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Medical Education

Notes for the Primary Care Teachers
WHAT DO WE HOPE TO ACHIEVE IN FAMILY PRACTICE TRAINING AND HOW
A brief look at the current trends in medical education

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Editor's note: This is the first article in a new series on medical education: *Notes for the Primary Care Teachers*

For new teachers and mentors in family practice, you are embarking on a career (part time or fulltime) that is both challenging and rewarding. You may be at a loss as to how to start to become a good teacher or mentor. Understanding that need, this new series of short notes will hopefully provide some tips on specific areas of concern like how to prepare a tutorial, to give feedback, mentoring and touch on various teaching and assessments methods available.

In this first article I would like to give you an overview on some current trends in medical education – on what we hope to achieve in our students and how, before other authors go into specific areas of teaching in later articles.

Outcome based curriculum

The current trend in medical education is to look not at the process but more at the outcomes you hope to achieve in your students and work backwards. For example in undergraduate medical school, the aim is to produce an undifferentiated doctor who can function safely and effectively under supervision as a member of a team in our local health care setting while undergoing further training for future practice. Postgraduate vocational family practice training aims to produce doctors who can function effectively and competently in independent clinical practice.

What are the essential competencies required to achieve the above outcomes? Different medical schools and professional bodies like the Royal Australian College of General Practitioners (RACGP) offering vocational training of family doctors have come out with their own aims and objectives but all these can fit into a generic model by Harden[1] (see Figure 1) which covers 12 outcomes in 3 circles or areas which are as follows:

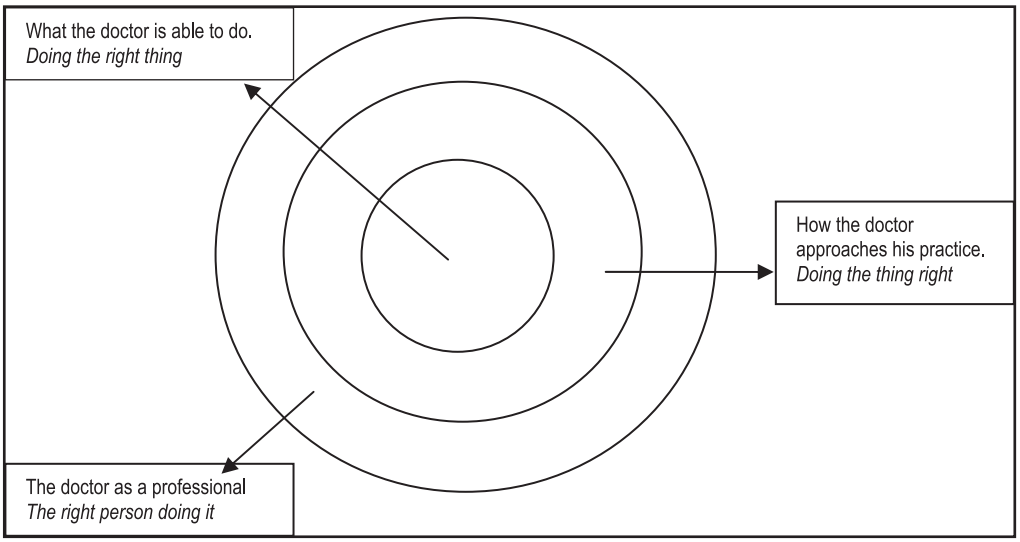

Figure 1: The three circles model by Harden

a. *Inner circle - What a doctor can do*

1. Competence in clinical skills like history taking and physical examination
2. Competence to perform practical procedures
3. Competence to investigate a patient
4. Competence to manage a patient
5. Competence in health promotion and disease prevention
6. Competence in skills of communication
7. Competence to retrieve and handle information

b. *Middle circle - How a doctor approaches his practice*

8. With an understanding of basic, clinical and social sciences
9. With appropriate attitudes, ethical understanding and understanding of legal responsibilities
10. With appropriate decision making skills and clinical reasoning and judgment

c. *Outer circle - The doctor as a professional*

11. Appreciation of the role of the doctor within the health service
12. Aptitude for personal development

The above model can be applied to postgraduate family practice training.

- *What a family doctor can do* encompasses all the essential competencies specific to family practice
- *How a family doctor approaches his/her practice* includes the three outcomes mentioned above
- *The family doctor as a professional* (with appreciation of his role and aptitude for personal development)

New teachers need to be clear of the outcomes they want to produce in their students. The following had happened in the past. A hospital consultant found a group of house officers who hardly consulted their senior colleagues in the course of their work. The consultant discovered that in their undergraduate training, their teachers in the consultant's particular discipline, aimed to make mini-specialists out of the medical students so that they can function independently upon graduation. This resulted in content overload and more dangerously in producing doctors who would try to work independently without consulting their senior colleagues which is unsafe and detrimental to patient's welfare. The outcomes must be appropriate to the tasks required of your trainees upon graduation - no less and no more.

Educational strategies and teaching methods

Traditional medical education which I went through in my undergraduate days more than 30 years ago were discipline based, with a lot of didactic lectures covering a huge amount of knowledge (content overload) requiring cramming, rote and strategic learning with regurgitation of factual knowledge during examinations. Most of the detailed knowledge were forgotten soon after the examinations and not applied to clinical practice.

To address these issues, one of educational strategies used now is called **SPICES model**[2] which stands for:

S **Student-centred** rather than teacher-centred. Teachers should concentrate on how students (in our context adults) learn and attempt to facilitate student learning. Students learn better if the topic is of their choice and of interest to them.

P **Problem-solving**. Students learn better if the task is to solve problems relevant to their practice. You would have discovered by now that whole class lectures are often less helpful than small group tutorials discussing clinical problems encountered in practice. This is because students learn better if they participate in interactive sessions on topics relevant and useful to them.

I **Integrated** curriculum. Traditionally anatomy was taught separate from physiology and biochemistry. Most curriculums are now integrated to facilitate understanding. Family practice is one area where integration and a holistic approach are important.

C **Community** based. Traditionally medical students were taught in hospitals. The trend is towards community based teaching which is the basis for training in family practice.

E **Electives** in a core curriculum. Besides essential competencies, students need to have electives or options to study in-depth their own areas of interest.

S **Systematic** rather than opportunistic. In clinic attachments, students sometimes complain that what they learned are limited to the cases that present to the clinic. Opportunistic teaching should not be the only means by which students are taught. It is possible to arrange for patients with relevant problems to be brought back to the clinic during the student attachment period and to diversify student attachments. Tutorials to cover core syllabus, student seminars, sharing of experiences in small group discussion, video recording of patient interviews for discussion all help to provide systematic teaching and learning.

Teaching methods will be covered in detail later on. Suffice to say that teachers should be familiar with the various teaching methods and pros and cons of each method and select suitable methods to facilitate student learning.

Assessments
Assessments have also changed with time. In the old days true-false multiple choice questions asking for trivial factual details were prevalent in both undergraduate and post graduate examinations. This has practically being phased out and replaced by extended matching questions which are based on clinical scenarios, testing applied knowledge and is more discerning.

The other problems included setting assessments that did not test what students were taught. Examinations were also not standardized as in the traditional long case where a lot of luck comes into play whether the student get an easy case or a difficult one. Nowadays the Observed Structured Clinical Examination (OSCE), performance based assessment using portfolios[3] and standards setting have come to the forefront. This will be dealt in more details in a later article.

In conclusion as a new teacher, you need to be clear on the outcomes you want to produce in your student. You need to be familiar with the overall aims and objectives of the course you are teaching. If you are involved in developing the curriculum, Harden's model can be used as it encompasses all major areas to be covered. The syllabus would give you details on the content to be covered in your teaching preparation. The teaching methods and assessments you choose should help produce deep learning i.e. an understanding of concepts, application of principles and knowledge to a clinical problem, not just superficial memorizing of factual knowledge. Of course skills training require a different approach which would be dealt with in later articles. Assessments should test on what is taught i.e. core competencies and assess whether students have achieved the objectives set for the course.

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Quotations on teaching and teachers …

Sixty years ago I knew everything; now I know nothing; education is a progressive discovery of our own ignorance. [*Will Durant (1885-1981), US historian*]

The task of the excellent teacher is to stimulate "apparently ordinary" people to unusual effort. The tough problem is not in identifying winners: it is in making winners out of ordinary people. [*K. Patricia Cross, Professor of Higher Education Emerita of the University of California at Berkeley*]

Tell me and I forget. Show me and I remember. Involve me and I understand. [*Chinese proverb*]