Presidential Address – 2004

Making a physician

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'..... all physicians were priests and all priests were magicians ....'
(Egypt, 3000 B.C.)

The ancient Egyptians seem to have realised that attitudes and communication skills form an important part of the make-up of a physician. This is because patients are more likely to develop psychological problems if their concerns are unresolved and information needs unmet[1,2]. Yet, many doctors are uncertain how to handle these issues. Feeling inadequately trained in communication skills has been linked to burn-out of senior doctors working in the field of cancer[3]. Many clinicians find some consultations particularly hard to manage, like those dealing with patients and their relatives who are highly distressed, angry, demanding, withdrawn or in denial[4]. These become particularly relevant issues for countries like ours with aging populations and an increasing non-communicable disease burden, where there is a shift from caring mainly for acutely ill patients to caring for those with long drawn out, chronic health problems, where rapport with patients and their relatives is so vital.

Our patients complain, both in public and in private, that many of us modern physicians are lacking in correct attitudes and good communication skills. How much patients value these qualities in a doctor was highlighted, albeit indirectly, in a recent survey of more than 200 surgical patients, where the attribute most sought of the surgeon was not, as we doctors would expect, 'surgical competence and skill', but 'kindness' (de Silva M, 2003, Presidential Address, College of Surgeons of Sri Lanka). We should not dismiss our patients' concerns regarding us as biased, semi-literate or hysterical. Because if we are unable to realize or ignore how we are perceived, then we cannot address the concerns and interests of the society we serve. It is time that we looked at ourselves and the system that produces us.

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The tool that is used to decide entry into our medical faculties is the A'level examination. Our colleagues complain endlessly regarding poor proficiency in English, poor attitudes to learning, poor motivation, poor intellectual ability and indiscipline, among present day medical students. We know that our teachers made very similar complaints about us, when we were medical students. So the problem is hardly a new one.

Studies on the correlation between performance at the Sri Lankan A'level examination and performance in medical school have yielded conflicting results. In 1987, Amarasinghe and Basnayake in Peradeniya[5], reported that the overall performance at the second MB (which is the first examination in medical school), fell far short of expectations, with only 40-50% of students passing the examination at the first attempt over a five-year period between 1981 and 1985. Performance was only weakly associated with the A'level aggregate mark, but the A'level mark taken in conjunction with the AL attempt appeared to predict performance at the examination better. In the same year, Udupihilla and colleagues[6] found that all poor achievers at the second MB examination were poor in comprehending English, leading to non-use of textbooks and the inability to write notes at lectures. Senanayake and Weerasinghe in 1996[7], again in Peradeniya, also observed a poor correlation between the A'level aggregate mark and performance at the second MB, and the correlation got even worse for subsequent examinations, becoming weakest at the final MBBS. They, however, found that the number of attempts at the AL had a bearing on academic performance in medical school, with students who entered medical school at the first or second attempts faring significantly better than those entering at the third AL attempt. The same study also found that correlation between performance at examinations within the medical faculty was high (r=0.7). More recently, de Silva and others[8] in Ragama in one of the more comprehensive studies on this matter, found that the A'level aggregate mark, which is the single measure of academic performance used for admission to medical schools in Sri Lanka, was a very weak predictor of

performance in medical school. They also found that female students and students who obtained at least a 'B' grade in Zoology were more likely than others to pass all undergraduate medical examinations at the first attempt, and that those who obtained at least a 'B' grade in Physics performed better at the second MB examination.

Similar studies have been done in the United Kingdom. A recent review reported that previous academic performance is a good, but not perfect, predictor of achievement during undergraduate training in British medical schools. A meta-analysis of 62 papers[9], found that previous academic performance (the A'level or other medical school admission tests) was a moderate predictor of undergraduate academic performance, and had a small predictive value for postgraduate performance. Analysis of academic predictors of success in the Nottingham undergraduate medical course found that achieving a high grade in A'level Biology predicted success at the final examination[10] – highlighting, like the Ragama study, the importance of individual A'level subject marks as predictors of subsequent undergraduate performance. A recent 20 year follow up study of 511 doctors who attended a medical school in London, showed that a good performance at the British A'level examination predicted both better undergraduate performance and obtaining postgraduate qualifications, like the MRCP, early[11].

The British A'level accounts for 23% of the variance in performance in undergraduate medical training[9], while our A'level accounts for <5%[8]. Only 50% to 60% of students in our medical schools pass any examination at the first attempt, compared to more than 90% to 95% in British and Australian medical schools. About 10% of our students fall behind their year, whereas this is a very rare occurrence in the UK. Poor English language skills are likely to contribute to this situation, because our medical students are in the unenviable position of having to study Medicine in English after having had all their secondary education in either Sinhalese or Tamil.

Because performance at the British A'level seems to predict subsequent undergraduate performance at medical schools in the UK better than the Sri Lankan A'level predicts undergraduate performance in our medical schools, it is interesting to compare the two entry systems (Table). It seems that the problem we have lies not only in the A'level examination itself, but also in the way in which we use the results to decide entry into medical school.

Table. Systems of medical school entry

British system	*Sri Lankan system*
3 A'level subjects	3 A'level subjects (was 4)
Only Chemistry compulsory	Biology, Physics, Chemistry
Practical examination	None
Admissions on merit-based system	Only 40% on merit
Most enter at first AL attempt	Only ~ 45% at first attempt (15% at third attempt)
Good grades in all subjects required	Weighted average (Z score)
Interview/aptitude test	None

While it is felt that many of our graduates who qualify MBBS have adequate knowledge and psychomotor skills, such as, in clinical examination and performing procedures, it is also generally agreed that they have deficient attitudes, communication skills, English proficiency, analytical skills and self-learning ability. This shouldn't be all that surprising when one considers that they come into medical schools, having had all their secondary education in their mother tongue, in an examination oriented, didactic teaching based, murderously competitive secondary education system, and often get more of the same at our medical schools. The newer medical curricula specifically address some of these issues. Reducing the information load, placing more emphasis on teaching communication skills, giving more weightage to in-course assessments – where attitudes can be better tested – and encouraging a self-learning culture, are significant differences between the new and the old, traditional curricula. Two of our medical faculties, first Colombo and then Kelaniya, have followed this new philosophy in medical education and revised their curricula. However, attitudes and communication skills cannot be improved just by changing the curriculum. Students learn most of these attributes by observing their teachers. Teachers need to be aware of this, and guard against becoming bad examples. One aspect that I personally think needs improvement is the way in which we treat our students. In a recent survey of medical students in the Colombo medical faculty, trainers, they seem to still lack proper attitudes, communication skills (including English language proficiency), analytical skills, and an interest in research.

In developed countries, attitudes and communication skills are considered so important that they are given pride of place in postgraduate medical training

programmes. In the UK, for example, they are a major component of the Specialist Registrar training programme and are specifically tested in the new MRCP PACES examination that has completely replaced the clinicals. Of the Sri Lankan candidates who have recently failed the MRCP, the majority have failed at stations testing communication and history taking skills, confirming, at least to my mind, the low place we accord these important attributes in our training programmes. The MD trainees here have to submit a case-book, describing several interesting or challenging patients they encountered during their training. This is supposed to improve their critical thinking, which in my opinion, and the opinion of many other trainers, it does not. If we are to really improve critical thinking and analytical skills among our trainees, we should make a small research project, like a clinical audit, compulsory, and encourage more small-group discussions, for example, journal clubs. A journal club should be a forum where a research paper is critically analyzed, and not a lecture based on a review article – which is what happens in most instances at present. We have, however, come a long way. The theory papers and vivas are now structured and lend themselves to fairly objective marking, and there is continuous training of the trainers themselves.

Having highlighted several problems that are encountered in making a physician, I would like to suggest some possible solutions.

We are likely to get students better suited for the undergraduate medical course if their secondary education in the science subjects is in English. We should also gradually increase the proportion of students we admit to our medical faculties on merit, to 80% from the present 40%, or to as much as possible within our social context. Because the total A'level aggregate has been repeatedly shown to correlate poorly with subsequent performance in medical school, there is little point in only increasing the proportion of students who enter medical faculties on merit. The increased intake on merit should be combined with: having the mark obtained standardized for the number of attempts (for example, 65 marks in a subject obtained by a student at the first AL attempt should be considered equal to 70 marks obtained by another student at the third attempt) so that many more students will enter medical schools at the first AL attempt; making entry to medical schools based on good grades in all subjects, rather than based only on the total aggregate mark; insisting on a minimum grade in the General English test, for example a 'C'; and if possible including some skills testing and administering a scientific and objective aptitude test. This last suggestion will be difficult. As an alternative we could introduce some form of career guidance, ideally after the O'level examination, to make it easier for students to make informed choices on the courses of study they wish to follow and thus become better motivated to follow them, rather than choosing a course of study just because their parents want them to.

Medical school curricula should be revised with a view to reducing the information load, and rectifying deficiencies such as those in communication skills, analytical skills, and self-learning abilities, and equally importantly, teacher behavior must reflect the changes that we desire in our students.

Changes in our postgraduate training programmes should include giving much more weightage to rigorous, continuous on-the-job assessments – which would make the training less examination oriented, encouraging research – at least audit, modifying the MD examination to reflect these changes, and having a mechanism for continuously training the trainers. The Board of Study in Medicine of the Postgraduate Institute of Medicine, has gone a long way towards addressing these issues.

There is a small nucleus of young, competent, motivated, academically aggressive physicians in this country, who can compete internationally. The future of Medicine in Sri Lanka depends on increasing their numbers. This will require many changes in how we, at present, train our medical students and postgraduates. We should not fear change. For those who believe that change could lead to a worse crisis than we have at present, and let's not kid ourselves, we do have a crisis of public confidence in our physicians, let me end by quoting an old Chinese saying, 'Every crisis carries danger, but no matter how dangerous the situation, at the heart of each crisis also lies a tremendous opportunity'.

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