Capturing Patient Data in Small Animal Veterinary Practice

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CENTRE FOR EVIDENCE-BASED VETERINARY MEDICINE
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Aim

The aim of this study was to investigate the feasibility of extracting clinical data from veterinary Electronic Patient Records (EPRs) and to assess the value of the data extracted for use in practice-based research.

Method

The Centre for Evidence-based Veterinary Medicine in collaboration with Vet-One Veterinary Management Software designed an XML (extensible mark-up language) extraction schema to select and extract information from the Practice Management Software (PMS) system. A data warehouse of extracted EPRs, from a working small animal practice, was created. Validation of the extraction schema was achieved by comparing a random sample (10%) of records extracted to the original records at the practice.

Results 1

- Two 8 weeks data collection periods
- The XML Schema was compatible with the PMS systems and all animal data were successfully extracted (Fig1, Fig3)
- Validation against a random 10% sample of paper records confirmed 100% accuracy for extraction

Results 2

- Data extracted was used to examine the quality and precision of data contained within a typical veterinary EPR.
- Data extracted from the EPR was compared to that recorded directly during the consultation (Fig 2).

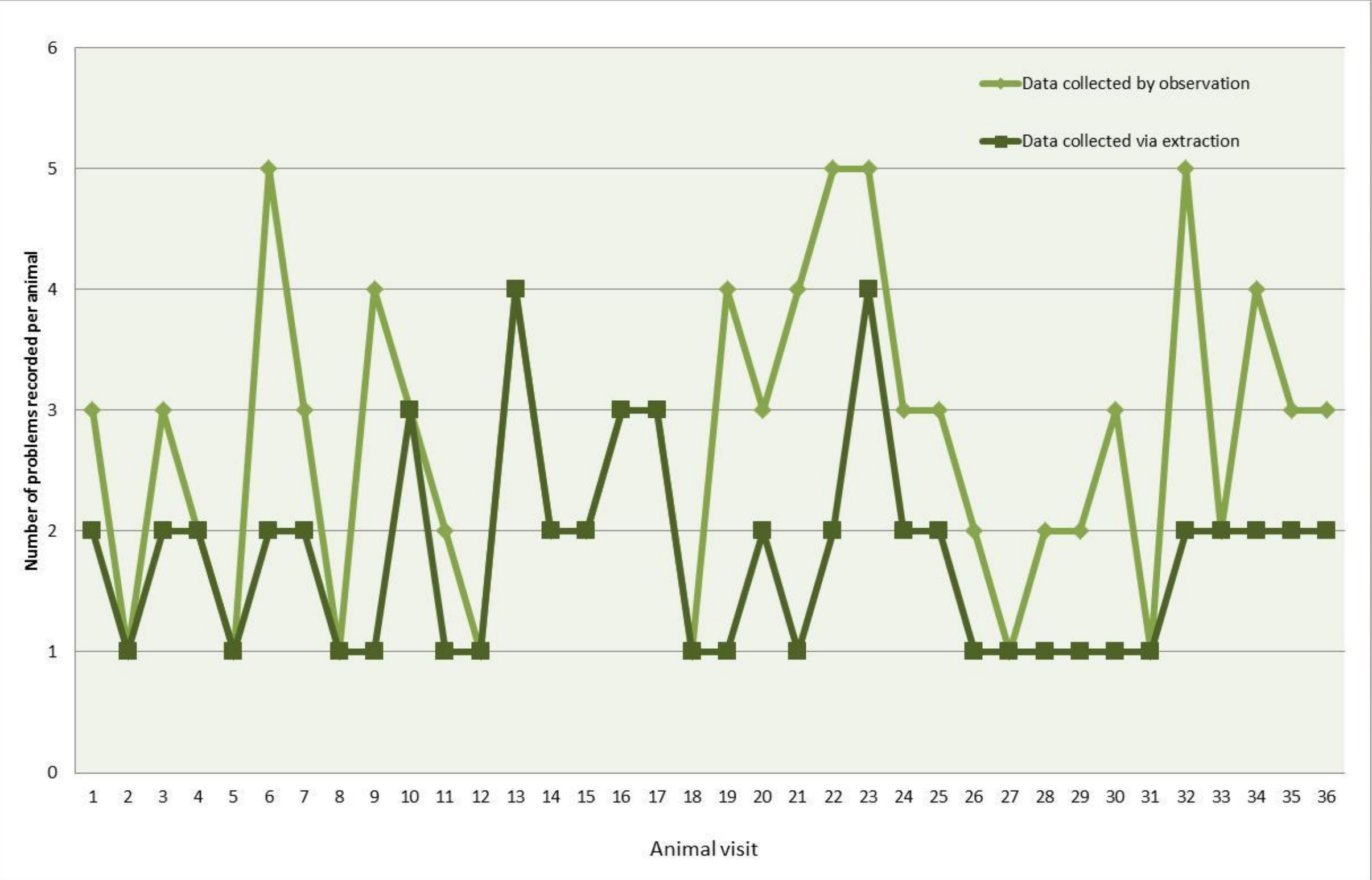Fig 1. The CEVM Vet-One XML Schema identifying fields for extraction. Jones-Diette J.S. (2013) Thesis.

Fig 2. Comparison of presenting problem data contained in the EPR to that collected by direct observation during the consultation.

16 WEEKS DATA COLLECTION

Total 4946 visit records ;

2700 Invoice records

2246 animal records by 1279 animals

3 VETS

693 Dogs   (54%)
336 Cats   (26%)
38 Rabbits (3%)
114 Farm   (9%)
98 Other/blank (8%)

1858 EXAMINATION RECORDS

388 = Lab Reports,
        Insurance,
        Previous history

2246 PATIENT VISITS

1858 = Examination records composed of;
        1624 Consultation (87.4%)
        83 Vaccination (4.4%)
        14 Phone call (0.8%)
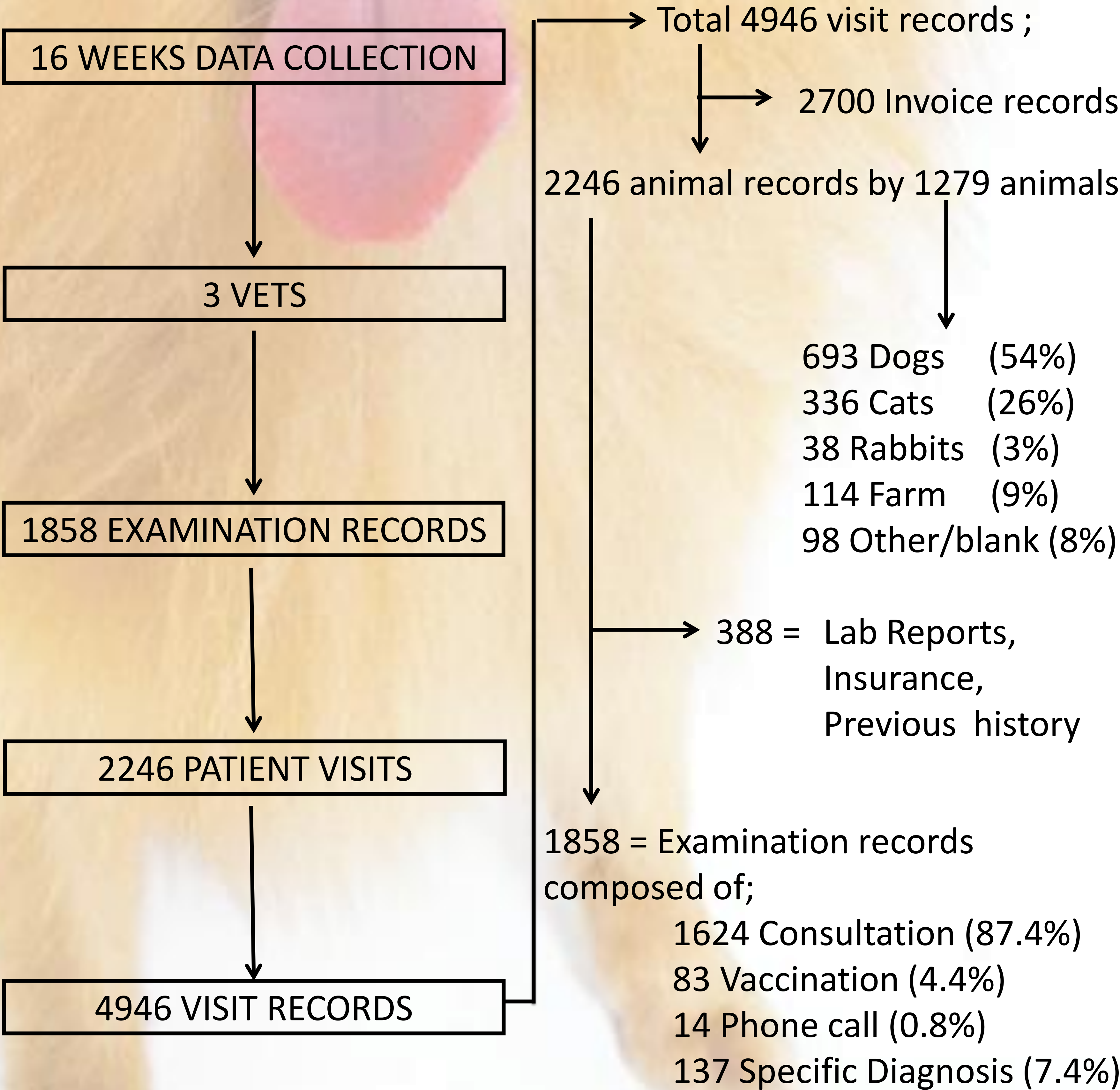   137 Specific Diagnosis (7.4%)

4946 VISIT RECORDS

Fig 3. Extracted pet consultation data from one sentinel practice over a 16wk period. Jones-Diette J.S. (2013) Thesis.

Discussion

This successful pilot study show this method to be a viable method for the capture of small animal health data for practice-based research. Database extraction and analysis of this type can provide data that is suitable for both longitudinal and cross-sectional studies, and offers a unique source of population-based information.

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