OCCASIONAL PAPER

The introverted medical school — time to rethink medical education

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Curricular reform in the education of medical students is highlighted within the context of changing patterns of provision of health care. A number of industrialised countries' medical schools have accepted that they have a 'social contract' to respond to the health needs of the populations they serve. Such a contract, and the commitment to populations which it would necessitate, is also relevant in the South African context.

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There is renewed interest in medical education worldwide, reflected in recent debate in the columns of the *Lancet*,[1] *British Medical Journal*,[2,3] *New England Journal of Medicine*,[4] and others. This is a welcome indication that debate and, hopefully, change are on the agenda in medical schools in industrialised countries. Yet South African medical schools, which draw so heavily upon the imported model of overseas institutions, have been remarkably resistant to progressive change. For years, norms, standards and concepts of excellence have been derived from the schools of the UK and elsewhere. Yet even these schools are now acknowledging that medical education needs to be reorientated, that medical schools have some responsibility for addressing local health problems and that students need to learn about the real world and not only academic hospital medicine.

In addition, and far more importantly, South Africa is facing a social transition of immense importance. This should prompt a reassessment of the role of local institutions. Medical schools should grasp this opportunity to address priority local needs through education, service and research.

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Pressure on the medical curriculum

In the 1970s and 1980s the issue which placed medical education in the spotlight was the insensitivity of much medical practice in the face of increasing high technology and sub-specialisation. The debate was followed by the formal acceptance of general practice as a specialty, with a status equal to those of the more traditional specialisations, an international trend towards the family or general practitioner as the key health care provider, and an acknowledgement in the undergraduate medical curriculum of the importance of interpersonal and primary care skills.

New demands on professional roles

We face such a challenge now. Over the past 30 years, the cost of medical care per capita has risen to levels unaffordable by even the wealthiest developed countries. The response of society has been to attempt to reduce expenditure and ration care. The clinician is increasingly required to be aware of the direct and indirect costs and benefits of every clinical decision, and of the possible benefits of alternative uses of those resources.

Medical education must acknowledge these changes and prepare graduates for this reality: health resources are limited and the profession is being challenged to demonstrate the effectiveness and efficiency of its therapies.

Other realities are also apparent. More effort must be devoted to health promotion and disease prevention; greater awareness of managerial issues is required; and concern not only with individuals but with populations, especially those disadvantaged by apartheid policies, are leading items on the health care and health promotion agenda.

With the community's expectations that medical schools contribute directly to the solving of local health needs, medical graduates will be forced to play a range of roles for which they are inadequately prepared. One of those roles is as a member of an interdisciplinary team addressing a shared health problem. It is necessary for medical schools to prepare their graduates to play such a role; this will be facilitated by the use of a broader portfolio of teaching sites at primary and secondary care levels, and by closer interaction with those responsible for providing care on a municipal, regional and national basis.

The South African medical school response

South African medical schools have been grappling with these challenges. Some of these issues were first raised in the alternate sector — groups of medical students, journals such as *Critical Health*,[5] organisations like NAMDA and various communities have long demanded more appropriate medical education. The South African Association of

Medical Education was established some years ago as a professional society of like-minded people with an interest in exchanging ideas, conducting research, writing and speaking about innovative educational methods and influencing others (personal communication — R. Kirsch). Some faculties have responded by appointing staff specifically to deal with educational development and evaluation. Various curricular changes have been implemented, including changes to admission policy and selection criteria, course modifications both in terms of content and process, some extension of clinical teaching away from academic hospitals to include rural areas, and greater diversity in methods of evaluation. More recently, the Kellogg Foundation has provided a valuable opportunity for committed health personnel training institutions, to develop an approach to integrating health sciences education with the provision of community-based services, in partnership with local communities.

There are currently a number of initiatives in South Africa to establish schools of public health. Reorientation of medical education can pave the way for a far more productive relationship between these schools and the country's medical schools, and avoid some of the more negative experiences which have recently been described in the USA.[6]

Many of these proposals advocate greater engagement with the community and the expanded use of primary care facilities as teaching resources. This would be a valuable and necessary component of any redefinition of the role and scope of medical education.

Nevertheless, we believe that simply to move students from hospitals to the primary care setting for a component of their training is an inadequate response to the range of challenges facing medical education. Change should entail a more fundamental review of the nature and focus of medical education and thus the role of the medical school itself.

A new response from industrialised country medical schools

Current debate in South Africa may benefit from developments in medical education elsewhere. A workshop held in Florida, USA, brought together invited participants from British, American, Canadian and Australian medical schools.[7] Those present offered perspectives on medical education, epidemiology, clinical practice and the role of the State.

The meeting affirmed that medical schools have an implicit 'social contract' with the communities they serve, and that this will manifest itself and be reinforced by the stronger development of a 'population perspective' in clinical teaching and if learning activities take into account credible data about health needs and health services both within their immediate surrounding catchment population, and in society at large. This social contract is manifest in the mission statement adopted by the 'Health of the Public' programme in the USA (Appendix).[8]

Direct addressing of this 'social contract' should make medical schools better able to influence the health status and health care access of their catchment communities, enhance and render more responsive the relationship between medical personnel and the community, improve the balance between generalists and specialists, generate effective interventions to prevent and treat disease, and improve the flow of funds to support health sciences education and research.

The meeting recommended that each medical school (*i*) publish a statement of its mission, goals and objectives, thereby defining its commitment to both individuals and communities; (*ii*) develop programmes to ensure that medical school staff are aware of the nature and distribution of health problems treated at their institution; (*iii*) ensure that each graduate has acquired knowledge, attitudes and skills that reflect the application of both individual and population perspectives to health and health care and that exhibit awareness of the conditions affecting health status in communities of differing size and complexity; (*iv*) assemble a range of resources to ensure that all students have experience of dealing with selected health problems within communities and gain experience of working with professionals other than doctors; and (*v*) establish links with organisations capable of transforming health data into practical information which can be used to guide the faculty in the establishment of research, teaching and service priorities.

In the UK, for example, this approach can tie in with the responsibility which district health authorities have for establishing the health needs of communities, and purchasing and monitoring the provision of care within their districts. Medical schools could develop much stronger links with local health authorities in order to come to grips with their larger societal role, giving meaning to their social contract and commitment to the local communities.

In South Africa, an approach along these lines may be compatible with present developments. Medical schools are heavily subsidised by the State and the public, via taxation. The community, therefore, may justifiably expect something of the schools presently in existence: in the past, communities with a voice expected these medical schools to produce graduates of a sufficiently advanced calibre to practise at the highest clinical levels but, since access for the empowered minority was guaranteed by private medical insurance, little effort was directed at ensuring equity and guaranteed coverage for all. Moreover, there was almost no incentive to contain the costs of health services. In the future, communities can be expected legitimately to demand that the medical school fulfil other functions and obligations with regard to the health of the majority of the population.

Now, given the awareness of the diminished resources available for all aspects of health care, and of the luxury of producing graduates who are not necessarily in tune with the community's priority needs or who practise in settings which limit equity and accessibility to health care, medical schools need to reflect on their future role. The changing funding base of the academic medical complex similarly reflects a challenge to the medical school and its associated health service providers to demonstrate their role in identifying the health needs of the community, monitoring and evaluating the care provided, and instituting appropriate interventions for health promotion and disease prevention.

The extroverted medical school

This is an opportune time to reconsider the role of the medical school in South Africa. Is it reasonable to suggest that all medical schools in South Africa adopt the basic recommendations cited above? Would medical schools accept a social responsibility to the communities in which they are located? Even if the institutions do not accept such a challenge, could communities demand it of their local schools? Could one assert that each medical school should define a population with which to relate? This could include municipal or metropolitan areas, as well as a related peri-urban and rural area. The medical school would then have to become familiar with available information about the population and its health, health behaviours, use of health services, and the distribution of health and illness in the community. Where such data are lacking, as is the case generally in South Africa, the medical school would need to develop a plan and a strategy, together with the appropriate public health agencies, to acquire this information. Such data could then be used in the devising of teaching, research and service activities. These data would, furthermore, be available to the general community and its elected political representatives for debate about future health policy and practice in the region concerned.

By means of such an approach, medical students and medical faculty members would learn to gather information about the health needs of populations, learn about the distribution of health and illness within them, monitor and reflect on the provision of care and its costs and effectiveness, and influence the future determination of priorities and interventions. Not only would this influence research, teaching and service aspects of the medical school's activities, but it would potentially create partnerships between teachers and providers (in both state and local authority sectors) and local communities to the mutual benefit of all. The public health function could benefit from the critical thinking which should characterise a medical school; the medical schools too need to be more aware of the real world and to respond to the needs of the communities in which they operate.

Anticipated benefits would be the development of tools to monitor the health of comparable populations across different regions and over time; this would provide an important basis for the measurement of change in health status and health services provision. Establishment of a core data set, for which each medical school has a responsibility in its defined area and population, would provide an excellent basis for such activity.

The Network of Community Oriented Educational Institutions for the Health Sciences, including members from both industrialised and developing countries, has been active in many parts of the world and has grappled with these and related issues. It has also sought to bring together training and education for medical practitioners, nurses, occupational and physical therapists, and a range of other health care team members — an ongoing challenge facing South African medical schools.

Medical education needs to prepare students to face the real world of health problems in diverse communities: fewer resources, the need to demonstrate effectiveness, efficiency, equity, improved management, teamwork and evaluation. A rethinking of the nature, role and responsibility of the medical school may play some part in developing medical education in the right direction, and enable it to play a leading role in the critical debates around health and health care which lie ahead.

Appendix. Mission Statement

Goals

Academic health centres, concerned with the health of the public, should adopt a broad approach to health that emphasises individuals' social and personal resources as well as physical capacity. Institutions dedicated to the health of the public seek to establish a thorough integration of population and clinical perspectives into their educational, research and service programmes.

The successful integration of a population perspective into clinical medicine at an academic health centre has five goals:

1. Maximise the health of a defined population.
2. Achieve collaboration among the broad array of professionals needed to meet the health needs of that population.
3. Provide appropriate preventive as well as therapeutic services.
4. Conduct population-based research and apply the results to the shaping and enhancement of health care.
5. Use the social and behavioural sciences and humanities to gain a richer understanding of the individual patient, the role and responsibilities of health care providers, and the performance of the health care system.

Objectives

The attainment of the above goals can be reached through the development of programmes at academic health centres that meet some or all of the following objectives:

Achieving change within the academic health centre

1. Provide basic competences in population-based subjects to all health professional students.
2. Provide enhanced population-based education for selected students.
3. Include clinical prevention knowledge and skill-building activities at all levels of health professional education.
4. Conduct substantive scholarly research in subjects related to population medicine.

Achieving change in an academic health centre's role in the community

1. Assume institutional responsibility for maximising the health of a defined population within viable resources.
2. Involve the academic health centre in decision-making about the development and deployment of health resources.
3. Involve the academic health centre in the social/ political process as an advocate of the health of the public.

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