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A medical school in Zambia

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The Medical School in Zambia was founded in 1968, some four years after independence. The first graduates qualified in 1973, and over the intervening 23 years there have been some 700 medical graduates, 600 of them Zambian. These doctors are now working all over the world, and the standard of their training compares favourably with that at medical schools of North America and Europe. This story of success, against a worsening financial situation and with deteriorating amenities, has to be tempered by the fact that only 100 Zambian graduates are today working in the country and 50 of those are in private practice. Thus the idea of training Zambian doctors in Zambia for the Zambian health care system has been found unworkable.

How many doctors and what sort of doctor does Zambia need now? These are crucial questions. WHO estimates for this type of country and at this stage of development would suggest one doctor per 5000–10 000 people, and with a population of 9 million this argues for some 1000–1500 doctors for the country, with the necessary support of clinical officers, nurses and other health professionals. There are some 800 doctors working in Zambia today and registered with the Zambian Medical Council. Thus there is a considerable shortfall. Many of the doctors working are non-Zambian and are on short-term contracts. It has been very difficult to retain Zambian graduates within the country, largely owing to poor conditions of service, lack of career structure and an unsatisfactory professional experience.

The Medical School in Lusaka is in the process of examining its own contribution to redressing this balance. It is reviewing the suitability of the teaching and learning provided, and its emphasis upon primary care and community based education. Is it even asking the hard question – do we need a medical school? Assuming the answer is yes, then what sort of school and what sort of curriculum will be most effective in providing the Zambian doctors for the twenty-first century? Does the sort and style of medical school make a difference? Ten years after qualifying, is it possible to tell the difference between the doctor educated at McMaster and the one in Lusaka? The essential minimum is to train doctors who are clinically competent and safe to practice. They should be trained to a standard that is on a par with that of other medical schools in the world, but there is much else to try for . . .

A medical school is part of a university. If at school one learns how to learn, at university what to learn and after graduation to learn to go on learning for the rest of one’s professional life, then how is this philosophy imbued and nourished? There are now many different models of medical education – McMaster, Maastricht, Edinburgh and Newcastle. There is traditional and hospital-based medicine, and medical schools essentially based in the community. There are lots of ideas and enthusiasts but little hard evidence as to what is effective or what is best.

The present curriculum in Lusaka is traditional, and relies on lectures and practicals; the student is a passive recipient of knowledge which has to be disgorged at rather frequent intervals to ensure he or she passes examinations of dubious validity, for a period of seven years. (Most students do the equivalent of ‘A’ levels during their first two years at university). Selection is on the basis that the 50 best students in natural sciences are offered places in the Medical School. The drop-out rate in the remaining five years is nearly 20 per cent – most often because of failure in yearly examinations. Virtually all the teaching is done in Lusaka and within the walls of the University Teaching Hospital. Students have little or no exposure to the rural health services, to urban primary care or to general practice. Because university salaries are low by European standards the cost of training a doctor is estimated to be about £25 000 in total, but there are many hidden subsidies. Any other model of training has to be within the same resource package. It is cheap and easy to give a lecture to 50 students and much more costly to do several small group tutorials, to provide interactive teaching and learning packages, or to transport students outside the capital, with the extra costs of travel, staff support, accommodation and subsistence. Because the terms and conditions of the staff of the Medical School are poor there are problems of recruitment and retention. Staff devote appreciable time to their own private practices and they do not expect to have to work harder or to spend extra hours in the Medical School. Their morale is poor, little research is done and the teaching is often unimaginative and dogmatic.

Despite the lack of firm evidence, there appears to be increasing consensus world-wide that there is a better way; the status quo is increasingly irrelevant and change is important and
worth while. It is said at McMaster that training a doctor is like begetting a child — it can be achieved either by sexual intercourse or by artificial insemination. Most of us would consider that the former is more enjoyable, more memorable and more fun. Education should be fun, an exploration of student and teacher together when each can learn from the other; it is most challenging when neither is an expert and each brings previous knowledge, skills and experience to bear upon a new problem.

During the last two years it has been possible to sample medical student opinion on their present curriculum — the quality of teaching, interest and importance of particular subjects. Sadly, and unsurprisingly, community medicine has languished near the bottom — it is perceived as boring, poorly taught and not particularly important. Medicine, surgery and, surprisingly, anatomy were highly regarded by all the students, and this pattern has remained over two years. What can community medicine learn from anatomy to improve its standing and its teaching skills? The students expressed a wish for fewer lectures and more tutorials, less emphasis upon examinations and more of a continuous assessment model. This was a surprise, as their whole educational experience has been based upon didactic instruction. There are shortages of books, poor resources, limited supplies for laboratory work, and sometimes no paper. The students are interested in the newer skills of computer literacy, law and economics. Their standard is as good or bad as that of students in London. They have the same worries and anxieties as medical students the world over.

There is a sharp divide. Some see the education of doctors and some other health workers as the responsibility of the university and the task, in essence, of recruiting the most able students into medicine, to teach Western medicine so that graduates can practise anywhere in the world. Others argue that the task is instead to build a Zambian health care service appropriate to need, based upon primary care with a team approach, and that the whole essence and purpose of the Medical School or, even better, an Institute or College of Health Sciences, should be bent towards this overriding goal.

The backbone of the health care system is the clinical officer, who, after obtaining Form 5 (GCSE), has a practical training of three years suitable for rural Africa; this training is based upon the disease and health care problems needing simple care in remote areas, where diagnostic backup is minimal, drugs are in short supply and resources limited, and even salaries may not be paid for months. King showed that doctors were expensive to train, expensive to deploy and reluctant to leave the city. Doctors are trained as prima donnas and not as team members. Their training makes them dissatisfied with rural practice and inflexible.

The medical curriculum, and, less so, the medical syllabus, needs radical restructuring. Ideas include positive discrimination in favour of the recruitment of medical students from rural areas; modular teaching shared with nurses, clinical officers and the paramedical professions; a move away from university dominance towards a College of Health which would be ‘broad church’ and autonomous. The role of the university then would be to provide a standard for examinations and staff appointments, and a capacity for joint research across disciplines. Does every student need the same amount of time to train or should the time be flexibly geared to the needs and abilities of the student? Should there not be a ‘fast track’ allowing clinical officers to become doctors without having to start with basic science and seven weary years of medical training? How much should students do on their own in some form of ‘problem-based learning’, in a group actively involved, rather than passively writing notes in lecture theatres and retaining them only long enough to pass an examination based upon factual recall, rather than the application of knowledge and the demonstration of skills?

Teaching and learning should be interdisciplinary — the anatomist and the surgeon teach and examine together; similarly the physician and the physiologist, the community physician—epidemiologist and the consultants in community based services such as paediatrics, obstetrics and mental health. Continuous assessment would be essential, not to penalize and fail these bright young men and women but to see early where there are problems, where more help is necessary or a little more time required. Examinations are about rewards and punishments, winners and losers. They are largely irrelevant to clinical practice, and are poor guides to clinical skill.

It is worth thinking radically; there is much to play for. All education is about change and the ability to change. Education itself, if it becomes fossilized, dies too. It is a process for life for everyone, and health workers are not exempt. In a poor country, struggling with major and preventable disease, talents cannot be wasted. The task is to rethink and change the model. The task is to be prepared to be radical. The task is to be prepared to make mistakes and to try again.

In Zambia today, water engineers and farmers still do more for the health of the people than the health service does. The health care system is expensive and often irrelevant. If that can be changed then the game is worth the candle.

Note

The above is the personal view of the author and is not necessarily government policy.

Reference


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