Report of the Working Party on the Review of i Homeopathy, Acupuncture and Chinese Herba	ssues associated with Medicine
	Final Report 15 July 2009

1. Introduction

As a consequence of concerns expressed by some colleagues within the University of Central Lancashire (UCLan) Dr Malcolm McVicar, Vice Chancellor, appointed a working party to review the issues associated with the University offering courses in Homeopathy, Acupuncture and Chinese Herbal Medicine.

The terms of reference and working group membership, led by Eileen Martin, Pro-Vice Chancellor and Dean of the Faculty of Health & Social Care, are presented together with a list of contributors and bibliography in the appendices.

2. Context

The internal discussion at UCLan, which initiated this review, must be viewed within the context of the lengthy and ongoing wider debate and controversies around Complementary and Alternative Medicines (CAMs), which has national and international dimensions.

The debate is centred on a number of key themes which relate to:-

- the quality of and/or absence of an evidence base to support claims of the efficacy and benefits of such treatments, linked to issues of public safety/protection and professional regulation.
- the rationale for, or desirability of, promoting these disciplines as suitable for university based study.
- the nomenclature of current CAMs degrees on offer in England, in terms of whether such courses warrant the award of a science or arts based degree.
- the consideration of the ethical and economic components of such activities in relation to society in general.

3. Method

To assist consideration of issues detailed in Section 2 the working group utilised a number of approaches to inform discussion.

- (i) Literature review.
- (ii) Commissioned reports on 'Complementary and Alternative Medicine and the Purpose of Universities' and a related paper on the ethics of offering CAMs courses.
- (iii) 'Face to face' meetings with interested parties (refer to Appendix 3).
- (iv) Consideration of submitted evidence from individuals, societies and associations (refer to Appendix 4).

4. Consideration of Themes

The working group confined its deliberations to the key themes identified in Section 2 and used these as a framework for both the 'face to face' meetings and for individual and group written submissions.

4.1 Efficacy

The debate on the efficacy and benefits of the various CAM disciplines and what constitutes an 'acceptable' evidence base for CAM treatments can be viewed as a dichotomy between two differing ways of 'knowing', linked to the principles of supposed 'holism' and 'reductionism' in medicine (Rosenberg, 1998). It is also important to note that such debate is framed by country-specific sociopolitical circumstances.

Dr Chan (2001), the Director General of the World Health Organisation (WHO) added to the debate recently by calling for 'traditional' medicine, such as herbal medicines or acupuncture, to be viewed as a precious potential resource for future therapeutic pharma-based advances, whilst also calling for the regulation of practitioners and strict control of product safety.

Much of the discourse and debate focuses on the 'factual' arguments about clinical efficacy but is also concerned with matters such as:-

- How should the influences of CAM treatments be evaluated?
- What is the research agenda that is appropriate to CAM?
- Is it appropriate to examine CAM effects using the randomised controlled trial?
- To what degree should medicine be tolerant of different methodologies and standards of appreciation?

Recognition of the volume and diversity of views and attendant literature on this topic led the working group to a similar decision to that of the House of Lords Select Committee on Science and Technology (2000) in its report on CAM, namely, that 'conclusions from research into the efficacy of the various CAMs are outside the remit of this report'.

4.2 The Role of Universities in Society

Much has been written over the years on the appropriate role for and contribution of universities to society. However, in our opinion, Newman's 1854 definition most effectively captures the function of a university:

"A University is a place Wither students come from every quarter for every kind of knowledge, ... a place for the communication and circulation of thought, by means of personal intercourse ... It is a place to which a thousand schools make contributions, in which the intellect may safely range and speculate... It is a place where inquiry is pushed forward, ... discoveries verified and perfected, and ... error exposed, by the collision of mind with mind, and knowledge with knowledge" (Newman 1854)

More recent documents have formulated statements on the vocation of universities: for instance the European Magna Charta Universitatum (1988) highlights the importance of commitment to academic freedom and to diversity and to the inseparable link between teaching and research, as well as specifically referencing the need to ensure that students' freedoms are safeguarded so that:

"they enjoy concessions in which they can acquire the culture and training which it is their purpose to possess."

The National Committee of Inquiry into Higher Education (NCIHE) report (1997) concerned itself with the aims and purposes of higher education (Chp 5) and demonstrated a continuing broad commitment to the principles set out in the 1963 'Robbins' report. The NCIHE report determines that the aims and purposes of higher education (not only in universities) should be to:-

- inspire and enable individuals to develop their capabilities to the highest potential levels throughout life, so that they grow intellectually, are well-equipped for work, can contribute effectively to society and achieve personal fulfilment;
- increase knowledge and understanding for their own sake and to foster their application to the benefit of the economy and society;
- serve the needs of an adaptable, sustainable, knowledge-based economy at local, regional and national levels;
- play a major role in shaping a democratic, civilised, inclusive society.

If one uses Herisonne-Kelly's (2009) distillation of the principles essential to the concept of a university, which are,

- (i) Equipping students for employment
- (ii) The development and exercise of critical thinking
- (iii) The respecting and safeguarding of academic freedom
- (iv) The generation of knowledge
- (v) Commitment to diversity

then it can be demonstrated that these are encapsulated in UCLan's Mission Statement (refer to Appendix 1) and by an ethical commitment summarised in UCLan's Values.

In the course of our inquiry it was evident that respondents also subscribed to these principles although they differed in which ones they considered to be most important.

Employability is a key concern for students, albeit couched within the desire to demonstrate responsible and accountable practice to the public and to the accrediting professional bodies.

Teachers and students from CAM courses all emphasised the importance of university (degree level education) for the development of these professions citing critical thinking as a key competence, but also highlighting 'benefit' in terms of producing 'rounded' individuals with a breadth of education, transferable high level skills and the ability to contribute to knowledge generation and research agendas as post-graduate students.

Others argued that these subjects have no place within a university's portfolio on the basis that there is no rigorous scientific evidence base to support the claims of efficacy in relation to Homeopathy, Traditional Chinese Herbal Medicine and Acupuncture.

How then can a university resolve the question of which disciplines should be admitted or excluded? If we revisit Herisonne-Kelly's (2009) principles we must ask whether all five are jointly essential for university courses or whether an activity is acceptable if it fulfils or supports any one or some of these aims?

Although there may be potential ambiguities of interpretation of language, the NCIHE's 1997 report suggests that universities should enable students to be equipped for work at the same time as enabling them to grow intellectually, to contribute effectively to society, and to achieve personal fulfilment. Equipping students for employment is therefore an important aim of university education.

Critical thinking, its development and its exercise were held by all of the Review contributors to be fundamental to higher education and to lie at the heart of the research and innovation carried out in universities. The expectation is that critical thinkers will be reflective of their own judgements, non-dogmatic and willing to provide substantiation for their claims to be assessed by others. Disagreements about critical thinking within CAM arise because some will argue that such substantiation and assessment can occur *within* the discipline, whilst others will argue that the methodology for substantiation, that is evidence provision, is *universal*. As a result, the latter will demand that evidence is provided using methods from one field (e.g. randomised controlled trials) for use in another.

This tension applies to the second and fourth principle of the roles of universities, namely critical thinking and the generation of knowledge (see also below). Is one discipline's failure to measure up to the standards internal to, and distinctive of another, a sufficient reason to warrant removal of the first discipline from a university's portfolio? One could argue that the only acceptable grounds upon which any discipline can be 'expelled' would be if it were shown to be incompatible with the aims and purposes of a university, or if its inclusion in university curricula were unethical. The latter point relating to the ethics of offering degrees in CAMs is dealt with in section 4.4.

Inevitably the diversity inherent in universities will ensure that the frameworks within which any one discipline operates will be susceptible to critical assessment by the representatives of other disciplines within the university. This picture fits well with Newman's idea of the university as a place where: "error (is) exposed, by the collision of mind with mind, and knowledge with knowledge" (Newman 1854).

Considerable value is placed on the notion of academic freedom within the sector, and also by our respondents, with the Magna Charta Universitatum (1988) labelling it "the fundamental principle of university life."

To emphasise the importance of this fundamental principle, the Magna Charta Universitatum (1988) states:

"Each university must - with due allowance for particular circumstances — ensure that its students' freedoms are safeguarded, and that they enjoy concessions in which they can acquire the culture and training which it is their purpose to possess"

suggesting that responsiveness to the needs of students is of particular importance. However, the phrase "with due allowance" implies some degree of qualification of the statement which we believe must be that universities respond to demand for courses if they can do so while remaining true to their other aims and purposes.

Consideration of the notion that universities' contributions to knowledge generation are essential at a discipline level raises issues as to the nature and impact of such knowledge and whether it is this that should determine if a discipline is offered by a university. It is difficult to say whether many traditional university disciplines produce knowledge that has an impact external to academia; but does this matter? Or is the important question whether applicable knowledge is more important in some disciplines than in others? Critics argue that in the sciences, and particularly in the applied health sciences, it *does* matter whether the knowledge generated is relevant and valid; they oppose CAM on the basis that its claims of efficacy are not true and that these disciplines lack rigour in gathering evidence to support such claims. However, CAM practitioners argue that the study of such disciplines does result in knowledge production. Therefore, the debate appears to centre around the nature of the scientific evidence, which leads us to consideration of the commitment universities should have to the idea of *diversity*.

There are many facets to the notion of diversity but the aspect at issue here is the commitment to a fundamental *academic* diversity as defined in Newman's quotation. This would suggest that if *collisions* in knowledge are possible then different kinds of knowledge exist with correspondingly different conceptions of evidence and also of what it is for something to "be useful" in a particular field. Those who make such claims, then, are committed to a diversity amongst such concepts as those of 'knowledge', 'evidence' and 'efficacy'. This is important because many defenders of CAM adopt this position. An example is Barry (2006) who argues that a fundamental difference between conventional medicine and CAM is the conception of what constitutes a successful treatment, suggesting that in order to understand the notions of evidence and efficacy that feature in informed work on CAM we must be prepared to step outside the scientific model of medicine and its purposes.

Strauss (2000), from the National Centre of Complementary and Alternative Medicine, has examined hierarchy of evidence and believes that systematic reviews may be conducted at and across every level, writing that diverse research designs are needed to assess the spectrum of CAM techniques and products, since it is impossible to examine some CAM modalities (e.g. massage) through double-blind trials. He cites two studies published in the New England Journal of Medicine (Benson & Hertz, 2000, and Concato, Shah & Horowitz, 2000) which suggest that observational studies can be sufficiently well designed to yield data comparable to those of randomised controlled trials (RCTs). The authors of these papers conclude that the popular belief that only RCTs produce trustworthy results and that all observational studies are misleading, does a disservice to patient care, clinical investigation and to the education of healthcare professionals.

A criticism levelled against Chinese Herbal Medicine, Homeopathy and Acupuncture is a lack of a credible scientific explanatory theory. However, even though an explanatory theory is untenable a particular CAM may still have an unexplained beneficial effect.

As previously stated the determination of the efficacy of CAMs is a task beyond the scope and capability of our Working Group. However, in relation to the role of universities in society and whether CAM courses should be offered by universities two questions arise from the debate between CAM and conventional medicine supporters on admissible notions of evidence and efficacy.

- Do the divergent understandings of evidence and efficacy at issue here arise as a result of the diversity amongst disciplines that universities are supposed to cherish and uphold?
- Is a serious academic defence of the CAM conceptions of evidence and efficacy possible? Leaving aside the question of whether that defence is successful, this in itself might suggest that a study of CAM is not incompatible with the aims and purposes of universities.

Recommendation

• The University considers offering a limited number of postgraduate research studentships (leading to Masters by Research or PhD) to suitably qualified UCLan students and staff in these disciplines. They should have interdisciplinary supervisory teams to facilitate development of a broad range of research skills and to contribute to the generation of knowledge in CAM.

4.3 Nomenclature of CAMs degrees

The issue of whether CAMs courses should carry a BSc or MSc title has provoked considerable discussion across the sector, and this was reflected in respondents' contributions to the UCLan review process. There are no national regulations or a commonly accepted 'norm' defining what constitutes a BSc or a BA (QAA, 2008, 65-75), these matters being at the discretion of the University. However, there was a degree of consensus amongst respondents that in order to 'qualify' for a science nomenclature then at least 75-80% of the award must be science based. This, in relation to CAMs, medicine and other health professions courses raises the issues:

- what constitutes scientific knowledge? and
- what is the role and nature of professional knowledge?

Euraut (1994) argued that in relation to the practice knowledge of professions: "knowledge is still defined according to the criteria of the research community alone... .A much broader framework is needed for studying the creation of professional knowledge...."

In all health care related courses a significant proportion of the course is spent in clinical practice. This is the arena where Euraut (1994) suggests that students' *propositional* knowledge of science and traditions of practice in their profession interact with their *process* knowledge and *personal* knowledge in complex ways which are fundamental to the nature of professional working to include interdisciplinary working and understanding of other professions' roles. Students on such courses also need to develop a broad range of other skills such as communication skills, empathy and rapport, which have been shown to make a positive difference to clinical outcomes (Price et al., 2006).

It is difficult to separate out defined areas of learning as either science based or non-science based because many of the areas of curricula consist of a blend of research-based information with practice knowledge; examples include the development of professional judgement, safe practice and ethical practice. This also highlights the importance of discipline 'experts' contribution to curricula delivery in courses where key underpinning knowledge is imported from disciplines other than that of the exit award. Therefore, recognising the anomalies which exist nationally across other disciplines, as well as in CAMs (for example MA/MSc Social Work, BSc/BA Nursing) may reflect an individual university's approach and/or the complex interplay between scientific and professional knowledge and paradigms. A resolution may be for all degrees leading to a professional as well as an academic qualification to be separate named routes.

Recommendation

- The nomenclature of courses, leading to a professional as well as an academic award, should reflect the professional route; for example Bachelor with Honours in Complementary Medicine, B Comp. Med.(Hons) or B Acupuncture (Hons).
- The University should consider how more interdisciplinary teaching can be achieved, where appropriate, within both undergraduate and postgraduate teaching to facilitate greater exposure to subject expertise and different paradigms.

4.4 Ethical, non-harm and economic considerations

The theory of 'utilitarianism' together with legal considerations has been adopted to facilitate analysis of these points in relation to the offer of degree courses in Homeopathy, Acupuncture and Chinese Herbal Medicine. This is a standard approach in reaching policy-making decisions. The question of whether it is ethical to offer these courses should be viewed as separate from the question of whether the teaching of such courses adheres to the previously discussed generic role of universities.

Schroeder (2009) argues that the more people critically, imaginatively and openmindedly engage with a discipline, the more likely is its progress and refinement. Yet, there are certain fields which may benefit from rigorous academic treatment and would be highly useful to government, and other agencies, which are nonetheless unsuitable to be taught at universities for ethical reasons alone: a topical example is that of interrogational torture studies.

The intentional use of physically and/or psychologically painful methods to extract information from individuals is forbidden by United Nations (UN) law, but it is still practised in many countries. While rigorous academic study in related fields such as psychology and pain management for instance would inform the practice of this field, anything which teaches and refines a practice that contravenes UN law must be seen as unethical, even though such courses may fit within the defined generic role of a university.

By contrast, the practice of CAM is not forbidden by law in any country world-wide although regulatory legislation varies across countries. This would suggest that from a legal perspective teaching CAMs at university level in the UK is not unethical.

However, for ethical assessments one cannot always rely on the law. It is important, therefore, to consider other key questions, namely efficacy, non-harm, autonomy and economic issues. Ideally, a health intervention works efficiently if its benefits outweigh its harms and it does not conflict with patient autonomy.

Efficacy has already been discussed at section 4.1 and an acknowledgement made that answering this question was beyond the scope and capability of the Working Group. However, it is worth noting that all three CAMs under consideration may, in principle:

- not be effective at all;
- achieve a placebo effect only, *i.e.* a positive health improvement in the patient is achieved but it is not directly attributable to the treatment; or
- achieve a therapeutic health benefit, attributable to the course of treatment.

If one uses these three efficacy categories set out above to assess the issue of non-harm, then of the three disciplines under consideration, Homeopathy and Acupuncture appear to pose little or negligible direct physical risk, while in Chinese Herbal Medicine there appears to be greater potential for medical harm. Blackwell's (1996) analysis of incidents of harm from Chinese Herbal Medicine in Europe demonstrates risk associated with the lack of professional regulation, poor product quality assurance and inadequately trained practitioners. These issues were recognised by the House of Lords Select Committee on Science and Technology in its report on CAM (2000) which singled out acupuncture, herbal medicine and non-medical homeopathy as the three areas that:

"are at a stage where it would be of benefit to them and their patients if the practitioners strive for statutory regulation under the Health Act."

Recommendation

• The University refrains from offering any CAM courses until such disciplines have achieved statutory regulation status.

The main risk for indirect physical harm lies in the 'no efficacy' scenario if an individual fails to seek advice from a conventional medical or health practitioner. In addition a financial harm may occur if treatments are not effective and funds are being expended. Therefore in the worst case scenario all three disciplines lead to waste of resources, as payments are made for ineffective treatments. In the best case scenario low payments achieve a health improvement. In the middle ground, the placebo effect should be considered in terms of the patient's perceived benefit, in particular where standard treatment is not easily accessible.

To date the risks noted above have not been considered sufficient in the UK to regulate these disciplines perhaps because:-

- patient/consumer protection is not deemed necessary (the risk is not high enough) or
- consumer choice (autonomy) is regarded as a more important value.

Patient autonomy is viewed as one of the cornerstones of health care delivery in the UK. This is protected by the principle of informed consent, which is the "voluntary, un-coerced decision, made by a sufficiently competent or autonomous person on the basis of adequate information and deliberation, to accept rather than reject some proposed course of action that will affect him or her."

In a society which values and emphasises autonomy, competent individuals are able to make decisions regarding their health care/treatment schedules, irrespective of medical advice, without state interference in that decision.

Consideration of the points in this section would suggest that it is not unethical to offer courses in Homeopathy, Acupuncture and Chinese Herbal Medicine at a university.

5 Conclusions

This has been a challenging task for the Working Group particularly in separating the unresolved debate on the efficacy of CAM, from the questions of whether CAM courses should be offered by universities, from both an ethical and public safety/protection perspective, the nature of academic rigour and the role of universities in society.

On the basis of the literature review and the evidence presented to the Working Group it is apparent that there is a good level of consensus around the generic role of universities in society and also of the key characteristics that constitute degree level study and courses, which are summarised in Section 4 of this report. It is on the nature of what is acceptable 'knowledge' in terms of the evidence base for the teaching of such subjects that is questioned by critics from other disciplines (section 4).

From the University's perspective the consideration is whether the aims and purposes of these courses are compatible with the aims, purposes and values of the institution, and whether such courses comply with the accepted levels of skills and knowledge acquisition required by the level of the award, the professional or accrediting body and the University's own quality assurance requirements. On the basis that these courses meet such criteria, and given the debate over what constitutes 'knowledge' and scientific evidence, the nomenclature of such courses should be revisited.

The ethical question has been explored in terms of non-maleficence, autonomy and the legal framework as well as a brief consideration of the efficacy question, and on the basis of these deliberations it seems that there is no ethical reason to prevent the University from offering such courses with the nomenclature for exit awards that we recommend in this report.

The issue of public safety/protection was raised by practitioners themselves as well as by the House of Lords Select Committee on Science and Technology and the Royal College of Physicians who wrote in support of the Select Committee's recommendation on regulation noting that the Government also thought "..it would be desirable to bring both acupuncture and herbal medicine within a statutory framework as soon as practicable...."

In 2008 the Department of Health's Steering Group on the Statutory Regulation of Practitioners of Acupuncture, Herbal Medicine, Traditional Chinese Medicine and other Traditional Medicine Systems submitted its report to the Minister. The report's recommendations have been out to a final round of consultation and a statutory register is expected to be in place by 2011/12 under the aegis of the Health Professions Council.

In conclusion there appears to be no legal reason, within the limitations of the Working Group's Term of Reference, why the University should not offer such courses. However, we would wish to make the following recommendations to the Vice Chancellor for his consideration.

6 Recommendations

- The nomenclature of courses, leading to a professional as well as an academic award, should reflect the professional route; for example Bachelor with Honours in Complementary Medicine, B Comp. Med. (Hons) or B Acupuncture (Hons).
- 2 The University refrains from offering any CAM courses until such disciplines have achieved statutory regulation status.
- The University considers offering a limited number of postgraduate research studentships (leading to Masters by Research or PhD) to suitably qualified UCLan students and staff in these disciplines. They should have interdisciplinary supervisory teams to facilitate development of a broad range of research skills and to contribute to the generation of knowledge in CAM.
- The University should consider how more interdisciplinary teaching can be achieved, where appropriate, within both undergraduate and postgraduate teaching to facilitate greater exposure to subject expertise and different paradigms.

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Our Mission & Values

Our mission

WE PROMOTE ACCESS TO EXCELLENCE ENABLING YOU TO DEVELOP YOUR POTENTIAL

We value and practise equality of opportunity, transparency and tolerance.

We strive for excellence in all we do: locally regionally, nationally and internationally.

We work in partnership with business, the community and other educators.

We encourage and promote research, innovation and creativity.

Our values

The advancement and protection of knowledge, freedom of speech and enquiry.

The promotion of educational opportunity for all.

The protection of the rights and freedoms of individuals and respect for diversity.

A commitment to health, well-being, sustainability and sustainable development.

MEMBERSHIP:

Eileen Martin (Chair) Pro-Vice Chancellor and Dean of Faculty of

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Professor Gordon Bromage Head of Centre for Astrophysics

Professor Malcolm Edmunds Emeritus; Built and Natural Environment

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TERMS OF REFERENCE:

To review the issues associated with Homeopathy, Acupuncture and Chinese Herbal Medicine.

To advise the Vice Chancellor of the out-turn of the Working Party Review by April 2009

Verbal/written evidence from external people

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Learned Societies/Special Interest Groups

The Royal Society

The British Acupuncture Council

The British Acupuncture Accreditation Board

The Society of Homeopaths

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Critics slam draft WHO report on homeopathy Patient-practitioner-remedy (PPR) entanglement. Part 1: a	McCarthy, M	2005, Aug	www.sciencedirect.com/science? ob=ArticleUR L&_udi=B6T1B-4GYH5HK-D
qualitative, non-local metaphor for homeopathy based on quantum theory	Milgrom, L	2002	www.vetpath.co.uk/voodoo/milgrom1.pdf
Are randomized control trials (RCTs) redundant for testing the efficacy of homeopathy? A critique of RCT methodology based on entanglement theory	Milgrom, L	2005, Oct	www.ncbi.nlm.nih.gov/pubmed/16296916?dopt= AbstractPlus
Effectiveness, safety and cost-effectiveness of homeopathy in general practice - summarized health technology assessment	Bornhoft, G; Wolf, U; von- Ammon, K et al	2006, JuN	www.ncbi.nlm.nih.gov/pubmed/16883077

Deconstructing the evidence-based discourse in health sciences: truth, power and fascism	Holmes, D; Murray, S; Perron, A et al	2006	www.ucl.ac.uk/Pharmacology/dc-bits/holmes-deconstruction-ebhc-06.pdf
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