



## The external use of comfrey: A practitioner survey



Rachael Frost<sup>\*</sup>, Susan O'Meara<sup>1</sup>, Hugh MacPherson

Department of Health Sciences, University of York, York, UK

### A B S T R A C T

**Keywords:**  
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**Aim:** The survey aimed to assess how often and in what ways herbal practitioners use comfrey (*Symphytum officinale* L.) externally in everyday practice.

**Methods:** A 2-sided A4 survey was sent to all UK members of the National Institute of Medical Herbalists, the College of Practitioners of Phytotherapy and the Association of Master Herbalists with viable practice addresses ( $n = 598$ ).

**Results:** 239 herbalists responded, of whom 179 (75%) reported regularly using comfrey, in 15% of their consultations. It was most commonly prescribed as a cream for tendon, ligament and muscle problems, for fractures, and for wounds, the indications for which it was also perceived to be most effective. Comfrey was rated least effective for haemorrhoids, varicose veins and boils and was considered to carry the greatest risk when prescribed for ulcers, wounds and boils.

**Conclusion:** Practitioner experience suggests that comfrey can be used safely and effectively externally for certain indications.

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### 1. Introduction

Comfrey (most commonly *Symphytum officinale* L.) has been in recorded use since approximately 50AD for closing up new wounds and healing inflammations [1]. Subsequent authors have expanded on these uses – in the 1600s comfrey was also recommended for haemorrhoids, gout, painful joints, gangrene, moist ulcers, inflamed breasts and broken bones [2–5]. It was still used by European doctors in the early 20th century [6,7] and is used throughout folk medicine today, for boils, fractures, pain and sprains, with documented evidence from the UK [8], Northern Navarra [9] and Lithuania [10]. Today, Western medical herbals recommend it for sprained ankles, joint inflammations, psoriasis, boils, arthritis, contusions, fractures, mastitis and muscle and ligament damage [11–14].

However, it is often unclear whether the information written in herbals reflects actual usage, as both traditional and modern herbals can be criticised for endorsing every alleged plant virtue

[15]. As a result, there are a wide range of potential indications for which comfrey may or may not be efficacious. Clinical trials have demonstrated moderate evidence for the use of comfrey (*S. officinale* or *S. x uplandicum*) in ankle distortion, back pain, osteoarthritis and abrasion wound healing [16]. However, with regards to other indications such as acne or ulcers, little to nothing is known about comfrey's effectiveness.

Comfrey contains carbohydrates (including mucilage), tannins, triterpenes, allantoin and alkaloids [17]. Allantoin stimulates the regeneration of connective tissue, bone and cartilage [18]. Animal studies have found a reduction in rat paw oedema using comfrey root and an increase in the number of fibroblasts and collagen fibres in rat lesions using comfrey leaf [19].

However, restrictions are placed on comfrey within the UK due to its pyrrolizidine alkaloid content – it can only be purchased over the counter for external use. Pyrrolizidine alkaloids have been linked to cases of hepatotoxicity and carcinogenicity, though there are only five documented reports of toxicity from comfrey (internal consumption only) [20–24] and the reports lack detail and definitive links to comfrey [25].

In searching for further avenues for research, Western herbal practitioners remain a largely untapped resource. Western herbal medicine is defined by the Department of Health Steering Group on Statutory Regulation [26] as a system incorporating Graeco-Roman traditions, the British Isles indigenous culture, North American Eclectic and Physiomedical movements and Western medical

**Abbreviations:** AMH, Association of Master Herbalists; CPP, College of Practitioners of Phytotherapy; NIMH, National Institute of Medical Herbalists; PAS, pyrrolizidine alkaloids.

<sup>\*</sup> Corresponding author. Present address: NMAHP Research Unit, K200 Buchanan House, Glasgow Caledonian University, Port Dundas Road, Glasgow, G4 0BA, UK. Tel.: +44 (0) 141 2731606.

**E-mail addresses:** [rachael.frost@gcu.ac.uk](mailto:rachael.frost@gcu.ac.uk), [raefrost369@gmail.com](mailto:raefrost369@gmail.com) (R. Frost), [s.m.omeara@leeds.ac.uk](mailto:s.m.omeara@leeds.ac.uk) (S. O'Meara), [hugh.macpherson@york.ac.uk](mailto:hugh.macpherson@york.ac.uk) (H. MacPherson).

<sup>1</sup> Present address: School of Healthcare, University of Leeds, Leeds, LS2 9JT, UK.

science. Its counterpart, phytotherapy, is defined by VanMarie as the use of herbal medicines where the action is accounted for only in scientific terms [27]. Nevertheless, all herbal practitioners today typically qualify from university degrees which adhere to a core curriculum specified by the European Herbal & Traditional Practitioners' Association [26] and thus have a combination of education and clinical experience.

Clinical experience forms a valuable component of evidence-based medicine [28] yet practitioner knowledge of herbal remedies, particularly external remedies, is largely unexplored through research. Surveys of Australian practitioners suggest external remedies are widely used among herbalists [29] but there are no UK data. Herbalists therefore represent an (as yet) untapped source of professional knowledge that could contribute to the evidence base. The primary aim of this survey was therefore to explore the clinical experience of UK medical herbalists in regards to: frequency of external comfrey prescription, type of preparations used, indications treated, subjective ratings of effectiveness and safety and sources of information used.

## 2. Materials and methods

A survey was sent out to all UK members of the National Institute of Medical Herbalists (NIMH) ( $n = 482$ ), the College of Practitioners of Phytotherapy (CPP) ( $n = 189$ ) and the Association of Master Herbalists (AMH) ( $n = 74$  but a list of members contactable for research was  $n = 60$ ). A number of these were members of more than one organisation or had unviable addresses, giving a total sampling frame of 598 herbalists. Surveys can be low cost, preserve anonymity and rapidly obtain information from a large number of people [30]. They have previously been used successfully to access herbalists' opinions [31,32]. This survey consisted of a 2-sided quantitative A4 questionnaire (Appendix 1), which was developed for the purposes of this study and contained questions on the following topics: frequency of use; indications for which external comfrey was used; perceived efficacy (the magnitude and duration of effect) [33] and risk (the severity, frequency and duration of adverse effects) [33] for the use of comfrey in relation to each indication; type of preparation; sources consulted for information regarding comfrey; and practitioner demographics. A herbalist-researcher was consulted on the acceptability of the wording and design of the questionnaire. The following strategies were used to increase response rates [34]: stamped return envelopes, contacting participants prior to sending the questionnaires through a social networking site, using university-headed paper and personalising the letters. Follow up questionnaires were sent to non-responders five weeks later in NIMH and CPP. AMH administrative delays meant that their members could only be surveyed once.

### 2.1. Ethics

Ethical approval for this survey was gained from the University of York's Department of Health Sciences' Research Governance Committee. Permission was granted from NIMH, CPP and AMH to contact their members prior to mailing. On return of a questionnaire or after the second mailing herbalists' details were deleted to preserve anonymity.

### 2.2. Statistical analysis

Responses were entered into SPSS 19 for analysis. Descriptive summary statistics, including mean, median and range, were used

with data displayed in tables, and graphs. Narrative responses to questions were coded as missing data and numeric values  $<1$  were coded as 0.5.

## 3. Results

Questionnaires were sent to 598 herbalists and 239 herbalists responded though there were variable rates of missing data per question. Response rates were roughly equal from each organisation, with the largest number of responses from NIMH ( $n = 177$ , 74.0%) the largest regulatory body. 13.5% ( $n = 32$ ) respondents were CPP members, 8.4% ( $n = 20$ ) were AMH members and 4.2% ( $n = 10$ ) were members of both NIMH and CPP.

### 3.1. Demographics

The mean age of respondents was 49.4, with an age range of 25–75. Practitioners were predominantly female (82.7%) and White British (88.4%), with small numbers of other ethnicities (White Irish, American, Australian and White European). The majority of respondents held a degree from a university course ( $n = 107$ , 44.8%) or an externally validated non-university course ( $n = 102$ , 43.7%). Respondents had studied for a mean of 4.1 years ( $n = 237$ ) to qualify as a herbalist and had been in practice for a mean of 10.9 years (median = 10.00, range 0.5–34). They saw a mean of 24 (median = 16, range 0–160) patients per month. The large range stems from a number of herbalists who were recently retired or just starting in practice, who currently saw an average of zero patients per month, and a small number of herbalists who saw over 100 patients per month.

Respondents largely described themselves as using a Western herbal medicine approach ( $n = 230$ ), with 105 using a phytotherapeutic approach (more than one option could be selected). Smaller numbers used principles from physiomedicalism (a traditional American system,  $n = 54$ ), humoral medicine (a traditional European system,  $n = 45$ ), Ayurveda (a traditional Indian system,  $n = 38$ ) and Traditional Chinese Medicine ( $n = 24$ ) in their prescribing choices.

### 3.2. External remedies

In total 75% ( $n = 179/239$ ) of herbalists reported using comfrey externally. Twenty six did not answer the question. Over half of all external remedies prescribed per practitioner per month (Table 1) contained comfrey. Table 1 demonstrates the mean frequency, sum and percentage of external products prescribed containing comfrey by the herbalists responding to this survey. The median (also displayed) may represent a more accurate picture of comfrey prescriptions as the mean number of remedies prescribed per month and year was somewhat skewed by larger values. The total number of comfrey products (containing comfrey alone or with other herbs) prescribed per practitioner per month is 2.27 (median 1.50). This represents a mean of 15.38% (median 7.50%) of patients per month receiving a comfrey product as part of a treatment.

If this survey is representative of the other 60% of UK herbalists who did not respond, the total number of comfrey products prescribed by 598 UK herbal practitioners per year would be 10,764. This is a conservative estimate based on the median per practitioner of total comfrey products per year.

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