Systematic review of methods for pet population estimation: finding the papers

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Background:

Currently a systematic review is being undertaken to examine the best methods of determining the population size of the dog and cat population in the United Kingdom. A systematic review aims to provide an exhaustive summary of literature (published and grey) relevant to a research question. The first step is a thorough search of the bibliographic databases and citation indexes that are relevant to the topic area. This is followed by extensive manual filtering of the outcomes of the searches to end up with all the relevant papers that addresses the systematic review question. The aim of the poster is to outline the processes involved in searching the literature and to present the initial results of the literature searches.

Methods:

Literature searches

Relevant experimental studies were identified by searching the following databases followed by date search completed: PubMed (11/05/11), MEDLINE (10/05/11), CAB Abstracts (09/05/11), Embase (11/05/11), BIOSIS Previews (14/07/11), Web of Science (09/05/11), Zoological Record (14/07/11). The searches were completed using various terms and Boolean equations (depending on the database) for Cat, Dog, Pet, Census, Population Demographics/Dynamics and population surveillance.

Data abstraction

The searches were done by the first author and the citations found exported and inserted in to Endnote.

Endnote was used to automatically remove duplicates created by the merging of different data sources.

The dataset was then scanned manually and any duplicates identified were removed.

Articles that were clearly identified by their title as not meeting the inclusion criteria were removed.

Papers identified as not meeting the inclusion criteria by reading the abstract were excluded.

Full text was obtained where possible and were checked by MD and MB.

Inclusion Criteria

- Studies on dogs (*Canis lupus familiaris*) and cats (*Felis catus*).
- Studies that stated they looked at owned, or pet, dogs or cats.
- Studies that provided an estimate of size of the owned dog or cat population.
- Studies that collected raw data on dog and cat ownership and
- Studies that analysed primary data, and
- Studies that were not a review or summation of another study
- Studies written in any language were considered for inclusion.

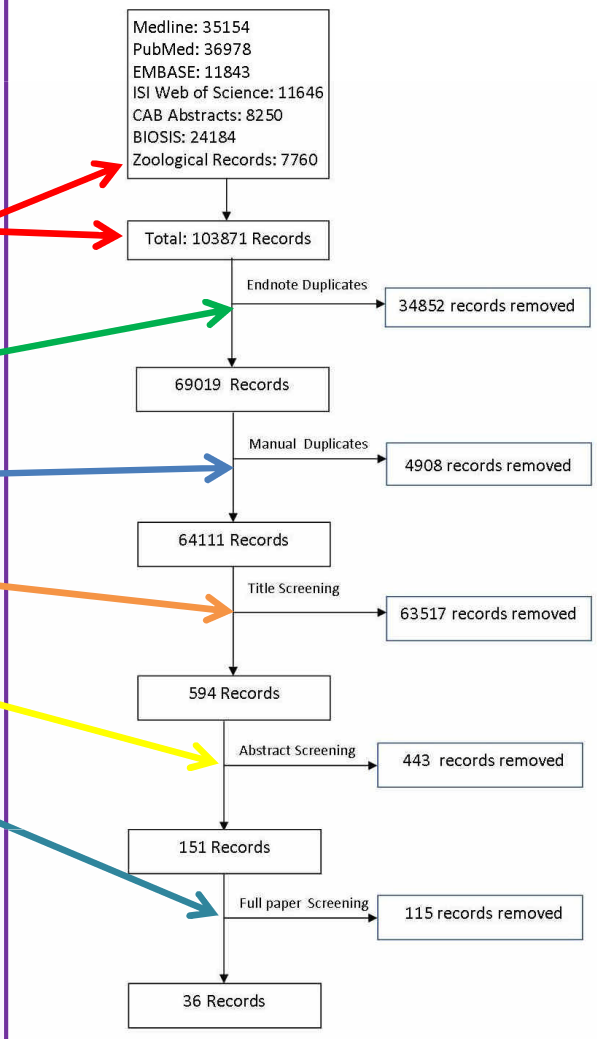

Figure 1. Flow diagram showing the total number of papers and the number of papers filtered, at each stage of the selection process from the literature search of a systematic review on pet population estimation.

Results:

When the searches from all the databases were combined a total of 103871 papers were extracted. A total of 39760 duplicate records were found in the combined dataset. Of these only 36 papers incorporated all the inclusion (Figure 1).

Discussion:

- There is a huge overlap between the different literature databases
- It is also important to note that there is a lot of diversity between the databases.
- There are considerable differences between databases with veterinary coverage (Grindlay *et al*, 2012).
- CAB Abstracts has the greatest cover of veterinary journals (Grindlay *et al*, 2012).
- With diverse topics information can be published in many areas of scientific literature, not just in veterinary Journals.
- Systematic review topics that are not traditional questions lead to an extensive numbers of papers in order to ensure maximum coverage of the literature.
- Many veterinary reviews will not meet the traditional Cochrane systematic review procedures (Higgins and Green 2011).

Acknowledgment:
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References:
Higgins, J. & Green, S. Cochrane Handbook for Systematic Reviews of Interventions, http://www.cochrane-handbook.org/
Grindlay, D. Brennan, M. & Dean, R. Searching the veterinary literature: a comparison of the coverage of veterinary journals by nine bibliographic databases. Journal of Veterinary Medical Education, In Press.