Homeopathy (2007) 96, 74–81

doi:10.1016/j.homp.2007.02.004, available online at http://www.sciencedirect.com

ORIGINAL PAPER

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

RT Mathie* and S Farrer

Faculty of Homeopathy and British Homeopathic Association, Hahnemann House, 29 Park Street West, Luton LU1 3BE, UK

***Background and Aims*: A base for targeted research development in dental homeopathy can be founded on systematic collection and analysis of relevant data obtained by dentists in clinical practice. With these longer-term aims in mind, we conducted a pilot data collection study, in which 14 homeopathic dentists collected clinical and outcome data over a 6-month period in their practice setting.**

***Methods*: A specifically designed *Excel* spreadsheet enabled recording of consecutive dental appointments under the following main headings: date; patient identity (anonymised), age and gender; dental condition/complaint treated; whether chronic or acute, new or follow-up case; patient-assessed outcome (7-point Likert scale: −3 to +3) compared with first appointment; homeopathic medicine/s prescribed; whether any other medication/s being taken for the condition. Spreadsheets were submitted monthly via e-mail to the project co-ordinator for data synthesis and analysis.**

***Results*: Practitioners typically submitted data regularly and punctually, and most data cells were completed as required, enabling substantial data analysis. The mean age of patients was 46.2 years. A total of 726 individual patient conditions were treated overall. There was opportunity to follow-up 496 individual cases (positive outcome in 90.1%; negative in 1.8%; no change in 7.9%; outcome not recorded in 0.2%). Sixty-four of these 496 patients reported their outcome assessment before the end of the homeopathic appointment. Strongly positive outcomes (scores of +2 or +3) were achieved most notably in the frequently treated conditions of pericoronitis, periodontal abscess, periodontal infection, reversible pulpitis, sensitive cementum, and toothache with decay.**

***Conclusions*: This multi-practitioner pilot study has indicated that systematic recording of practice data in dental homeopathy is both feasible and capable of informing future research. A refined version of the spreadsheet can be employed in larger-scale research-targeted data collection in the dental practice setting.** *Homeopathy* (2007) **96, 74–81.**

Keywords: systematic data collection; homeopathic dentists; clinical outcomes; research targeting

Introduction

Homeopathy in dentistry is considered useful in the treatment of a number of problems, including teething, dental abscess, toothache, surgical trauma, and nervousness or anxiety.[1] However, the research evidence base in dental homeopathy is minuscule: to our knowledge, only four randomised controlled trials

*Correspondence: Robert T Mathie, British Homeopathic Association, Hahnemann House, 29 Park Street West, Luton LU1 3BE, UK.
E-mail: rmathie@trusthomeopathy.org
Received 18 September 2006; revised 5 February 2007; accepted 8 February 2007

(RCTs) have been published. Three of these studies have investigated post-surgical complications, such as pain and bleeding, after tooth extraction; findings have been positive,[2] negative[3] and inconclusive.[4] A trial of homeopathy for oral dryness also reported results in favour of homeopathy.[5] Clearly a great deal more research is required. Such initiatives would benefit from being firmly grounded in normal dental homeopathic practice, focusing on conditions/symptoms where there is particularly promising case-based evidence of its effectiveness.

It is therefore important that clinical outcomes in the 'real world' of dental homeopathic practice are characterised by conducting suitable systematic observational studies. They have been strongly advocated in the medical homeopathy literature.[6–9] Multi-practitioner clinical data collection in the dental profession would make a significant contribution towards meeting that principle. The Faculty of Homeopathy has recently carried out pilot studies of this nature within both the medical[10] and the veterinary professions.[11] In dental homeopathy, the only clinical observational study of this nature has been the single-practice audit reported by Feldhaus.[12]

The current pilot study was designed to lay the foundation for a larger-scale dental data collection project in the Faculty of Homeopathy. The objectives of such an initiative have been defined as follows:

1. Using a piloted spreadsheet 'tool', to gain insight into the complaints that dentists treat using homeopathy in the clinical setting.
2. For follow-up (FU) cases, to determine patient-assessed change in severity of the treated dental condition/complaint (comparing the last with the first consultation in a defined study period), and thus identify any specific patterns of disease, clinical responses and/or homeopathic medicines that may help to target future research projects in dental homeopathy.
3. For FU cases, to note any change in patients' use of conventional medication for their dental condition/complaint 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 find how consistently practitioners complete and then return spreadsheet data to a co-ordinating centre over a 6-month period.
2. To inform our approach to a larger-scale dental data collection project – in particular, to ascertain whether data can be analysed and interpreted in anticipation of Aims 1–3 of such work (see above).

Secondary aims were: (1) to begin the process of engaging Faculty dental practitioners in clinical data collection/research; (2) to explore whether data of this kind might be useful for dentists in their own practice setting.

Methods

Fourteen dentists contributed to the study: all were in primary care, six in an exclusively private practice setting. All were based in England. Five practitioners were DFHom (Dent) qualified, and nine were LFHom qualified. Recruitment took place from a pool of 35 Faculty dentists who had replied to a survey on UK dental homeopathy practice, conducted in autumn 2004. All 14 were given the opportunity to comment on a spreadsheet (*Microsoft Excel*), which was 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).
- Unique (anonymised) patient identity/number.
- Age of patient.
- Gender of patient.
- The condition/complaint treated. A separate page comprised a 'pick-list' containing 59 dental terms in eight 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—Endodontia (ENDO), Exodontia (EXO), Face & Jaw (F&J), Mouth & Gums (M&G), Periodontia (PERIO), Psychological (PSY), Toothache (T-ACHE), Trauma (TR).
- 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 newly treated complaint or an FU appointment for further treatment of the same complaint.
- Patient-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' [±1] / 'moderate' [±2] / 'major' [±3]).
- Homeopathic medicine/s prescribed, using a 'pick-list' containing 61 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.
- Homeopathic medicine/s prescribed at previous appointment.
- Any other (conventional) medication/s being taken for the condition/complaint.
- Notes/comments, especially those that qualify or amplify other data for the same appointment. State 'phone' if FU information obtained by that means.

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

The duration of the study was 6 months: 1 February–31 July 2005. Practitioners were expected to send data to one of us (RTM, the project co-ordinator), via e-mail attachment, on a monthly basis (on the last day of each month); this allowed the co-ordinator to oversee data generally, 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 (with 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 the study 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 particular 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. Appointments data from all 14 dentists were combined together into a master spreadsheet. Pivot-table analysis (one each for conditions and homeopathic medicines) allowed a convenient count of the total number of pick-list items and their transfer to the appointments page by copy/paste. Near-duplicate descriptions of what were clearly identical conditions or medicines were reconciled into single unique terms. Any conditions not on the pick-list were ascribed category headings. One new category was added as a result of this approach: viz. 'Polysymptomatic' ('POLY').

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 final one for a given condition/symptom in a given patient during the 6 months of the study. These procedures enabled convenient pivot-table analysis based on final 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. (The phrase 'individual patient condition' is used because a given patient could present with different conditions on a different—or even the same—occasion. Also, if a patient presented at one 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.)

A blank cell usually characterised the 'outcome' column for a New appointment. However, there were a number of occasions in this study where patients reported a change in symptoms *immediately* after taking their first homeopathic medicine (ie before leaving the dentist's surgery) – see *Results*. Exceptionally, therefore, a score was recorded in the 'outcome' column for a New appointment in such cases.

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

Results

Use of the spreadsheet

Dentists submitted data reliably to the project co-ordinator. Each practitioner sent an updated spreadsheet for every consecutive month, and most were punctual in their communication (3 days early to 28 days late; average 5 days late per month per dentist). All practitioners returned data for the entire 6-month study period, except for three practitioners who discontinued data collection after 3 or 4 months, due to either communication difficulties or ill health.

Technical problems, such as failure of e-mail or of attaching a file, occurred relatively rarely. Most appointments appeared to be recorded meaningfully, with misunderstanding over the detailed use of the spreadsheet occurring infrequently. One early difficulty was in cases where a patient presented with two discrete conditions that were treated separately with two different homeopathic medicines: it took a month or so of taking part in the project before all practitioners adopted the recommended use of two

Table 1 Age profile of patients

Age (years)	0–9	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80–89	Unknown
Number of patients	18	30	47	111	171	142	73	52	7	2

separate rows to describe two independent dental complaints of this kind. These early errors were rectified prior to analysis.

Some patients reported an effect of homeopathic treatment *during the first appointment*; giving an outcome score in a 'New appointment' row became the agreed means of identifying such cases. In all but two of those occasions, no subsequent appointment took place.

Where homeopathy had been used following invasive dental surgery, ie iatrogenic injury, patients had no point of reference against which to compare change. Consequently they were asked to assess change in comparison to their expectation. Cases of this type were highlighted in the Notes/Comments column.

The total number of appointments per practitioner for the 6-month period varied from 5 to 224 (mean, 82). The large majority of data cells were completed as required, though 15.8% of those specified for homeopathic medicine had missing information. Entries for 'homeopathic medicine prescribed at previous appointment' had 26.2% missing data; these were rectified, where possible, before final analysis. The greatest amount of missing data occurred in the first month or two, while practitioners became used to working with the spreadsheet. The presence or absence of other (conventional) medication/s taken for the condition/complaint was noted on just 20.2% of appointments. Two-thirds of those notes (ie 13.6% of the total appointments) explicitly stated 'none', while the other third (6.6% of the total) stated a conventional medication that had been prescribed. The Notes/Comments column was used in 27.5% of appointments; some practitioners made ready use of this column for additional notes, while others used it sparingly.

A total of 1143 homeopathy appointments was recorded. Nine hundred and eighteen (80.3%) of the appointments were for conditions present in the pick-list. Of those 918 appointments, it was estimated that copy/pasting of the condition took place in 90.8% of occasions. Practitioners treated 95 different dental conditions in total; 49 of these appeared in the original pick-list. Of the total 1143 appointments, 741 (64.8%) used homeopathic medicines present in the pick-list; 276 (24.1%) used remedies (or combinations) not in the pick-list; the remaining appointments had no entries in this column. Of the 741 appointments where a listed remedy was used, copy/pasting of the remedy occurred in an estimated 64.2% of occasions. In total 113 different homeopathic medicines (or combinations of medicines) were reported; 42 of these appeared in the original pick-list; 18 single remedies and 53 remedy combinations were not in the pick-list.

Analysis of clinical data

Patient demographics

The 1143 homeopathy appointments represented data from 726 individual patient conditions. Inspection of the data revealed that 73 of those were recorded in patients who had also been recorded for another treated condition—ie there were actually 653 individual patients in the study overall: 414 (63.4%) of these were female, 239 (36.6%) were male. The corresponding age profile is shown in Table 1.

The mean of the 651 known ages was 46.2 years. 7.4% of the patients of known age were children or adolescents (aged 19 years or less).

Analysis of the data from the 726 patient conditions treated shows the most frequently treated were apical abscess, tooth extraction, anxiety, sensitive cementum, periodontal abscess, post-surgery pain, gum swelling, and reversible pulpitis. A longer list of conditions treated is given in Table 2.

Additional analysis of the data from the 726 patient conditions shows the homeopathic medicines (single, complex or combined remedies) most frequently used at the penultimate appointment† were as follows: *Hepar sulph*, 66; *Arnica*, 50; *Aconite*, 40; *Traumeel*, 31; *Hypericum*, 30; *Plantago tincture*, 30; *Silicea*, 18; *Hepar sulph* + *Silicea*, 15; *Rhus tox*, 10. Individualised prescribing was the general rule, though within a relatively narrow range of medicines per condition. There were several instances of matching between a specific dental condition and a particular homeopathic medicine, the following being most apparent: *Aconite* for anxiety (34 of 56 anxiety patients at last appointment where the medicine was noted); *Arnica* for tooth extraction (31 of 50); *Plantago tincture* for sensitive cementum (30 of 33); *Arnica* + *Hypericum* for post-surgery pain (23 of 27); *Hepar sulph* for apical abscess (23 of 82).

Clinical outcomes

There was opportunity to follow up 496 individual cases—68.3% of those treated. This includes 64 cases where the final outcome score was recorded during the first appointment. Of these 496 FUs, there was a positive outcome in 90.1%, no change in 7.9% and deterioration in 1.8%; failure to record outcome occurred in 0.2% of cases. For the same 496, a score of +2 or +3 was recorded in 79.0% of cases; a score of −2 or −3 was recorded in 1.2% of patients. For the subset of 64 patients who reported an immediate response, a score of +2 or +3 was recorded in 76.6%

†This includes medicines used in the appointment at which the outcome in 64 patients was recorded — see subsequent text.

Table 2 Most frequently treated dental conditions/complaints

Rank	*Condition/complaint*	*Total no. of cases*
1	Abscess—apical	104
2	Tooth extraction	68
3	Anxiety	62
4	Sensitive cementum	33
5	Abscess—periodontal	28
6	Post-surgery pain	27
7	Gum swelling	24
8	Pulpitis—reversible	23
9	Toothache with decay	19
10	Anxiety plus post-surgery pain	18
11	Pericoronitis	17
12	Dry socket	13
12	Root canal work	13
12	Sensitive nerve	13
15	Pulpitis—irreversible	12
15	Ulcer—aphthous	12
17	Periodontal infection	11
18	Periodontal pain	10

A total of 96 different conditions was reported overall; the tabulation lists only those 18 comprising at least 10 cases in each.

Table 3 Outcome scores by percentage of 496 follow-ups—acute and chronic cases

Outcome	*Percentage of follow-up patients*		
	Acute	*Chronic*	*Overall*
?	0.2	0.0	0.2
−3	0.6	0.2	0.8
−2	0.4	0.0	0.4
−1	0.4	0.2	0.6
0	4.9	3.0	7.9
+1	5.7	5.4	11.1
+2	20.9	9.7	30.6
+3	41.1	7.3	48.4

of cases; a score of −2 or −3 was recorded in 1.6%. 368 FUs were for 'acute' conditions; 128 were 'chronic'. Further details of these data are illustrated in Table 3.

A global summary of +2/+3 outcomes by dental category is presented in Table 4: the greatest percentage of high positive scores was most apparent in patients presenting with toothache or periodontal complaints; the fewest such scores were reported by patients treated for F&J conditions. An equivalent summary of −2/−3 outcomes by dental category is also presented in Table 4: very few patients had negative outcome scores of this magnitude, and there was no particular dental complaint that typically seemed to respond adversely. Table 4 also contains summarised data of +1/0/−1 outcomes (ie patients who reported little or no change): patients with F&J conditions were prominent in this category. A summary of +2/+3 outcome scores by dental condition/complaint is given in Table 5. High positive scores were achieved in many cases, most notably in the frequently treated conditions of pericoronitis, periodontal abscess, periodontal infection, reversible pulpitis, sensitive cementum, and toothache with decay, as well as in cases of tooth extraction.

Table 4 Summary of outcome scores of follow-up patients by dental category

Category	*No. final FUs*	*% +2 or +3*	*% +1 or 0 or −1*	*% −2 or −3*
ENDO	131	75.6	21.4	3.0
TR	94	85.1	13.8	1.1
PSY	70	75.7	24.3	0.0
M&G	68	70.6	27.9	1.5
T-ACHE	52	94.2	5.8	0.0
PERIO	51	88.2	11.8	0.0
F&J	23*	47.8	47.8	0.0
POLY	6	100.0	0.0	0.0
EXO	1	100.0	0.0	0.0

*Outcome not recorded in one of these 23.

Table 5 Summary of +2/+3 outcomes of follow-up cases by dental condition/complaint

Condition/complaint	*No. final FUs*	*% with +2 or +3 score*
Abscess—apical	81	76.5
Anxiety	49	75.5
Tooth extraction	45	84.4
Sensitive cementum	27	100.0
Gum swelling	20	65.0
Abscess—periodontal	16	93.8
Pulpitis—reversible	14	92.9
Sensitive nerve	13	61.5
Toothache with decay	13	100.0
Pericoronitis	12	91.7
Periodontal infection	11	81.8
Pulpitis—irreversible	10	70.0
Root canal work	10	70.0

Conditions with 10 or more follow-up patients only are listed.

Final outcome scores in terms of the homeopathic medicines most frequently used at the penultimate appointment (see previous footnote †) were as follows (score of +2 or +3): *Plantago tincture*, 96.7%; *Traumeel*, 87.1%; *Arnica*, 80.0%; *Hypericum*, 80.0%; *Hepar sulph*, 78.5%; *Aconite*, 77.5%; *Rhus tox*, 70.0%; *Hepar sulph* + *Silicea*, 66.7%; *Silicea*, 61.1%.

Participating dentists' views

Completed questionnaires were received from 12 of the 14 practitioners who took part. Four of the 12 dentists entered the clinical data during the homeopathic appointment itself. All but one found the spreadsheet practical to use; only two had used *Excel* previously. Nearly all found it easy to copy/paste data from the pick-lists. The outcome question sequence seemed to be understood by all dentists' patients, whose stated outcome proved easy to score on the 7-point scale. Seven of the dentists felt the scores had a positive bias. All the dentists found it convenient to return data on a monthly basis, though one found the use of e-mail inconvenient. A large majority found it a worthwhile exercise, and derived useful factual information from the analysis of their own practice data. Most of the 12 dentists would take part in a larger-scale clinical data collection study, and about half would probably take part in future controlled research.

The following is a sample of specific comments/ suggestions made by practitioners:

"I have enjoyed taking part in this study and this has given me confidence in using homeopathy [more] in my daily practice."
"I mainly used local prescribing for acute conditions in this study, which may explain the very positive results."
"Those participating are inevitably positively inclined toward homeopathy. On the other hand, I saw definite clear-cut clinical reactions, some of which were immediate."
"It reduces my stress levels dealing with less anxious patients [who had received homeopathy]."

Discussion

These 14 Faculty of Homeopathy dentists were clearly capable of recording homeopathic cases systematically in a spreadsheet and communicating the data reliably to a co-ordinating centre. The *Excel* format appeared to allow most appointments to be recorded in a meaningful way. The complaints that were treated frequently and with greatest apparent success were readily ascertained: pericoronitis, periodontal abscess, periodontal infection, reversible pulpitis, sensitive cementum, toothache with decay. In a previous data collection study in UK dental homeopathy,[12] data on specific conditions were not reported. There is therefore no previous report of dental homeopathy with which to compare our overall rate of positive outcome (90.1% of FU patients). Similar studies of homeopathy in medical practice settings typically achieve positive outcome in 70–80% of FUs overall.[13,14] A high score (+2 or +3) was recorded in 79.0% of FUs in our study. It is notable, however, that a large majority of those high positive scores was in patients whose condition was reported as acute (self-limiting), and this has probably exaggerated the findings. It should also be noted that medical practitioners spend the majority of their time as physicians prescribing medicines and giving advice. By contrast, dental practitioners spend much of their time as surgeons doing physical intervention supported by prescribed medicine (whether homeopathic or conventional). Related issues are discussed below.

It is important to comment that data analysis was not carried out on an intention-to-treat basis. Thus, the outcome statistics refer only to patients who were re-assessed at FU, as per the prospective design of the study. Any controlled research that is informed by such outcome findings would properly involve intention-to-treat analysis (where statistics would include patients with no recorded outcome), but the purpose here was to establish the basis for *trends* in homeopathic prescribing and outcomes and thus begin to inform future research. It should also be noted that a control group was inappropriate to the study design of the current project; comparison from baseline per patient was sufficient for our needs.

Several other characteristics of the data are worth highlighting. Not surprisingly, many of the polychrest remedies were frequently prescribed, and on an individualised basis. It is equally apparent that a number of remedies tended to be selectively used for particular dental conditions. The several clear matches (eg *Aconite* for anxiety, *Arnica* for tooth extraction, *Hepar sulph* for abscess) are consistent with standard teaching of the homeopathic Materia Medica. It is a matter of debate 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. Individual practitioners adopt differing prescribing profiles dependent on their level of expertise.

The outcome score used was a generic 7-point Likert scale. It has three levels of severity both for improvement and for deterioration, as well as a zero value expressing no change. Although not strictly validated for the purpose adopted here, such scales have been validated in other research settings[15] and have been used in homeopathy outcome audits in the past.[14,16] The scale was chosen here for its simplicity and convenience, given that in a study aiming to provide trends of outcome information for *any* condition or symptoms, it is neither necessary nor appropriate to have a greater apparent degree of precision. Identifying patients with scores ± 2 or ± 3 was sufficient for the purpose intended. For targeted research in named dental conditions, however, it would be much more important to have validated outcome scales. Such research would also typically attribute a clear baseline reference assessment against which to gauge any symptom changes that may be due to homeopathy. Our scale assessed only *changes* from a recalled baseline. Controlled research would also normally ascribe specific and relevant time-points for FU assessment, and which would take into account the temporal relationship between homeopathic treatment and any dental surgical intervention. In a non-controlled data collection study such as the current one, patients are assessed opportunistically when they return to the dentist for further treatment or if they are in contact by telephone. This inevitably means that the FU intervals—even for a single named dental condition—are highly variable. The issue of iatrogenic injury (see *Results*) might be addressed in future work by adding a column to the spreadsheet headed 'dental treatment undertaken' so it can be seen what took place at each appointment, with 'no surgical intervention' being the clearest result for homeopathic data interpretation.

Relying on patient recall over time 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 'dentist-with-patient' dialogue in identifying the outcome score; (b) the fact that dentists may have selected, unwittingly, some of their most promising cases for homeopathy instead of

conventional treatment; (c) patients attending a homeopathic dentist may have more confidence or optimism about the therapy and empathy with its practitioners. Empathy has been shown to have a positive association with outcome (enablement) from homeopathic treatment,[17] and targeted research would usefully address issues such as this. Half the dentists in the current study expressed the opinion that outcome scores had a positive bias.

Another limitation of a study such as this is the rather brief 6-month duration of systematic recording. This means that a full course of homeopathy appointments per patient condition will be registered in a limited number of cases only. This would be the situation particularly for long-term chronic cases, where the start and/or end of homeopathic treatment would lie outside the 6-month 'window' of recordings. Data might be distorted also by seasonal factors (the study took place mainly in spring and summer months) and by the unequal number of cases treated by each of the 14 practitioners (5–224 appointments). It was obvious too that, because of some practitioners' base in private practice, there was a wide range of consultation characteristics from the long case to the shorter appointment. None of these issues is of major concern in a pilot study, but they 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 named dental conditions/complaints and homeopathic medicines which could be copied and pasted into the appointments file.

Practitioners completed the spreadsheet with considerable care and attention to detail. The number of data cells with missing information was encouragingly low, and precision in data entry was good overall. This was probably assisted by availability of the pick-lists and by the fact that few dentists completed the data entry during the homeopathic appointment itself. Nevertheless, a considerable amount of work was required by the project co-ordinator (RTM) during data synthesis to ensure that the maximum quantity and quality of information was analysed and reported. This provided meaningful analysis of the entire spreadsheet, with the key exception of patients' use or non-use of other medication—information entered in only a fifth of all appointments. Since absence of information cannot be interpreted in any useful way, the data from the latter column have been reported only in general terms. In another data collection study of this type, one would wish to ensure that practitioners were obliged to enter information in *all* data cells (except in Notes/Comments). It was clear that most practitioners gained useful factual information from their own practice data and that many were engaged by the concept of taking part in future data collection work and/or controlled research.

Conclusions

Clinical outcome studies of this type and other non-randomised designs are fundamental in informing well-targeted future research in dental homeopathy. The current study has successfully piloted a spreadsheet that, with some revision, can be used effectively in larger-scale systematic data collection in the dental practice setting. This work has indicated the apparent swiftness of some homeopathic treatment effects, but also the difficulty of interpreting results in cases of iatrogenic injury. Controlled research already seems indicated, particularly in patients with pericoronitis, periodontal abscess, periodontal infection, reversible pulpitis, sensitive cementum, or toothache with decay.

Acknowledgements

Practitioners taking part in data collection: Mark Cronshaw; Peter Darby; Peter Galgut; Ludwig Gedah; Kyriacos Hajikakou; Kathryn Hockey; Vanessa Maddox; Louise Nash; Chris Norman; Carol Somerville Roberts; Lesley Trivett; Philip Wander; Wendy Watson; Brigitte Wilkinson.

References

1 Bhat SS, Sargod SS, George D. Dentistry and homeopathy: an overview. *Dent Update* 2005; **32**: 486–491.
2 Albertini H, Goldberg W, Sanguy BB, Toulza C. Homeopathic treatment of dental neuralgia using Arnica and Hypericum: a summary of 60 observations. *J Am Inst Hom* 1985; **78**: 126–128.
3 Kaziro G. Metronidazole (Flagyl) and Arnica montana in the prevention of post-surgical complications, a comparative placebo controlled clinical trial. *Br J Oral Maxillofac Surg* 1984; **22**: 42–49.
4 Lökken P, Straumsheim PA, Tveiten D, Skjelbred P, Borchgrevink CF. Effect of homoeopathy on pain and other events after acute trauma: Placebo controlled trial with bilateral oral surgery. *Br Med J* 1995; **310**: 1439–1442.
5 Haila S, Koskinen A, Tenovuo J. Effects of homeopathic treatment on salivary flow rate and subjective symptoms in patients with oral dryness: a randomized trial. *Homeopathy* 2005; **94**: 175–181.
6 White A, Ernst E. The case for uncontrolled clinical trials: a starting point for the evidence base for CAM. *Complement Ther Med* 2001; **9**: 111–115.
7 Walach H, Jonas WB, Lewith GT. The role of outcomes research in evaluating complementary and alternative medicine. *Altern Ther Health Med* 2002; **8**: 88–95.
8 Bell I. Evidence-based homeopathy: empirical questions and methodological considerations for homeopathic research. *Am J Hom Med* 2003; **96**: 17–31.
9 Mathie RT. Clinical outcomes research: contributions to the evidence-base for homeopathy. *Homeopathy* 2003; **92**: 56–57.
10 Mathie RT, Robinson TW. Outcomes from homeopathic prescribing in medical practice: a prospective, research-targeted, pilot study. *Homeopathy* 2006; **95**: 199–205.

11 Mathie RT, Hansen L, Elliott MF, Hoare J. Outcomes from homeopathic prescribing in veterinary practice: a prospective, research-targeted, pilot study. *Homeopathy* 2007; **96**: 27–34.
12 Feldhaus H-W. Cost-effectiveness of homoeopathic treatment in a dental practice. *Br Hom J* 1993; **82**: 22–28.
13 Robinson TW. Responses to homeopathic treatment in National Health Service general practice. *Homeopathy* 2006; **95**: 9–14.
14 Spence DS, Thompson EA, Barron SJ. Homeopathic treatment for chronic disease: a 6-year, university-hospital outpatient observational study. *J Altern Complement Med* 2005; **11**: 793–798.
15 Gordon S, Ameen V, Bagby B, Shahan B, Jhingran P, Carter E. Validation of irritable bowel syndrome Global Improvement Scale: an integrated symptom end point for assessing treatment efficacy. *Dig Dis Sci* 2003; **48**: 1317–1323.
16 Clover A. Patient benefit survey: Tunbridge Wells Homoeopathic Hospital. *Br Hom J* 2000; **89**: 68–72.
17 Mercer SW, Reilly D, Watt GC. The importance of empathy in the enablement of patients attending the Glasgow Homoeopathic Hospital. *Br J Gen Pract* 2002; **52**: 901–905.