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The Integration of Complementary Therapies in Australian General Practice: Results of a National Survey

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ABSTRACT

Methods: Australian general practitioners' (GPs) attitudes toward and use of a range of complementary therapies (CTs) were determined through a self-administered postal survey sent to a random sample of 2000 Australian GPs. The survey canvassed GPs' opinions as to the harmfulness and effectiveness of CTs; current levels of training and interest in further training; personal use of, and use in practice of, CTs; referrals to CT; practitioners; appropriateness for GPs to practice and for government regulation; perceived patient demand and the need for undergraduate education.

Results: The response rate was 33.2%. Based on GPs' responses, complementary therapies could be classified into: nonmedicinal and nonmanipulative therapies, such as acupuncture, massage, meditation, yoga, and hypnosis, that were seen to be highly effective and safe; medicinal and manipulative therapies, including chiropractic, Chinese herbal medicine, osteopathy, herbal medicine, vitamin and mineral therapy, naturopathy, and homeopathy, which more GPs considered potentially harmful than potentially effective; and esoteric therapies, such as spiritual healing, aromatherapy, and reflexology, which were seen to be relatively safe yet also relatively ineffective. The risks of CTs were seen to mainly arise from incorrect, inadequate, or delayed diagnoses and interactions between complementary medications and pharmaceuticals, rather than the specific risks of the therapies themselves.

Conclusions: Nonmedicinal therapies along with chiropractic are widely accepted in Australia and can be considered mainstream. GPs are open to training in complementary therapies, and better communication between patients and GPs about use of CTs is required to minimize the risk of adverse events. There is also a need to prioritize and provide funding for further research into the potential adverse events from these therapies and other therapies currently lacking an evidence base.

INTRODUCTION

The demand for complementary therapies has increased dramatically over the past 20 years.[1–5] In the United States, the National Center for Complementary and Alternative Medicine (NCCAM) reported in 2004 that more than one third of U.S. adults use some form of complementary therapy,[6] while in the United Kingdom it is estimated that 46.6% of the population have used a complementary therapy.[5] In Australia in 2000, it was estimated that 1 in every 2 people had used at least one nonmedically prescribed alternative medicine and 1 in 5 had attended a nonmedically trained therapist.[7] Australians consume as much nonconventional medicine and vitamin and mineral supplements as prescription drugs,[8] and public spending on complementary medicine is estimated to be almost four times the out-of-pocket spending on pharmaceuticals.[7]

In Australia, GPs' attitudes toward many complementary therapies has led to the suggestion that therapies such as acupuncture, hypnosis, meditation, and chiropractic can be

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considered mainstream in general practice.[9–11] High acceptance of complementary therapies by GPs has been previously reported in the United Kingdom with most GPs referring their patients to some form of complementary therapy.[12] In 2002, the Australian Medical Association (AMA) released a formal position statement on complementary medicine that was subsequently endorsed by the Royal Australian College of General Practitioners (RACGP) recognizing "that evidence-based aspects of Complementary Medicine are part of the repertoire of patient care and may have a role in mainstream medical practice."[13] More recently, the RACGP established a joint working party with the Australasian Integrative Medicine Association (AIMA) to review the training needs of GPs and provide an outline of how complementary therapies can be incorporated into high-quality clinical practice.

This is the first national Australian study aimed to assess GPs' attitudes to complementary therapies and whether their attitudes had changed appreciably since the 1990s.

MATERIALS AND METHODS

Aims

The aim of this study was to investigate Australian general practitioners' attitudes toward complementary therapies and their responses to the increase in community demand for these therapies.

Survey design

A national postal survey was conducted between May and August 2004. An 11-page A5 booklet was designed to allow direct comparison with the data from the 1997 survey of Victorian GPs,[14] although with an expanded range of questions and therapies. Opinions were canvassed about the following therapies: acupuncture; aromatherapy; Chinese herbal medicine; chiropractic; herbal medicine; homeopathy; hypnosis; massage; meditation; naturopathy; osteopathy; reflexology; spiritual healing (e.g., Reiki); vitamin and mineral therapy; and yoga.

Sample

The Health Insurance Commission (HIC), which administers the Australian government's national health insurance scheme, Medicare, provided a random sample of 2000 Australian GPs who had each seen at least 1500 patients in the previous year. The representative nature of the sample was tested using the "General Practice Workforce 1999" data from the Australian Commonwealth Department of Health and Aged Care.[15] Rurality was determined using the "Rural, Remote, and Metropolitan Areas" (RRMA) classification scheme.[16] Exclusion criteria included doctors who had left their clinic without leaving a forwarding address, taken leave, retired, died, or were otherwise uncontactable.

Analysis

The statistical analysis was performed using SPSS (SPSS Inc. 2004 Version, Chicago, IL) data analysis software. Responses were analyzed to search for groupings of common levels of use or acceptance. Qualitative data from handwritten comments were classified by themes.

RESULTS

Comparison of the sample with the GP population (Table 1)

Table 1 compares characteristics of the surveyed sample with the entire GP population. The random sample was slightly under-representative of female ($\chi^2 = 4.67$; $p =$

Table 1. Comparison of the GP Population with the Sample, Respondents, and Nonrespondents

	GP population (n = *18,787*)	*Sample of GPs* (n = *1916*)	*Respondents* (n = *636*)	*Non respondents* (n = *1280*)
Gender				
Male	66%	69%	64%	71%
Female	34%	31%	36%	29%
Age distribution				
<34	12%	7%	7%	7%
35–44	32%	26%	26%	26%
45–54	30%	36%	37%	35%
55–64	15%	23%	23%	24%
>65	11%	8%	7%	8%
Average age	49.3 years	49.5 years	49.3 years	49.7 years
Rurality				
1 Capital city	68%	68%	67%	69%
2 Other metro	7%	7%	6%	8%
3 Rural/remote	25%	25%	27%	23%

0.031) and younger doctors (25–44 years) ($\chi^2 = 6776$; $p < 0.01$). After exclusions, we received 636 completed surveys from 1916 eligible doctors, a response rate of 33.2%. The 636 respondents represented approximately 3.4% of the Australian GP population.[16] Females were 5% more likely to respond than male doctors ($\chi^2 = 5.18$; $p = 0.032$). Respondents had an average of 121 patient consultations per week.

Patient demand for complementary therapies

Doctors were asked about the demand from their patients for complementary therapies. More than half (54%) felt that demand was increasing, 32% found no change, and only 3% saw a decrease; 11% responded "don't know." When asked to indicate what percentage of their patients had enquired about complementary therapies in the previous month, more than one third of respondents (38%) reported that less than 5% of their patients had asked, another 31% reported 5%–10%, while 19% of respondents reported 11%–30%, 7% reported 31%–50%, and only 6% of respondents reported that more than 50% of their patients had asked in the last month.

Potential effectiveness/harmfulness of complementary therapies (Table 2)

Table 2 depicts respondents' opinions as to the potential effectiveness and potential harmfulness of complementary therapies. Space was also provided for additional comments. The most common theme in the 134 comments to this question was that the potential "effectiveness" of a complementary therapy depended on the indication for that therapy. Another common theme was that effectiveness could be a factor of the placebo effect and the therapeutic (therapist/patient) relationship rather than the efficacy of the therapy itself and many expressed concern about those complementary therapies lacking in clinical evidence. Comments indicated that many respondents felt that harmfulness of CTs more often related to incorrect, inadequate, or delayed diagnoses than the specific risks of the therapies themselves and that CTs often involved considerable personal or financial cost to the patient. Some commented that complementary therapies caused no harm in the hands of appropriately trained therapists.

By representing respondents' perceived effectiveness and potential harm of the different therapies graphically, it was clear that complementary therapies can be classified into three distinct groupings (see Fig. 1).

Group 1. High effectiveness/low harm. Therapies in this grouping included the nonmedicinal therapies acupuncture, massage, meditation, yoga, and hypnosis. These therapies were characterized by two thirds or more of respondents believing they were moderately or highly effective, with more than 80% considering them safe. Respondents were more likely to have undertaken training in these therapies, more likely to actively encourage or refer patients to these therapies, and were also more likely to use them personally and either use or consider using them in practice.

Group 2. Moderate effectiveness/moderate harm. Therapies in this grouping included manipulative and medicinal therapies, such as chiropractic, Chinese herbal medicine, osteopa-

Table 2. Opinions as to the Potential Effectiveness (Average n = 544) and Potential Harmfulness (Average n = 534) of Complementary Therapies (Percent of Respondents)

	Potential effectiveness		*Potential harmfulness*	
	Not or seldom	*Moderately or highly*	*Not or seldom*	*Occasionally or frequently*
Acupuncture	16%	84%	86%	14%
Aromatherapy	85%	15%	94%	6%
Chinese herbal medicine	50%	50%	34%	66%
Chiropractic	28%	72%	25%	75%
Herbal medicine	64%	36%	37%	63%
Homoeopathy	82%	18%	69%	31%
Hypnosis	35%	65%	81%	19%
Massage	16%	84%	91%	9%
Meditation	18%	82%	97%	3%
Naturopathy	71%	29%	60%	40%
Osteopathy	56%	44%	57%	43%
Reflexology	90%	10%	85%	15%
Spiritual healing (e.g., Reiki)	81%	19%	85%	15%
Vitamin and mineral therapy	70%	30%	64%	36%
Yoga	24%	76%	92%	8%

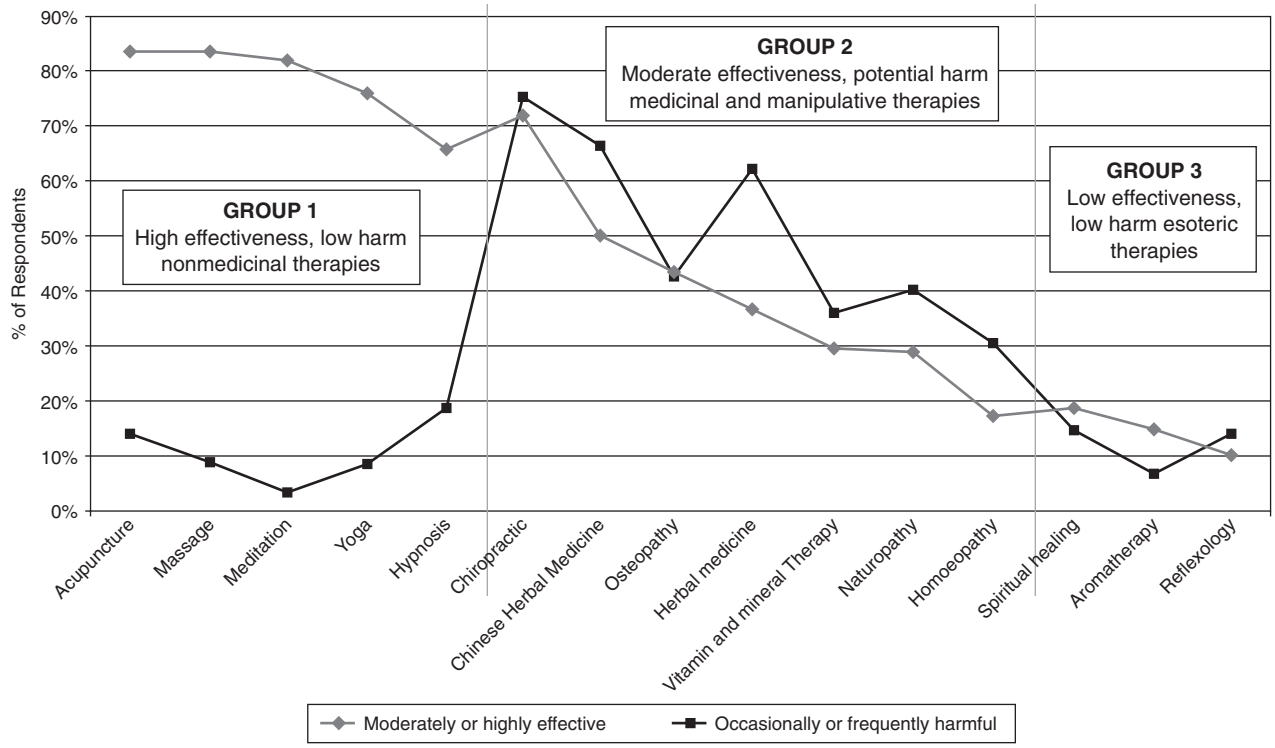

FIG. 1. Potential effectiveness and potential harmfulness of complementary therapies illustrating grouping of therapies.

thy, herbal medicine, vitamin and mineral therapy, naturopathy, and, on the fringe of this group, homeopathy. More respondents thought that these therapies were potentially harmful than potentially effective. It is interesting to note that while respondents' views of vitamin and mineral therapy and naturopathy were similar, more doctors would consider receiving vitamin and mineral therapy than naturopathy.

Group 3. Low effectiveness/low harm. This group included spiritual healing, aromatherapy, and reflexology. These therapies were seen to be relatively safe yet also relatively ineffective, with less than 20% of respondents finding them either potentially harmful or potentially effective. It is interesting to note that while spiritual healing, aromatherapy, and reflexology were seen to be the three least accepted therapies in terms of perceived efficacy, referrals, and encouragement of patients suggestion to attend, each of these three therapies may be included as part of massage therapy, which was seen as one of the most accepted therapies.

Adverse events from complementary therapies (Table 3)

General practitioners were asked how many patients they had seen in the previous 4 weeks who had experienced:

1. An adverse event as a result of a complementary therapy
2. An interaction between a complementary and medical therapy
3. Withdrawal of a medical therapy by a complementary therapist
4. A delay in diagnosis or treatment owing to inappropriate use of a complementary therapy

TABLE 3. ADVERSE EVENTS (INCLUDING INTERACTIONS, INAPPROPRIATE WITHDRAWALS, DELAYS IN DIAGNOSIS AND INAPPROPRIATE TREATMENT) RELATING TO COMPLEMENTARY THERAPIES SEEN IN A 4-WEEK PERIOD BY RESPONDENTS (AVERAGE N = 402) (PERCENT OF ALL EVENTS)

	Percent of all events (1548 events)		
	Mild	*Serious*	*Total*
Acupuncture	3.2%	0.4%	3.6%
Aromatherapy	1.3%	1.0%	2.3%
Chinese herbal medicine	5.6%	1.8%	7.4%
Chiropractic	13.1%	4.7%	17.8%
Herbal medicine	11.5%	4.1%	15.6%
Homoeopathy	4.5%	1.4%	5.9%
Hypnosis	1.6%	0.1%	1.7%
Massage	6.3%	0.6%	6.9%
Meditation	2.6%	0.4%	3.0%
Naturopathy	9.6%	3.6%	13.2%
Osteopathy	2.4%	0.7%	3.1%
Reflexology	1.6%	0.5%	2.1%
Spiritual healing (e.g., Reiki)	2.1%	0.4%	2.5%
Vitamin and mineral therapy	12.5%	0.7%	13.2%
Yoga	1.4%	0.3%	1.7%

Table 3 depicts the responses. A total of 402 doctors answered this question, generating 1548 adverse events from all four listed categories above; however, many doctors commented that it was difficult to recall actual patient numbers. As respondents reported an average of 121 consultations per week, this represents approximately one complementary therapy adverse event per week (1 in 125 consultations).

Training and interest in further training (Table 4)

Table 4 depicts the number of respondents with current training or interest in pursuing further training in complementary therapies. GPs were also asked to rate the importance of education on complementary therapies in the core undergraduate medical curriculum on a sliding scale from 1 (not important) to 5 (extremely important). The majority of respondents (71%) selected "3" or "4" resulting in an average score of 3.31.

Personal use of, and use in practice of, complementary therapies (Table 5)

Table 5 depicts the number of respondents who had personally received or used complementary therapies in practice in the previous 12 months or whether they would consider doing so. Forty percent (40%) of respondents reported personally using vitamins, minerals, herbal, or other supplements in the previous 4 weeks. These supplements were, in order of frequency, multivitamins, vitamins C, B, E, glucosamine, omega 3/fish oil, zinc, folic acid, iron, antioxidants, selenium, garlic (*Allium sativum*) oil, and evening primrose (*Oenothera biennis*) oil. Doctors were also asked whether they use any complementary medicine technologies in their practices (e.g., electroacupuncture stimulators, lasers). The majority of respondents (369 of 465; 79%) did not use such devices; however, 21% reported using various therapies and complementary technologies in their practices, most commonly acupuncture or electroacupuncture, laser, and ultrasound.

When asked if they thought it was appropriate for GPs to sell or dispense complementary medicines, 66% (411 of 623) felt it was unethical to profit from the sales of supplements they prescribed; 18% thought it was appropriate, while 16% were undecided. This question provoked many respondents to comment (309 of 636) with the majority citing conflict of interest, potential for diminished clinical judgement, and loss of GP integrity as reasons for GPs not to sell or dispense complementary medicines. However, others pointed out that pharmacists and other therapists did this, so why not GPs? "At least we would know what they are taking," was a typical comment.

Referrals and responses to a patient's suggestion to use (Table 6)

Table 6 depicts the number of respondents who would actively discourage, encourage, or not be confident to discuss a patient's suggestion to use or consult a complementary therapist. Those who would remain neutral are not shown. Doctors were also asked to indicate how often they had suggested or referred a patient to a complementary therapist in the past year. Of these, 20% of respondents said they only refer to medically trained practitioners, while 75% said they refer to both medical and nonmedical practitioners.

Table 4. Previous Training (Average n = 614) and Level of Interest in Further Training (Average n = 591) in Complementary Therapies (% of Respondents)

	Previous training		*Interest in training*	
	Self-taught or intro workshop	*Certificate, diploma, or degree course*	*Intro workshop*	*Certificate, diploma, or degree course*
Acupuncture	11%	12%	18%	24%
Aromatherapy	4%	0%[a]	9%	2%
Chinese herbal medicine	3%	1%	14%	9%
Chiropractic	6%	1%	10%	5%
Herbal medicine	11%	3%	21%	11%
Homoeopathy	3%	2%	7%	4%
Hypnosis	8%	6%	22%	14%
Massage	15%	2%	25%	10%
Meditation	23%	3%	27%	16%
Naturopathy	4%	1%	13%	4%
Osteopathy	3%	1%	8%	3%
Reflexology	3%	0%	5%	1%
Spiritual healing (e.g., Reiki)	3%	0%	8%	2%
Vitamin and mineral therapy	18%	5%	18%	13%
Yoga	12%	1%	22%	11%

[a]<1%.

Table 5. Personal Use in Last 12 Months (or Would Consider Personal Use) of Complementary Therapies. Use in Practice in Last 12 Months (or Would Consider Use in Practice) of Complementary Therapies (Average n = 592) (Percent of Respondents)

	Personal use of		*Use in practice*	
	Would consider receiving	*Have received in last 12 months*	*Would consider practicing*	*Have practiced in last 12 months*
Acupuncture	56%	12%	31%	18%
Aromatherapy	15%	3%	3%	1%
Chinese herbal medicine	23%	4%	7%	1%
Chiropractic	27%	7%	5%	1%
Herbal medicine	26%	5%	11%	4%
Homoeopathy	12%	3%	4%	1%
Hypnosis	45%	3%	16%	6%
Massage	55%	26%	29%	11%
Meditation	56%	11%	22%	18%
Naturopathy	16%	3%	4%	2%
Osteopathy	20%	3%	3%	1%
Reflexology	11%	2%	2%	0%[a]
Spiritual healing (e.g., Reiki)	15%	3%	2%	1%
Vitamin and mineral therapy	27%	13%	10%	9%
Yoga	52%	10%	18%	8%

[a]<1%.

Risks and regulation of complementary therapies (Table 7)

Table 7 depicts doctors' responses to whether they felt therapies were appropriate for GPs to practice (if trained) and, if so, whether they should attract government health insurance rebates. The issue of governmental regulation of nonmedically trained practitioners was also raised. Some doctors commented that only therapies with evidence were appropriate for GPs to practice and, therefore, for Medicare

Table 6. Response to a Patient's Suggestion to Use or Consult a Complementary Therapist ("Neutral" Responses not Shown) (Average n = 564). Frequency of GP's Suggestion or Referral to Consult a Complementary Therapist in the Previous 12 Months (Average n = 570) (Percent of Respondents)

	Response to patient's suggestion to use			*GP's referral or suggestion to use in last 12 months*	
	Not confident to discuss	*Actively discourage*	*Actively encourage*	*A few times or at least monthly*	*At least weekly or daily*
Acupuncture	5%	1%	57%	76%	7%
Aromatherapy	20%	24%	7%	8%	0%[a]
Chinese herbal medicine	18%	14%	10%	18%	1%
Chiropractic	5%	16%	23%	57%	3%
Herbal medicine	14%	17%	13%	24%	3%
Homoeopathy	17%	37%	7%	9%	1%
Hypnosis	7%	3%	43%	57%	3%
Massage	4%	2%	69%	72%	15%
Meditation	6%	2%	65%	56%	9%
Naturopathy	16%	26%	11%	20%	2%
Osteopathy	19%	21%	15%	21%	2%
Reflexology	22%	38%	4%	5%	0%[a]
Spiritual healing (e.g., Reiki)	23%	22%	7%	11%	0%[a]
Vitamin and mineral therapy	9%	18%	18%	30%	6%
Yoga	6%	3%	62%	55%	7%

[a]<1%.

Table 7. Appropriateness for GPs to Practice Complementary Therapies, if Trained, and Appropriateness for Medicare Rebates. Appropriateness for Government to Regulate or Register Non-Medically Trained Complementary Therapists (Average n = 579) (Percent of Respondents)

	Medical CT practitioners		*Non-medical CT practitioners*	
	Appropriate for GP to practice therapy, if trained	*Should be eligible for Medicare rebates*	*Gov't should regulate*	*Gov't should not regulate*
Acupuncture	93%	91%	87%	6%
Aromatherapy	18%	17%	40%	34%
Chinese herbal medicine	49%	49%	80%	7%
Chiropractic	47%	58%	88%	4%
Herbal medicine	51%	49%	77%	8%
Homoeopathy	25%	32%	66%	13%
Hypnosis	87%	85%	79%	9%
Massage	49%	48%	49%	33%
Meditation	64%	57%	37%	44%
Naturopathy	32%	39%	73%	11%
Osteopathy	29%	43%	72%	10%
Reflexology	14%	18%	46%	28%
Spiritual healing (e.g., Reiki)	19%	19%	39%	36%
Vitamin and mineral therapy	53%	54%	66%	18%
Yoga	43%	34%	33%	49%

rebates. Many GPs commented that therapies that do not involve the use of medicines, such as yoga, meditation, and spiritual healing, did not require regulation, while others that had the potential to delay diagnosis or interact with conventional medication, such as herbal medicine or naturopathy, should be regulated. Some doctors suggested self-regulation (for example, industry accreditation) would be more appropriate for some therapies than government regulation. Many GPs in their comments also identified interactions between complementary medicines and pharmaceuticals as a major area of concern.

DISCUSSION

Strengths and limitations of this study

This study is the largest and only national Australian survey of GPs' attitudes to complementary therapies conducted to date. While the survey canvassed GPs' attitudes and opinions, which may be assumed to reflect their real-life experience, the effect of self-report, recall, and response bias is unknown. It is also not possible to determine whether the attitudes of respondents were significantly different to non-respondents.

The survey did not compare GPs' attitudes to complementary therapies with their attitudes about conventional Western medicine approaches. We also did not provide a definition of each therapy so doctors may have relied on different interpretations of the terms used, especially with therapies such as vitamin and mineral therapy, naturopathy, and spiritual healing.

The response rate of 33.2% was low compared with the response rate of 64% in the 1997 survey of Victorian GPs, which employed the same methodology. It may be that pressures on GPs' time and financial resources have increased, as evidenced by many handwritten comments from doctors indicating that they were "oversurveyed" and that they "do not do surveys for free." While the response rate for this study was relatively low, the results were remarkably consistent with previous studies—both in Australia and overseas—with much higher response rates, suggesting that response bias did not unduly influence the results.

Comparison with other Australian and overseas studies

Comparing the results of this study with the earlier surveys of GPs in Victoria, Perth, and Tasmania,[11,14,17] suggests that the attitudes of Australian GPs to complementary therapies have not changed appreciably in the last 7 years. Australian GPs also appear to have similar levels of interest in, training in, and referral for complementary therapies as their counterparts in other Western and European countries. In the United Kingdom in 2001, approximately 50% provided some access to complementary therapies[5] while in Canada, most family doctors had, at some time, referred patients to complementary practitioners.[18,19] In New Zealand, more than half of GPs were interested in further training in

complementary therapies[20] while in Israel, 88% wanted training and 16% had trained.[21]

Acupuncture and meditation were the therapies most commonly practiced by Australian GPs with 18% of doctors, whereas only 8% of Canadian GPs[19] and 4% of U.K. GPs[22] had training in acupuncture. By contrast, homeopathy was the therapy most practiced by British GPs,[22,23] but one of the least practiced in Australia. Estimates of overall practice of complementary therapies by GPs vary from approximately 16% in Canada[19] and the United Kingdom[22,23] to 30% in New Zealand,[19,24] 47% in Holland[25] (mainly homeopathy) and up to 85% in Germany[26] (mainly herbal medicine).

Mainstream complementary therapies

Our results suggest that Group 1 therapies, along with chiropractic, are truly complementary rather than alternative to conventional medicine and can be considered mainstream in Australian general practice, with high levels of referrals and perceived effectiveness and, with the exception of chiropractic, low levels of perceived harmfulness.

It is interesting to note that while the nonmedicinal therapies appear to be well accepted, they often have a smaller evidence base than some of the less well-accepted therapies, such as herbal medicine and vitamin and mineral therapy. The relative lack of evidence for many nonmedicinal therapies may relate to inherent difficulties in the methodology and funding of trials of nonproduct-based therapies and suggests that the choice of therapies may be based on considerations other than evidence. It further suggests that supporting research in these therapies should be a priority for governments and the medical profession, as research support for these widely used therapies is unlikely to come from industry.

Why, then, do doctors support the use of nonmedicinal complementary therapies over the use of other therapies with greater research support? Certainly, evidence is only one of the considerations when making treatment decisions and much of what happens in current-day medical practice is not evidence-based. High GP acceptance of nonmedicinal therapies may stem from the perception that these therapies are extremely safe and low in cost. GPs may also feel that they do not require as much personal knowledge about nonmedicinal therapies to safely support their use, as there is less likely to be interactions between nonmedicinal therapies and other medical interventions. The benefits of these therapies may also be seen to be related to managing stress and enhancing quality of life and thus these therapies may be useful for "complementing health," as well as treating specific illnesses.

Some complementary therapies lacking evidence base—more research needed

Our respondents expressed concern about those complementary therapies lacking in clinical evidence. It is widely accepted that there needs to be more research into complementary therapies.[27,28] While some studies have demonstrated efficacy for certain therapies, ongoing concerted effort in this area is still urgently required, especially in widely used therapies where the evidence base is weak, such as the nonmedicinal therapies.

Risks associated with complementary therapies

In the discussion paper, "Regulation of Complementary Health Practitioners," the "generic" risks of complementary therapies (other than the risks specific to certain therapies) were described as inappropriate withdrawal from medical therapy, failure to detect serious underlying disease, mental trauma, unsubstantiated claims of therapeutic benefit, sexual misconduct, and financial exploitation, while "specific" risks included interactions between complementary and traditional medicines.[29] GPs responding to the survey suggested that harmfulness was related more to the scope of practice than the specific risks of therapies themselves, with specific concern regarding nonmedical therapists displacing the GP. While the extent and consequences of delayed or missed diagnoses owing to complementary therapy use are currently unknown, this is an important area for future research.

While respondents reported approximately one adverse event per week attributable to complementary therapies, many doctors commented that it was difficult to recall actual patient numbers, so this data must be treated with caution, as it is likely to under-represent the actual number of events during this period. A further reason for caution when interpreting these figures is that some therapies are more widely used than others, which would, in turn, influence the number of adverse events seen by doctors. Nevertheless, the data provides a useful basis for comparison of the relative percentage of adverse events between therapies in the given period. Clearly, further prospective studies are needed to explore this further.

It is remarkable that more than two thirds (69%) of respondents reported that less than 10% of their patients had asked about complementary therapies in the previous month, despite the fact that approximately 50% of the Australian population are reported to use at least one nonmedically prescribed complementary medicine.[7] This concords with the finding that between 57% and 70% of patients do not disclose complementary medicine use to their doctors[3,7,26] and highlights a serious deficiency in communication about complementary medicines between doctor and patients, which may increase the risk of adverse events attributable to CT use.

Regulation for some complementary therapies

GPs were more concerned about the possibility of delayed or missed diagnoses and treatment than the risks of adverse events arising from a particular therapy, in particular, where nonmedically trained therapists may assume a primary care role, such as in chiropractic, Chinese herbal med-

icine, osteopathy, herbal medicine, vitamin and mineral therapy, naturopathy, and homeopathy, which GPs also identified as the most potentially harmful therapies. Not surprisingly, these are also the therapies that most doctors felt needed regulation. Our respondents' view is supported by the Australian Medical Association (AMA), in its position statement on complementary medicine, which stated that "it is essential that there is appropriate regulation of complementary therapists. Such regulation should ensure that nonmedical complementary therapists cannot claim expertise in medical diagnosis and treatment."[13]

CONCLUSIONS

Despite the trend of increased community use of complementary therapies, GPs' attitudes about these therapies have not changed appreciably since the 1990s. Nonmedicinal therapies, such as acupuncture, massage, meditation, yoga, hypnosis, and chiropractic, are widely accepted and can be considered mainstream in Australian general practice. GPs consider the harmfulness of complementary therapies to be related more to the scope of practice leading to incorrect, inadequate or delayed diagnoses, than the specific risks of the therapies themselves. GPs are concerned about the risks of CT use, including adverse events and interactions with pharmaceuticals, as well as the lack of evidence for many CTs, yet are open to education about these issues. These issues of training, leadership, and funding for CT research need to be taken up by leading GP and government bodies.

Communication between doctors and patients about complementary therapies is limited. This may add to the risks identified with CT use. Governments and medical educators need to instigate education campaigns for the public and health practitioners about the safe use of all medicines, the potential for interactions—even with "natural" medicines, and the importance of open communication between doctors and patients about all medicine usage.

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