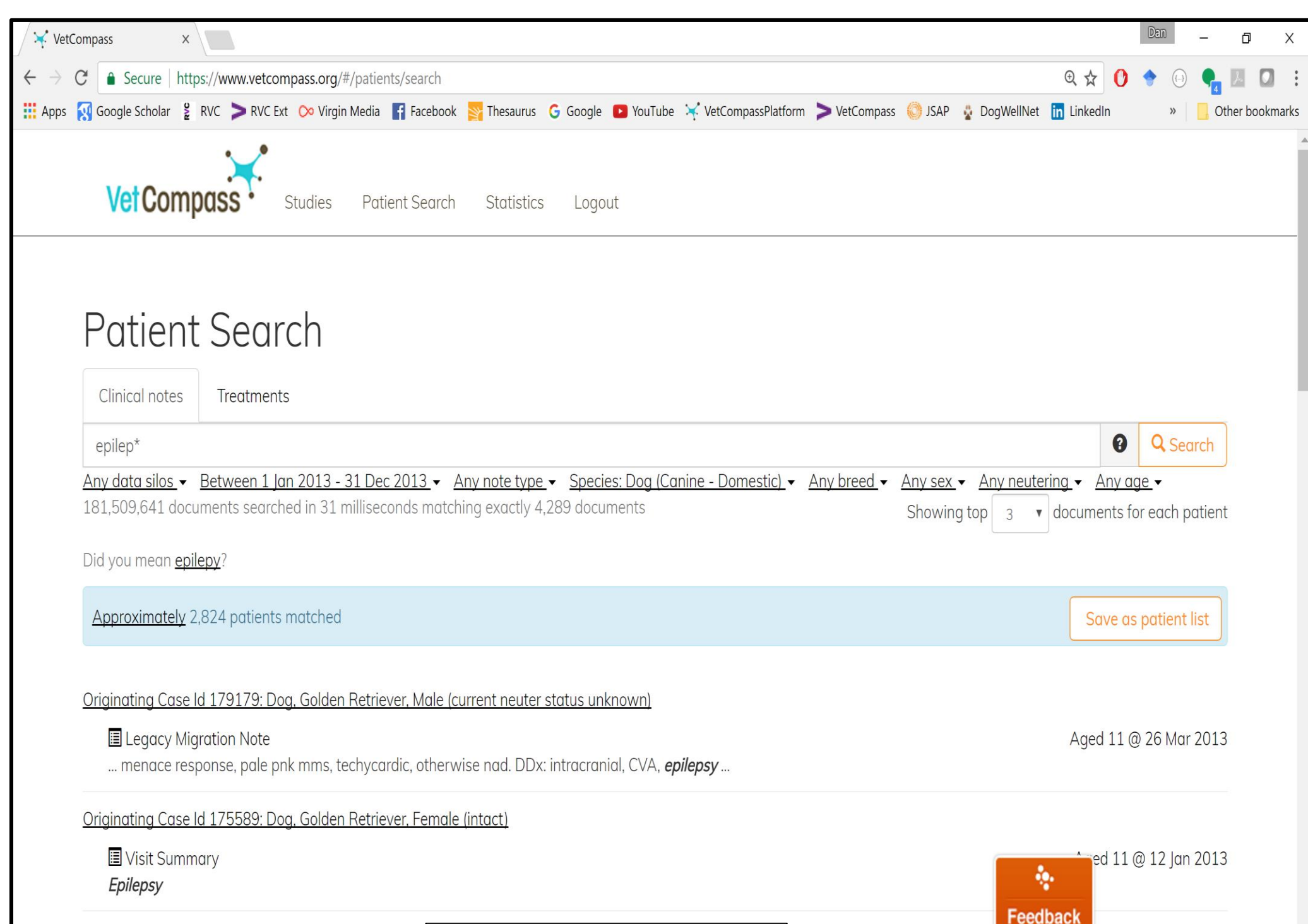


Fig. 2

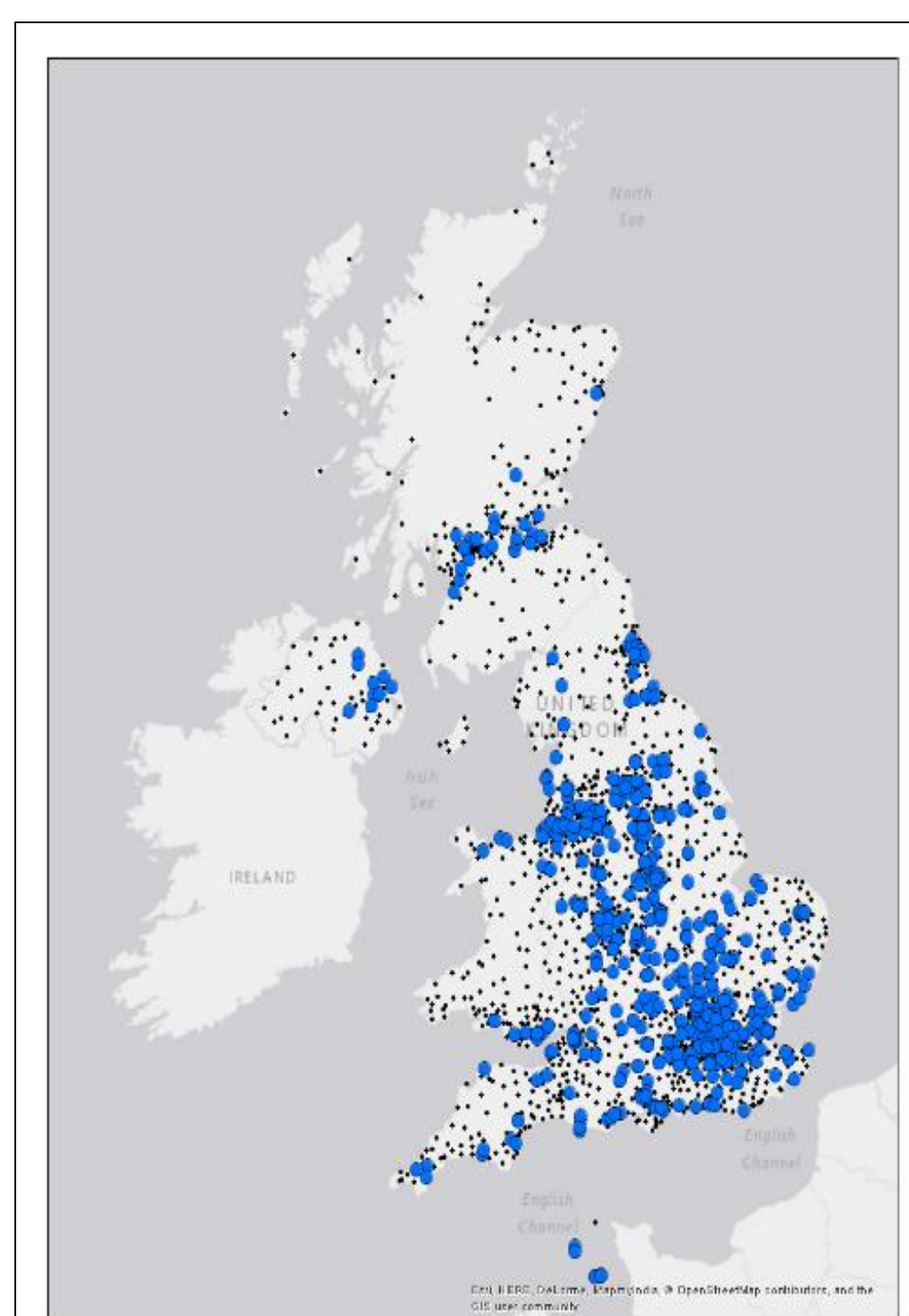


Fig. 3

'Big Data'

February 2018 (Fig. 3):

Participating practices	498
Unique animals	5,843,600
Total episodes of care	36,347,778
Total treatments used	111,212,641
Canine	2,764,825
Feline	1,859,095
Rabbit	426,679
Guinea Pig	66,750
Bird	64,007
Exotic	21,948
Reptile	13,756
Equine	11,337

Peer-reviewed Publications

Peer-reviewed publications (Feb 2018)

General

1. Disorder prevalence in dogs
2. Longevity and mortality in dogs
3. Disorder prevalence in cats
4. Longevity and mortality in cats
5. Brachycephaly in dogs
6. Disorders of CKCSs
7. Disorders of Pugs
8. Disorders of GSDs
9. Disorders of Rottweilers
10. Disorders of Border Terriers
11. Glucocorticoid use: cats and dogs
12. Antimicrobials in cats and dogs
13. Canine health surveillance methods
14. Data collection methods - New Zealand
15. Multimorbidity: dog as model

Therapeutics

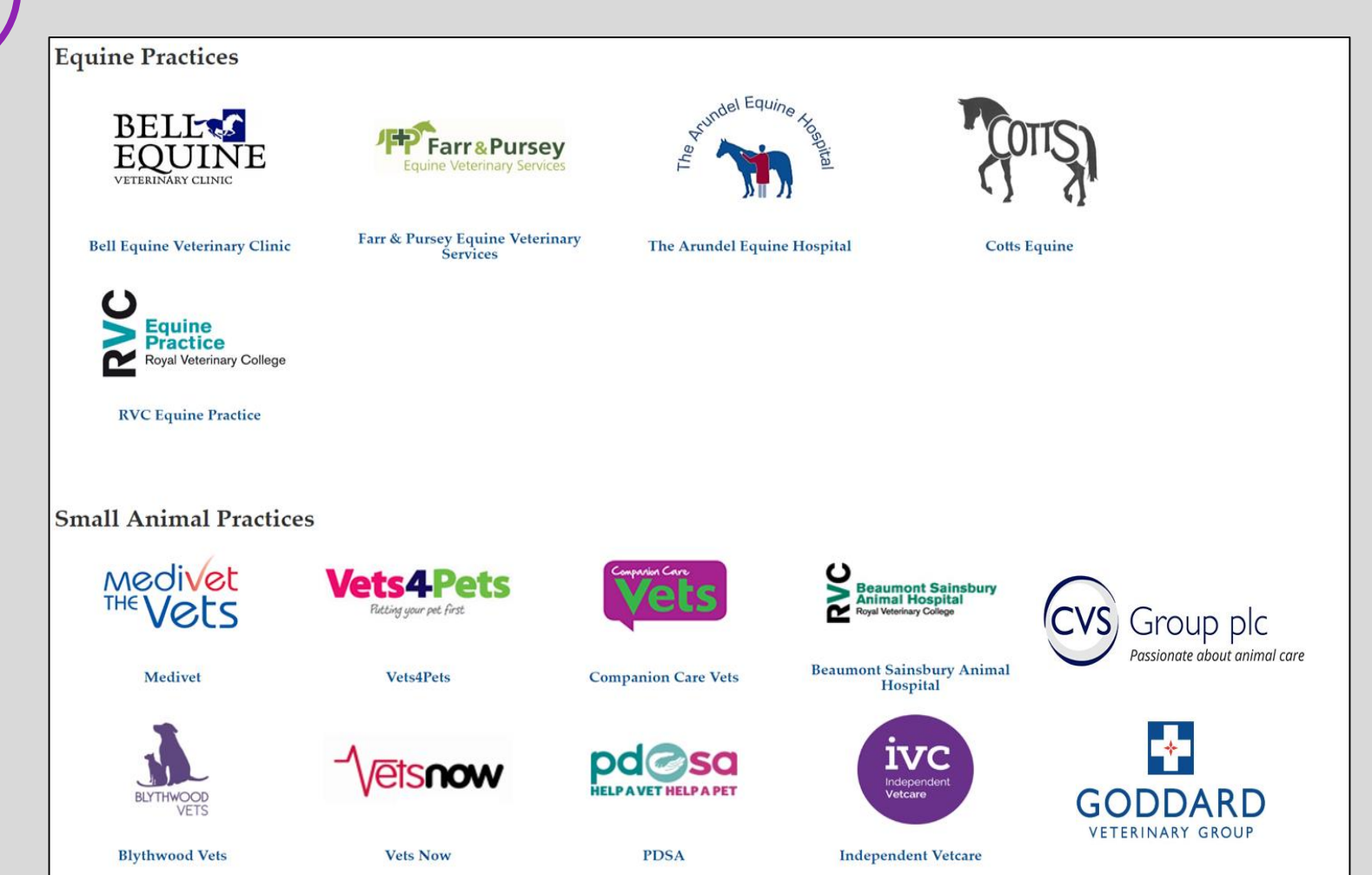
16. Epilepsy
17. Pyoderma
18. Chronic kidney disease
19. Diabetes mellitus
20. Mitral valve disease - 1
21. Mitral valve disease - 2
22. Cruciate disease
23. Patellar luxation
24. Mast cell tumours
25. Hyperadrenocorticism
26. Syringomyelia
27. Dystocia
28. Corneal ulceration
29. GDV
30. Urinary incontinence in bitches
31. Hyperthyroidism in cats
32. Diabetes mellitus
33. Trauma/RTA

Translational

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32. Diabetes mellitus
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Collaborations

- UK:**
RVC
Cambridge
Lincoln
Edinburgh
Sussex
Newcastle
Aberdeen
Bristol
Manchester
- International:**
Sydney
Munich
Copenhagen
Washington, US
Alabama, US



The Future

The VetCompass™ concept aims to cover all species and every country. Currently, it covers small animals and horses. VetCompass™ already exists in Australia and is assisting pilot projects in New Zealand, Sweden, Denmark and the US.

References

1. BATESON, P. 2010. Independent inquiry into dog breeding. Cambridge: University of Cambridge.
2. MCGREEVY, P. D. & NICHOLAS, F. W. 1999. Some practical solutions to welfare problems in dog breeding. *Animal Welfare*, 8, 329-341.
3. VETCOMPASS. 2017. *VetCompass: Health surveillance for UK companion animals [Online]*. London: RVC Electronic Media Unit. Available: <http://www.rvc.ac.uk/VetCOMPASS/> [Accessed January 24th 2017].

