

# Alternative medicine and general practitioners

## *Opinions and behaviour*

MARJA J. VERHOEF, PHD  
LLOYD R. SUTHERLAND, MD, FRCPC

**OBJECTIVE** To describe general practitioners' opinions and behaviour regarding alternative medicine.

**DESIGN** Cross-sectional survey of a random sample of Ontario and Alberta general practitioners.

**SETTING** General practices in Ontario and Alberta.

**PARTICIPANTS** A questionnaire was mailed to 400 general practitioners. Of the 384 eligible physicians, 200 completed the questionnaire.

**MAIN OUTCOME MEASURES** Reported beliefs and practices concerning alternative medicine.

**RESULTS** Acupuncture, chiropractic, and hypnosis were considered most useful and reflexology, naturopathy, and homeopathy least useful. Results showed 56% of general practitioners believed that alternative medicine has ideas and methods from which conventional medicine could benefit, 54% referred to alternative practitioners, and 16% practised some form of alternative medicine. Province of practice, place of graduation, training in alternative approaches, number of alternative approaches perceived useful, and attitude toward alternative medicine were clearly related to referring to alternative practitioners. Sex, age, type of practice, training in alternative medicine, referring to alternative practitioners, number of alternative approaches perceived useful, and attitude toward alternative medicine were related to practising alternative medicine.

**CONCLUSION** Although acceptance and integration of alternative medicine extend only to certain approaches, alternative medicine cannot be discounted in general practice. A study encompassing all Canadian provinces could help in planning medical education and developing policies to guide physician behaviour.

**OBJECTIF** Décrire les opinions et le comportement des omnipraticiens concernant les médecines alternatives.

**CONCEPTION** Enquête transversale auprès d'un échantillon randomisé d'omnipraticiens de l'Ontario et de l'Alberta.

**CONTEXTE** Pratiques générales de l'Ontario et de l'Alberta.

**PARTICIPANTS** Questionnaire postal envoyé à 400 omnipraticiens. Parmi les 384 médecins admissibles, 200 ont complété le questionnaire.

**PRINCIPALES MESURES DES RÉSULTATS** Croyances et pratiques rapportées concernant les médecines alternatives.

**RÉSULTATS** L'acupuncture, la chiropraxie et l'hypnose ont été jugées très utiles alors que la réflexologie, la naturopathie et l'homéopathie furent considérées les moins utiles. Les résultats montrent que 56% des omnipraticiens sont d'avis que les médecines alternatives présentent des idées et des méthodes dont la médecine traditionnelle peut tirer avantage, que 54% ont déjà consulté des praticiens des médecines alternatives et que 16% appliquaient une certaine forme de médecine alternative. Il existe une corrélation claire entre le fait de consulter les praticiens des médecines alternatives et la province d'exercice, l'endroit de l'obtention du diplôme, la formation dans le domaine des approches alternatives, le nombre d'approches alternatives considérées utiles et les attitudes face à la médecine alternative. On a également établi une corrélation entre le fait de pratiquer une médecine alternative et le sexe, l'âge, le type de pratique, la formation dans les médecines alternatives, les consultations aux praticiens alternatifs, le nombre d'approches alternatives considérées utiles et l'attitude face à la médecine alternative.

**CONCLUSIONS** Même si l'acceptation et l'intégration des médecines alternatives se limitent à certaines approches, l'omnipraticien doit tenir compte des médecines alternatives. Une étude pancanadienne permettrait de mieux planifier la formation médicale et d'élaborer des politiques afin de guider le comportement du médecin.

**Dr Verhoef** is an Assistant Professor in the Department of Community Health Sciences in the Faculty of Medicine at the University of Calgary.

**Dr Sutherland** is Professor and Head of the Division of Gastroenterology in the Faculty of Medicine at the University of Calgary.

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ALTERNATIVE MEDICINE IS DIFFICULT to define. No widely accepted term covers the practices grouped under the rubric of alternative, unconventional, unorthodox, or complementary medicine. In general, alternative medicine can be described as medical practices (eg, naturopathy, herbal medicine, and chiropractic) that do not conform to the standards of the medical community, that are not taught widely at North American medical schools, and that are generally unavailable in North American hospitals.<sup>1</sup>

about the efficacy of alternative medicine remains.<sup>4,5</sup>

Many Canadians use alternative medicine. A 1990 survey, which used a broad definition of alternative medicine, showed that 20% of Canadians had used the services of at least one alternative practitioner during the previous 6 months.<sup>6</sup> In a study conducted in a University-based gastroenterology clinic in Calgary, we found that 27% of patients reported using alternative medicine during the previous 2 years.<sup>7</sup>

If about 20% of Canadians use alternative medicine, it is important to assess physicians' attitudes and behaviour with respect to alternative medicine. To date no study has been done in North America; information is available only for England,<sup>8-10</sup> New Zealand,<sup>11,12</sup> the Netherlands,<sup>13,14</sup> Sweden,<sup>15</sup> and Germany.<sup>16</sup> In general, studies show a high level of interest in and acceptance of alternative medicine by physicians. However, there is considerable geographic variation; therefore, results cannot be extrapolated to Canada.

Although the Canadian Medical Association has no specific guidelines on using alternative medicine and referring to alternative medical practitioners, attitudes are changing. Recently, the Alberta College of Physicians and Surgeons changed its policy on chiropractic, and physicians can now refer their patients to chiropractors. A study of physicians' opinions and behaviour regarding alternative medicine might generate data that can inform, and perhaps reform or revise (undergraduate, graduate clinical, and continuing), medical education and current policies guiding physician behaviour.

This study aimed to describe general practitioners' opinions about alternative medicine, to determine the proportion of general practitioners practising alternative medicine or referring to alternative practitioners, and to examine factors related to the last two behaviours.

**Table 1. General practitioners' attitudes toward alternative medicine**

ATTITUDE	AGREE AND STRONGLY AGREE (%)	NEUTRAL (%)	DISAGREE AND STRONGLY DISAGREE (%)
Alternative medicine is a threat to public health	21	36	43
Treatments not tested in a scientifically recognized manner should be discouraged	47	30	23
Alternative medicine is a useful supplement to regular medicine	42	33	25
Alternative medicine's results are usually due to a placebo effect	38	38	24
Alternative medicine includes ideas and methods from which conventional medicine could benefit	56	28	16
Most alternative treatments stimulate the body's natural therapeutic powers	33	43	24

Alternative medicine claims to offer a more holistic form of care than conventional medicine and, it is argued, is directed toward maintaining health, with illness regarded as a deviance from health. In contrast, conventional medicine is characterized as being preoccupied with disease and its pathogenesis and is often perceived as regarding health as a deviance from disease.<sup>2</sup> However, with the exception of chiropractic treatment,<sup>3</sup> confusion

## METHODS

We conducted a pilot study in two provinces, Ontario and Alberta, before studying physicians all across Canada. A cross-sectional survey of a random sample of 200 general practitioners in Alberta and 200 in Ontario was conducted during the spring of 1992. The samples were drawn from Southam business lists.

Data were collected by means of a mailed questionnaire. The questionnaire was pretested among Calgary physicians and, based on the results, some of the questions were modified. Two reminders were sent to physicians who did not return the questionnaire.

Alternative approaches addressed in the questionnaire were chiropractic, herbal medicine, naturopathy, homeopathy, osteopathy, faith healing, hypnosis, reflexology, and acupuncture. These approaches were included in most of the studies we reviewed and were also mentioned most frequently in our study of patients at the gastroenterology clinic.<sup>7</sup> Sociodemographic variables included age, sex, type and site of practice, university affiliation, and year and country of graduation.

General attitudes toward alternative medicine were assessed using a six-item scale developed by Visser and Peters,<sup>13</sup> which had a high internal consistency (Cronbach's  $\alpha = 0.86$ ) and was found to be highly predictive of physician behaviour with respect to alternative medicine. The questionnaire also assessed perceived knowledge and usefulness of alternative approaches, previous training in alternative medicine, referring to alternative practitioners, and practising alternative approaches. These variables were measured in a straightforward way, similar to other studies of physician attitudes toward alternative medicine.<sup>9,11,12</sup>

Data were analyzed using the statistical software package SPSS<sup>X</sup>.<sup>17</sup> Relationships between variables were evaluated by  $\chi^2$  test or *t*-test, depending on the level of measurement. An

$\alpha$  criterion of 0.05 was used. The study was approved by the University of Calgary's Conjoint Medical Ethics Committee.

## RESULTS

Of the 400 general practitioners contacted, 16 (8 in each province) were excluded from the sample because they had moved, were out of the country, did not practise, or were retired. Although retired physicians were excluded from the sampling frame, some retired or semiretired physicians continue to register as practising physicians. Of the remaining 192 physicians in each province, 118 (62%) responded in Alberta, and 82 (43%) in Ontario. This difference is significant ( $P < .001$ ).

Table 2. General practitioners' knowledge and opinion of various alternative approaches

APPROACH	CLAIM TO KNOW A LOT OR A CONSIDERABLE AMOUNT ABOUT IT (%)	PERCEIVED AS USEFUL OR VERY USEFUL (%)
Chiropractic	28	59
Acupuncture	24	71
Hypnosis	23	55
Faith healing	9	16
Osteopathy	9	34
Homeopathy	7	12
Herbal medicine	6	17
Reflexology	6	7
Naturopathy	4	9

A telephone follow-up of 28 nonresponding physicians had a low contact rate (29%). Physicians indicated that they were too busy, not interested, or hesitant to respond because they did not know the investigator's credentials. We followed up by mail with 40 nonresponders. Of these, 17 returned the questionnaire (12/20 in Alberta, 5/20 in Ontario). The nonresponders were similar to physicians who completed the questionnaire: 18% were female (compared with 24% of responders),

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91% thought that at least one alternative approach was useful (versus 86%), and the average age was 48 (versus 44).

Sex and age distributions for Ontario and Alberta physicians were similar to population distributions (which were obtained from Southam business lists). Most physicians (69%) practised in urban settings and 63% graduated from Canadian medical

39% indicated that all could be harmful if used inappropriately, 25% indicated that faith healing could be harmful, and 14% considered naturopathy harmful.

Forty general practitioners (20%) had training in alternative medicine, mostly hypnosis and acupuncture. The type of training varied widely and consisted of lectures or seminars provided by societies or foundations of specific alternative approaches, seminars for practising physicians, university lectures, medical school electives, weekend courses, and so on. Of those with no training, 50% indicated that they wanted training, mostly in hypnosis or acupuncture. More Ontario physicians wanted training than Alberta physicians (63% versus 43%,  $P=.01$ ).

A little more than half of the physicians (54%) indicated they refer patients to alternative practitioners. Physicians referred most to chiropractors (83%), acupuncturists (42%), or hypnotists (17%). The main reasons for referring patients were lack of response to conventional treatment (51%), patient preference or request (21%), and belief in effectiveness for certain disorders (21%). Physicians referred to chiropractors for back pain, musculoskeletal indications in general, neck problems, chronic pain, and a variety of other indications; to acupuncturists for chronic pain, musculoskeletal indications, headaches, and a variety of other indications; and to hypnotists for smoking cessation and anxiety.

Only 16% of general practitioners indicated that they practised alternative medicine. The most common approaches were again hypnosis and acupuncture, and they were used for a variety of conditions.

We investigated whether sociodemographic variables, training, attitude toward alternative medicine, number of alternative approaches known or well known, and number of approaches considered useful or very useful, were significantly related to referring to alternative practitioners and practising alternative medicine. Table 3 presents

**Table 3. Respondent characteristics related to whether general practitioners refer to practitioners of alternative medicine**

VARIABLE	REFER (N=107)	DO NOT REFER (N=93)	P VALUE
Province of practice (%)			.042
• Ontario	65	35	
• Alberta	44	56	
Place of graduation (%)			.015
• Canada	60	40	
• United Kingdom	49	51	
• Other	34	66	
Trained in alternative medicine (%)			.017
• Yes	70	30	
• No	49	51	
No. of alternative approaches perceived to be useful (mean ± SD)	3.0 ± 1.9	1.6 ± 1.3	<.001
Score on attitude scale* (mean ± SD)	16.0 ± 4.3	19.3 ± 3.8	<.001

\*Attitude scale runs from 6 (positive) to 30 (negative).

schools; 76% were men. Half of the physicians graduated in 1975 or later; 41% were in solo practice; and 83% were affiliated with hospitals.

Table 1 shows attitudes of general practitioners toward alternative medicine. Chiropractic, hypnosis, and acupuncture were the alternative approaches best known and considered most useful (Table 2). Reflexology, naturopathy, and homeopathy were considered least useful. In both Alberta and Ontario, 67% indicated that one or more of the approaches listed in Table 2 could be harmful. Of these,

the variables related to referring to practitioners of alternative medicine.

Ontario physicians were more likely to refer to chiropractors, hypnotists, and masseurs, and less likely to refer to acupuncturists ( $P < .05$ ); more likely to refer to alternative practitioners due to patient preference ( $P < .05$ ) and less likely to refer due to lack of response to conventional treatment ( $P < .05$ ) than Alberta physicians. *Table 4* presents the variables related to practising alternative medicine.

## DISCUSSION

Canadian general practitioners knew most about chiropractic, acupuncture, and hypnosis. English doctors knew

most about spinal manipulation, hypnosis, and spiritual healing<sup>10</sup>; New Zealand doctors about acupuncture, chiropractic, and spiritual healing<sup>11</sup>; and Netherlands doctors about homeopathy, chiropractic, and acupuncture.<sup>13</sup> Proportionately more Canadian physicians indicated they knew a considerable amount about alternative approaches than did doctors in other countries. We did not, however, test their degree of knowledge.

The approaches that Canadian general practitioners knew best were, not surprisingly, also considered to be most useful. The proportion of physicians finding these approaches useful was lower than in other countries,<sup>9,11,13</sup> but, except for homeopathy in the Netherlands,<sup>13</sup> vegetarian diets in

*Table 4. Respondent characteristics related to whether general practitioners practise alternative medicine*

VARIABLE	PRACTISE (N = 31)	DO NOT PRACTISE (N = 169)	P VALUE
Sex (%)			.042
• Male	18	82	
• Female	6	94	
Age (mean $\pm$ SD)	42.6 $\pm$ 9.4	48.8 $\pm$ 11.0	.002
Type of practice (%)			<.001
• Solo	27	73	
• Group	8	92	
Trained in alternative medicine (%)			<.001
• Yes	60	40	
• No	4	96	
Refer to alternative practitioners (%)			.033
• Yes	20	80	
• No	10	90	
No. of alternative approaches about which a lot is known (mean $\pm$ SD)	2.5 $\pm$ 2.0	0.9 $\pm$ 1.5	<.001
No. of alternative approaches perceived to be useful (mean $\pm$ SD)	3.6 $\pm$ 2.1	2.1 $\pm$ 1.6	.001
Score on attitude scale* (mean $\pm$ SD)	13.8 $\pm$ 3.8	18.2 $\pm$ 4.0	<.001

\* Attitude scale runs from 6 (positive) to 30 (negative).

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Sweden,<sup>15</sup> and herbal medicine and neural therapy in Germany,<sup>16</sup> doctors mostly agree on the approaches that are most useful.

The percentage of physicians referring to alternative practitioners (54%) is similar to England (58%),<sup>10</sup> but considerably different from the Netherlands (90%),<sup>13</sup> and New Zealand (69%<sup>12</sup> and 77%<sup>11</sup>). Canadian general practitioners practise alternative medicine about as often as British physicians, but less often than physicians in New Zealand, Sweden, the Netherlands, and Germany.

Previous studies addressed the relationship between age and sex and practising alternative medicine. Unlike the present study, these studies found no relationship between age and sex and practising alternative medicine. Anderson and Anderson<sup>10</sup> found, as we did, that physicians in solo practice practised alternative medicine more than those in groups, clinics, or partnerships. They suggest that this indicates that practitioners who practise by themselves are more individualistic and more likely to try unorthodox methods of treatment. However, it could also be that they find it easier to practise alternative medicine because they are subjected less to peer review.

Although, compared with the rest of the world, Canadian general practitioners do not seem to be in the forefront of alternative medicine, our study documents considerable acceptance of alternative medicine. This is somewhat surprising, given the different assumptions of health and disease underlying alternative medicine and the relatively few clinical trials that have been conducted to measure the efficacy of alternative treatments. Acceptance, however, does not extend to all alternative approaches but is selective, restricted to chiropractic, acupuncture, and hypnosis.

The results of this study should be considered cautiously given the relatively low response rate, which raises the possibility of bias. However,

follow-up of nonresponders as well as comparison with the age and sex distribution of the population suggest that bias is minimal. The low response rate is not unique for this study. Berk<sup>18</sup> has commented that physicians' reluctance to participate in studies is a growing problem. The response rate to the American Medical Association's Periodic Survey of Physicians has dropped to 49%.<sup>18</sup> In addition, due to the small sample size, the power of the study to detect significant differences was low for some of the variables.

Our definition of alternative medicine was intentionally broad, so that a range of information could be obtained. However, these approaches by no means form a homogeneous group of treatments. Physicians' perceptions of these approaches might vary considerably from embracing a practice to finding it very harmful.

History has shown that the definition of an approach as alternative is not cast in stone and can change over time. An example is *die Kur* in Germany, an institutional bathing activity, that is now part of conventional medicine and is also used for health promotion.<sup>19</sup>

Given the number of general practitioners who refer to alternative practitioners, who practise alternative medicine, and who want training in alternative medicine, it is remarkable that current (undergraduate, graduate clinical, and continuing) medical education pays so little attention to alternative approaches.

The differences between Canadian general practitioners and general practitioners in other countries, as well as between general practitioners in Alberta and those in Ontario, support the hypothesis that regional or geographic differences in general practitioners' opinions and practices occur. Therefore, it might not be possible to generalize the results of this study to other Canadian provinces. If this pilot study were extended to include all Canadian provinces, it

could provide information for medical education planning and for developing policies to guide physician behaviour. ■

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**Correspondence to:** Dr M.J. Verhoef, Department of Community Health Sciences, Faculty of Medicine, University of Calgary, 3330 Hospital Dr NW, Calgary, AB T2N 4N1

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