Medical Education in Uganda -A Critique

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There is a growing concern about the decline in standards of the undergraduate medical education in Uganda. Our two established medical schools are having difficulty in achieving their educational objectives. Undergraduate teaching has become uneven in quality, variable in commitment and lacking in co-ordinated objectives. Consequently the medical students have become the losers. Today it is the medical students who are losing out but tomorrow it will be the patients who will lose out.

Currently a large proportion of young medical graduates have lack communication skills, have a poor grasp of clinical logic, are uncertain in their choice of diagnostic tests, make poor decisions in prescribing treatment and have a poor grasp of ethical principles. Even more alarming, is the significant number of our senior medical students and house officers who are deficient in basic clinical skills of taking a focused history and making a physical examination. If these matters are to be rectified, we need a fundamental rethink of the role of our medical schools in producing the doctors of tomorrow capable of handling the disease burden in our rural areas. This paper is aimed at examining the current state of our undergraduate medical education in the region with special emphasis on medical training in Uganda. An attempt to highlight the relevant remedial steps is made.

Perceived Importance of Teaching

Our medical schools, like many others worldwide are less than fully committed to teaching. Currently the major problem is that a number of key players in planning and control of training of medical students focus more on research and publication with little enthusiasm in teaching. Even those few who are committed to teaching are undermined by the disproportionate importance placed on productivity in research.

This is often measured by the number rather than the quality of research publications a teacher or department can enlist. Another obstacle to overcome is the long held view that to be a good teacher you must, as a priority, be active and productive in research. Although our medical school have to excel in both teaching and research that does not necessarily mean that all academic members of staff have to be equally committed, interested and excellent in clinical work, teaching and research. Indeed our medical schools have to consider differential development and attainment - the so-called twin-track approach. Some academicians could teach more and publish less, and vice versa. The essential difference is that all would be equally rewarded provided that appropriate standards were met. If this approach is adopted, some medical academicians would be encouraged to concentrate on teaching and clinical work while those whose principal interest is in research could concentrate more on high quality medical research.

The medical profession often affirms that teaching is an art and cannot be taught. A medical educationist in disagreeing with that view pointed out ***"the root of the problem is not that teaching cannot be taught, but rather that it is not"***. If medical academic staff is to be involved in teaching they have an obligation to become educators, not just experts in content.

Consequences of Neglect of Teaching.

The fundamental objective of an educationist is to teach a student to learn how to learn. Too many teachers persist in the impossible tasks of trying to provide students with a body of knowledge "sufficient to sustain them throughout their professional life time". This leads to overcrowding of the curriculum, with the emphasis on instruction to the detriment of learning, particularly self -learning. A doctor can never as he once did, know his whole job; hence the dire need for continuing medical education.

Another drawback in our method of teaching is that too much attention is paid to instilling and testing recall of actual information. We end up imparting to our graduates voluminous knowledge, which they cannot bring to bear unless precisely triggered. So many of our students have difficulties in trying to

apply their knowledge to a real life problem. For instance, every student knows that thiazide diuretics can cause gout but will often fail to make the connection of the two when faced with a patient presenting with a painful, inflamed joint and who happens to be taking a thiazide diuretic. This happens because learning too often takes precedence over reasoning. Students memorize the facts without understanding what these facts mean. Thus much of their knowledge remains inaccessible and therefore useless. Needless to say, students need to acquire factual knowledge it should however be selective and relevant to the country needs.

The current medical teaching we offer can also be accused of imbalance whereby training is favoured over education. Whereas training is directed towards learning to perform specific tasks education prepares one for the unexpected challenges.

If we train medical students to do merely what is being done now, we are condemning them to early obsolescence. They must be equipped to adapt (not to adopt) and cope up with the many changes they will inevitably encounter in their professional careers. Factual knowledge should be used as a vehicle for developing self-reliance in skills, which can last a lifetime and acquiring new knowledge and skills. Teachers while imparting this basic factual knowledge must concentrate more on instilling powers of judgment in the students.

Appropriate Attitudes

Increased emphasis must be placed on the development of cognitive skills and appropriate attitudes. For example, students need to be helped to develop the capacity to think critically, to have scientific and humanitarian values to respect the autonomy as well as the dignity of the patient. These attributes are often neglected in our day-to-day teaching.

Appropriate Research

One of the factors that motivate clinicians to pursue an academic career is the love of making a discovery. This love must be inculcated in the minds of students right from the early days of their undergraduate studies by involving them in basic research e.g. concerning PHC, as was the case in the sixties.

Prof Sharper was a shining example for this practice. Students used to have vocational employment both for the love of research and pecuniary reasons. There

are many questions in the field of PHC to which we do not have the answers as yet and we must conduct health practice research.

The major problems in the administration of health care in developing countries are recognized as being:

1. Administrative mismanagement.
2. Poor or absent planning, resulting in failure to:
    - Identify one's sense of direction.
    - Identify one's priorities in health requirements.
    - Implement one's goals, if any.
    - Evaluate achievements, if any.
3. Limited financial resources or misuse.
4. Shortage of skilled personnel.

Most of our graduates end up running hospital institutions unarmed with any idea of collecting data. This knowledge should be imparted to them through basic research methods. They need, as medical officers, to convince the governments of the economic and health needs of the community they serve.

Far from being a "capital consuming" service, well-directed health service provides a comparatively quick return on investment in terms of raising the productive capacity of the population. Assembly of research data on:

- Disease incidence. (Especially communicable diseases)
- Loss of working hours through illness
- Treatment costs that could easily be avoided by educating the community.
- The art of proper medical audit in general is essential on the part of the health workers to make a convincing case to government to spend more on health. What percentage of our doctors that embrace the heavy responsibilities of running hospital institutions is armed with this basic knowledge of operational indispensable research methods? The number is abysmal if not negligible.

Need For Community-Based Health Education

It is indeed a good turning point to re-activate this type or education in our medical schools (Makerere/ Mbarara). Kasangati Health Centre was the birthplace of this type of education.

Patients need not be lost to the educational system just because they are outside the hospital. Simultaneous education in primary, secondary, and tertiary care should be our aim. Students by being physically placed in good dispensaries and outpatient clinics could follow the progress of the illness from the first report of symptoms through hospital care to resolution. They would then properly study the natural history (course) of the disease and thus be best placed in position to manage the patients. Their education would be richer as a result.

The over-burdened medical educator in a developing country where the doctor- patient ratio is approximately 1: 20000 need not sigh and shudder over this issue. The auxiliary medical workers should play their respective roles in teaching students. A student is most likely to gain more from a health inspector in matters pertaining to sanitation than from a specialist physician. A specialist in community medicine should play a pivotal role in coordinating this program.

Assessment of Students

While we accept the necessity for normal testing of knowledge of pre-clinical science our current format for clinical examinations is left at the discretion of individual departments. Examinations for medical undergraduates are unsatisfactory. Our assessment of the medical students still relies heavily on MCQs and clinical examination.

How justified is our belief in these old faithfuls? The standard argument in favour of the MCQ's is that it represents the most "scientific" way of assessing the knowledge base required to practice medicine. But what is this base that is static? Recent studies suggest that clinical expertise is not based on a common core of knowledge but on individual experience(s)

Clinical examinations, of which we are so proud, also warrant closer scrutiny. Given enough time, it may be possible to assess some aspects of a young person's clinical skills while examining one on a “long case".

But wandering around "short cases" or OSCE particularly if the aim is to make spot diagnoses bears little resemblance to clinical practice. How then can we improve student assessment?

Currently there is no perfect yardstick one can use as the best method of examining medical students. The ideal solution that I humbly propose is the following:

1. Continuous Assessment

The central objective of medical education is to produce a competent clinician. As Wordsworth said "The child is father of the man, and medical education is the father of medical practice". Society expects much of medical schools, and even more of their graduates who are required to show diverse skill and abilities. J.A. Ryle's (1931) description of a medical doctor still stands today. "There is probably no servant of the community of whom a greater degree of omniscience is demanded, upon whom a graver responsibility in respect of personal and sometimes social guidance is imposed than a medical doctor". As an examiner, you will, but be a genius to assess these qualities fairly well, during the few hours of clinical examinations.

The methods used in continuous assessment are fairly standard; particular emphasis is directed at determing whether students have mastered the basics of history taking; clinical examination, as well as focused plan of investigating and treatment of a patient.

2. Essay Paper

This is usually a three-hour test designed to see if students can arrange their thoughts on straightforward clinical questions or other aspects of health care in a well-organized way.

3. Clinical Examination

This is conducted preferably by two groups of examiners consisting of at least two clinicians per group. There is the usual "long case" where the examiners are instructed to pay particular attention to clinical methods and to whether the student has gained a complete picture of the patient e.g. the domestic, occupational, and

emotional response to the illness. Such a student should satisfy the examiner, in discussing the relevant differential diagnosis, the investigations and treatment of the patient's illness. Short cases follow the usual pattern, where the second groups of examiners assess a student to appreciate his or her knowledge in psychomotor skills. A student is required to examine several patients on certain systems.

4. Viva Voce

Finally there is a viva-voce during which examiners are asked to concentrate on acute clinical problems and some practical aspects of medical practice such as pulmonary oedema, snake bites, organophophorus poisoning and many others.

The major practical difficulty of assessing such essential qualities of a student is the severe shortage of staff in our medical schools which ought to be addressed as a matter of urgency.

When teaching one-to-one as is the case in USA, it is easy to provide a detailed assessment of a student's performance and learn something about their all round skills in handling patients. Unless we strive to improve the staffing of our medical teaching departments, we will be stuck with our current examination systems.

Final examinations

Are final examinations necessary? Should we rely more on continuous assessment like the ever-increasing list of other medical institutions that seem to reap better fruits from this exercise? As I hinted before, we should strive to achieve that goal but we do not, as of now, have enough teaching manpower to ably supervise the relatively large number of students we have. We should steer a middle course. The protagonists and they are man, for the final examinations give a number of reasons:

1. The main reason is incentive; leading to an intensive concentrated revision period that gives a candidate an opportunity to bring things together after five years of study. This gives him/her something to work towards the end of the course.

2. The students feel that they need an experience of this type if they are to effectively deal with examinations for higher qualifications later in their carriers.

3. The students feel that passing over a hurdle at the end of their course gives them self-confidence.

Need for Weighing These Various Aspects of Assessment

From the foregoing, premises, it is evident that given relatively adequate teaching human resources a caring, compassionate, competent medical graduate would have been evaluated by continuous day-to-day assessment.

I wish to propose the following distribution of marks for assessment the final year medical undergraduate student:

- **Continuous Assessment: 30-50%**
- **Clinical (long and short cases): 20%**
- **Essays: 10%**
- **MCQ's: 10%**
- **Viva-voce: 10%**