

## ORIGINAL PAPER

# Outcomes from homeopathic prescribing in veterinary practice: a prospective, research-targeted, pilot study

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**Background and aims:** Targeted research development in veterinary homeopathy is properly informed by the systematic collection and analysis of relevant clinical data obtained by its practitioners. We organised a pilot data collection study, in which 8 Faculty of Homeopathy veterinarians collected practice-based clinical and outcomes data over a 6-month period.

**Methods:** A specifically designed *Excel* spreadsheet enabled recording of consecutive clinical appointments under the following headings: date; identity of patient and owner (anonymised); age, sex and species of patient; medical condition/complaint treated; whether confirmed diagnosis, chronic or acute, new or follow-up case; owner-assessed outcome (7-point Likert scale: –3 to +3) compared with first appointment; homeopathic medicine/s prescribed; other medication/s for the condition/complaint. Spreadsheets were submitted monthly by e-mail to the project organisers for data checking, synthesis and analysis.

**Results:** Practitioners submitted data regularly and punctually, and most data cells were completed. 767 individual patients were treated (547 dogs, 155 cats, 50 horses, 5 rabbits, 4 guinea-pigs, 2 birds, 2 goats, 1 cow, and 1 tortoise). Outcome from two or more homeopathic appointments per patient condition was obtained in 539 cases (79.8% showing improvement, 6.1% deterioration, 11.7% no change; outcome not recorded in 2.4% of follow-ups). Strongly positive outcomes (scores of +2 or +3) were achieved in: arthritis and epilepsy in dogs and, in smaller numbers, in atopic dermatitis, gingivitis and hyperthyroidism in cats.

**Conclusions:** Systematic recording of data by veterinarians in clinical practice is feasible and capable of informing future research in veterinary homeopathy. A refined version of the spreadsheet can be used in larger-scale research-targeted veterinary data collection. *Homeopathy* (2007) 96, 27–34.

**Keywords:** systematic data collection; veterinary homeopathy; clinical outcomes; research targeting

## Introduction

The published, peer-reviewed, research evidence base in veterinary homeopathy is slight, comprising fewer than 20 randomised controlled trials (RCTs). More research in this area is indicated and has recently been encouraged.<sup>1</sup> Constructive reviews on the subject are beginning to emerge.<sup>2</sup> RCT research has concentrated mainly on farm livestock rather than on companion

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animals, and has typically studied the effect of a single or complex homeopathic medicine in groups/herds rather than individualised homeopathy. Examples of such work have reported findings in favour of homeopathy's clinical effectiveness.<sup>3-5</sup> Future research in veterinary homeopathy would benefit from being more broadly based in typical practice, focusing on conditions—and in a greater range of species—where there are promising suggestions of clinical effectiveness.

It is therefore important to characterise clinical outcomes in routine veterinary homeopathic practice by conducting observational studies of individualised treatment. Multi-practitioner clinical data collection would make a significant contribution toward meeting this requirement. Successful practice audit or multi-centre clinical data collection of homeopathy in the medical practice setting in the United Kingdom has been reported.<sup>6-8</sup> To our knowledge, however, no reports of this type exist in the veterinary homeopathy literature, though some non-controlled clinical research exists for a few medical conditions and species.<sup>9-11</sup>

This pilot study was designed to lay the foundation for a larger-scale veterinary clinical data collection project in the Faculty of Homeopathy. The objectives of the project that this pilot study was intended to inform are:

1. To use a piloted spreadsheet 'tool' to gain insight into the medical conditions/symptoms and the species of animal that veterinarians normally treat using homeopathy in general or referral practice.
2. For follow-up cases, to determine owner-assessed change in severity of the treated medical condition/complaint and thus identify any specific patterns of disease, species, clinical responses and/or homeopathic medicines that may help to target future research projects in veterinary homeopathy.
3. For follow-up cases, to note the change in use of conventional medication for the animal's medical condition/symptom since the start of homeopathic consultations.

The primary aims of this pilot study were thus:

1. To test the use of a specially designed spreadsheet, and to determine how consistently veterinarians complete and return spreadsheet data to a co-ordinating centre over a 6-month period.
2. To inform our approach to a larger-scale clinical data collection project in veterinary homeopathy—in particular, to ascertain whether data can be analysed and interpreted in anticipation of Aims 1, 2 and 3 of such work (see above).

An important secondary aim of the pilot was to begin the process of engaging Faculty veterinarians in clinical data collection/research.

## Methods

Eight veterinarians contributed to the study: 4 general practice, 3 referral practice, 1 general and referral practice (all based in England). Seven were qualified VetMfHom, 1 Cert IAVH. Recruitment took place from a pool of 45 Faculty veterinarians who had replied to a survey on UK veterinary homeopathy practice, conducted in summer 2004. All 8 were given the opportunity to comment on the spreadsheet (*Microsoft Excel*), designed by the authors and approved by the Homeopathic Research Committee of the British Homeopathic Association.

The spreadsheet allowed the recording of consecutive appointments, row by row, under the following column headings:

- Appointment date (day, month).
- Patient's name and owner's surname initial.
- Unique patient identity/number.
- Species and breed (if appropriate) of patient.
- Age of patient.
- Sex of patient.
- The condition/complaint treated. A separate page comprised a 'pick-list' of 102 medical terms, in 13 categories—see below. The list was not designed to limit prescribing, but to ensure consistency of nomenclature by using the 'copy/paste' facility in *Excel*. Practitioners were invited to add terms to the pick-list as required.
- System-based category of condition/complaint—Behaviour (BEH), Cardiovascular (CV), Dermatology (DERM), Endocrine (ENDO), Ear Nose & Throat (ENT), Eye (EYE), Gastrointestinal (GI), Miscellaneous (MISC), Musculo-skeletal (MSK), Obstetrics & Gynaecology (OG), Respiratory (RESP), Trauma (TR), Uro-genital (URO).
- Whether named condition is a confirmed diagnosis:
  - in general practice, whether suitable confirmatory laboratory tests have been performed;
  - in referral practice, whether the diagnosis has been made by a 'Specialist' at a recognised referral centre.
- Whether the condition/complaint is 'chronic' or 'acute'. In the context of a 6-month study (see below), this was defined as symptoms greater than or less than 4 weeks' duration.
- Whether, in relation to the previous 12 months, this is a new or a follow-up (FU) appointment for the same condition/complaint.
- Owner-assessed change in the treated complaint at the current FU compared with the *initial* homeopathic consultation, using 7-point scale ('no change' or 'unsure' [0] / 'mild' [ $\pm 1$ ] / 'moderate' [ $\pm 2$ ] / 'major' [ $\pm 3$ ]).
- Homeopathic medicine/s prescribed, using a 'pick-list' containing 141 remedies (including the option 'none'). This was not designed to limit prescribing options, but to ensure consistency of nomenclature

using 'copy/paste' in *Excel*. Practitioners were invited to add to the pick-list as required.

- Indicate any other (conventional) medication/s being taken for the condition/ complaint.
- Notes/comments, especially those that qualify or amplify entries in this row of data. State 'phone' if FU information obtained by that means.
- Exclusions:
  - Treatment of animals in groups/herds (ie non-individualised therapy).
  - Use of homeopathic prophylaxis or 'immunisation'.

Detailed instructions on using the spreadsheet format, and how to ask owners questions about the animal's clinical outcome, were provided on separate pages of the file. The following standard question sequence was recommended: 'Are the symptoms better, worse or exactly the same?' If the owner says "better", then ask: "Has there been what you would call a mild, moderate or major improvement?" Responses were scored as follows: mild improvement = +1; moderate improvement = +2; major improvement = +3. If the owner says "worse", then ask: "Has there been what you would call a mild, moderate or major deterioration?" Responses were scored as follows: mild deterioration = -1; moderate deterioration = -2; major deterioration = -3. Record 'no change' or 'unsure' as 0.

Additional, personalised, 'bolt-on' columns could be added by practitioners (eg for noting potency or prescribing strategy). Such data were not forwarded to the central co-ordinator for analysis.

The duration of the study was 6 months: 1 January–30 June 2005. Practitioners were expected to send data to one of us (JH), as an e-mail attachment, on a weekly basis. After checking and any necessary clarification with the originating veterinarian, spreadsheets were forwarded to the overall project co-ordinator (RTM) at least once per month. This approach allowed both organisers to scrutinise the data, to point out obvious errors to practitioners, and generally to maintain contact with those collecting the original data. End-of-study data analysis was by practice (individual feedback to each practitioner) as well as overall (reported in this paper). 2–3 weeks after the final despatch of their practice data, practitioners were sent a brief questionnaire, designed to gauge their experience of using the spreadsheet and their opinions of the value they attributed to the data it produced.

The Chair of the South Bedfordshire Research Ethics Committee (REC) advised that a study of this type did not require REC approval.

### Methods of spreadsheet analysis

Upon receipt of practitioners' final spreadsheets at the end of the project, the original data were re-checked and scrutinised for obvious missing data and

typographical errors. These were flagged up, and rectified where possible. A note was made of whether the condition/symptom treated and the homeopathic medicine prescribed seemed to have been copy/pasted from the pick-lists provided—absence of capital letters, for example, made it certain that copy/pasting had not been used. Data from all 8 practitioners were combined into a master spreadsheet. Pivot-table analysis (one each for conditions and homeopathic medicines) allowed a count of the total number of pick-list items and their transfer to the appointments page by copy/paste. Near-duplicate descriptions of the same condition or medicine were reconciled into a single unique term. Any conditions not on the pick-list were ascribed category headings. Three new categories were added as a result of this approach: 'CANCER', 'MALE', 'NERVE'.

A new master copy of the complete appointments page was then created, into which were added columns to indicate: (1) the appointment number per patient per condition/symptom (when this could be determined); and (2) whether or not an appointment was the last for a given condition/symptom in a given patient. These procedures enabled pivot-table analysis based on last appointments only—ie on the number of individual patient conditions treated, irrespective of whether they were treated by the practitioner once, twice or more often. A blank cell characterised the 'outcome' column for a New appointment. [The phrase 'individual patient condition' is used because a given patient might present with different conditions on a different—or even the same—occasion. If a patient presented at a given appointment with more than one condition—each of which was treated separately with homeopathy—the practitioner reported each on a different row of the spreadsheet. This approach was adopted because a key purpose of the study was to catalogue the frequency and success rate of treating named conditions, even if a given individual patient exhibited more than one.]

The following 3 principal pivot-table analyses were then carried out: (1) 'final' outcome score by medical category and condition; (2) 'final' outcome score by medical category and homeopathic medicine used at previous appointment; (3) 'final' outcome score by medical category.

## Results

### Use of the spreadsheet

Veterinarians submitted data reliably to the project organisers: each sent at least one updated spreadsheet for every consecutive month, and most were punctual in their communication (1 day early to 13 days late; average 5 days late per month per veterinarian). All returned data for the entire 6-month study period, except for one practitioner who was on maternity leave for the last 2 months of the project.

Technical difficulties, mainly failure of e-mail or omitting to attach a file, occurred rarely and were always rectified. The spreadsheet format appeared to allow most appointments to be recorded in a meaningful way. However, the constitutional homeopathic approach to treating a patient with several medical complaints or deeper issues meant that limiting the recording to just one named condition did not provide a full picture of the case. In addition, in patients where the diagnosis changed during the course of treatment, there was little opportunity to make this obvious without recourse to extended notes and comments. A different issue arose in cases where a patient presented with two discrete medical conditions that were treated separately with two different homeopathic medicines: it took a month or so of participating in the project before all practitioners adopted the recommended use of separate rows to describe independent medical complaints. These early errors were rectified prior to analysis. There were also some difficulties in recording outcomes suitably on those occasions when an animal died or was euthanased after a period of palliative care but the owner's experience of homeopathic treatment had been positive. The nature of the project deliberately denied any opportunity to record data for groups/herds of animals, but this seldom limited recording of clinical appointments.

The total number of appointments per practitioner for the 6-month period varied from 43 to 357 (mean 179). The large majority of data cells were completed as required. Age of patient was omitted in 3.6% of appointments, and 'whether confirmed diagnosis' was missed in 8.2%. 3.2% of cells specified for homeopathic medicine had missing information. The presence of other (conventional) medication/s taken for the condition/complaint (including 'none') was noted on 34.9% of appointments. The Notes/Comments column was used in 30.5% of appointments.

A total of 1431 homeopathy appointments were recorded. 862 (60.2%) of the appointments were for conditions present in the original pick-list. Of these 862 appointments, it was estimated that copy/pasting of

the medicine was done on 91.4% of occasions. Practitioners treated 283 different medical conditions in total; 97 of these appeared in the pick-list. Of the total 1431 appointments, 894 (62.5%) used homeopathic medicines present in the pick-list; 489 (34.2%) used remedies (or combinations) not in the pick-list; 48 entries were blank and are unknown. Of the 894 appointments where a listed remedy was used, copy/pasting of the remedy was done in an estimated 72.0% of occasions. 406 different homeopathic medicines (or combinations of medicines) were reported in total; 93 of these appeared in the pick-list; 103 single remedies and 210 remedy combinations were not in the pick-list.

### Analysis of clinical data

#### *Patient demographics*

The 1431 homeopathy appointments represented data from 855 individual patient conditions. Eighty-eight of those 855 were recorded in patients who had also been recorded for another treated condition—ie there were actually 767 individual patients in the study overall. There were 547 dogs, 155 cats, 50 horses, 5 rabbits, 4 guinea-pigs, 2 birds, 2 goats, 1 cow, and 1 tortoise. The most commonly treated breeds of dog were: Labrador Retriever, 79; Collie, 17; Golden Retriever, 16; Cocker Spaniel, 13; Dachshund, 10. The majority of cats were Domestic Short Hair ( $n = 91$ ).

Global analysis of the data from the 855 patient conditions shows the most frequently treated were arthritis, dermatitis/skin conditions, lameness, epilepsy, and diarrhoea. Dogs accounted for the majority of these cases. There was little evidence of an association between commonly presented conditions and particular breeds of dog, except for the relatively high incidence of arthritis in Labrador Retrievers ( $n = 17$ ). A longer list of conditions/complaints and species treated is given in Table 1. Of the 855 patients, diagnosis was noted as having been confirmed in 463 patient conditions and not confirmed in 332; data under this heading were not recorded in 60 cases.

**Table 1** Most frequently treated medical conditions/complaints—all species

Rank	Condition/complaint	Dog	Cat	Horse	Other	Total no. of cases
1	Arthritis*	57	0	1	1	59
2	Atopic dermatitis†	41	9	0	0	50
3	Lameness	21	0	6	2	29
4	Epilepsy	24	1	0	0	25
5	'Skin conditions'	20	2	1	0	23
6	Dermatitis	17	1	2	1	21
7	Diarrhoea	16	5	0	0	21
8	Aggression	14	2	1	0	17
9	Weakness	12	2	1	0	15
10	Fear	12	1	0	0	13
11	Otitis externa	13	0	0	0	13
12	Pruritus	12	0	0	0	12
13	Kidney failure	4	6	0	1	11

(A total of 283 different conditions were reported overall; the tabulation lists only those 13 comprising a total of more than 10 cases in each)

\*Includes 'osteoarthritis', a term used by some veterinarians.

†Includes the term 'atopy', used by one veterinarian to describe atopic dermatitis.

Additional analysis of the data from the 855 patient conditions shows the homeopathic medicines most frequently used at the penultimate appointment were as follows: none 21; *Pulsatilla* 13; *Phosphorus* 12; *Silicea* 12; *Causticum* 9; *Conium* 9; *Rhus toxicodendron* 9; *Rhus toxicodendron*, *Ruta* and *Arnica* (*RRA*) 9; *Sulphur* 9. There was little evidence of matching of a particular homeopathic medicine with a specific medical condition; individualised prescribing to the patient was the general rule. A possible exception to this was the prescription of *Rhus tox*, *Ruta* and *Arnica* in combination, prescribed for arthritis in 10 of 41 arthritis patients at last appointment where the medicine was noted; all these 10 were dogs.

*Clinical outcomes*

Two or more homeopathic appointments per patient condition were obtained for 539 individual cases (392 in dogs, 114 in cats, 25 in horses, 8 in other species)—63.0% of those treated. Of these 539, there was a positive outcome in 79.8%, no change in 11.7% and deterioration in 6.1%; failure to record outcome occurred in 2.4% of cases. For the same 539, a score of +2 or +3 was recorded for 61.6% of cases; a score of -2 or -3 was recorded for 2.6%. Forty-six cases were described as having ‘acute’ conditions/symptoms and 490 as ‘chronic’; 3 were not labelled in this way. These data, with further details, are illustrated in Table 2.

A global summary of +2/+3 outcomes by medical category is presented in Table 3. Of the conditions where the final number of FUs was more than 20 animals, the greatest percentage of high positive scores was most apparent in patients presenting with behavioural, musculo-skeletal, or especially uro-genital complaints. Also presented in Table 3 is an equivalent summary of -2/-3 outcomes: very few patients had negative outcome scores of this magnitude, and there was no particular medical problem—even cancer—that typically seemed to respond adversely. Table 3 also contains summarised data of +1/0/-1 outcomes (ie patients whose owners reported little or no change): cancer and gastrointestinal problems appeared most prominently in this set.

**Table 2** Outcome scores by percentage of 539 follow-ups—acute and chronic cases

Outcome	Percentage of follow-up patients		
	Acute	Chronic	Overall
?	0.2	2.2	2.4
-3	0.0	0.9	0.9
-2	0.0	1.7	1.7
-1	0.0	3.5	3.5
0	0.4	11.3	11.7
+1	0.7	17.5	18.2
+2	2.4	29.3	31.7
+3	4.8	24.5	29.9*

\*Includes 0.6% of follow-ups (3 cases) where ‘acute’ or ‘chronic’ labelling was missing.

**Table 3** Summary of outcome scores of follow-up patients by medical category

Category	No.	final FUs%	+2 or +3%	+1 or 0 or -1%	-2 or -3%
DERM	138	57.3	36.2	3.6	0.0
MSK	119	66.4	32.8	0.0	0.0
BEH	46	69.6	21.7	4.4	0.0
ENT	41	56.1	39.0	4.9	0.0
CANCER	39	46.2	43.6	7.7	0.0
MISC	35	65.7	25.7	2.9	0.0
GI	32	56.3	40.6	0.0	0.0
URO	21	76.2	23.8	0.0	0.0
ENDO	18	55.6	44.4	0.0	0.0
EYE	14	78.6	21.4	0.0	0.0
RESP	11	54.6	36.4	9.1	0.0
CV	7	100.0	0.0	0.0	0.0
OG	6	83.3	16.7	0.0	0.0
NERVE	5	20.0	60.0	0.0	0.0
TR	5	40.0	40.0	0.0	0.0
MALE	2	100.0	0.0	0.0	0.0
TOTAL	539	61.6	33.4	2.6	0.0

In the 392 canine cases, there was a positive outcome in 79.6%, no change in 12.0% and deterioration in 5.6%; no outcome recorded in 2.8% of cases. A score of +2 or +3 was recorded for 60.0% of cases; a score of -2 or -3 for 2.0%. A summary of +2/+3 outcome scores by medical condition in dogs is given in Table 4a. High positive scores (+2 or +3) were achieved most notably in arthritis and epilepsy; the symptoms ‘lameness’ and ‘weakness’ also seemed to respond especially well.

In the 114 feline cases, there was a positive outcome in 79.8%, no change in 10.5% and deterioration in 7.9%; no outcome recorded in 1.8% of cases. A score of +2 or +3 was recorded for 66.7% of cases; a score of -2 or -3 for 4.4%. A summary of +2/+3 outcome scores by medical condition in cats is given in Table 4b. Though the total number of examples of each condition was small, high positive scores (+2 or +3) were achieved notably in atopic dermatitis, gingivitis and hyperthyroidism.

Final outcome scores in terms of the homeopathic medicines most frequently used at the penultimate appointment were as follows (score of +2 or +3; all species): *Conium*, 66.7%; *Rhus toxicodendron* 66.7%; none, 61.9%; *Phosphorus*, 58.3%; *Causticum*, 55.6%; *Silicea*, 50.0%; *RRA*, 44.4%; *Sulphur*, 44.4%; *Pulsatilla*, 23.1%.

**Participating veterinarians’ views**

Completed questionnaires were received from all veterinarians who participated. None entered the clinical data during the homeopathic appointment itself. All of the practitioners found the spreadsheet practical to use and the instructions helpful; only 3 of them had used *Excel* previously. The time needed to fill in the necessary data averaged 6–7 min per appointment. A majority found it easy to copy/paste data from the pick-lists, though one mentioned the choice of

**Table 4** Summary of +2/+3 outcomes of follow-up cases of dogs and cats

Condition/complaint	No. final FUs	% with +2 or +3 score
<i>(a) Dogs (conditions/complaints with 10 or more follow-up patients only are listed)</i>		
Arthritis	42	61.9
Atopic dermatitis	32	56.3
Epilepsy	15	66.7
Dermatitis	14	50.0
'Skin conditions'	14	21.4
Lameness	10	70.0
Otitis externa	10	40.0
Weakness	10	80.0
<i>(b) Cats (conditions/complaints with 5 or more follow-up patients only are listed)</i>		
Atopic dermatitis	8	100
Hyperthyroid	8	75.0
Gingivitis	5	100
Kidney failure	5	60.0

options was insufficient. The outcome question sequence seemed to be understood by the veterinarians' clients, and it proved easy in general to score outcomes on the 7-point scale. One veterinarian felt the outcome scores had a positive bias. Six of the 8 practitioners found it convenient to return data on a weekly basis. E-mail communication was convenient for all but one veterinarian, who had an inadequate e-mail system at work. All but one veterinarian found it a worthwhile exercise overall, deriving useful factual information from the analysis of their own practice data. All 8 would take part in a larger-scale clinical data collection study, and most would likely take part in future controlled research work.

Sample of specific comments/suggestions by practitioners:

The study has made me aware that I use homeopathy more frequently than I had realised. It has also gave me an incentive to use it more, so thank you for that!

Useful to be able to quote success rates to new clients.

Follow up information was difficult to track if it fell outside of the consultation—I get a lot of information via letter, e-mail, phone, etc and it is missed in the recording.

Multiple conditions for the same animal became confusing as with homeopathy you are not treating a condition as such, so you had to keep thinking conventionally and breaking things down.

The horse yard I visit was a nightmare (92 horses) and I only recorded single horse constitutionals where in fact a lot of group (herd) remedy work is carried out.

I did at times persuade the owner to go for a lower score than their first choice. There is always the risk of owners wanting to be positive and to please the practitioner—and being desperate for a good result.

## Discussion

The veterinary practitioners who took part in this study were clearly capable of recording homeopathic cases systematically in spreadsheet format and of communicating the data reliably to a co-ordinating centre. Most appointments were recorded in a meaningful way. The medical complaints and species that were treated most frequently and with greatest apparent success were readily identified, and the outcomes recorded at follow-up have already highlighted several—most notably in dogs and cats—that may be especially promising for homeopathy research. None of these conditions (arthritis or epilepsy in dogs; atopic dermatitis, gingivitis or hyperthyroidism in cats) has been the subject of published controlled research in homeopathy. It was clear that most practitioners gained useful factual information from their own practice data and were enthusiastic about taking part in future data collection work and, in most cases, controlled clinical research.

The overall rate of positive outcome in 79.8% of follow-up patients is somewhat higher than that reported in clinical outcome studies of homeopathy in humans.<sup>7, 8, 12</sup> A score of +2 or +3 was recorded in 61.6% of follow-ups overall, with a slightly lower figure obtained for dogs (60.0%) and a rather higher one for cats (66.7%). It is notable that 87% of these (see Table 2) were in patients overall whose condition was reported as chronic (ie longer than one month duration). This supports the often-expressed view that homeopathy can have a positive impact in patients with long-term health problems. The high frequency of patients with problems categorised as 'Dermatology' is consistent with this viewpoint, though this was not the category with the highest percentage of +2 or +3 scores: especially high positive scores were most apparent in patients presenting with uro-genital complaints (although numbers of patients are much lower).

It is important to note that data analysis was not carried out on an intention-to-treat basis. Consistent

with the prospective design of the study, the outcome statistics refer only to patients who were re-assessed at follow-up. Any controlled research that is informed by such outcome findings would properly involve intention-to-treat analysis, but the purpose here was to seek trends in homeopathic prescribing and outcomes, and thus to begin to inform future research. A control group was inappropriate to a study of this type.

Several other characteristics of the data are apparent. Few, if any, homeopathic medicines were exclusively used for particular medical conditions—individualised prescribing was the norm. A recording of ‘none’ against last-used homeopathic medicine was the most frequently noted; and was the third most apparently successful of the frequently recorded ‘medicines used’. This may be because resolution of symptoms was already evident at the penultimate appointment recorded. This view is reinforced by the fact that the majority of the 21 ‘none’ cases had an average of 3–4 appointments within the study’s 6-month duration. It is thus debatable whether the penultimate prescription is actually the most appropriate or representative, but we have used it in this study as a single description of a patient’s homeopathic treatment.

The outcome score used was a generic 7-point Likert scale. Although not strictly validated for the purpose adopted here, such scales have been validated in other research settings<sup>13</sup> and have been used in medical homeopathy outcome audits in the past.<sup>12, 14</sup> The scale was chosen for its simplicity and convenience: in a study aiming to provide trends of outcome information for any condition or symptoms, identifying patients with scores  $\pm 2$  or  $\pm 3$  was sufficient. For targeted research in named medical conditions and species, however, it is much more important to have validated outcome scales. Such research would also rightly attribute a clear baseline reference assessment against which to gauge any health changes that may be due to homeopathy. Our scale assessed only changes from a baseline recalled by the owner. Controlled research would also normally ascribe specific time-points for follow-up assessment; in a non-controlled data collection study such as this, patients are assessed opportunistically when they return to the veterinarian. This inevitably means that the follow-ups intervals—even for a single named medical condition and species—are highly variable.

Relying on client recall is one of the several potential sources of outcome bias in studies of this kind. Additional sources of bias (probably positive in nature) include: (a) the ‘vet-with-owner’ dialogue and ‘desire to please’ bias in identifying the outcome score; (b) the fact that veterinarians may have selected, unwittingly, some of their most promising cases for homeopathy instead of conventional treatment; (c) owners attending a homeopathic veterinarian may have more confidence in the therapy and empathy with its practitioners. Empathy has been shown to have a

positive association with outcome (enablement) from homeopathic treatment in humans.<sup>15</sup> It is conceivable that inter-personal relationships of this kind may play a therapeutic role in the homeopathic treatment of companion animals. Targeted research would usefully address issues such as this. Only one of the veterinarians in the current study felt that outcomes scores had a positive bias.

Another limitation of this study is the relatively brief 6-month duration of systematic recording. This means that a full course of homeopathy appointments per patient condition will only be registered in a limited number of cases. This may apply especially to chronic cases, where the start and/or end of homeopathic treatment would lie outside the 6-month ‘window’ of record keeping. Data might be distorted also by seasonal factors (the study took place mainly in winter and spring months) and by the unequal number of cases treated by the 8 practitioners (43–357 appointments). These issues are not of major concern in a pilot study, but would be important considerations in designing a more definitive data collection project. Such a project would be informed importantly by the practical aspects of the current work, and would benefit from having more comprehensive lists of medical conditions/complaints and homeopathic medicines that could be copied and pasted into the appointments file. Attention would be paid to clarifying some of the medical nomenclature, particularly in the dermatology and musculo-skeletal categories.

Practitioners completed the spreadsheet with care and attention to detail. Precision in data entry was good overall, and the number of data cells with missing information was encouragingly low. This was probably assisted by availability of the pick-lists and by the fact that none of the veterinarians entered the data during the appointment itself. Nevertheless, the project coordinator had to undertake a significant amount of work during data synthesis to ensure that the maximum quantity and quality of information was analysed and reported. Also, one column of data was completed relatively poorly by practitioners: consumption of other medication was noted at only 34.9% of appointments. Since absence of information cannot be interpreted in any meaningful way, the data from this column have not been reported. In another data collection study of this type, it would be desirable to ensure that practitioners were obliged to enter information in all cells that should contain data for analysis.

## Conclusion

Clinical outcomes studies of this type and other non-randomised designs are fundamental in informing well-targeted research in veterinary homeopathy. They have been strongly advocated in the recent medical homeopathy literature.<sup>8, 16–19</sup> There is little precedent for such work in the veterinary homeopathy profession, but it is

clearly indicated. The current study has successfully piloted a spreadsheet that, with some revision, can be used effectively for larger-scale systematic clinical data collection in veterinary homeopathic practice—particularly in the treatment of dogs and cats.

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