Identifying and training effective clinical teachers

New directions in clinical teacher training

Decisions about recruitment of clinical teachers and about the content of clinical teacher training programs are complex. This article aims to identify core components that reflect the characteristics of effective clinical teachers and effective clinical teaching in the ambulatory setting. These are grouped into four thematic categories – personal attributes, educational theory and principles, core clinical teaching skills, and mentored instructional activities.

Eugen Molodysky
MBBS, DRACOG, PhD, is Clinical Associate Professor, Discipline of General Practice, University of Sydney, and Director, Clinical Teacher Training Program, SIGPET, Sydney, New South Wales.
molodysky@ozemail.com.au

Natasha Sekelja
BA(Psych), is a research assistant, Medical Psychology Research Unit, Faculty of Medicine, University of Sydney, New South Wales.

Claudia Lee
MBBS, BSc, FRACGP, is a general practitioner, Bondi, New South Wales.

Clinical teaching is a part of everyday life for doctors, yet doctors are rarely taught to teach. Relying on natural talent and intuition to impart knowledge to the next generation of doctors may not be sufficient. Formal training in clinical teaching may be desirable if a clinician wishes to be an effective clinical teacher. As clinical teaching is provided primarily by the medical profession, consideration should be given to which doctors have the highest aptitude for being clinical teachers.

How best to train clinical teachers, and how clinical teachers should be assessed[1–5] relies on developing a successful clinical teacher training framework that rests on the primary goals of effective clinical teaching – training competent and caring doctors.

This article considers the characteristics of effective clinical teachers and effective clinical teaching in the ambulatory setting and whether, in order to instil these characteristics, clinical teachers need specialised knowledge in the discipline of education as well as medical expertise.[6,7] It also proposes a preliminary framework (*Table 1*) for delivering structured and effective clinical teaching.

Exploring the literature

The research group examined the literature in a two stage process. First, a qualitative search was conducted of the Medline, PubMed, and Educational Resources Information Centre (ERIC) databases for review articles published in English for the period 1980–1999,[6,8–11] to ascertain what, if any, common elements recurred in these reviews. Although five individual reviews stated there was a lack of common features or shared nomenclature in describing components of clinical teaching, collectively these reviews provided some common elements that could be collected under four thematic categories (*Table 1*):

- personal attributes
- educational theory and principles
- generic clinical teaching skills, and
- mentored instructional activities.

A subsequent search was conducted of the Medline, PubMed, and ERIC databases for articles published in English from 2000 through to September 2005 relating to clinical teaching in the ambulatory setting. Over 140 articles were found, reviewed and then sorted into the four thematic categories.

Considerations in designing clinical teacher training programs

Although academic leaders rarely expect clinical teachers to have undergone formal or even informal instruction in the basic concepts and principles of education,[12] clinical teachers need to acquire an understanding of the key educational theory and principles[11,13] (*Table 1*, tier two). Understanding learning provides a foundation for eliciting principles that may guide and inform teaching.[14] Planning and structuring the teaching for different clinical settings also varies between learners at different levels of their training.[15] This helps clinical teachers to: facilitate learning; make lessons learner centred, active and experiential; and individualise lessons.[6,9,10,16] This is particularly important as we move away from didactic teaching to problem based learning.

Doctors need to be trained in core teaching skills[6,17]

(*Table 1,* tier three). These skills help clinical teachers to: develop rapport with and motivate learner doctors; enable learner doctors to feel respected; make learning relevant and practical; use questioning appropriately; listen carefully; model appropriate behaviour; give effective explanations and feedback; and facilitate reflection.[6,10,16]

The core skill of reflection is the process of transforming experience into knowledge, skills and attributes.[18] Reflection can commence with anticipation and planning the experience (reflection in planning), continue throughout the experience (knowing in action and reflection in action), and following the experience (reflection on action).[18] Many of these skills overlap with the skills of good clinicians, but most people don't naturally transfer these skills to teaching without training.

Doctors may benefit from attending workshops with mentored instructional activities (*Table 1,* tier four), so they can further develop the core teaching skills needed to combine their roles as teacher and clinician.[6,19] Some activities such as bedside teaching may seem intuitive, but formal training allows clinical teachers to explore teaching methods that can be used in a range of different clinical settings for a range of different learning needs.

Selecting the best clinical teachers

A growing body of knowledge shows that not only are effective clinical teachers proficient in these learned skills, they may also share certain personal attributes giving them a natural aptitude for clinical teaching[6,8–11,20,21] (*Table 1,* tier one).

The five main personal attributes characterising effective clinical teachers are:

- a sense of teacher identity (eg. a sense of vocation, underlying humanitarianism, familiarity with adult learning principles[22–24]). When the individual's own sense of professional role becomes part of the collective identity of the profession, we have professional identity, a factor that may be critical in the recruitment of clinical teachers
- enthusiasm for and enjoyment of teaching, plus the ability to stimulate and encourage students, making learning enjoyable and exciting[5,9,15,25–29]
- good interpersonal communication skills, allowing assessment of level and needs of the learner as a basis of individualised teaching.[16] Excellent listening and speaking skills allow clinical teachers to encourage active participation, establish rapport, answer questions carefully and precisely, and question students in a nonthreatening manner
- balanced personal perspective of teaching and an understanding of the impact of personal (and social) values and perspectives on learning.[23,24,30]
- being seen as positive role models by learners. Excellent physician teacher role models are seen as knowledgeable, clinically competent, demonstrate teaching responsiveness, have good rapport with patients and emphasise the importance

Table 1. Proposed framework for designing a clinical teacher training program[6,8,10,11,25]

Tier 1

Selection of doctors who demonstrate the following personal attributes:

- sense of teacher identity
- enthusiasm for and joy of teaching
- good two-way communication skills
- balanced personal perspective of teaching
- potential to be a positive role model

Tier 2

Teaching educational theory and principles such as:

- teaching in different clinical settings
- principles of adult learning
- clinical teaching approaches
- clinical teaching planning

Tier 3

Teaching core clinical teaching skills such as:

- establishing rapport
- identifying learning opportunities
- setting goals
- questioning
- feedback
- reflection

Tier 4

Teaching clinical teaching methods through mentored instructional activities:

- bedside teaching
- ambulatory morning reports
- communication skills
- deskside teaching
- videotape recording workshops
- examination skills
- supervising skills
- microskills of teaching
- procedural skills

Tier 5

Demonstration of achievement of clinical teaching goals with appropriate changes in:

- knowledge
- attitudes
- skills
- behaviours

of the doctor-patient relationship and psychosocial aspects of cases.[21,29,31] This can be one of the most powerful influences on medical residents in enhancing learning.[32]

The future of clinical teaching

Future doctors should be exposed to the basic principles of clinical teaching starting from the undergraduate years through to residency and registrar levels. This supports other recent proposals[33] that trainees should be able to apply sound educational theory and principles to teaching and training; and the trainee should be able to use a range of teaching methods, including those suited to lecture, small group discussion, bedside, and theatre based teaching.

In addition to this, it may be appropriate for doctors who wish to take on a more formal role as a clinical teacher of medical students or vocational trainees to consider committing to undertaking some form of structured training in clinical teaching.

However, while normal instruction through online learning and face-to-face workshops has been shown to increase the knowledge of educational theory and learned skills of doctors, formal instruction has not been shown to affect the underlying personal attributes of effective clinical teachers.[26] The proposed framework (*Table 1*) for formal clinical teacher training is a rational starting point for planning a clinical teacher training program, but it remains to be seen what are the best ways to train clinical teachers and how medical education programs for medical students and vocational trainees might incorporate teacher training.

Summary of important points

- Does formal training improve the quality of clinical teaching to an acceptable standard in those without natural attributes?
- Should clinical teachers be required to demonstrate their aptitude for teaching?
- How will doctors with the appropriate aptitude and attributes be identified?
- What support do clinical teachers need?

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afp CORRESPONDENCE email: afp@racgp.org.au