

Homoeopathic and herbal prescribing in general practice in Scotland

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What is already known about this subject

- Homoeopathy and herbalism are increasingly popular among the public and prescribed by general practitioners in the NHS.
- Doctors and regulatory authorities have expressed concerns about their efficacy and safety.
- Studies from the 1990s suggest that between 5.9 and 7.5% of English NHS general practitioners have prescribed homoeopathy, while less than 1% have prescribed herbal remedies. Current levels of prescribing are unknown but are thought to have increased.

What this study adds

- Sixty percent of Scottish general practices now prescribe homoeopathic or herbal remedies.
- The prevalence of homoeopathic prescribing in those under 16 years has doubled since 2000 and is maximal in children < 1 year old, of whom 1% are prescribed a homoeopathic remedy.
- Recognized drug–herb interactions were identified in 4% of patients prescribed oral herbal remedies.

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Aims

To investigate the current levels of homoeopathic and herbal prescribing in Scottish general practice.

Methods

Prescribing of homoeopathic and herbal remedies in primary care was assessed in 1891 669 patients for the year 2003–2004, using computerized prescribing data retrieved from 323 general practices in Scotland.

Results

Forty-nine percent of practices prescribed homoeopathic and 32% herbal remedies. A total of 193 homoeopathic and 17 herbal remedies were prescribed, with 5% of practices accounting for 46% of patients and 50% of remedies. Four thousand one hundred and sixty patients (2.2/1000 registered patients) were prescribed at least one homoeopathic remedy during the study period, with the highest prevalence to children under 12 months of age (9.5/1000 children of that age). Children under the age of 16 made up 16% of the population prescribed homoeopathic remedies (2.2/1000 registered patients of that age). Three hundred and sixty-one patients (0.2/1000 registered patients) were prescribed at least one herbal remedy during the study period, 44 of whom were children <16 years old. Patients prescribed a homoeopathic or herbal remedy were also prescribed a median of four and five conventional medicines, respectively. Of patients prescribed an oral herbal remedy, 4% were also concomitantly prescribed a conventional medicine with which a drug–herb interaction has been documented.

Conclusions

Our study reports that a substantial number of Scottish general practitioners prescribe homoeopathic and herbal remedies, with an approximate doubling in the number of children prescribed homoeopathic remedies. The level of homoeopathic and herbal prescribing raises questions about homoeopathic/herbal provision in the National Health Service and should prompt critical review.

Introduction

The use of complementary and alternative medicine (CAM), in particular homoeopathy and herbalism, is increasingly popular with the public. Of the five most common types of CAM, homoeopathy and herbalism are of particular interest as both use remedies which can be prescribed on a National Health Service (NHS) prescription, provided they are not on the 'black list' of banned substances. Although health boards are obliged to reimburse homoeopathic prescriptions, for herbal prescriptions decisions are made on an *ad hoc* basis. Despite widespread concerns about the lack of proven efficacy of homoeopathic remedies [1, 2] and the safety and potential for drug interactions with herbals [3], anecdotally their use by the public appears to be increasing. Although public demand for increased integration of complementary and alternative medicines into our current health service is growing, scant data exist on current levels of homoeopathic and herbal prescribing within the NHS.

The most recent data come from three UK studies undertaken during the 1990s in England, which reported that between 5.9 and 7.5% of NHS general practitioners (GPs) prescribed homoeopathic remedies, 4.6–18% referred patients for homoeopathy and 7–13.4% endorsed homoeopathy [4–6]. These studies also identified that <1% of GPs prescribed herbal remedies, while only 0.4% referred for, and 3.3–5.0% endorsed herbal remedies [4–6]. All three studies used a questionnaire approach to calculating these figures and reported perceived rather than actual prescribing practices, and as such may have been limited by selection bias.

A more recent study of Scottish GPs, which reported on levels of paediatric homoeopathic prescribing in general practice for the year 1999–2000, identified that 22% of general practices prescribed homoeopathic remedies to 0.1% of all children aged 0–16 years [7].

Therefore, the aims of this study were to characterize the current levels of homoeopathic and herbal prescribing in Scottish general practice, together with patient characteristics.

Methods

Prescriptions for homoeopathic or herbal remedies issued by 323 Scottish general practices using the General Practice Administration System for Scotland (previously demonstrated to be representative of the Scottish/UK populations [8]) during the study year 1 April 2003 to 31 March 2004 were identified by electronic search using search terms constructed from lists of remedies in texts on homoeopathy by Leckridge [9] and *Herbal Medicine* by Barnes [10]. In

spring 2004, this dataset contained 1891 669 live patients.

Leckridge lists remedies covered by the UK Faculty of Homoeopathy examination, which are regarded as the basic list of remedies of which a homoeopath should have knowledge. *Herbal Medicine* is a paper publication and a regularly updated electronic resource designed to provide monographs on herbal medicines most relevant in the UK. Considering the many hundreds of herbal and homoeopathic remedies available throughout the world, neither source is comprehensive; however, they do cover those most commonly used/prescribed remedies in the UK. Although herbal in origin, ispaghula and senna were excluded from the search strategy as they are prescribed to large numbers of patients as conventional formulations for the treatment of constipation. As many homoeopathic and herbal remedies share the same basic ingredient/name, it was necessary to differentiate between formulations by checking the dosage and, in the case of a homoeopathic preparation, the presence of a letter to denote dilution.

Statistical analysis was performed using SPSS version 13.0 (SPSS Inc., Chicago, IL, USA).

Descriptive statistics were used to analyse the characteristics of those practices which prescribed homoeopathic and/or herbal remedies, patient characteristics and the remedies used. Practices which prescribed homoeopathic and herbal remedies were compared with those that did not in terms of practice size, age and gender of GPs, location and deprivation score (Scottish index of multiple deprivation). Student's *t*-test was used if variable data were normally distributed, otherwise the Mann–Whitney test was used. χ^2 tests were used to test the null hypothesis when both variables were dichotomous.

Results

Sixty percent (194) of the 323 practices surveyed prescribed homoeopathic or herbal remedies. Forty-nine percent (159) of practices prescribed homoeopathic remedies and 32% (102) herbal remedies (67 practices prescribed both). Overall, 8% (26) practices prescribed oral herbal remedies.

Approximately 5% of practices (10) accounted for 46% of patients and 50% of the 210 different homoeopathic/herbal remedies prescribed. The majority of practices (66%) prescribed five remedies or less (range 1–91) (see Figure 1) during the study year.

Practices which prescribed homoeopathic and herbal remedies were larger than those that did not (mean rank 124 vs. 167, Mann–Whitney test, $P < 0.001$) and more likely to be located in urban areas (Mann–Whitney test, $P < 0.001$). No significant differences in deprivation

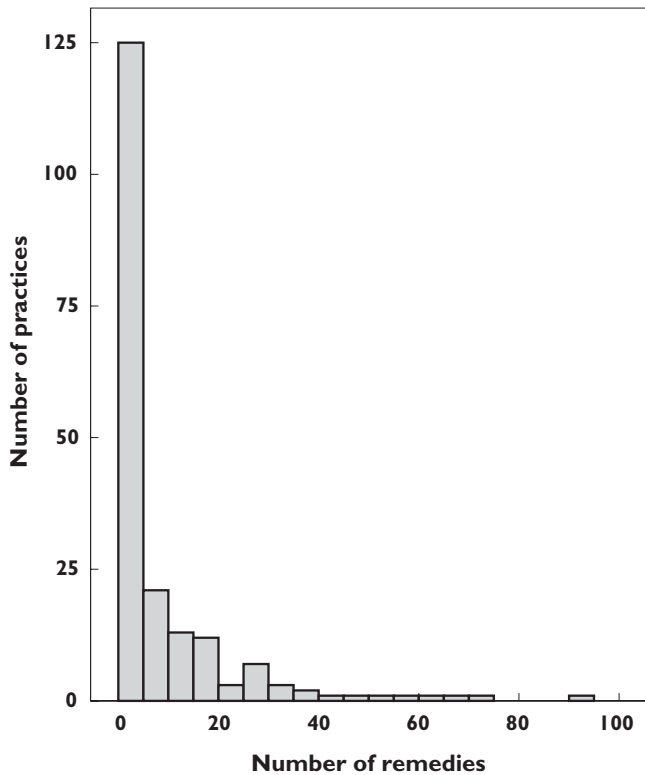


Figure 1
Number of homoeopathic/herbal remedies prescribed by general practices

Table 1

Top five prescribed homoeopathic remedies

Remedy	Suggested indication
<i>Arnica montana</i>	Injury, bruising
<i>Rhus toxicodendron</i>	Joint symptoms, headache
<i>Cuprum metallicum</i>	Cramp, poor circulation
Pulsatilla	PMT, menopausal symptoms, breast feeding problems
Sepia	PMT, menopausal symptoms, fatigue

score, age and gender of GP were observed between practices which did or did not prescribe homoeopathy or herbal medicines.

Homoeopathic remedies

A total of 193 different homoeopathic remedies were prescribed during the study year to 4160 patients (prevalence 2.2/1000 registered patients), with a median age of 47 years, of which 73% were female.

The most frequently prescribed remedies and their suggested indications are reported in Table 1. Given the nature of homoeopathy, indications are speculative.

Table 2

The number of individuals/1000 registered patients of that age, prescribed a homoeopathic or herbal remedy during the study year

Age range, years	Prevalence per 1000 registered patients of that age
<1	9.52
1–4	2.37
5–11	1.74
12–16	1.69
17–20	1.25
21–30	1.49
31–40	1.74
41–50	1.96
51–60	2.88
61–70	3.50
71–80	4.16
81–90	4.46
91–100	3.46

Patients prescribed homoeopathic remedies were also prescribed a median of four different conventional medicines (lower quartile (LQ) 2, upper quartile (UQ) 8) during the study year.

Over the age of 1 year, a steady rise in the prevalence of homoeopathic prescribing was observed with increasing age (Table 2).

Of the population prescribed homoeopathic remedies, 16% (733) were children <16 years old, giving a prevalence of 2.2/1000 children aged 0–16 years registered with their GP. The highest prevalence was observed in children <1 year old (prevalence 9.5/1000 registered patients). Twenty-one percent (67) of practices prescribed homoeopathic remedies to children <16 years old.

Different age groups were prescribed different remedies. Pulsatilla, *Thuja occidentalis* and chamomilla were most commonly prescribed to children for probable breast feeding problems, vaccination reactions, colic and teething, while *Arnica montana* and sepia were the most commonly prescribed remedies to adults for bruising and menstrual problems, and *Rhus toxicodendron* and *Cuprum metallicum* to older adults for joint problems and muscle cramps.

Herbal remedies

Seventeen different herbal remedies were prescribed during the study year to 361 patients (prevalence 0.2/1000 registered patients), with a median age of 61 years, of whom 72% were female.

Table 3

Top five prescribed oral herbal remedies

Remedy	Suggested indication
Gentian	Poor appetite, digestive problems
Cranberry	Urinary tract infection
Digestodoron (Filix, Polypodium, <i>Salix alba</i> , Scolopendrium)	Indigestion, heartburn, constipation
Evening primrose	PMT
Laxadoron (Aniseed, Caraway, Centaury, Nectar, Peppermint, Senna, Yarrow)	Constipation

The most frequently prescribed remedies and their suggested indications are reported in Table 3.

Approximately 20% (72) of those prescribed herbal medication were prescribed oral remedies (the median age for this group was 67.5 years). Patients prescribed an oral herbal remedy were also prescribed a median of five different conventional medicines (LQ 1, UQ 10) during the study year.

Approximately 6% (44) of the children prescribed a CAM remedy were prescribed herbal remedies, including seven children aged 3–12 years who were prescribed oral herbal remedies. These included *Avena sativa* compound, digestodoron and evening primrose. Eight percent (25) of practices prescribed herbal remedies to children <16 years old.

Oral herbal remedies such as hypericum (St John's Wort), valerian and cranberry were prescribed to patients also prescribed conventional medicines including: the oral contraceptive, theophylline, selective serotonin reuptake inhibitors (SSRIs), venlafaxine, warfarin, amiodarone, digoxin, anticonvulsants and immunosuppressants. Well-recognized and reported drug–herb interactions were identified in three of the 72 patients prescribed oral herbal remedies: two were concurrently prescribed warfarin and cranberry and one an SSRI and hypericum.

Homoeopathic and herbal remedies

Overall, of the 1.9 million patients in the dataset, 4496 were prescribed at least one homoeopathic or herbal remedy (prevalence 2.4/1000 registered patients) and 16.7% (751) at least two or more homoeopathic/herbal remedies over the 12-month period (see Table 4). Only 1% (36) of patients were prescribed both homoeopathic and herbal remedies.

Table 4

Number of homoeopathic and herbal remedies per patient during the study year

No. of remedies	No. of patients (%)
1	3745 (83.3)
2	564 (12.5)
3	127 (2.8)
4	31 (0.7)
5	20 (0.4)
6 or more	9 (0.3)

Discussion

Almost half of Scottish general practices prescribe homoeopathic and a third herbal remedies, indicating that at least 12% of Scottish GPs prescribe homoeopathy and 1.8% oral herbal remedies. This is substantially higher than the figures reported in the English studies in the 1990s. While this may be explained by the relatively greater number of doctors trained in homoeopathy in Scotland compared with England, it may also represent an increase in prescribing as demonstrated by the increase in paediatric homoeopathic prescribing in Scotland [7]. Without accurate information on previous prescribing levels in adults in Scotland, it is difficult to draw firm conclusions.

Although a substantial proportion of practices prescribed homoeopathic and herbal remedies, a small proportion (5%) were responsible for prescribing a wide range of remedies to the majority of patients. The characteristics of these practices, in terms of the variables assessed, are not unusual.

The majority of patients prescribed homoeopathy were female, with a median age of 48, possibly reflecting the gender split of patients attending their GP rather than any gender bias [11], although available data suggest that women between the ages of 35 and 60 are the main consumers of over-the-counter remedies or consultants of CAM practitioners [12]. The similar demographic characteristics, between those who seek out CAM and those who are prescribed it in the NHS, may support the suggestion that patient demand is a major reason for prescribing.

The age of patients prescribed herbal, and particularly oral herbal, remedies was substantially higher than of those prescribed homoeopathic remedies. The reasons for this are unclear. One possibility is that GPs use homoeopathic remedies for a placebo effect in younger,

'worried well' patients; however, the fact that these patients were also prescribed a median of four conventional medicines suggests otherwise. A further possibility is that patient demand is a factor and that patients prescribed CAM remedies perceive themselves to have poorer health and are dissatisfied with conventional treatments, in line with the findings of previous studies [13].

The finding that homoeopathic and herbal remedies were prescribed more commonly by large urban practices may also relate to the type of patients registered with these practices and the expectations of urban communities.

A fifth of practices prescribed homoeopathy to children, a finding in keeping with a previous study from 1999 to 2000, which reported that 22% of general practices prescribed to children [7]. However, since 1999 the number of children prescribed homoeopathy appears to have doubled from 1.1 to 2.2/1000, with a doubling in 1–4-year-olds and a trebling in the 5–11 and 12–16-year-olds [7]. The level of prescribing to children <1 year old has remained unchanged at 1% [7]. Possibly of greater concern is the fact that a small number of children were prescribed oral herbal remedies, of unproven safety and efficacy.

Adults prescribed herbal remedies were also prescribed a large number of conventional medicines, placing them at real risk of drug interactions. We identified well-recognized interactions in 4% of those prescribed oral herbal remedies concomitantly with traditional medicines; however, considering the current lack of drug–herb interaction data, and knowledge of over-the-counter purchases, this may be an underestimate of the true level.

It should be noted that prescribing within the NHS represents only a fraction of the total homoeopathic and herbal remedy use by patients, who often purchase remedies over the counter or from CAM practitioners without informing their GP [14].

As previously mentioned in the Introduction, the major difficulty with homoeopathy is the lack of evidence for its efficacy and its 'unscientific' nature. With the rise of evidence-based medicine and the trend towards prescribing guidance from the National Institute for Clinical Excellence and the Scottish Medicines Consortium in Scotland, should therapies with no convincing positive clinical trial evidence be prescribed and funded by the health service? Or are proponents of such remedies correct in stating that the difficulties inherent in trialling such therapies make evidence irrelevant?

Given the lack of evidence, can homoeopathy be assessed as cost-effective? Although several studies

have attempted to look at this question, as with many other studies in the CAM area, methodology has often been poor. White and Ernst's systematic review was unable to reach any conclusions about the economic impact of homoeopathy [15]. Almost every other therapy must now be justified in this way and the continually rising drug budget and financial pressures on the NHS necessitate hard decisions about the use and availability of treatments, especially in the area of new and expensive medicines.

In conclusion, the level of homoeopathic and herbal prescribing (particularly homoeopathy) raises a number of questions about CAM provision in the NHS. First, should homoeopathy and herbalism be available at all to NHS patients through primary care, given the problems with each? If it is to be available, should more practitioners be encouraged to provide these services, to ensure both equity of access and full medical involvement in CAM provision? Second, in view of the current concerns regarding paediatric off label and unlicensed use of medicines, should homoeopathic and herbal remedies be prescribed to young children? Clearly, the apparent acceptance of homoeopathic and herbal medicine within primary care, especially in the young, needs critical review.

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