The power of patient-side teaching – still of benefit to student and patient

As Ramani[1] points out, the patient-side, which may occur in in-patient or ambulatory settings, is the 'perfect venue for triangular interactions between teacher, trainees and patient'.

Linked as they typically are to busy public-sector hospitals, South African medical schools are still in the (some might say, dubiously) fortunate position of offering a wealth of clinical experience to their undergraduates and new graduates.

In time-honoured tradition, our medical undergraduates learn while caring for patients. This exploits, as it always has, the advantages of experiential learning or service-based learning,[2] where learning is enhanced because it is shaped around professional performance and builds on what learners already know. In-service training facilitates integration of theory and practice on the part of the medical student and is essential to the development of professional competency. It follows that if professional competence is the aim of teaching and learning at medical school, so-called competency- or performance-based assessment, tailored to measure occupational performance, is called for.

The medical profession's rather late awakening to the cognitive psychology that underpins learning has recently driven change in medical education. Adult learning principles applied to medical training[3] have it that students are motivated to learn since they perceive that their learning is directly related to their future life tasks as doctors. They may be trusted to be self-directed and to accept personal responsibility for their learning while requiring expert guidance from qualified clinicians, acting as mentors and role models, who facilitate that learning but who should no longer serve as mere transmitters of facts in the old, didactic, teacher-centred manner.

Medical curriculum modernisation

In the past two decades most medical schools around the world, South African schools included, have revised their curricula to permit students to enjoy clinical experiences from their earliest training years. This early clinical exposure to medicine's problems parallels student learning of the basic medical sciences and ensures the optimal context for such learning. In addition, there is an increasing emphasis on clinical experience gained in the more real world of primary and secondary medical practice in preference to that in the more rarified settings of academic tertiary referral centres.

South African Health Professions Council accreditation of our universities' medical training programmes now requires that medical schools comply with the recommendations[4] of early clinical contact for students through integration of the basic and clinical sciences, with an emphasis on a biopsychosocial approach to patient care, and incorporation of communication skills, population-based medicine and ethics. The accent is on development of clinical reasoning, diagnostic and procedural skills, all of which must be formally assessed. It is also recommended that learner-centred and problem-orientated approaches to learning[5] be promoted, acknowledging students' adult learner status, with the ultimate aim of producing doctors comfortable with the reality that medical scientific knowledge will change and only be coped with if habits of lifelong learning have been inculcated.

Two articles in this issue of the *Journal* from colleagues teaching in South African medical schools that have recently undertaken curriculum change are of note in the context of recent shifts in medical education – that from Chauke and Pattinson[6] re-emphasises the value of teaching in the presence of the patient; that from Burch *et al*.[7] offers fresh strategies to enhance patient-side teaching and achieve competency - or performance-based assessment.

Real patients remain key!

As reflected in the experience of Chauke and Pattinson,[6] making the patient the centre of clinical training permits our learners real-life opportunities to perfect their skills of observation, examination and communication, and to develop the traits of professionalism. Dealing with real patients in authentic clinical settings also ensures that students acquire an understanding of their context of medical practice that includes the local patient population and social circumstances of their patients. In our rainbow nation the role of culture and illness, the social origins of illness and the importance of assessing the beliefs, concerns and expectations of patients and their families, while weighing the resources available to them, are all part of successful patient management.

The implicit opportunities for role modelling doctor-patient relations on the part of the clinician-educator in the course of real bedside learning are especially precious. Role models and mentorship continue to be highly valued by undergraduates and junior trainees. There exists a large literature reporting the traits of the best role models;[8] the prime attributes, not surprisingly, are personality (sense of humour, compassion towards patients and their families, integrity and objectivity, ease of interaction with other health care personnel, patience and a non-threatening and affirming teaching style), diagnostic proficiency, manifest clinical skill and competence, an obvious enthusiasm for the role of doctor and tutor, and a healthy self-awareness with regard to strengths and weaknesses.

Furthermore, there is a persuasive literature dating from 1941 to the present[9] that testifies to patients' comfort with, indeed preference for, their inclusion in bedside or clinic teaching/training presentations. Patients see themselves as making specific contributions to students' teaching and training.[10] The article by Chauke and Pattinson reinforces this view. Of course, as these authors emphasise, it behoves the tutor to carefully summarise any discussion that inevitably occurs at the bedside (in the patient's own language if necessary), to ensure that the patient knows what does and what does not apply to his/her illness and management.

New assessment tools aid professional competency development

Burch *et al*.[7] describe how students' clinical clerkship attachments, designed to contain structured bedside-teaching sessions, can assist students in improving their clinical reasoning and diagnostic skills by providing an opportunity for 'on-the-job' or 'work-based' assessments, each of which is characterised by corrective, or affirming, focused feedback.

As Schmidt *et al*.[11] have shown, diagnostic proficiency and expertise among clinicians depends on developing an extensive and diverse 'library' of so-called 'illness scripts', each of which is a cognitive structure describing features of prototypical cases. Thus, on seeing a patient the clinician first searches his/her memory for an appropriate illness script, and then individualises it by adding specific information on the present case. All clinicians utilise this as a basis for diagnosis. The expertise of the seasoned doctor reflects his/her richer library of scripts, developed with longer and more extensive experience.

It follows that the greater the opportunity students have to see the different manifestations of diseases through patient contact, and to discuss and reflect on them, the greater the expansion of their own expertise as their own library of scripts steadily grows. Burch *et al*. exploit this key insight into diagnostic reasoning. The strategy of actively facilitating the role of students in real patient-side exercises enables them to evolve through the learner's four stages of acquiring skills, from unconsciously incompetent, to consciously incompetent, consciously competent, and finally to unconsciously competent.[12] Most significantly, making an individual student the centre of an exercise firstly permits 'diagnosis of the learner'[13] through observation and questioning while s/he demonstrates and practises history and physical examination and clinical reasoning skills, and secondly offers 'remediation' and reinforcement of learning through providing positive and gentle corrective feedback. In educational parlance this process is referred to as formative assessment, which may be defined as the diagnostic use of assessment to provide feedback to teachers and students over the course of instruction, in contrast to summative assessment which takes place at the end of a period of instruction to make a judgement about the learning that has occurred.

In this era of curriculum modernisation, Osler's century-old advice that 'there should be no teaching without the patient for a text, as the best teaching is taught by the patient himself' remains relevant, particularly as only patient-side teaching offers trainees the opportunity to 'care more for the individual patient than for the special features of the disease … to put himself/herself in the patient's place … to offer the kindly word, the cheerful greeting, the sympathetic look, which the patient understands'.[14] It is fair to argue that the reputation for unusual clinical maturity that our South African graduates enjoy derives from the extensive hands-on clinical experience they are privileged to obtain during their medical school training.

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