Integrating complementary therapies into mainstream cancer care: which way forward?

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No longer a collection of covert practices, unconventional cancer medicine today is highly visible, and information about it is widely available to the general public. It is a multi-billion-dollar business in the United States and of equivalent impact and importance throughout the developed world.[1]

Complementary and alternative medicine (CAM) is a diverse group of medical and health care systems, practices and products, not presently considered part of conventional medicine.[2] While the word *complementary* implies use in conjunction with standard medical treatments, *alternative* suggests use instead of standard treatments. In different circumstances, the same therapy could be used as complementary or alternative therapy.

In Australia, serial population-based surveys indicate that about half the population uses non-medically prescribed medicines and more than 20% visit CAM practitioners.[3,4] Expenditure on CAM ($1.86 billion in 2004)[4] represents about four times the public contribution to the Pharmaceutical Benefits Scheme.[3]

Cancer patients are frequent users of CAM: between 9% and 91% of patients diagnosed with cancer in the United States use some form of CAM after diagnosis.[5] The large range in use is partly related to different classifications of CAM, frustrating attempts to compare the prevalence of different therapies.[1,6] An Australian study found that 22% of cancer patients used CAM,[7] a finding corroborated by a recent survey in New South Wales.[8]

Cancer patients use CAM for many reasons: for symptomatic relief;[9] to improve their quality of life; because of concerns about the toxicity of conventional therapies;[10,11] because CAM is congruent with their values and beliefs;[11] or because they believe CAM can fight cancer, or boost their immune system.[12]

The emergence of CAM at the forefront of consumer health-seeking behaviour has significant medical, ethical and economic implications, and impacts on the public health mandate of protecting, promoting and restoring people's health. The prevalence of and reasons for CAM use are well documented in the Australian medical literature, but the public health implications have received far less scrutiny.

Is integration of CAM with mainstream medicine desirable?

Some CAM of proven effectiveness is being used as an adjuvant to conventional medical treatments in a holistic approach to cancer care termed integrative medicine,[1] although the level of integration and the quality of services offered vary in different countries and among individual cancer centres. In Australia, integration has been slow to gather momentum, with a recent Senate inquiry[13] capturing the views of the diverse stakeholders involved: conventional practitioners largely opposed it on the grounds of lack of evidence for effectiveness and safety, while consumer groups and CAM practitioners perceived that alternative cancer therapies were deliberately suppressed, as they challenged the prevailing cancer treatment paradigm.[13] Here, we identify some issues to focus this debate.

ABSTRACT

- Although viewed with scepticism by the medical and scientific community, complementary and alternative medicine (CAM) is being used by about 50% of Australians.
- Integrative medicine is a holistic approach to cancer care, with some CAM of proven effectiveness being used as adjuvants to conventional medical treatments. However, there is little evidence of a systematic process of evaluation or dialogue between mainstream cancer medicine and CAM providers in Australia. Collaboration, guidance and support for relevant research in this area are needed.
- The key elements of a process of furthering integrative medicine include improving knowledge about CAM; addressing uncertainties about CAM efficacy and safety; improving communication about CAM between medical practitioners and patients, and between medical practitioners and CAM practitioners; introducing regulatory frameworks and credentialing of CAM practitioners; and addressing ethical issues.

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Efficacy and safety of CAM for cancer patients

Although ineffective in curing cancer, some CAM can be helpful in controlling cancer symptoms and enhancing quality of life. Reviews of the effectiveness of CAM in palliative care for patients with cancer found that treatments — such as acupuncture, massage, hypnotherapy, and relaxation — showed promise, but there was insufficient evidence to recommend their widespread use.[14-16]

The list of agents with purported cancer-fighting properties is growing rapidly, although few have been tested in rigorous clinical trials. Awareness of risks related to the use of herbal medicines is limited, and "natural" does not necessarily correlate with "safe". Factors that pose specific challenges include: wide variation in biological potency among herbal crops;[17] possible contamination by fungi, bacteria or pesticides;[18] use of incorrect plant species;[19] absence of product standardisation[17] (leading to possible substitution adulteration and incorrect dosing or preparation); and inappropriate labelling or advertising.[20] Some herbal medicines have toxic effects (kava causes hepatotoxicity), interact with prescription drugs (St John's wort), or cause surgical complications (garlic, ginkgo, and ginseng may enhance bleeding; ephedra causes cardiovascular instability; and ginseng causes hypoglycaemia).[20,21]

Physicians' attitudes to CAM and awareness of its use

Surveys of Australian, Italian and Canadian oncologists' knowledge and utilisation of CAM have identified gaps in their knowledge of non-traditional therapies.[22-24] In the US, many medical schools are now offering elective courses on CAM, yet few promote critical thinking in reviewing the evidence.[25]

Doctors underestimate their patients' use of CAM: a recent study found that 37% of patients receiving radiotherapy used CAM; their doctors estimated that 4% of them did.[26] One study found that about half the patients using CAM do not tell their doctors,[4] either because they expect them to be disinterested or express disapproval,[27] or they may be unaware of possible drug–CAM interactions. This limits opportunities for patient–physician dialogue about the risks and benefits of these treatments.

Research into CAM

Despite its popularity, there has been limited research into CAM. Some of the challenges for CAM research relate to methodological issues, as individualised patient treatment (a cornerstone of the CAM philosophy) makes many CAM practitioners reluctant to adopt randomised controlled trial methodologies. There are also difficulties with recruitment for trials, identifying appropriate outcome measures, and finding appropriate placebos.[28] Establishing research collaborations is also a problem,[29] with few clinicians being supportive of CAM research.[6] Added to this are differing research priorities, difficulties in securing research funding, and a reluctance of ethics committees to endorse research on products or procedures lacking formal safety testing.

Regulatory framework for CAM and CAM practitioners

In Australia, complementary medicines are regulated under the *Therapeutic Goods Act 1989* (Cwlth), administered by the Therapeutic Goods Administration. Most complementary medicines are categorised as "listed" rather than "registered" products. They are therefore required to meet safety and quality of manufacture standards, rather than the rigorous quality, safety and efficacy evaluations required of registered products.[30] The Expert Committee on Complementary Medicines in the Health System identified a need to improve the quality of adverse reaction reporting in complementary medicine to raise awareness of treatment interactions.[30]

Under the Australian Constitution, the power to regulate the health professions is the prerogative of state and territory governments. Regulation of CAM practitioners takes the form of statutory regulation or self-regulation. A nationally agreed process, in place since 1995, stipulates that occupational regulation is required only if the majority of the jurisdiction agree to it and certain criteria are met, one of which is a potential for causing harm.[30] The Expert Committee[30] recommended that all jurisdictions would need to develop more effective self-regulation for CAM professions, with some CAM practitioner groups receiving federal government support to explore implementation options.

Educational standards are extremely variable among Australian CAM practitioners, and consumers and health care professionals lack reliable methods of identifying suitably qualified practitioners.[30] Acquiring and updating information on CAM should be part of undergraduate vocational and continuing medical education, but significant barriers remain in putting this into practice.[30]

Ethical, equity and consumer issues

Issues with significant ethical and legal ramifications include: identifying and reporting potential CAM–drug interactions;[31] the use of CAM in children; determining acceptable levels of knowledge of CAM treatments for medical practitioners; and defining professional duty with regard to (i) patient information about CAM risks and benefits, (ii) when and how to refer patients to qualified CAM practitioners, and (iii) how to remain involved in a patient's care.[32,33] Practitioners also need to consider equity issues, as the sometimes significant costs of CAM treatments are borne largely by patients.

An important aspect of CAM is safeguarding consumer choices. Patients most commonly receive information on CAM from family and friends, the media,[12] from books, and increasingly from the Internet.[6] Using the Internet to gather information about CAM can

Suggested ways of advancing the process of integrating CAM into mainstream cancer care

Developing integrative services: logistical aspects

- Consult stakeholders to define scope, objectives and outcomes
- Form collaborative group to include "CAM champions"
- Agree on models and implementation options
- Identify possible pilot sites for integrated CAM delivery, informed by local interests and available expertise
- Define scope of CAM in pilot sites and expected outcomes

Facilitating information transfer and meeting educational objectives

- Assess options and requirements for educational programs
- Define target audiences (eg, medical undergraduates, oncology trainees, clinicians, general practitioners, nurses)
- Provide reviewed and regularly updated information for consumers
- Develop professional communications and professional continuing medical education modules on CAM

Supporting CAM research

- Identify interested research groups and establish common goals
- Define research priorities
- Provide training in research methodology for interested CAM researchers
- Establish research collaborations, depending on interests and available expertise
- Consider including operational research in all new projects
- Support research on public health questions related to CAM

Supporting the development of regulatory aspects related to integrative medicine

- Collaborate with statutory bodies to define options for CAM registration
- Assist the process of developing credentialing policies
- Define practice standards for CAM treatments suitable for integration
- Define procedures around obtaining informed consent and risk management
- Establish pharmacy policies relating to products such as dietary supplements and herbal remedies
- Establish policies on granting of clinical privileges and practice reimbursements
- Stipulate malpractice liability arrangements
- Assist the translation of CAM therapies into standardised diagnostic and treatment codes and define clear practice standards

Establishing working relationships with other groups

- Clarify the role played by CAM practitioners in health care provision
- Develop an agreed ethical base for CAM practice
- Agree on referral guidelines and systems
- Reach agreements on CAM practitioners' working relationships with conventional practitioners

CAM = complementary and alternative medicine. ◆

empower individuals and give them greater opportunities to become active participants in their care, but separating reputable sources of information from those selling "bogus cures" challenges consumers' ability to make informed decisions.[34]

Which way forward?

The move of CAM from the "invisible mainstream" into the open signals a difference in perception between what patients expect of conventional medical practitioners and what practitioners themselves believe they are providing. Integrating CAM therapies into mainstream cancer care is contingent upon CAM meeting safety and efficacy standards and on the development of effective collaborations among relevant stakeholders. Some steps that could facilitate program planning and implementation are given in the Box. An integrated model needs to be built around a tailored CAM research agenda, a mentoring program for CAM researchers, and the development of evidence-based practice models.[35] A combined research and clinical program of integrative medicine, as commonly practised in North America,[1] could foster dialogue between CAM and conventional treatment providers, and create new opportunities for collaborations to both explore the potential of novel treatments and facilitate their rigorous evaluation.[5]

The medical and public health communities need to become more involved in this dialogue: CAM is not a passing fad and, in view of its enormous popularity, the potential for harm, and the lack of effective mechanisms to safeguard consumer choices, it is time for clinicians and public health practitioners to learn more about "the other side".

Competing interests

None identified.

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