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Frost, R, Bhamra, SK, Pendry, B and Heinrich, M

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1 Covid-19 and herbal practice: A UK practitioner survey

2

3 Abstract

4 **Objectives:** To identify the effect of the Covid-19 pandemic on UK herbal medicine practice and how

- 5 herbal medicine practitioners are supporting people with Covid-19. **Design:** Mixed-methods e-
- 6 survey. **Methods:** The survey link was distributed through professional associations and social
- 7 media. Quantitative data were descriptively summarised and qualitative data were analysed using
- 8 content analysis. **Results:** Results from 59 responses indicated a profound effect of the pandemic on
- 9 herbal medicine practice, with a move to remote working and a reduction in client numbers.
- 10 Practitioners reported prescribing a wide range of medicinal plants, chiefly *Glycyrrhiza glabra* L. and
- 11 *Echinacea spp.* alongside providing information and advice. Few reported inter-professional
- 12 collaboration. **Conclusions:** Herbal practitioners need to build on current collaborations, research
- and experience to develop consistent approaches to support people with mild-moderate Covid-19
- symptoms. More systematic exploration of herbal medicine practice during and as a consequence of
- 15 the pandemic is needed.

16 What is already known about the topic

- 17 The Covid-19 pandemic has had a large impact on all types of healthcare
- 18 The impact on herbal medicine practice is unclear

19 What this paper adds

- The Covid-19 pandemic has substantially affected UK herbal medicine practice
- A wide range of medicinal plants are currently used by herbal practitioners to support
 people with Covid-19
- Herbal practitioners need to develop consistent holistic approaches to support people with
 mild-moderate symptoms of Covid-19
- 25

26 **1. Introduction**

- 27 Herbal medicine is consistently the most popular form of complementary medicine [1], mostly using
- over-the-counter products without the consultation of a healthcare professional [2]. A 2018
- 29 representative national survey suggested only 26/4862 (0.005%) of the public in England visited a
- 30 herbal practitioner in the previous 12 months [3]. UK Herbal medicine typically includes Western
- 31 herbal medicine (WHM), Ayurveda and Traditional Chinese Medicine (TCM). Practitioners usually
- 32 practice face-to-face in a clinic or from home [4]. UK herbal medicine is provided outside the UK
- 33 National Health Service, in essence mostly privately via herbal practitioners or via informal networks.
- 34 Since professional regulation is voluntary and members may be registered with more than one body.
- 35 or may not be registered at all, no estimate of total number of UK herbal practitioners is feasible.
- 36 However data from 2004 estimated that there were 1300 herbal practitioners registered with
- 37 voluntary bodies in the UK [5].
- 38 On 11 March 2020, the World Health Organisation declared the outbreak of SARS-Cov-2 (Covid-19) a
- 39 pandemic. In response to this, on 23rd March 2020 a UK lockdown was imposed to halt transmission,
- 40 leading to closure of businesses that were deemed non-essential [6]. Whilst herbal medicine
- 41 practitioners were not specifically mentioned in the guidance, complementary medicine services

- 42 were not deemed as essential and many therapies such as acupuncture and massage cannot be
- 43 practiced at a social distance, leading to the temporary closure of complementary medicine
- 44 premises. Restrictions were gradually lifted from May 2020 onwards for 'other medical and health
- 45 services', with further restrictions implemented gradually from Sep 2020 onwards. Guidance from
- 46 herbal practitioner bodies advised remote working where possible and safe.
- 47 Few studies have mapped the impact of the pandemic on complementary and alternative medicine
- 48 (CAM) practitioners. One preprint Norwegian survey found just over a third of providers (223/581)
- 49 continued providing care during the Norwegian lockdown, offering video (57%) and telephone (47%)
- 50 consultations in addition to face-to-face (44%) [7]. However, only 18 (3.1%) respondents were herbal
- 51 medicine practitioners. Currently, the effect of the pandemic on herbal medicine practice is unclear
- 52 it is possible that practitioners could have seen an increase in client demand due to the UK
- 53 National Health Service (NHS) being overstretched, or that all demand would be reduced in light of
- restrictions. It is also unclear how herbal practitioners are supporting people with Covid-19 during
 the pandemic, and the herbal medicines and lifestyle recommendations made. We therefore carried
- 56 out a mixed-methods survey to identify:
- 57 How herbal practitioners' practices have changed in response to Covid-19
- 58 Common medicinal plants that were used to support people with symptoms of Covid-19 by
 59 practitioners
- 60 Advice sought from and given by herbal practitioners regarding Covid-19
- 61 If/how herbal practitioners are working with NHS or CAM providers in response to Covid-19
- 62 Resources used by herbal practitioners to find information on Covid-19
- 63

64 **2. Methods**

- 65 A mixed-methods online survey was developed, targeting UK WHM, TCM and Ayurvedic
- 66 practitioners. The survey asked about changes to herbal practice since Covid-19, medicinal plants
- 67 used to support people with Covid-19, other supplement and lifestyle recommendations,
- 68 interprofessional working and practitioner demographics. Responses were not mandatory for any
- 69 questions. Ethical approval was obtained from UCL ethics committee (ref 14097/003).
- 70 The survey was distributed Jun-Nov 2020 through professional associations including the National
- 71 Institute of Medical Herbalists (NIMH), the College of Practitioners of Phytotherapy (CPP) and the
- 72 Register of Chinese Medicine (with one reminder email) and on social media platforms (i.e. Facebook
- and LinkedIn). Ayurvedic and other TCM associations were approached but did not respond. The
- total number approached could not be determined as there was overlap in membership across the
- 75 different recruitment routes.
- 76 Quantitative results were analysed using descriptive statistics and qualitative results from open-
- 77 ended questions were analysed using content analysis.

78 **3. Results**

- 79 The survey received 59 responses overall, with variable response rates for each question. Table 1
- 80 reports respondent demographics. Respondents were largely female Western herbal medicine
- 81 practitioners in England in their mid-fifties, who worked part time with an average of 35 clients per
- 82 month. They had practiced on average for 15.8 years.
- 83 Table 1. Demographics of survey respondents (out of n=59 who started the survey)

Demographic (n total responses)	Mean (SD) and range or N (%)		
	per category		
Age (n=40)	55 (10)		
	Range 29-73		
Gender (n=41)	Female 36 (88%)		
	Male 5 (12%)		
Years in practice (n=41)	15.8 (9.3)		
	Range 1-41		
UK country (n=36)	England 35 (97%)		
	Scotland 1 (3%)		
Discipline of HM (n=46)	WHM 31 (67%)		
	TCM 4 (9%)		
	Ayurveda 7 (15%)		
	Other 4 (9%)		
Clients per month (n=39)	35 (40)		
	Range 1-200		
Full/part time (n=41)	Full time 17 (41%)		
	Part time 24 (59%)		

84

85 **3.1. Impact on herbal practice**

86 Herbal medicine practitioners reported a drastic effect upon usual practice. Few completely paused

their herbal practice (n=4/59), but the majority moved to an online-only practice (n=47/59). Events

such as herb walks were cancelled (n=17), while some implemented additional precautions when

cleaning dispensaries (n=27) or changed how clients collected herbal medicines (n=24). Only three

90 participants reported no changes to their practice. Most had noticed a change to their caseload (see

91 Table 2), particularly a reduction in seeing non-Covid patients.

92 Just over half of respondents (33, 56%) had seen patients with suspected Covid-19 (mean 13

patients range 0-100), and 16 (27%) had seen patients with a confirmed diagnosis (mean 11 patients,
 range 0-60)

94 range 0-60).

95 Table 2. Changes in caseload since the start of the pandemic (n=59)

How has your patient/client caseload changed since the start of the pandemic?	N (%)
Increase in new patients with suspected or diagnosed Covid-19	6 (10%)
Increase in new patients with conditions other than Covid-19	2 (3%)
Increase in new patients both with Covid-19 symptoms and other conditions	10 (17%)
Reduction in new patients with other conditions	22 (37%)
Seeing existing patients on a more frequent basis	4 (7%)
No change	10 (17%)
Not sure	5 (8%)

96

97	The vast majority of respondents had been asked for advice by patients in relation to Covid-19
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98 (n=55, 93%), by an average of 30% of their patients (n=45, range 0-90%). Practitioners reported

99 clients requesting advice regarding medicinal plants to support the immune system (n=46),

100 medicinal plants to support people with Covid-19 symptoms (n=36), food or nutritional supplements

to support Covid-19 prevention (n=32) and medicinal plants to support wellbeing during social

isolation (n=28). Between 18-34% respondents had also been asked about general issues, such as

- 103 maintaining wellbeing during self-isolation and social distancing, general preventative measures,
- 104 self-isolation advice, Covid-19 transmission advice and whether to contact their GP. Herbalists
- 105 primarily reported referring patients for further information to Public Health England (37%) or the
- 106 NHS website (46%).

107 **3.2. Herbal medicines used**

- 108 To support patients with Covid-19, 31 herbalists responded reporting 59 medicinal plants and 3
- 109 compounds. Those reported by three or more practitioners are listed in Table 3. The most commonly
- 110 used medicinal plant was liquorice (*Glycyrrhiza glabra* L.), closely followed by Echinacea (*Echinacea*
- 111 *spp*). Therapeutic rationales were focused mainly on medicinal plants with anti-viral,
- immunomodulatory and anti-inflammatory properties, particularly those traditionally classed as lungor respiratory tonics.

Table 3. Most commonly reported medicinal plants used by practitioners to support people withsymptoms of Covid-19

Herbal medicine used	N	%	Documented rationale
Glycyrrhiza glabra L.	15	48%	Anti-inflammatory (9), antiviral (7), adrenal support (3), demulcent (2), respiratory tonic (3), cough management (1), expectorant (1) immune system and mucous membrane maintenance (1)
Echinacea spp	13	42%	Immune support or modulation (10), antimicrobial (2), antiviral (2), anti-inflammatory (1), requested by patients (1), prevention of cytokine storm (1) detoxifier (1)
Andrographis paniculata (Burm.f.) Nees	8	26%	Immune support/modulation (5), antiviral (4), bitter (2), has evidence base (1), antimicrobial (1), cooling (1), eliminates toxins (1), adaptogen (1), liver stimulant (1)
Inula helenium L.	6	19%	Lung or respiratory support (6), circulatory (2), digestive support (2), immune effects (1), expectorant (1)
Thymus vulgaris L.	6	19%	Lung or respiratory support/tonic (3), anti-infective (3), for cough (1)
Astragalus membranaceous Bunge	5	16%	Immune support (4), aid convalescence (1), increase vitality (1)
Sambucus nigra L. (fruct)	5	16%	Antiviral (5), immune support (2) anti-inflammatory (1), anti- catarrhal (1)

Zingiber officinale Roscoe	5	16%	Immune support (3), anti- infective (2), circulatory (2), digestive (2)
Scutellaria baicalensis Georgi	4	13%	Antiviral (2), immune support (2), cytokines (1), used in China (1), some evidence of activity against coronaviruses (1)
Eupatorium perfoliatum L.	3	10%	Relaxant diaphoretic (1), fever management (1)
Hypericum perforatum L.	3	10%	Antiviral (3), nervine tonic for anxiety or exhaustion (2), liver support (1), antidepressant (1)
Ocimum tenuiflorum L. <i>(syn.: Ocimum sanctum</i> L.)	3	10%	Antimicrobial (2), antiviral (2), immune system support (2), respiratory strengthening (1), adaptogen (1),
<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thomson	3	10%	Immune support (2), antiviral (1), antimicrobial (1), fevers (1), blood cleansing (1)
Withania somnifera (L.) Dunal	3	10%	Enhances immunity (1), rasayana (1)
Other = 45 medicinal plants reported by 1-2 respondents (see <i>Supplementary file</i> for full list)			

- 116 Note: not all respondents listed a rationale, and most listed multiple rationales
- 117 Twenty three out of 29 respondents had recommended vitamins or supplements, mainly vitamin D
- 118 (n=14). Other commonly reported vitamins and supplements included Vitamin C (n=8), zinc (n=6)
- and essential oil steam inhalation (n=3). A minority mentioned probiotics (n=1), fish oils (n=1),
- 120 multivitamin (n=1), mushrooms (n=2), garlic (n=2), nigella seed (n=1), quercetin (n=2), green tea
- 121 (n=1), certain foods (n=1), cocoa (n=1) and vitamin K (n=2).
- 122 For wider support (e.g. with mood, wellbeing), 46 medicinal plants were reported by 23 practitioners
- 123 (see Table 4), chiefly lemon balm (Melissa officinalis), skullcap (Scutellaria lateriflora), Siberian
- 124 ginseng (*Eleutherococcos senticosus*) and St John's Wort (*Hypericum perforatum*). Wider support
- included prescribing relaxing or anxiolytic herbs, with some immune system support and adaptogens
- also prescribed.

Table 4. Most commonly reported medicinal plants used by herbal practitioners to provide widersupport with wellbeing

Herbal medicine used	N	%	Rationale
Melissa officinalis L.	7	30%	Anti-anxiety (2), relaxing (2),
			antiviral (2), antidepressant (1),
			nervous system support (1),
			anti-complement (1)
Scutellaria lateriflora L.	7	30%	Anxiety (4), nervine (2)
Eleutherococcus senticosus (Rupr. & Maxim.) Maxim.	6	26%	Adaptogen (3), adrenal support
			(1), increase energy (1),
			immunomodulator (1)

Hypericum perforatum L.	5	22%	Antidepressant (3), mood (2),
			for anxiety (1), nervous
			exhaustion (1), stimulant (1)
Crataegus spp	4	17%	Cardiovascular support (2),
			circulation and heart support
			(2), nervine (1)
Rhodiola rosea L.	4	17%	Adrenal support (3), post-
			infection support (2)
Avena sativa L.	3	13%	Nervous system
			support/nervine (3), exhaustion
			(1)
Ganoderma lucidum (Leyss.ex Fr.) Karst,	3	13%	Immune support (3), calms the
			mind (1), anti-allergy (1)
Passiflora incarnata L.	3	13%	Sedative (1), relaxant (1),
			hypnotic (1), anxiolytic (1),
			mood support (1), for disturbed
			sleep (1)
Valeriana officinalis L.	3	13%	Anxiolytic (2), mood support (1),
			relaxant (1), hypnotic (1), for
			panic attacks (1)
Verbena officinalis L.	3	13%	Anti-depressant (1), nervine (1)
Withania somnifera (L.) Dunal	3	13%	Adaptogen (1), adrenal and
			thyroid support (1), anxiety and
			sleep (1)
Others (34 medicinal plants, see Supplementary file	1-2		
for full list)			

129 Note: not all respondents listed a rationale, and most listed multiple rationales

130

131 **3.3. Other professional activities**

132 Most practitioners (n=32) were not working with other healthcare professionals. Those who were,

133 tended to work with other herbal practitioners (n=16) or CAM practitioners (n=10). Qualitative

134 responses indicated that working with other herbalists largely involved discussions about supporting

people with Covid-19 and best practices (n=10), for example: "Sharing of research and experience

136 with colleagues by phone/video calls."

137 A minority worked with health food shops (n=3), NHS professionals (n=6) or pharmacies (n=1). Some

reported working with the NHS through a support programme for front line workers (n=4) or

139 working in the NHS in another profession (n=2). Five respondents mentioned being involved more in

140 their community, including sharing traditional knowledge (n=1), giving general Covid-19 advice (n=1),

141 continuing an existing lifestyle programme (n=1), using medicinal plants preventatively (n=1),

socially distanced medicinal plant walks and supplying medicinal plants to local shops (n=1).

143 Four reported other professional activities, including conducting webinars (n=1), being involved in

research (n=2), attending webinars (n=1), teaching (n=1), developing practitioner guidance (n=1) and

145 working with a professional body (n=1).

- 146 For their own information, herbal medicine practitioners reported mainly consulting information
- 147 from research databases (34/59), webinars from other herbalists (33/59), NHS guidance (29/59),

Public Health England guidance (28/59) and professional body guidance (CPP 18, NIMH 12, other18).

150 4. Discussion

151 The Covid-19 pandemic has substantially impacted UK herbal medicine practice. Most practitioners

- 152 worked remotely, noting a reduction in client numbers. Practitioners reported supporting clients by
- 153 providing information and advice, recommending Vitamin D and prescribing medicinal plants with
- antiviral and immunomodulatory activity, chiefly *Glycyrrhiza glabra* L. and *Echinacea spp*, as well
- anxiolytic plants for wider support. Few reported inter-professional collaboration.
- The medicinal plants listed for supporting people with Covid-19 reflect those typically used bypractitioners to support people with respiratory tract infections. Currently, there is a lack of clear
- evidence on the use of herbal medicines for Covid-19, which may be the reason for inconsistent
- 159 treatment approaches and the wide range of medicinal plants used. While there is generally no
- 160 direct treatment of the infection as such, some of the medicinal plants reported have clear potential
- as an adjunctive therapy. A positive benefit/risk assessment for herbal medicines as adjunctive
- treatments for Covid-19 was found for *Althaea officinalis* L., *Commiphora molmol* (T.Nees) Engl., *G.*
- 163 glabra, Hedera helix L., and S. nigra [8]. Twelve herbal medicines (including A. paniculata, Echinacea
- 164 *angustifolia* DC., *Echinacea purpurea* (L.) Moench *and Z. officinale*) were considered promising.
- 165 Results from clinical trials are typically emerging or ongoing. One systematic review found a small
- amount of studies supporting the effectiveness of a number of TCM preparations (Lianhua Qingke
 granules, Shufeng Jiedu capsule, Jinhua Qinggan granules, Toujie Quwen granules and tailored
- granules, Shufeng Jiedu capsule, Jinhua Qinggan granules, Toujie Quwen granules and tailored
 herbal decoctions) as adjunctive treatments for Covid-19, with 32 ongoing trials identified [9].
- 169 Adjunctive treatment with Echinacea and Ginger tablets increased resolution of coughing, muscle
- 170 pain and breathlessness, in one RCT of 100 outpatients [10].
 - 171 Thailand has approved the use of *A. paniculata* for a pilot clinical study in the treatment of mild
 - 172 Covid-19 infections [11] whilst Iran has approved the use of four traditional herbal products [12].
 - 173 The World Health Organisation published a statement supporting research into traditional medicines
- for Covid-19 in Africa [13]. Medicinal plants have received comparably less research attention in the
- 175 UK's medical sector. A March 2020 statement from NIMH encouraged practitioners to distance
- themselves from any spurious claims of 'cures' for Covid-19 [14]. Only one herbal medicine trial is
- 177 running in the UK so far, of Sambucol Black Elderberry liquid [15]. With the relatively widespread
- use of herbal medicines sourced over the counter, there clearly was an increase in usage, but there
- is no information on this available.
- The move to remote working reflects practitioners following professional body guidance, and is likely
 to be easier for herbal practitioners than for therapies requiring contact (e.g. massage). Remote
- 182 working was also observed in Norwegian CAM practitioners [7]. It has benefits such as flexibility and
- 183 greater client reach, but may enhance digital exclusion and limits the possibility of clinical
- 184 examination.
- 185 Whilst this survey is the first to document UK herbal practitioners' response to the Covid-19
- 186 pandemic, it is limited by the low response rate. Sample demographics are consistent with that of
- 187 other WHM practitioner surveys [4] but the data relating to TCM or Ayurvedic practice are too
- 188 limited to allow conclusions. We did not ask about the impact of Covid-19 on the medicinal plant
- 189 supply chain. Although this issue was not spontaneously raised by respondents, it may have affected
- 190 the choice of medicinal plants to use. As the survey was designed at the start of the pandemic, we
- 191 were unable to collect data on supporting people with long Covid. It is now estimated 1.46% of those

- 192 who have had Covid are experiencing long Covid in the UK, defined as symptoms persisting for more
- 193 than four weeks after suspected Covid-19 infection that cannot be explained by another cause, most
- 194 commonly fatigue, shortness of breath, muscle ache and loss of smell [16]. Although there is little
- 195 evidence for herbal medicines for long Covid at present, potentially similar conditions such as
- 196 chronic fatigue show some evidence for fatigue improvement through herbal medicines [17], with
- 197 established approaches to treatment [18]. This may be a promising avenue for further research.

198 5. Conclusion

199 The Covid-19 pandemic has substantially affected UK herbal medicine practice. There is a need for

200 herbal practitioners to build on current collaborations, research and experience to develop

- 201 consistent approaches to support people with mild-moderate symptoms of Covid-19. The survey
- highlights the need for a more systematic exploration of herbal medicine practice during and as a
- 203 consequence of the pandemic.
- 204

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- 207

208 **Conflict of interest statement**

- 209 RF is a Western herbal medicine practitioner.
- 210

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