

Continuing medical education in clinical nutrition

Neil Paget, MA, MAdmin, MACE

Director of Education, Royal Australasian College of Physicians

To achieve better promotion and acceptance of clinical nutrition at all levels of public and medical education requires involvement in educational services based on sound educational theory and practice. Adult learning theory has established principles that support effective learning which, in turn, influence people's attitudes and behaviour. Application of these principles in Continuing Medical Education implies that as much emphasis must be placed on the educational skills necessary to produce self-directed lifelong learners as on clinical content. This article presents guidelines to assist in the planning and implementation of activities in clinical nutrition, and offers illustrative examples from other disciplines.

My approach to this topic aims to emphasise the educational role appropriate to a clinical group whose discipline crosses traditional discipline boundaries. Without education there is the risk of maintaining the status quo at a time when the context of medical education demands otherwise. Although I will tend to continue to use the term "medical" and identifiably medical examples, I use it in a broad, generic sense that encompasses all health professions. The principles involved are equally applicable to all health professionals.

Let us begin by clarifying a basic term. Medical education is slowly being recognised as a discipline in its own right. It covers the areas now often aligned to principles of adult learning in that it focuses mainly on undergraduate and postgraduate tertiary courses as well as continuing education thereafter. It includes the application of sound educational principles within the field of medicine and allied health specialties consistent with the expectations of professionals and the public. These expectations may be represented in a variety of ways, such as official reviews and reports, or through specific groups or societies. Medical education therefore also encompasses elements of professional and public education, in this case both about nutrition and about education for those who work in clinical fields. Further, it implies that professionals in clinical nutrition have a responsibility not only to promote current thinking in nutrition but also to use current educational approaches in their promotion.

Continuing Medical Education or CME traditionally referred to those medical education activities in which practitioners are assumed to be involved throughout their professional lives after formal undergraduate and postgraduate studies. Recently, however, this stage distinction has been considerably blurred by an increasing acceptance of a continuum of learning which unites the educational experiences from admission to a university course through a professional lifetime. The main reason for this shift is the recognition of the need to reinforce the importance of current educational principles throughout

the full continuum and to establish very early the educational practices which will best support the highest levels of clinical practice and patient care.

In an undergraduate curriculum at least, students come to clinical nutrition with a somewhat negative mind set. In part this is because nutrition has already been encountered as a pre-clinical scientific subject that appears, to the students, to have very little relevance for the practice of medicine. "Some students have difficulty in seeing the relationship between biochemical and physiological aspects of nutrition and the clinical aspects, and question the relevance of some of the scientific aspects of teaching to day to day clinical situations." Additionally, the way in which it is usually presented emphasises the technical and chemical aspects of nutrition using a formal and didactic approach which has little concern for the now-established principles of adult learning.

Adult learning as a movement tried to counter the inappropriate application of the principles of pedagogy at the tertiary and continuing education stages, in large part because many teachers at these levels did not themselves understand pedagogy properly. When those responsible for helping others at this level learn about clinical nutrition apply some of these principles appropriately, learning is much more rapid, more effective and more likely to bring about lasting change in attitude and behaviour. Brundage and MacKeracher (1982) established 36 "Adult learning principles and their application to program planning". Amongst these are:

- the value of past experience;
- shared responsibility for learning;
- clear educational objectives needed;
- learning in a social context;
- importance of active learning;
- the need for self-pacing;
- the role of feedback and reinforcement;
- relevance as a motivational factor;
- adults are self directed learners.

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Correspondence address: Neil Paget, Royal Australasian
College of Physicians, 145 Macquarie St, Sydney, NSW, 2000
Tel: +61-2-256-5490 Fax: +61-2-252-3310

Karen Mann has argued¹ that CME based on such principles has a lot to offer in ensuring that medical students not only learn more effectively and efficiently, but will also develop educational skills that will support them throughout life. An understanding of the basic principles of CME, she argues, is essential right from the beginning of a professional career. Among her list of important issues are:

- utilising the entire learning environment;
- emphasising the importance of the contexts in which learning occurs;
- centring learning around clinical problems;
- using small group learning and other ways of learning from colleagues;
- developing self-efficacy so that professionals are confident of their abilities;
- reinforcing early development of process skills as well as content mastery.

Whether focusing on undergraduate, postgraduate or continuing education of health professionals, there is much that can be offered as appropriate educational guidelines. Some of these come from medicine, rather than education. For example, the Doherty Commission Report into Australian medical education and workforce into the 21st century² gives the following structure for CME to be able to meet its educational objectives:

(i) appropriate

Achieved by programs which are:

- (a) of high quality;
- (b) responsive to the needs of practitioners;
- (c) responsive to the needs of the community;
- (d) relevant to locally available services.

(ii) available

Programs should be:

- (a) universally available;
- (b) co-ordinated.

(iii) used

Utilisation is stimulated by:

- a) personal motivation;
- b) recognition of CME activities;
- c) support for those attending formal courses;
- d) limiting private costs.

The development of recertification requirements is forcing providers of Continuing Medical Education to structure activities on a sounder educational foundation, as well as meeting the needs of the practitioners for whom they are targeted. The Royal Australasian College of Physicians in its Maintenance of Professional Standards (MOPS) program, for example, has a list of six criteria that are to be met if an activity is to be recognised as a workshop and attract a higher level of credit points. These criteria are:

- the activity has a significant patient care focus;
- planning takes the needs of participants into consideration;
- the educational objectives of the activity are clearly stated;
- the sessions allow for ample interaction and discussion;
- educational activities demonstrate appropriate clinical and ethical standards;

- an evaluation of the activity is completed.

The MOPS program also gives prominence to self-assessment exercises, to self-directed learning projects, and to active quality assurance projects. The responsibility to initiate, plan, complete, evaluate and modify practice as a result of these activities rests clearly with the practitioner.

It is hardly coincidental that participants in these types of activities consistently comment on their greater value and relevance. This is consistent with adult learning theory, and with those theories that describe the process by which professionals learn from practice. Donald Schon has proposed a framework emphasising reflection, both in action and on action. Without such skills one's clinical practice cannot be effectively incorporated into an individual's "knowing in action", that is the automatic, deeply embedded knowledge and skill that makes up much of the daily practice of the professional.

But even CME habits in the individual have to begin to be developed at an earlier stage than formerly, as habits of self-directed, lifelong learning need to be in place with the appropriate educational skills by the time a health professional graduates. Let us look at two examples of activities at undergraduate level which try to incorporate not only the principles of good CME but also the principles of adult learning.

1. Incorporating nutrition into a curriculum

As an instructive example, the College of Emergency Medicine Annual Meeting recently included a full day of educational activities. In the afternoon over ninety participants were involved in two workshops (CME activities themselves) to develop programs in Emergency Medicine for 5th Year undergraduate students. It is amazing how creative such a group can be despite severe practical limitations imposed upon their planning, such as having no formal teaching space and no additional resources available.

Included in the list of suggested objectives were the following: ability to recognise and manage emergencies, approach to the undifferentiated patient, basic resuscitation skills, communication skills, medico-legal aspects, ethical aspects, Emergency Medicine in the health system and other "student-defined" objectives. Note the emphasis on process rather than content!

Methods to achieve these objectives included: clinical experience with patients, case presentations, ward rounds, tutorials, handouts, practical skills development, demonstration, simulation, practice self-directed learning projects, problem-oriented worksheets/ books, record of experience log book, constructive feedback, computer assisted learning, problem based learning.

Assessment was considered in some detail, with all groups also highlighting the importance of encouraging the students to give feedback on the program and supervisors to ensure that learning needs are being met. The concluding summary statement was that "successful training will result from the resourcefulness and motivation of supervisors and students and the recognition that education is a co-operative process".

If Emergency Medicine can break the shackles of traditionalism and create a range of creative educational opportunities, is it not possible for other disciplines to do the same? If such a range of learning approaches are becoming available within the undergraduate curriculum, why are these methods not also being employed more commonly within CME activities? Resourcefulness and motivation may well be the key!

2. Health Promotion

As a second brief example of how opportunities arise to cross traditional discipline boundaries, nutrition features prominently in a Second Semester, Third Year course on Health Promotion in an integrated undergraduate curriculum at Monash University. This course is co-ordinated by the Department of Medicine at Monash Medical Centre, and has as one of its key features group project work which results in both a poster presentation and a written report on some aspect of health promotion. The formal syllabus and project topics cover many areas of clinical nutrition in a stimulating and relevant context. Traditional criticisms of the large amount of material presented in mainly a lecture format are non-existent. Again the key elements may well be resourcefulness and motivation, but this time they were vested in the students.

So what are some of the lessons appropriate to clinical nutrition that we can learn from the above?

1. Continuing medical education, at all levels, concerns itself with the application of sound educational principles, strategies and methodologies. Knowledge of these, and skill in their utilisation, is essential for any successful enterprise.
2. Being reactive is no way to achieve appropriate recognition or acceptance. Promotion requires a proactive approach. As health promotion requires a detailed understanding of the environment which impacts upon health professionals and their patients relative to a clinical issue, so medical education requires a full appreciation of the context and processes which influence the interaction between professionals at various stages in their learning.

3. The Association of American Medical Colleges has recently published³ recommendations for the "Roles for Medical Education in Health Care Reform". They cite areas of education to which American graduates reported that they did not receive sufficient exposure during their medical course. Nutrition was the highest rated medical discipline at 63% reporting deficient exposure, behind only cost effective practice management in the list of topics. The AAMC recommends:

"Medical educators should make more explicit and visible in the curriculum an emphasis on prevention, public health and community medicine; incorporate these subjects into practice; and see to the reinforcement of teaching and practice in these areas during the continuum of clinical education" (p.513).

Further, the AAMC recommends:

"The partnership between CME and other elements of the medical education continuum should be strengthened to enhance the role of academic medicine in the establishment and maintenance of clinical standards and the propagation of clinical guidelines" (p.515).

CME must be seen as a foundation for medical education activities which emphasise effective learning processes and their application to all areas of clinical content.

This is the challenge for clinical nutrition.

References

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为了使各级公卫，医学教育系统更好地接受和促进临床营养学，必须要使他们参与建立在牢固的教育理论与实践基础上的教学活动。成人教育理论已经建立了一些基本原则和以此为基础的有效的学习活动，而这些活动可以影响人们的态度，行为。这些基本原则在医学继续再教育的应用意味着必须给予能够生产出"自我引导的终身学者"的教学技能和临床内容同等的重要性。本篇文章将陈述辅助计划，实施临床营养学教学活动的指导方针，并提供一些来源于其它科目的实例来辅助说明。