

Why GPs refer patients to complementary medicine via the NHS: a qualitative exploration

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Background: The use of complementary and alternative medicine (CAM) is increasing. Access to CAM through primary care referral is common with some of these referrals occurring through existing NHS contracts. Yet currently little is understood about General Practitioners (GPs) referrals to CAM via an NHS contract. **Aim:** This exploratory qualitative study was designed to explore UK GPs experiences of referring patients to CAM under an NHS contract. **Method:** Semistructured interviews were conducted with 10 GPs in the UK, purposively sampled, who referred patients under an NHS contract to a private CAM clinic, staffed by medically qualified CAM practitioners. Qualitative methodology making use of the framework approach was used to undertake the interviews and analysis. **Findings:** The decision of GPs to refer a patient to CAM through an NHS contract is complex and based on negotiation between patient and GP but is ultimately determined by the patients' openness and motivation towards CAM. Most GPs would consider referral when there are no other therapeutic options for their patients. Various factors, including clinical evidence, increase the likelihood of referral but two overarching influences are crucial: (a) the individual GPs positive attitude to, and experience of CAM, including a trusting relationship with the CAM practitioner; and (b) the patient's attitude towards CAM. In-depth knowledge of CAM was not a vital factor for most GPs in the decision to refer. **Conclusion:** A CAM referral only took place if the patient readily agreed with this therapeutic approach, and in this respect it may differ from referrals by GPs to conventional medicinal practitioners. Such an approach, then, relies on patients having a positive view of CAM and as such could result in inequity in treatment access. Increasing knowledge about and evidence for CAM will assist GPs in making appropriate referrals in a timely manner. We propose a preliminary model that explains our findings about referrals considering patients need as well as the medical process. As data saturation may not have been achieved, further investigation is warranted to confirm or refute these suggestions.

Key words: complementary and alternative medicine; primary health care; qualitative research; referral

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Background

Use of complementary and alternative medicine (CAM) in the UK has increased over the last dec-

ade (Giveon *et al.*, 2003) and, although mainly accessed privately by patients, 10% of consultations are accessed through NHS primary care (Ong *et al.*, 2005). Forty per cent of patients would use CAM if recommended by a medical practitioner; therefore, doctors' views about CAM are important to patients (Lewis *et al.*, 2001; Lewith *et al.*, 2001). However, General Practitioners (GPs) describe their knowledge of CAM as poor or very poor

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(Wharton and Lewith, 1986) and only a quarter report feeling confident talking about CAM with patients (Perry and Dowrick, 2000). Many doctors report that their ability to refer patients to CAM is diminished by this lack of information and understanding (Thomas *et al.*, 1995; White *et al.*, 1996; Lewith *et al.*, 2001; Schmidt *et al.*, 2002).

Concerns about CAM that are commonly aired by doctors include patients stopping their conventional treatment, treating CAM as a substitute for conventional prescribed medicines, delayed or missed diagnosis, adverse effects of CAM, unqualified or overcharging practitioners, and lack of research evidence (Astin *et al.*, 1998; Zollman and Vickers, 1999; Cohen *et al.*, 2005). Despite this, up to 40% of doctors view some CAM as having a sound theoretical basis (Anderson and Anderson, 1987), and 70% believe in its safety (Schmidt *et al.*, 2002). Indeed, there is some evidence that GPs endorse CAM despite not necessarily understanding or believing in it (Perry and Dowrick, 2000; Cohen *et al.*, 2005). Estimates of GP referral rates vary depending upon the time period assessed, the therapy and the timing of the studies (Table 1), but studies show that between 59% and 72% of GPs have referred to CAM in the preceding year (Wharton and Lewith, 1986; Anderson and Anderson, 1987).

No qualitative studies have specifically assessed the reason or motivation for these referrals. Limited and non-systematic data from open sections in a small number of surveys have suggested some reasons, for example patient request or a lack of response to conventional treatment (Borkan *et al.*, 1994; Boucher and Lenz, 1998; Kaczorowski *et al.*, 2002; van Haselen *et al.*, 2004). However, these quantitative studies were focussed on the overall pattern of referral and not on understanding the processes that shape referral behaviour. We have addressed this research gap by exploring the key factors that shape GPs' referring behaviour. This initial exploratory qualitative study formed part of a service evaluation within a UK Primary Care NHS contract and only relevant data from the study is presented.

Methods

Qualitative face-to-face semistructured interviews were used. An interview topic guide, based *Primary Health Care Research & Development* 2008; 9: 205–215

on the existing literature, was used to ensure the primary question was addressed systematically in each interview. Framework analysis was used to identify key themes (Ritchie and Spencer, 1994). In order to be eligible, UK GPs needed to have referred patients to the private CAM clinic within their NHS contract during the previous two years, so their experiences were 'current'. There were no other criteria for inclusion. Invitation letters from the CAM clinic were sent to 33 GPs who had referred their NHS patients for CAM within the existing NHS contract during the previous two years. An interview was arranged with those GPs who expressed an interest and were suitable to take part.

The complementary practitioners (CPs) at the CAM clinic study site are all medically qualified. The NHS contract has been in existence for 12 years and covers referrals for irritable bowel syndrome, migraine, eczema, chronic fatigue syndrome, childhood behavioural disorders and non-specific allergy syndrome. Patients are treated for up to six sessions, which can be extended for a further six. Therapies offered are homeopathy, acupuncture and herbal, environmental and nutritional medicine. There is no specific upper limit for referral by a single GP, although a provisional limit of 500 referrals per year is set by the PCT.

Interviews took place in the GPs' surgeries (EH). Informed written consent was obtained prior to the interview. Open-ended questions addressed GP perspectives about their referral practices and emergent issues relevant to the research question were added to the topic guide and explored at subsequent interviews. See Appendix 1 for the initial guide, which also shows the two additional questions included in the final guide. Interviews were audiotaped for transcription and the use of pseudonyms protected participants' anonymity. This study was classed as a service evaluation by the relevant NHS authorities, so ethical approval was not required. The study met all of the standards that would be required by the ethics process, including independent peer review, data protection, informed written consent and researcher safety.

Data analysis

Analysis of the data used the framework approach, a structured methodology following

Table 1 Studies quantifying GP referrals to CAM

Author	Date	GPs referrals to CAM	Further information
Referrals per year			
Wharton and Lewith	1986	76% to medical CPs in last 12 months 72% to non-medical CPs	Not all formal referrals UK GPs (Avon) <i>n</i> = 145
Anderson and Anderson	1987	59% in last year	GPs with knowledge of CAM > GPs without knowledge UK (Oxfordshire) study <i>n</i> = 222
Borkan <i>et al.</i>	1994	55–77% in last year	Mean referrals per year = 3.7, American and Israeli study
Referrals per month			
Cohen <i>et al.</i>	2005	76% acupuncture, 72% massage, 8% aromatherapy, 5% reflexology	Australian study, shows GPs who refer at least monthly to each therapy
Referrals per week			
Thomas <i>et al.</i>	1995	44.8% endorse CAM use per week	10 800 referrals per week in 2001; 29 600 recommendations. UK study
Perry and Dowrick	2000	31% GPs in last week	Most to homeopathic hospital UK, Liverpool study
Referrals ever			
Schmidt <i>et al.</i>	2002	79% ever refer to chiropractic 67% acupuncture, 66% osteopathy	UK portion of UK and German study
Giveon <i>et al.</i>	2003	25% never referred 69% referred occasionally	91% have positive or neutral reaction to being consulted about CAM, Israeli study
Brems <i>et al.</i>	2006	79.15% refer regularly or often 2.61% never refer	Not all formal referrals, American study
Other			
Astin <i>et al.</i>	1998	43% acupuncture 40% chiropractic 21% massage	American study, review of 19 papers. No details about frequency of referrals
Lewith <i>et al.</i>	2001	41% hospital doctors refer regularly	Study of UK physicians Hospital doctors refer < GPs
Thomas <i>et al.</i>	2003	In 1995, 39.5% GP surgeries provide CAM access In 2001, 49.4% surgeries did	Practices referring outside surgery remained same at ~25% due to resource restrictions
Poynton <i>et al.</i>	2006	94.7% have referred to one or more CAM therapy (CAM defined by Cochrane collaboration definition). The main modalities referred to were: Acupuncture 79.3%, chiropractic 78%, osteopathy 71% and hypnosis 38%	New Zealand study Time period of referral not stated

CAM: complementary medicine; CP: complementary medical practitioner; GP: general practitioner.

five distinct but interconnecting stages (Ritchie and Spencer, 1994) and all stages were conducted by EH and SB. These steps include familiarization with the data, identification of a thematic framework, indexing of the interviews, charting and lastly mapping and interpretation. Overall, this permitted the analysts to identify key themes in a rigorous and systematic fashion, ensuring that the corpus of data was dealt with in its entirety. The initial framework was coded by EH, checked by SB and any disagreements resolved by consensus.

Illustrative quotations are used in the findings to elucidate the key themes.

Results

Participants

Of the 33 GPs referring in the previous two years, 10 agreed to be interviewed; the remaining 23 declined to participate and no reason for refusal to participate was given. Interviews, lasting about

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30 min, took place between October 2006 and January 2007. GP referral rates varied, with one GP referring three to four times a week, seven of the 10 GPs referring 3–4 times a year, and two once in the preceding two years. GP practices were mainly in small towns or villages in the UK but also in a deprived city area. The distance from the GP practices to the CAM practice varied from 22 to 73 miles. Eight interviewees were male and two were female.

The key factors that shape GPs’ referring behaviour

The key factors that shaped GPs’ referring behaviour are demonstrated in Figure 1. GPs decisions to make a referral to CAM were mediated by: (a) their personal and professional experiences of CAM, and the evidence and their knowledge of CAM; and (b) their understanding of their patients’ attitudes to CAM and their patients’ experience of conventional medicine. GPs would only initiate referral if they perceived matching between these two.

1. GPs experience, evidence and knowledge of CAM

GPs recognized that their experiences, evidence and knowledge of CAM were of central importance to the referral process (see Figure 2).

a. The experience and knowledge of the GP

GPs’ own experiences and/or knowledge of CAM, along with an awareness of the referral process, influenced their referral decisions, but a

lack of knowledge did not preclude referral. The two GPs in the sample who practiced CAM reported that their experiences as CAM practitioners acted as a powerful catalyst for referral.

I’m a member of the Faculty of Homeopathy, ... so I’m very aware of what conditions do well with homeopathy.
(Andrew: 9–12)

I think it is just that I am lucky, because I know about complementary medicine. I practise one (CAM) as well... So, I have read a lot about the others, so I know what they can do and they can’t., I know that complementary medicine might be a better option
(Andrew: 21–26)

Positive reports from patients, friends and colleagues shaped one GPs decision to visit a CAM practitioner. His positive personal experience provided a particularly strong motivation for then referring his own patients.

So I thought well golly that’s three of them, plus the school nurse’s husband is four, plus this other friend, five, six, refractory [disease], I must go and see him Um I came back from seeing him, and before I had tried the [medicine] myself I saw a patient here [with the complaint I had] I said to [patient] try a month of [medicine] and I bumped into him in the street and he came

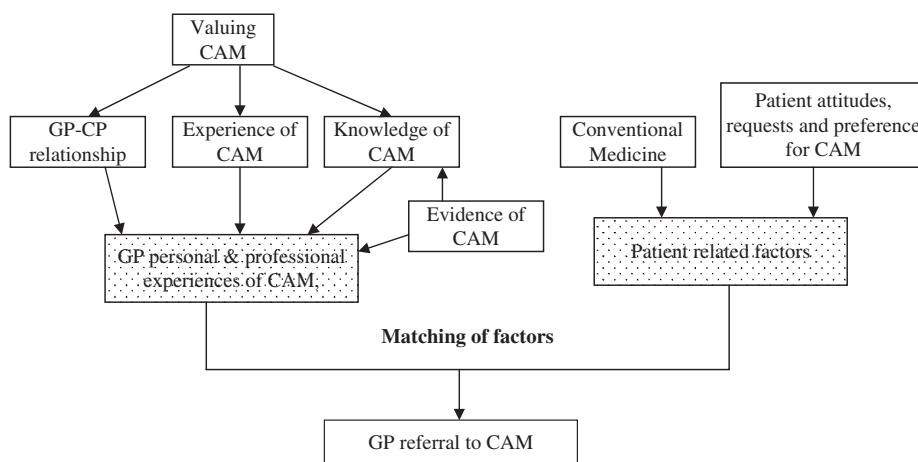


Figure 1 Thematic model of GP referrals. *Note:* the arrows do not imply causality

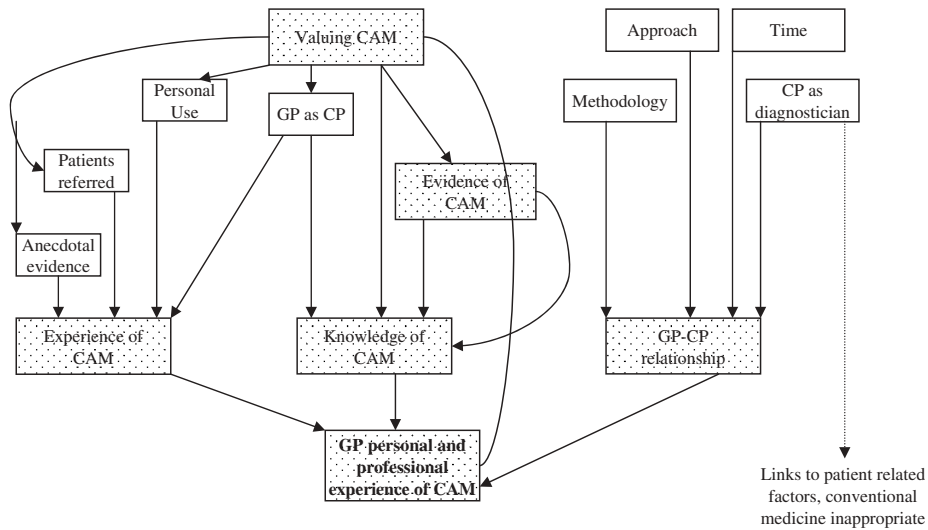


Figure 2 Model of GPs' experience, evidence and knowledge of CAM. *Note:* the arrows do not imply causality

rushing up to me and he said I'm cured. And that was fifteen, eighteen months of [disease] and I did actually suggest to this other chap that he went and saw a CAM practitioner.
(Peter: 76–122)

Positive past patient referrals were reported as shaping not just the decision to refer but the actual timing of the referral.

I have got so many cases improved by complementary medicine, so I probably refer people earlier than other GPs.
(Adrian: 54–5)

In contrast to 'early' referral, those who considered themselves to be less knowledgeable about CAM tended only to refer once conventional routes had been exhausted. They viewed CAM as a last resort.

Help, what should I do? Tried everything I can think of! Maybe we have tried one or more conventional consultants, and they haven't come up with anything... useful.
(Mary: 23–5)

Interviewees who reported the greatest epistemic uncertainty also tended to refer less than their more knowledgeable counterparts.

I wouldn't say I am particularly instructed in what conditions are suitable more than others for a complementary approach.
(Susan: 37–40)

It was clear that the awareness and understanding of evidence for CAM therapies varied across the group and this shaped their referring behaviour in a number of ways. Some GPs indicated more information would help them improve their referrals.

I don't think there is enough possibly circulated about what types of treatment can help...
(Susan: 104–6)

GPs with limited knowledge of CAM contrasted this with a relatively more enlightened and knowledgeable patient population.

I think people do look up things on websites; a lot of people are very well informed these days and sort of researched about themselves, um I am not that knowledgeable myself in complementary therapies.
(Susan: 34–40)

When GPs reported a lack of awareness of the scientific evidence base for CAM, experience and 'anecdotal' evidence formed the foundation for referral.

It is really it is a combination of anecdotal evidence and experience. You know I am not really well versed on research data for complementary medicine, you know but I accept it as a sort of part of the repertoire of what we have to offer.

(Nick: 57–61)

GP accounts indicated some discomfiture in justifying their referring behaviour because of the dearth of scientific evidence and their lack of knowledge about the available evidence.

I can't remember seeing any evidence, um, of efficacy for whatever [CAM treatment]. I am always a little bit suspicious of evidence anyway, because evidence always involves lots of other people who are not my patients... All I can say is that I can't give you chapter and verse, but I have had patients that I have sent to the centre who have come back better than when I sent them. And that is really what we are all about.

(John: 66–72)

Scientific evidence constituted a core focus for many of the interviewees. One GP indicated that while he had been equivocal about trying a new complementary medicine for a patient, his uncertainty was later quashed by a scientific study, which provided strong support for the approach.

The first time I saw him [i.e. the GP was a CAM patient] he suggested [some complementary medicine,] its interesting that he was ahead of the game, there'd been...an article in Gut since then from Cologne showing in a double blind trial ...that [this medicine]was as effective as [conventional medicine]. I was impressed.

(Peter: 78–86)

Some adopted a pragmatic stance by suggesting that the gaps in knowledge for complementary medicine are no different from the gaps in knowledge for conventional medicine.

Well you could argue that [the evidence isn't sufficient] for quite a lot of conventional treatments as well.

(Tony: 226–227)

Furthermore, the *prima facie* safety of CAM versus the known iatrogenic consequences of

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conventional medicine provided good reason to refer for the half of the GPs.

We cause an awful lot of harm in conventional medicine which complementary medicine rarely does, and we tend to overlook that

(John: 235–7)

b. Valuing CAM and trusting the complementary practitioner (CP)

Good communication with the CP to whom they refer to was also important to the GPs.

I mean the [CAM practitioner] is very good, if he sees them [privately] he does just drop us a line.

(Peter, 164–5)

In this study, the CAM practitioners were all medically qualified, and although interviewees did not explicitly discuss this as influencing their decision to refer it was implied but not explicitly stated that a medical qualification gave the GPs confidence and trust in the CPs' judgments. For many, trust was borne out of positive experience from past referrals.

I had a very good relationship with [CAM practitioner], ... he sees most of my patients..., through my knowledge of him and I have, I know exactly what we are allowed to refer...

(Andrew: 12–13)

GPs also valued the CPs' ability to offer patients time, both diagnostically and therapeutically. This was seen as augmenting their ability to identify and treat complex patient problems.

I refer them on because I know that they ... have more time and more experience and expertise than I have, so homoeopathically speaking, it makes sense.

(Andrew: 184–8)

Some GPs valued the expertise CPs could offer, such as their diagnostic ability, especially when conventional medicine had failed. Others, however, were a little more circumspect and only referred when there was a clear diagnosis.

You've got to exclude the nasty, the nasties first, the cancer and so on, but once those are excluded he can delve into his, into his areas of interest

(Peter: 27–9)

2. GPs perception of their patients' attitudes, requests and preferences for CAM

GPs recognized that their patients' experiences of and attitudes to both conventional medicine and CAM were of central importance to the referral process (see Figure 3). GPs offered five reasons for patient openness and requests for CAM:

- (i) Patients perceive CAM as safe, possibly incorrectly.

It is safer they say... but I mean that is a very contentious issue isn't it. Safety is not always the case with CAMs.

(Adrian: 73-7)

- (ii) Patients like CAM because it does not involve drugs, viewing CAM as a positive drug-free alternative, which would drive a request for a referral.

Lots of people who don't really want to take medicine all the time, don't want to take medication to control something chronic.

(Mary: 31-3)

- (iii) Some patients view health and illness holistically or are particularly receptive and/or have faith in it.

- (iv) GPs' patients, friends or family have previous positive experiences of CAM.

Sometimes there is recommendation, they have a friend who has been or has done well with complementary therapy.

(James: 73-4)

- (v) Increased awareness from the media and knowledge from the internet

I think that patients are much more aware of complementary therapy now, because of the media, and people like Prince Charles.

(James: 77-8)

Matching between doctors' attitudes and treatment preferences on the one hand and patients' views on these issues on the other was described as a vital prerequisite for referral. Without a mutual commitment to 'trying CAM', referrals would be resisted by patients.

There have been quite a few patients for instance who I have offered referral and they haven't wanted it

(Tony: 40-1)

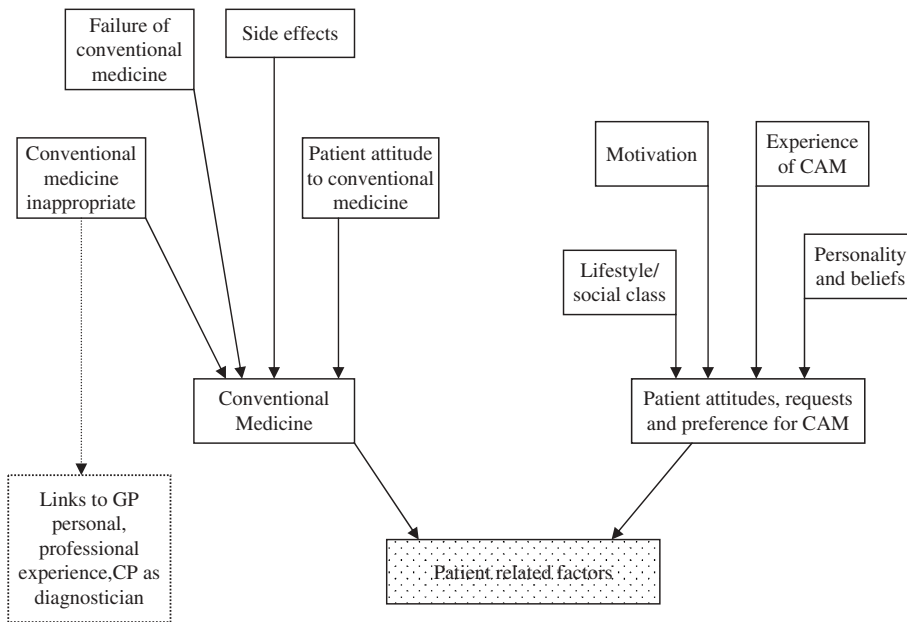


Figure 3 Model of patient-related factors. Note: the arrows do not imply causality

Discussion

Summary of main findings

This is the first exploratory qualitative analysis of GPs reasons for NHS referral to CAM so the results cannot be viewed as definitive. We have systematically identified that CAM referral is complex and occurs when there is matching of both the GP factors: their attitude to CAM, and the patient's diagnosis and clinical state and essential patient-related factors identified in this study: patient's openness and motivation and/or requests for CAM treatment. As illustrated in Figures 1–3, the key original finding was that GPs' perceive the final decision about CAM referral to be largely shaped by patient preference. In particular, GPs described patient enthusiasm for CAM as a pre-requisite to them investigating CAM referral. A mutual commitment was perceived as crucial and this contrasts with the evidence on referring behaviour for conventional medicine. Referrals to conventional medicine specialists are also not solely based on clinical need and GPs perception of the patient's pressure to refer does affect their referral rates (see eg, Armstrong *et al.*, 1991; Newton *et al.*, 1991; Cockburn and Pit, 1997; Britten, 2004; Little *et al.*, 2004). However, GPs still may refer patients to a conventional specialist based on clinical need without complete agreement from their patient (Reynolds *et al.*, 1991; Forrest, 2003) and take the time to persuade patients of the merits of conventional treatments, by citing the evidential basis for their recommendations and offering the benefits that will ensue should treatment recommendations be followed.

We also identified that GPs consider CAM referral when there are no other therapeutic options available for their patients. Various factors increase the likelihood of referral: the positive attitude of the individual GP to, and experience of, CAM; the patient's attitudes, openness and request for CAM treatment and confidence in the CP. Scientific evidence was a core focus for all interviews and knowledge of CAM was a factor in promoting or diminishing referral rates for some GPs but was not an absolute requirement for referral. Our data suggest that GPs consider anecdotal outcomes from CAM treatment as more influential on their decision to refer than the need for a systematic

evidence base. The finding that clinical practice is not driven solely by research evidence has been identified previously. Despite the rapid escalation of evidence-based medicine in the 1990s (Sackett *et al.*, 2000), clinical actions are not solely based on available evidence. For example, clinicians may not follow best practice guidelines (Freemantle *et al.*, 2000; Raine *et al.*, 2004). The direct translation of research evidence into a clinical setting is complex. Interpretation of data is dependent on clinical judgement, individual patient need and the practitioners' mindset and experiences (Garfield and Garfield, 2000; Malterud, 2001). From the tentative evidence in this paper, the role of evidence in referral to CAM appears to be similarly complex as referrals to conventional medicine, but a key contrasting element remains and that is the greater weight given to patient enthusiasm in CAM when compared to conventional medical treatments.

Limitations of this study

The number of participants was limited because we were unable to obtain further interviews within this NHS contract and data saturation may not have been reached. Also, as no information could be obtained to explain the reasons for those GPs who refused to take part in the study, it is not possible to identify any differences between responders and non-responders and this limits the generalizability of these findings.

The CPs to whom these GPs referred were all medically qualified; referrals and attitudes towards referrals to non-medical CAM therapists may differ. These data are based on referral to a single CAM practice and our findings will need to be further explored in other clinical environments. However, the focus of this study was on the referring GP and not on the practice to which they referred.

Comparison with existing literature

Prior CAM experience influences referral decisions. GPs are more likely to refer if they themselves have used CAM (Boucher and Lenz, 1998; Lewith *et al.*, 2001), had positive feedback from patients they have referred in the past (Wharton

and Lewith, 1986; Emanuel, 1999), and consequently on anecdotal evidence from friends and colleagues (Wharton and Lewith, 1986). Both non-medical factors (patient's attitude to CAM and conventional medicine) and request for CAM as well as medical factors (adverse drug reactions) influence this decision (Paterson, 1997; Givon *et al.*, 2003; Sharples *et al.*, 2003). Some previously identified triggers for referral were also systematically identified in this study, for example treatment failure and the inappropriate use of conventional medicine (Borkan *et al.*, 1994; Boucher *et al.*, 1998; van Haselen *et al.*, 2004) or a poor response to conventional treatment (LeWITH *et al.*, 2001; Poynton *et al.*, 2006). Being a GP practitioner of CAM increased referrals (the GP is knowledgeable about which patients are most likely to benefit), but it was not essential (Wharton and Lewith, 1986; Anderson and Anderson, 1987; Thomas *et al.*, 1995; White *et al.*, 1996; Perry and Dowrick, 2000; Lewith *et al.*, 2001; Schmidt *et al.*, 2002). A lack of emphasis on safety was at odds with previous literature (Cohen *et al.*, 2005), but possibly understandable in the context of this study where referral is to medical colleagues. This suggests that if the GP or patient knows little about CAM then referrals may not occur or not be made in a timely manner.

Conclusion: implications for future research and clinical practice

These initial exploratory findings suggest that referral to CP appears to differ from referral to conventional medicine and this may have important consequences. We speculate that these differences when GPs refer to a conventional and CAM practitioner occur on three levels:

- (a) *Patient clinical need.* In conventional referrals, there is usually an evidence-based clinical need for specialist advice about treatment or diagnosis. CAM referrals are not usually evidence-based, but there is a possibility of clinical benefit for the patient in the management of their chronic illness.
- (b) *The Doctor's skills.* Referrals by GPs for either conventional or complementary expertise seems to follow the same patterns: (i) GPs may not have the skills to manage their patient's clinical need so they refer their

patient to a 'specialist'; (ii) GPs with an interest in developing their specialist skills will increase their knowledge and management of handling complex patients through referral and specialist communication (Cummins *et al.*, 1981; Reynolds *et al.*, 1991; O'Donnell, 2000).

- (c) *The process of referral.* There is a key difference between referrals to conventional and complementary specialists. In conventional medicine, the referral may be doctor driven based on clinical need, but can also be driven by the patient based on their demands and expectations (eg Little *et al.*, 2004). In a CAM referral, there has to be a consensual agreement between the doctor and the patient for a referral to occur.

The GPs in this study did refer to CAM especially once conventional treatments have failed and when patients were enthusiastic. This implies that referrals may (a) not be best practice (due to lack of CAM knowledge and that patient request may be driving the referral); (b) be excluding those patients who do not have a prior knowledge or understanding of CAM; and (c) not be made in a timely fashion as referrals usually occur after exhausting conventional management routes. In addition, GPs conflict over the lack of evidence or lack of understanding of CAM may also preclude effective and timely referring behaviour.

A follow-on study is required to further explore these data in different NHS environments. Future work is needed to elucidate a fuller understanding of why some GPs find it valuable to refer patients to CAM within the NHS and others never do so. There is also a need to understand the referral processes to non-medical CPs. This exploratory study has identified that a substantial minority of GPs value the option for referral to CAM within the NHS. Increasing knowledge and evidence about CAM will assist GPs and their patients in this decision process.

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References

- Anderson, E. and Anderson, P. 1987: General practitioners and alternative medicine. *Journal of the Royal College of General Practitioners* 37, 52–55.
- Armstrong, D., Fry, J. and Armstrong, P. 1991: Doctors' perception of pressure from patients to refer. *BMJ* 302, 1186–188.
- Astin, J., Marie, A., Pelletier, K., Hansen, E. and Haskell, W. 1998: A review of the incorporation of complementary and alternative medicine by mainstream physicians. *Archive of Internal Medicine* 158, 2303–310.
- Borkan, J., Neher, J., Anson, O. and Smoker, B. 1994: Referrals for alternative therapies. *Journal of Family Practice* 39, 545–50.
- Boucher, A. and Lenz, S.K. 1998: An organizational survey of physicians' attitudes about and practice of complementary and alternative medicine. *Alternative Therapies* 4, 59–65.
- Britten, N. 2004: (Editorial) Patient's expectations of consultations. Patient pressure may be stronger in the doctor's mind than in the patient's. *BMJ* 328, 416–17.
- Cockburn, J. and Pit, S. 1997: Prescribing behaviour in clinical practice: patient's expectations and doctor's perceptions of patient expectations – a questionnaire study. *BMJ* 315, 520–23.
- Cohen, M., Penman, S., Pirotta, M. and da Costa, C. 2005: The integration of complementary therapies in Australian general practice: results of a national survey. *The Journal of Alternative and Complementary Medicine* 11, 995–1004.
- Cummins, R.O., Jarman, B. and White, P.M. 1981: Do general practitioners have different 'referral thresholds'? *BMJ* 282, 1037–39.
- Emanuel, J. 1999: Will the GP commissioner role make a difference? Exploratory findings from a pilot project offering complementary therapy to people with musculo-skeletal problems. *Complementary Therapies in Medicine* 7, 170–74.
- Forrest, C.B. 2003: Primary care gate keeping and referrals: effective filter or failed experiment? *BMJ* 326, 692–95.
- Freemantle, N., Harvey, E.L., Wolf, E. et al. 2000: Printed educational materials; effects on professional practice and health care outcomes. In *The Cochrane Library*. Oxford: Update Software.
- Garfield, F.B. and Garfield, J.M. 2000: Clinical judgement and clinical practice guidelines. *International Journal of Technology Assessment in Health Care* 1, 1050–61.
- Giveon, S., Liberman, N., Klang, S. and Kahan, E. 2003: A survey of primary care physicians' perception of their patients' use of complementary medicine. *Complementary Therapies in Medicine* 11, 254–60.
- Kaczorowski, J., Patterson, C., Arthur, H., Smith, K. and Mills, D. 2002: Complementary therapy involvement of physicians: implications for practice and learning. *Complementary Therapies in Medicine* 10, 134–40.
- Lewis, D., Paterson, M., Beckerman, S. and Sandilands, C. 2001: Attitudes towards integration of complementary and alternative medicine with hospital-based care. *Journal of Complementary and Alternative Medicine* 7, 681–88.
- Lewith, G., Hyland, M. and Gray, S. 2001: Attitudes to and use of complementary medicine among physicians in the United Kingdom. *Complementary Therapies in Medicine* 9, 167–72.
- Little, P., Dorward, M., Warner, G., Stephens, K., Senior, J. and Moore, M. 2004: Importance of patient pressure and perceived pressure and perceived medical need for investigations, referral, and prescribing in primary care: nested observational study. *BMJ* 328, 444–46.
- Malterud, K. 2001: The art and science of clinical knowledge: evidence beyond measures and numbers. *Lancet* 358, 397–400.
- Newton, J., Hayes, V. and Hutchinson, A. 1991: Factors influencing general practitioners' referral decisions. *Family Practice* 8, 308–13.
- O'Donnell, C. 2000: Variation in GP referral rates: what can we learn from the literature? *Family Practice* 17, 462–71.
- Ong, C., Bodeker, G. and Burford, G. 2005: Chapter 19: United Kingdom of Great Britain and Northern Ireland'. In *WHO global atlas of traditional, complementary and alternative medicine*. Kobe: WHO Kobe Centre.
- Paterson, C. 1997: Complementary practitioners as part of the primary health care team: consulting patterns, patient characteristics and patient outcomes'. *Family Practice* 14, 347–54.
- Perry, R. and Dowrick, C. 2000: Complementary medicine and general practice: and urban perspective. *Complementary Therapies in Medicine* 8, 71–75.
- Poynton, L., Dowell, A., Dew, K. and Egan, T. 2006: General practitioners' attitudes towards (and use of) complementary and alternative medicine; a New Zealand nationwide survey. *New Zealand Medical Journal* 119, 1–10.
- Raine, R., Sanderson, C., Hutchings, A., Carter, S., Larkin, K. and Black, N. 2004: An experimental study of determinants of group judgements in clinical guideline development. *Lancet* 364, 429–37.

- Reynolds, G.A., Chitnis, J.G. and Roland, M.O.** 1991: General practitioner outpatient referrals: do good doctors refer more patients to hospital? *BMJ* 302, 1250–52.
- Ritchie, J. and Spencer, E.** 1994: Chapter 9. Qualitative data analysis for applied policy research. In Bryman, A. and Burgess, R.G., editors, *Analyzing qualitative data*. London: Routledge.
- Sackett, D.L., Richardson, W.S., Rosenberg, W.M. and Haynes, R.B.** 2000: *Evidence-based medicine: how to practice and teach EBM*, second edition. London: Churchill-Livingstone.
- Schmidt, K. and Barton, A.** 2002: Cross-cultural differences in GPs' attitudes towards complementary and alternative medicine: a survey comparing regions of the UK and Germany. *Complementary Therapies in Medicine* 10, 141–47.
- Sharples, F., van Haselen, R. and Fisher, P.** 2003: NHS patients' perspective on complementary medicine: a survey. *Complementary Therapies in Medicine* 11, 243–48.
- Thomas, K., Fall, M., Parry, G and Nicholl, J.** 1995: *National survey of access to complementary health care via general practice*. Medical Care Research Unit, University of Sheffield.
- van Haselen, R., Reiber, U., Nickel, I., Jakob, A. and Fisher, P.** 2004: Providing complementary and alternative medicine in primary care: the primary care workers' perspective. *Complementary Therapies in Medicine* 12, 6–16.
- Wharton, R. and Lewith, G.** 1986: Complementary medicine and the general practitioner. *BMJ* 292, 1498–500.
- White, A., Mitchell, A. and Ernst, E.** 1996: Familiarisation with complementary medicine: report of a new course for primary care physicians. *Journal of Alternative and Complementary Medicine* 2, 307–14.
- Zollman, C. and Vickers, A.** 1999: ABC of complementary medicine: complementary medicine and the doctor. *BMJ* 319, 1558–61.

Appendix 1: Initial interview topic guide

Opening question

How often would you say you refer patients to the [CAM clinic]?

When was the last time you did?

These patients might be good examples for you to think about when answering my questions.

Specific questions

1. Reasons for GP to refer patients for CAM therapy

If at times you refer without being asked by a patient, what prompts you to do this?

Can you tell me any more about your decision making?

Are they generally purely medical decisions?

Has personal/anecdotal evidence been your main guide?

Does the type of illness affect your decisions?

Does how the patient make you feel have any impact?

Additional questions added to the final guide:
What is it about a patient/situation that makes you think of CAM?

Why do you refer some patients with_and not others?

Is this pattern different for CAM referrals and other conventional medicine referrals when you decide to refer a patient?

Is your referral threshold higher or lower for CAM

Time before referral greater or less for CAM

2. Reasons patients ask for CAM referral
What reasons do patients give for requesting CAM referral?

Do patients ask for medical/Non-medical reasons?

What is important for them: Personal experience or 'evidence'?

Do any of them not want conventional treatment?

Are many patients aware of the opportunity?

Is this different for CAM than for other conventional medicine referrals?

Is your referral threshold higher or lower for CAM?

Time before referral greater or less for CAM?

How much do patient requests and the NHS Contract stipulations match up?

Can you send everyone you want or is the service too limited? Many people disappointed?

OH, WE HAVEN'T TALKED ABOUT...

End of Interview