The current status and future needs of education and training in Family Medicine and Primary Care in South Africa

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Summary South Africa is undergoing tremendous political and social change affecting every sphere of society, including medical education and the delivery of health services. The legacy of its history created a health system that in some respects can be compared to the best in the world, but one also characterized by inequity, discrimination and lack of access to even basic services for the rural and the poor. Its medical education system trails behind modern trends such as problem-based learning, community-based education and the utilizing of general/family practitioners as trainers. Vocational training in family practice is not compulsory for independent practice. The discipline of family practice has nevertheless developed the programmes and core infrastructure for such a future undertaking in the form of masters programmes in family medicine at all medical schools. The recently introduced system of compulsory recertification through continuous professional development provides a window of opportunity to develop locally relevant curricula and appropriate education and training methods for family practitioners. Challenges for family practice include the establishment of the role and value of the discipline in a developing country with a health system based on a nurse-driven primary care service and the re-orientation of family medicine teachers, trained in a biomedical paradigm, to the patient-centred approach. The aspirations of family practice are to define the core content of the discipline, establish and nurture a culture of research in primary care, and to develop and introduce appropriate under and postgraduate training programmes for the new generation of family doctors.

Keywords Primary health care, *education; family practice, education; educational status; inservice training; education, medical, continuing; South Africa; needs assessment.

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History

South Africa, situated between the Indian and Atlantic oceans at the southern tip of the African continent, is a country of stark contrasts and human complexity. Its people have achieved some of the greatest technological achievements, such as the first human heart transplant and the production of the first African satellite, but have also played a role in some of the most severe human failures of our time, such as the tragedy of the apartheid socio-political system and the inability to stem the tide of the AIDS pandemic within its borders.

South Africa is well known for its richness in African fauna and flora and wonders of nature. It is the land of the Kalahari desert with its gracious Gemsbok and the nomadic San people, both uniquely adapted to their harsh desert-life; majestic Table Mountain and the lush vineyards of the Western Cape; the outstretched sheep farming plains of the Karoo, which was once a prehistoric inland lake now teeming with fossils; the towering Drakensberg mountains of KwaZulu-Natal, home of the proud Zulu nation; the goldmines of Gauteng, bustling industrial heartland of Africa, and the Bushveld with the famous Kruger game reserve, home of the African big five and hundreds of other species of wildlife.

South Africa's human history began long before the arrival of the first European settlers in the 15th century. In fact, many scholars believe that the southern African region was the cradle of mankind itself. The country was first inhabited in the south by the Khoi who were hunter-gatherer people. In the north several African tribes migrated from the mid-African region around the time in 1652 when Dutch settlers arrived at the Cape of Good Hope to establish a replenishment station for their trading ships between Europe and the East.

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British colonial rule from 1806 led to further inland migration of the Dutch-descended settlers. They came into contact with the black nations in the Eastern Cape and later in Natal. Bloody skirmishes over land and livestock followed. Subsequently, two settler republics, the Orange Free State and the Transvaal, were established in the regions north of the Orange River during the mid 19th century. In 1899, soon after the discovery of gold in the Transvaal, a colonial war erupted between Britain and these republics, which three years later ended in total defeat for the republics.

The Union of South Africa was formed in 1910. The African population was completely excluded in this process, which led to the establishment of the African National Congress, the first African independence movement. The rise of the National Party to power in 1948 legally entrenched the policy of racial segregation and discrimination, which became known as 'apartheid'. The first truly democratic election was held in 1994 after a long struggle to obtain freedom for all the people of the land. Nelson Mandela was inaugurated as the first president of the second republic. The new state, based on a supreme Constitution and the rule of law, a Bill of Rights and an independent judiciary, progressed through a peaceful transitional period. It is now entering a period signalling the birth of an African Renaissance with the election of Thabo Mbeki as the new president in June 1999.

Numbers

South Africa is about the size of the UK, France and Germany combined (1 221 037 square km). In 1998 the mid-year total population was estimated at 38·51 million: 32·45 m (84%) Africans; 4·5 m Whites; 3·72 m people of mixed race; and 1·07 m Indians.[1] Almost 11% of the population is younger than 5 years and about 54% is urbanized. The literacy level is 82%, average life expectancy 66 years and the average per capita income $2900 per annum.

At the end of 1997 there were 27 354 registered medical practitioners in South Africa, with 909 new doctors from the eight South African medical schools.[2] The production of South African doctors is outlined in Table 1. Almost 30% of all new registrants in 1997 were foreign medical graduates, working mostly in the rural and under-served areas.

These figures, however, do not reflect the inequity of the distribution of medical practitioners between levels of care, between private and public sector, and between

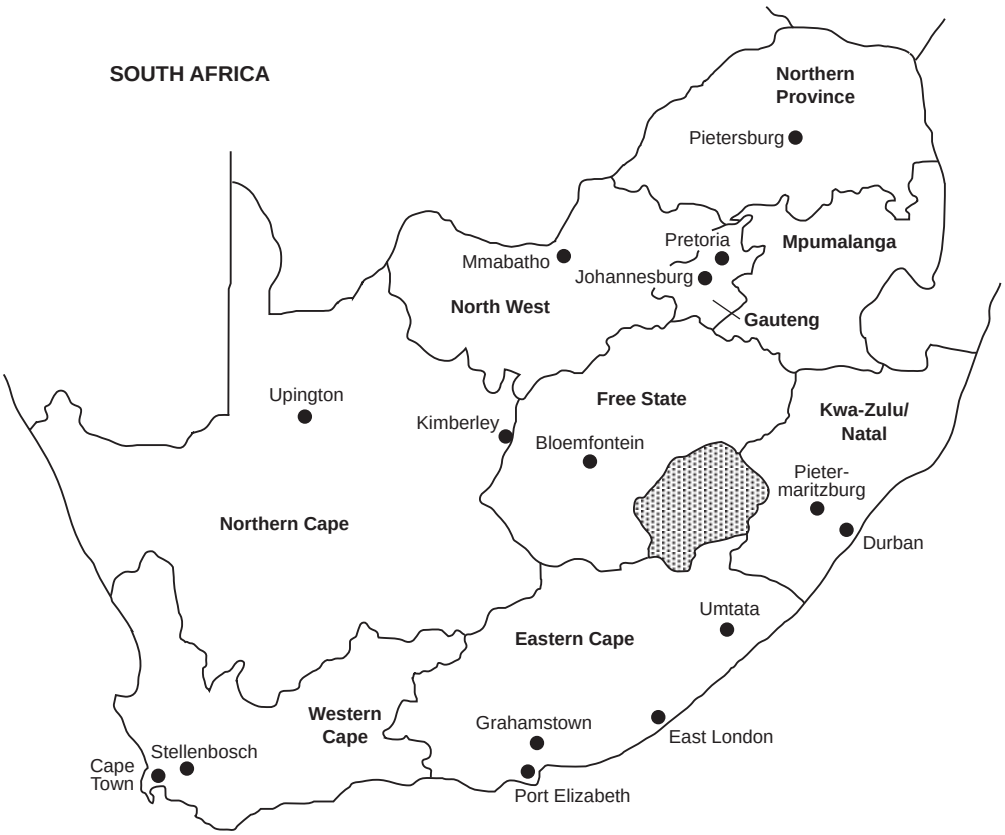

Table 1 Registration of Medical Practitioners in South Africa by University Medical School (1997)[2]

University	Number	Proportion (%)
Cape Town	113	12·4
Free State (Bloemfontein)	89	9·8
MEDUNSA (Pretoria)	127	14·0
Natal (Durban)	89	9·8
Pretoria	171	18·8
Stellenbosch	158	17·4
Transkei (Umtata)	13	1·4
Witwatersrand (Johannesburg)	149	16·4
TOTAL	909	100·0

rural and urban areas. There is also a severe racial imbalance in medical school entrants with less than 15% students being African.[2] Although all universities have affirmative action policies in place, the main problem remains the poor standard of school education inherited from past inferior educational policies and practices.

Medical education

The South African medical education system is largely based on the traditional British system. The undergraduate medical curriculum comprises three years of teaching in pre-clinical subjects followed by three years of clinical education and training mostly based in teaching hospitals. The MBChB degrees are conferred at the end of the sixth year.

Medical school is followed by an intern year which is a year of supervised medical practice in accredited hospitals. Interns choose between rotations of 4–6 months in the larger disciplines and 2 months in smaller disciplines including family practice. The intern system is fraught with difficulties, such as long working hours, extensive clerical duties, lack of formal training and a wide variety in training experiences, depending on the facility of training.[3] The Health Professions Council of South Africa (HPCSA) has recently introduced a system of rigorous inspection of training facilities and now provides improved guidelines for intern training.

Since 1998 medical practitioners have been obliged to complete a year of community service in the public sector before being allowed unrestricted medical practice. This system was introduced by the government to alleviate the shortage of medical practitioners in the public sector after a failed attempt by the Interim Medical and Dental Council, in 1997, to introduce a system of 2 years of compulsory vocational training. The latter proposal was opposed by both junior doctors,[4] who interpreted it as two years of community service, and the discipline of family practice, who regarded the proposed system of rotations through specialist disciplines as inappropriate training.

Further education in medicine is entirely optional and consists of a range of postgraduate diplomas in some of the specialist disciplines through the Colleges of Medicine, formal specialization through a registrar programme attached to a university or formal postgraduate education and vocational training as a family physician. The current medical registration system in South Africa allows medical practitioners unrestricted and independent practice (*general practice*) after completion of their intern and community service years, without the need of vocational training.

Six(a) of the seven(b) medical schools in South Africa have departments and full chairs of Family Medicine, the eighth established a family medicine programme in its Department of Primary Health Care. These departments are all involved in undergraduate medical education and have well developed postgraduate programmes. The first department of Family Medicine was established at the University of Pretoria in 1977 with Howard Botha as the first professor of Family Medicine in South Africa.

Primary Care

In 1945, South Africa was set on a course of introducing a unitary National Health Service with free healthcare for all, based on a system of community health centres providing primary health care to their communities. Unfortunately, after 1948 the country's health system developed on a course of *fragmentation and discrimination* (segregated health services based on race); emphasis on *hospital-based curative services* and the development of a strong and increasingly expensive private health care system. The private sector currently accounts for three fifths of all health expenditure but serves only 23% of the population.[5]

The first democratically elected government was set the enormous task of restructuring the health system of the country and redressing the inequities of the past, against the backdrop of far reaching political and social change. The watershed for the development of a new National Health Service came with the publication of the ANC Health Plan in 1994. This document established the primary health care approach as the central tenet of future health practice and placed the responsibility for governance and delivery of those health

services on the third tier of government ('District Health Authority'). The realities of cost and incomplete structures very soon dictated that a district health system will probably only be achieved over many years.[6]

Undergraduate medical education

Medical students in South Africa are mainly taught by specialists through formal lectures, supplemented with practical rotations in the clinical departments at the large teaching hospitals. These departments have complete autonomy on the content of their teaching. They also vigilantly guard the time undergraduate students spend in rotation with them, as it forms the basis of lecturer credits (and funds) from the university, and it also relates to their status in the medical school.

Most medical schools in South Africa have, however, entered into restructuring their undergraduate curricula in response to international trends[7] and political pressure on medical schools to become more responsive to social needs.[8] The HPCSA is reviewing the undergraduate medical education system and regulations are soon to be published to reduce the minimum period of training to 5 years and extend the intern year to two years.

Family Medicine is fulfilling a limited, but increasingly important, role in undergraduate teaching in South Africa. Rotations in departments of Family Medicine vary in duration, generally lasting between two and six weeks in the clinical years. Settings include general outpatient departments, community-based clinics and health centres,[9] and periods of preceptorship in private family practice. More emphasis is also placed on multidisciplinary training.[10]

Postgraduate education and training in Family Medicine

Recognition for postgraduate education in family medicine came only in 1993 when a special category of registration (*family physician*) was introduced by the South African Medical and Dental Council. This step was not a formal *de jure* recognition as a specialty, but it was implied by the fact that the public sector allows family physicians to hold posts as specialists. Practitioners have to undergo vocational training for 2 years in an accredited programme and obtain an approved qualification in Family Medicine in order to register as a family physician.

A Family Medicine subcommittee of the HPCSA controls this registration system.

Qualifications in Family Medicine can be obtained either through the College of Family Practitioners Membership examination, the MCFP(SA), or a Masters degree in Family Medicine (mostly named MFamMed) at a university. The latter also requires the completion of a research dissertation.

There are marked differences in the content and educational approaches of the various university masters programmes. Some are still mainly based on lectures by specialists, appropriate to family practice. Practice management, aimed at all aspects of management in a private practice, is usually another prominent feature of those programmes.

Other programmes have moved towards problem-based, student-centred and resource-based learning. Teaching takes place in small groups facilitated by family physicians, with students learning from their own patients, using appropriate sources of information to solve their clinical problems. Assignments, written patient studies and video recordings of their own consultations with patients, amongst others, form part of teaching and evaluation.

Maintenance of professional competence

Maintenance of professional competence had not, until recently, featured prominently for most South African family practitioners.[11] Many did not see the necessity for keeping up to date with medical advances and the most popular continuing medical education activities were product promotional events sponsored by pharmaceutical companies.

The most active group in the continuing medical education field for family practitioners is the South African Academy of Family Practice/Primary Care, who have, since 1980, organized a wide range of continuing medical education activities including national and regional conferences, workshops and meetings, published the *South African Family Practice Journal* and *Manual*, and formed a multitude of small groups which run their own educational activities. The Academy is the official South African body affiliated to WONCA, the world body for family doctors, and will be hosting the first International WONCA Congress in Africa in Durban in 2001.

Since January 1999 the HPCSA has instituted a system of recertification whereby doctors are obliged to undertake continuing professional development (CPD).[12] Over a period of five years a medical practitioner must acquire 250 credits, of which one credit is equivalent to one hour's CPD. Doctors' names may be removed from the register for non-compliance. The aim of this system is to ensure quality care for patients through the professional development of doctors.

CPD is supposed to be more broadly based than the traditional continuing medical education. It should include activities that add value to the practice of the profession by improving personal coping and growth, increasing awareness of ethical issues, facilitating multidisciplinary learning, providing managerial and organizational skills, etc. The principles of adult learning have to be applied, for instance the participants need to be actively involved throughout the planning, provision and evaluation stages. This ensures that the activity meets the needs of the participants in terms of relevance to their practice. The ultimate test for CPD should be based on whether or not there has been a change in practice that enhances the quality of care provided to the patient.[12]

The new CPD system was initially met with wide criticism. The approach of the HPCSA was to simplify the application of the system, but already it is clear that extensive administrative efforts and costs will be required from the HPCSA, accreditors, providers and, ultimately, the doctors. Another concern is that the lack of an ethical code towards the CPD system could lead to extensive defrauding of the system. Perhaps a future solution would be to look at practical ways of measuring professional competence.

The recertification system provides an opportunity for the medical profession to enhance its reputation, and specifically holds many positive implications for the discipline of family practice. The learning needs of primary care doctors have to be defined; programmes have to be provided which use teaching methods that suit their educational needs; family practitioners will increasingly have to be used as teachers and proper assessment of the outcome of teaching will have to be carried out.

Challenges to Family Medicine in South Africa

Family Medicine subscribes to a different paradigm (the patient-centred model) from the biomedical model mostly used by doctors in South Africa in order to meet the huge demand for curative services. Health services keep vertical health programmes in place because they are viewed as the best way to improve the health of the population suffering from diseases associated with poverty and rapid urbanization, such as infectious diseases, violence-related injuries and chronic diseases of lifestyle.

Undergraduate medical education and training continues to be mainly moulded on the traditional model within the confines of clinical departmental boundaries. The type of practice that these graduates adhere to will therefore remain doctor- and disease-centred. Their continuing medical education requirements are met, therefore, predominantly by updated lectures on disease-focused topics. The principles of active learning and practising evidence-based medicine remain foreign to them.

There is, unfortunately, still limited understanding within most training institutions about the contribution that Family Medicine can make to medical education and training. Family physicians consequently often doubt themselves and their value in the face of persisting support for the biomedical paradigm. It is also very disturbing that some of the teaching programmes in Family Medicine in South Africa continue to be biomedically- and disease-oriented. As a result, even qualified family physicians often have limited understanding of the patient-centred approach and the principles of Family Medicine. This 'paradigm-struggle' remains the main challenge for the advancement of the discipline of Family Practice in the desired direction.

The implementation of a District Health System in South Africa strives to establish an equitable and affordable health service for all of its citizens. It is argued that South Africa cannot afford for all patients to be treated initially by a doctor. The primary health care policy of the government clearly states that it should be nurse driven, with doctors providing a second level of care.[13] The role of the family practitioner in the District Health System must still be clearly defined and agreed upon.[14]

Lastly, the fact that the profession of family practitioners remains organizationally fragmented continues to be a challenge for its future development. Over the years many different doctor groupings have been established, enhanced by South Africa's previous segregatory policies, and representing different interest groups. This left the profession weak when bargaining with government, academic institutions and funders. Several promising movements towards unity on medico-political and academic levels in family practice are in progress but there is still no final resolution towards a clear unity of purpose.

Aspirations of Family Medicine

The main task for family doctors in South Africa today is to devise and implement a system of education and training which will continually improve the standards of family practice on a national basis. First, there has to be agreement on the core content, skills and values of the discipline within the context of the country. Those principles then have to be embodied in appropriately

constructed undergraduate and postgraduate education and training programmes which can have the widest possible impact. These have to be sustained by a continuous quality assurance process designed and driven by the profession itself.

South Africa does not yet have a requirement for specific vocational training as a prerequisite for independent family practice. This is in contrast to the international trend which is evidence-based as to the benefits of such training.[15] The challenge in South Africa is not merely to convince the HPCSA of the need for vocational training for independent family practice but also to improve the appropriateness and standardization of the existing training programmes. There will also be a great need for capacity building and resource allocation, as such a national undertaking will require the accommodation of at least 500 new entrants each year.

In South Africa, a large component of health services are delivered in rural areas, where generalists are compelled to perform many procedures that would usually be done by specialists. These practitioners need to be trained properly, and supported efficiently so as to retain their services to these areas.[16] Distance education programmes utilizing modern technology such as interactive television and the internet may hold the key to realize a national vocational training programme which will also support and develop rural health services.

Research by family doctors is largely a neglected aspect of family practice in South Africa. Family doctors have to be equipped with research skills and helped in planning and conducting research in their communities. More importantly, a research agenda for Family Medicine must be set and generalists encouraged to participate. A significant development in this regard has been the development of the Southern African Sentinel Practitioner Research Network (SASPREN), a division of the South African Academy of Family Practice/Primary Care.[17] This family practitioner research network has to date produced significant work in the field of primary care surveillance[18] and important health problems encountered by family practitioners.[19,20]

These are but a few of the important issues facing the current generation of family doctors in South Africa. It is now up to them to seize their opportunities and achieve their aspirations in the new millennium.

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