Health Care Provision and Surgical Education in South Africa


Department of General Surgery, University of Natal Medical School, Congella 4013, Durban, Natal, South Africa

Abstract. Apartheid policies have led to inequalities in the delivery of health care and the training of surgeons in South Africa. The nation's population of 33 million is comprised of 73.6% Blacks, 14.8% Whites, 8.8% Coloureds, and 2.7% Asians. Only 17% of the population are covered by medical insurance (78% of Whites, 28% of Asians, 26% of Coloureds, 4% of Blacks) that funds the private sector which accounts for 46% of the nation's total health care expenditure of 9.2156 million rand. The remainder receive care from curative state hospital based services, which consume 77% of the public expenditure on health. Preventive and promotive health services account for 23%. Only 3.2% of South Africa's gross national product is spent on health care provision for 80% of the population—well short of the World Health Organization's recommendation of 5.8%. This figure translates into a per capita expenditure of 138, 340, 356, and 597 rands for Blacks, Coloureds, Asians, and Whites, respectively. Eight medical schools produce just over 900 graduates per year, 80% of whom are white. The medium of instruction is English at five (Cape Town, Witwatersrand, Natal, MEDUNSA, and Transkei) and Afrikaans at three (Pretoria, Stellenbosch, and Bloemfontein). Natal and MEDUNSA are creations of apartheid and have graduated almost all the Black South African doctors, of whom only 15 are practicing surgeons. Many university faculties are cognizant that dramatic change is needed to redress such imbalances, and admission policies are changing. Schools are addressing the implications of admitting many more Black African students from less privileged educational backgrounds into their medical faculties. Only then will more nonwhite graduates emerge with excellent, well monitored specialist training in surgery, which until now has been the domain of mainly white doctors.

The invitation to contribute meaningfully on the subject of the impact of health care delivery on surgical education in South Africa is a daunting one. Apartheid policies practiced in this country have seeped into every pore of society. Health care delivery and surgical education have not been immune to this invasion. The efforts of many individuals and institutions to practice and teach medicine and surgery have been frustrated by discriminatory practices from both within and without the profession. Yet many fine surgeons have been produced from this system.

It is true that racially biased policies have had serious adverse effects on the health of the nation and the dignity of the humans within it [1, 2]. It is also true that inequality in health and health care delivery is not unique to South Africa [3] and goes hand in hand with poor socioeconomic status and other factors. Poverty will persist for a large section of the community in South Africa long after apartheid is gone and must be factored into future health care delivery and surgical education.

Since the abolition of "petty" apartheid during the late 1980s, radical change seems just around the corner. It will produce major effects on the continued development and provision of surgical services and training in this country [4].

Correspondence to: S.R. Thomson Ch.M.

Medical Health Care Provision and Expenditure

The Department of National Health and Population Development is responsible for the overall coordination of public health services [1, 2, 5, 6]. The four Provincial Administrations (Cape, Transvaal, Natal, and the Orange Free State) provide facilities for medical care in their public hospitals. Unfortunately, three administrative pathways to central government exist for their funds because of the Tricameral parliament system. In addition the "Bantustan" policy created four "independent homelands" (Botswana, Ciskei, Transkei, Venda) and five "self-governing states" (Gazankulu, Kwazulu, Lwembowa, QwaQwa, Kangwane) all of which administer their own health care budgets. Local authorities provide a small but not insignificant further source of funding for health care. At present the provincial administrations are largely responsible for curative hospital-based services and consume 77% of the budget. In contrast, the sectors responsible for preventive and promotive health services, central government and local authorities, accounted for only 15% and 8%, respectively of the annual funds. It is unlikely this trend will persist in the new order.

Private health care is well established with many well equipped hospitals. Some of these health care facilities provide more sophisticated technology than is available in the major teaching hospitals: magnetic resonance imaging and extracorporeal lithotripsy, for example. Only 17% of the population are covered by medical insurance (78% of Whites, 28% of Asians, 26% of Coloureds, 4% of Blacks). In 1987 total health care expenditure was 9.2156 million rand, or 5.8% of the gross national product (GNP)—a bit above the World Health Organization (WHO) target of 5% for the start of the next century. The public sector accounted for 56.4% of that expenditure, which may represent an overestimate, as the official private medical expenditure figures are almost certainly an underestimate [5]. Hence at best only 3.2% of the GNP was spent on health care provision for 80% of the population [5]. It translates into a per capita expenditure of 138, 340, 356, and 597 rands for Blacks, Coloureds, Asians, and Whites, respectively.

The unnecessary complexity of these systems is self-evident, and rationalization into a unitary health care system is long overdue [7–9]. There is little doubt that the medical insurance providers will be forced to curb expenditure in the private sector, and how this change will factor into the state's provision of health care is the subject of intense debate [10]. What is clear is that the private sector must make existing expensive technology available to the public sector and avoid the unnecessary duplication of equipment.

Medical Schooling in South Africa

The Republic of South Africa has eight medical schools, which produce just over 900 graduates per year, 80% of whom are white. The media suggests that 10% to 25% of recently qualified white graduates leave the country. English is the medium of instruction
in four: Cape Town, Witwatersrand, Natal, and MEDUNSA. Afrikaans is used for all verbal instruction at Pretoria, Stellenbosch, and Bloemfontein, which has resulted in the almost exclusive production of white graduates from these institutions, even though they have more recently adopted an “open” admission policy. Few if any of those Black Africans who have the educational qualifications to be considered for entry into a medical faculty have the natural fluency in Afrikaans to even consider applying to these universities. Only MEDUNSA and Natal have admitted significant numbers of Black Africans and Asians and were indeed created by the apartheid policies to fulfill just that role. The two oldest medical schools (Cape Town and Witwatersrand) continue, for what may be the best of academic motives, to admit only students who meet their stringent educational requirements. This requirement has excluded all but a few elite Black Africans from their midst until recently. Long before the widespread inadequacies of general school education are rectified Black South Africans will be clamouring for more places at the medical schools. A new South African government is in power, and all medical schools will have a nigh impossible task to resist the political pressure to change their admission policies. Cognizance of these facts by some of the universities has led to changes that have already started to redress these imbalances, particularly with regard to admission policies. They are also addressing the implications of admitting many more Black African students from less privileged educational backgrounds into their medical faculties. They recognize the need to develop an increased support structure to help these students through their difficult initial years. Only then will more nonwhite graduates emerge for an excellent, well monitored specialist training in surgery, which until now has been largely the domain of white doctors.

The University of Cape Town’s medical faculty was established in 1912 with recognized preclinical studies, and its first two graduates were capped in 1922 [11]. As in many countries pioneering institutes carry great kudos, and the medical faculty has promoted this ethos. Its standards remain unerring high. It graduates approximately 170 students each year, of whom 80% are white, although an increasing number of coloured and black students are now being enrolled.

The University of the Witwatersrand Medical Faculty came into being in 1920. This medical school is also steeped in tradition and has an international reputation for turning out fine graduates. It is the largest of the medical schools and graduates some 180 doctors annually. Most are white, but an increasing number of other racial groups are now enrolling to study medicine.

The Medical Faculty of the University of Pretoria was established in 1944. Since 1972 it has graduated approximately 175 students each year, all of them, to date, white.

The University of Natal Medical Faculty was established in 1951. As the only medical school admitting “nonwhites” exclusively, it has the most turbulent history of all the medical schools [12]. Conflicts have existed between the university and the government [13], the medical faculty and the (initially all white) main campus, the students and the medical faculty. These conflicts continue to flare up periodically and to interrupt academic routine. Even at present, the medical school student body believes that Medical Faculty should not open its doors to white students, as they believe it would deprive African students of places—at least until the other universities admit a significantly larger proportion of black students. Natal has the most dilapidated overcrowded teaching hospital (King Edward VII) and, for historic political reasons, is the most poorly funded of all the Medical Schools [14, 15]. Despite this fact, the university has graduated 1158 Asians, 576 Africans, and 84 Coloured students since 1972.

The University of Stellenbosch Medical Faculty opened in 1956, the second Afrikaans medical school to be established. It currently produces 140 doctors a year; 63 nonwhites and 1326 whites have graduated since 1983.

The University of the Orange Free State was the most recently incepted Afrikaans speaking medical school. It was thought in 1969 that another Afrikaans Medical School was necessary to ensure that there were the same number of Afrikaans-speaking as English-speaking medical schools in the country. Thirty-eight students were enrolled in the medical faculty in 1971. The current class size is 92, and by 1992 just over 1200 white students had graduated from the program.

The MEDical UNiversity of Southern Africa (MEDUNSA) the last undergraduate school to be established by the nationalist government, admitted its first medical students in 1978. All of them had completed a Bachelor of Science degree from Fort Hare. In 1982 the first 34 graduates received medical degrees, and to date 662 medical students, almost all of them black, have graduated from the Faculty.

The Transkei is the only “homeland” to have a medical school. It was created as one of the last acts of President Matanzima’s reign. Situated at Umtata, it granted its first eight medical degrees in 1990. A total of 26 students have graduated to date, and 17 students are in the current graduating class.

Surgical Qualifications

The College of Medicine of South Africa was founded in 1954 by several senior clinicians to provide a national body to set the standards of practice for all branches of medicine. It sets two diets of examinations for each specialist group every year. The College’s first examination was administered in 1957. Initially similar to the British Fellowship, it was a two part examination. However, because of the great advances in surgical pathophysiology, it was considered essential to change to a three part examination in October 1986. Part I-A consists of a multiple choice questionnaire on the preclinical sciences, which can be taken at the start of training. Part I-B is composed of two sections, the Principles of Surgery in General and the Principles of the Surgical Specialties. After two years of training, candidates are eligible to sit this part, which includes mandatory experience in accident and emergency surgery, as well as surgical intensive care. The examination comprises a written and oral examination in each section. It has a 50% pass rate. The Part I-B examination is the common pathway for almost all surgical trainees progressing to their Part II, or Final Fellowship, examination in their chosen surgical specialty.

For general surgery, the Part II examination includes vascular and pediatric surgery. It is considered an exit examination taken at the end of an individual’s formal surgical training period, usually after 5 to 6 years of residency. Passing this examination enables one to register the FCS(SA) in General Surgery, with The South African Medical and Dental Council (SAMDC) and to practice as a surgeon. “Final” examiners are traditionally the professors and heads of the divisions of general surgery from all the medical