Impressions of health in the new South Africa: a period of convalescence

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This is the first in a series of five articles reporting on health care in South Africa

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South Africa is a fledgling democracy. With a fair, and generally peaceful, first election in April 1994 it has shown the world that its people can make decisions that would do credit to a more mature democracy. Fears that the end of apartheid would be accompanied by a bloodbath were proved wrong.

South Africa is an extreme example of inequity in every sphere of life including health care. This series of five articles tries to capture a picture of the health of South Africa. I spent three weeks in South Africa and met doctors, administrators, politicians, and others who could enlighten me. In Cape Town, Johannesburg, Pretoria, Durban, and Kwazulu I visited hospitals, townships, and shanty towns that I was told were representative—and safe to visit.

This first article looks at the period after the elections and describes immediate gains and losses. The next three articles discuss the role of the traditional healers of South Africa, the country's mental health profile, and its medical workforce. The last article considers the South African government's plans and the dilemmas faced by its health planners while restructuring health care and undoing the ills of apartheid.

Inequity in health care and apartheid

Apartheid made South Africa unique. Racial discrimination exists in every country where people from different racial groups live together, but in South Africa racial discrimination was legalised and executed to perfection. With the death of apartheid South Africa has lost its dubious distinction. Apartheid caused inequity in health and health care.[1-3]

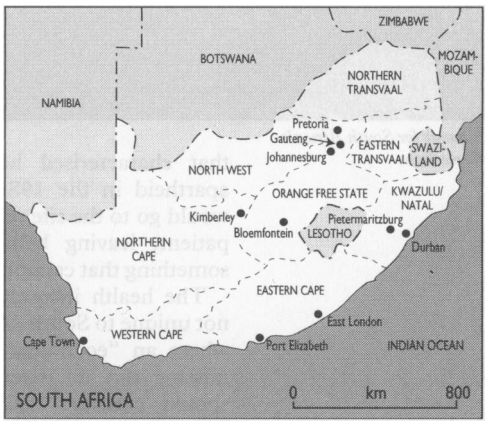
Administration of health care was fragmented, with 14 separate departments to look after the health of the different racial groups, the four homelands, and six "self governing" territories. The apartheid system produced white doctors who did not practise in rural areas or black townships where the need for doctors was greatest. In 1981 one doctor served 330 whites—or 91 000 black people.[4] The artificial paradox of the best of First World medicine and the worst of Third World medicine within a few miles of each other resulted in extreme inequity in the health profile of the country. This inequity is evident in indicators of health: infant mortality, maternal mortality, life expectancy at birth, and the incidence of infectious diseases like tuberculosis and measles are all higher among black people. For example, in 1985 the infant mortality for white infants was 13·1/1000 but 70/1000 for black infants (table I).

Statistics do not, however, reflect the inhumanity

Profile of health and disease in South Africa

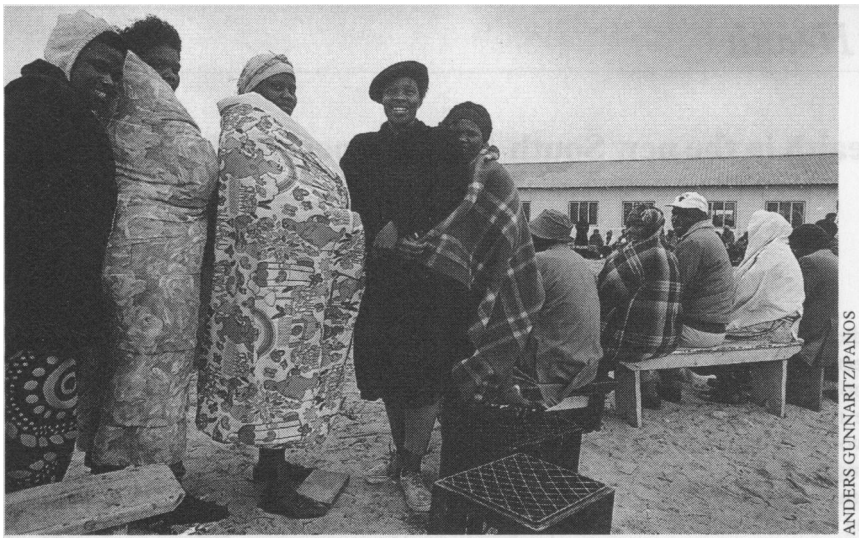
	Asians	Blacks	"Coloureds"	Whites
Population				
1980 (%)	821 000 (2·9)	20 692 000 (72·2)	2 613 000 (9·1)	4 528 000 (15·8)
1985 (%)	905 000 (2·7)	24 298 000 (73·6)	2 922 000 (8·8)	4 901 000 (14·8)
Annual growth rate, 1980-5 (%)	1·97	3·27	2·26	1·6
Birth rate per 1000				
1980	24	40	27·8	16·5
1985	22·5	39·1	27·6	16·3
Mortality per 1000				
Infant				
1980	24·4	70	60·7	13·1
1985	16·1	61	40·7	9·3
Total				
1980	5·9	11·0	10·3	8·4
1985	5·5	8·3	7·7	7·6
Deaths at ⩽4 years				
1980	12·1	30·7	25·7	3·4
1985	8·0	23·8	19·5	2·6
Maternal mortality per 100 000 live births				
1980	~30	~30	>40	1
1985	24	22	29	1
Life expectancy at birth (years)				
1980	65	55	58	70
1985	67	62	61	71
Incidence of tuberculosis per 100 000				
1980	82	226	325	12
1985	80	211	429	15
Incidence of measles per 100 000				
1980	34·6	82·4	57	22·1
1985	21·1	71·2	25·2	23·9
Death rate per 100 000				
Intestinal infection				
1980	16	75	92	5
1985	6	37	44	2
Nutritional deficiency (1985)	0·5	6·9	6·1	0·3
Ischaemic heart disease				
1980	116	6	64	199
1985	110	4	60	178
Lung cancer (1985)	6·9	5·0	23·1	29·0
Homicide (1985)	10·3	23·7	33	2·8
Suicide (1985)	5·8	2·6	2·9	11·4

The changing face of South Africa



South Africa formerly consisted of four provinces: Cape of Good Hope, Natal, Transvaal, and Orange Free State. These have been replaced by nine new regions—Western Cape, Northern Cape, Eastern Cape, Orange Free State, North-West, KwaZulu/ Natal, Gauteng, Northern Transvaal, and Eastern Transvaal. The country has a total area of 1 221 031 square kilometres (the area of United Kingdom is 245 000 square kilometres). Its neighbours are Namibia in the north west, Botswana and Zimbabwe in the north, and Mozambique and Swaziland in the north east. Lesotho, an independent country, is surrounded by South Africa.

Under apartheid, four "independent" homelands—Bophuthatswana, Ciskei, Transkei, Venda—and six "self governing" territories—Gazankulu, Kangwane, KwaNdebele, Kwazulu, Lebowa, and Qwaque—were created within South Africa. These are now reincorporated into South Africa but are among the most neglected regions.



ANDERS GUNNARTZ/PANOS

Voters queue for South Africa's historic elections

that characterised health services at the peak of apartheid in the 1980s. That a "white" ambulance would go to the site of an accident and pick up a white patient, leaving behind a black patient to die is something that cannot be seen in such statistical data.

The health inequity left by apartheid, however, is not unique to South Africa. It joins a long list of nations where an "economic apartheid" results in the poor missing out on essential health care. South Africa should consider itself more fortunate than many because it now has an opportunity to effect revolutionary changes in its health care, a chance that other countries will envy. How South Africans go about restructuring their health service is of interest to everyone concerned with health care. The measure of their success will be the narrowing of the wide gaps in the health of its racial groups.

A developing country

South Africa's population of about 40 million is expected to double in the next 34 years. It grows 2·2% a year, compared with 2·1% in other developing countries and 0·6% in the developed countries.[4] Three quarters of the population is black, three quarters of whom live in rural areas.[2] South Africa's literacy rate (defined as the percentage of people of 13 years and older who have attained at least Standard 5 schooling) varies betwen 69% in the four provinces (Natal, Cape, Orange Free State, and Transvaal) to 42% in KwaNdebele, a former homeland.[2] Malnutrition, avitaminosis, tuberculosis, and typhoid are major problems here, as in other developing countries.

The rainbow people

The earliest known inhabitants of South Africa were the San (Bushmen) and the Khoi-khoi (Hottentots), who are collectively known as the Khoisan. Bantu speaking tribes arrived in the 11th century; the Europeans came in the middle of the 17th century; Indians and Malays were brought into South Africa in the 19th century. Today the population is around 40 million.

The black people of South Africa may be divided into four groups on the basis of their language. They are the Nguni (Zulu, Xhosa, Swazi, North Ndebele, and South Ndebele), Sotho (Southern Sotho, Northern Sotho, and Tswana), Venda, and Tsonga (or Shangana). They make up about 75% of the population.

The whites are descendants of Dutch, British, German, French, Portuguese, Greek, Italian, and Jewish people. They constitute about 13% of the population.

The coloured people are of mixed parentage—Khoisan, white, Malay, and black—and form 9% of the population.

Asians are mainly of Indian descent and come from various regions of India. They form 3% of the population.

PATHOLOGY OF POVERTY

The pathology of poverty in Baragwanath hospital in Soweto described by one of its physicians, Dr D Blumsohn, could be that in any developing country. "As I work among the pathology of poverty and under nutrition, I see frank malnutrition: unbelievable emaciation due to poverty and underprivilege. I have seen the face of kwashiorkor and shuddered. I see protein-energy malnutrition, vitamin deficiencies—beri-beri, pellagra and scurvy in florid form—deficiency anaemias and cardiomyopathies.... I have seen and see daily the scourge of tuberculosis, a disease of poverty, deprivation, and overcrowding.... I see innumerable young people with cardiac valvular damage consequent on the ravages of rheumatic fever."[5]

Although South Africa has the population growth of a developing country, its gross national product per capita of US$2560 makes it a middle income group country.[6] It also has spectacular natural wealth. Its roads and other communication channels belong to the First World. It has 6·9 people per telephone and 9·5 people per television set; in comparison, Nigeria has 271·5 people per telephone and 31·3 people per television set.[7] Though insufficient in number and maldistributed, South Africa's health care workers are very well trained. If the recent political settlement stabilises further, the future of the health of South Africa seems brighter than that of other developing countries.

Elections and after

The mood of the people in South Africa is a complex mixture of disbelief in the realisation of a dream, hope for a utopian future, and fear that the prevailing peace is a passing phase in their long history of violence and repression. I asked several people if there had been any immediate gains—or losses—after the recent changes. Ralph Kirsch, professor of medicine at the Groote Schuur hospital and a member of the African National Congress said, "We now have a government that has an ethos of welcoming debate. The previous government regarded any debate as criticism and any criticism a vote of dislike. To change the culture from a white male dominant culture to a representative one is a major task."

Similar feelings were expressed by J P de V van Niekerk, Dean of the University of Cape Town Medical School: "The interesting thing is how remarkably smoothly the changes have occurred. Health policy was developed by the African National Congress and the Medical Association of South Africa even before the elections. Everyone had a vision. All the main players were speaking the same sort of language about a comprehensive health service not based on race. These were significant changes in the leaders' minds." William Pick, professor of community medicine at the University of Witwatersrand in Johannesburg, said, "The biggest change that we have seen is the change in attitude. People are much more relaxed with each other."

Restructuring the department of health

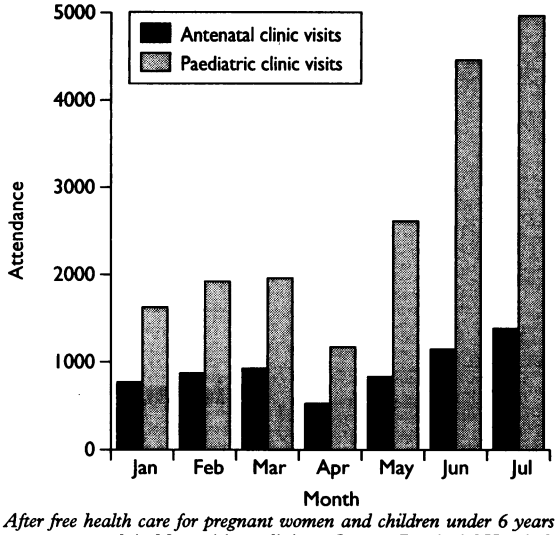
J H O Pretorius, a medical doctor, is deputy director general in the department of health, and one of the two main advisers to the present health minister, Dr

Nkosazana Zuma. He said, "Under the apartheid system health administration was carried out by 14 departments that resulted in much duplication and waste. We now have a central health department and a provincial department for each of the four provinces. This is an immediate benefit of the recent changes." This change is still only on paper and there has been no net financial gain from the reorganisation, which has yet to affect the grass roots. Dr Pretorius hopes that there will be considerable saving of time, money, and effort when the administration is streamlined.

Free health care for pregnant women and children

Daniel Ncayiyana, editor of the *South African Medical Journal*, described other tangible benefits of reorganisation. "The immediate benefit of course has been that pregnant women and children under the age of 6 can have free care. Yesterday I toured the Red Cross hospital for children here in Cape Town, which is the only children's hospital in the whole of South Africa. They have done a liver transplant on a baby and the father was telling me how nice it is that President Mandela made this announcement about free care just before his child needed a transplant because he said he wouldn't otherwise have afforded it. So, yes, there are immediate benefits. I think, however, these are just symbolic benefits. We need more time to feel the effects of the new changes. We also need some indices to mark whether health does improve. We expect that it will."

Elections were held in South Africa on 27-29 April 1994, and President Mandela announced free health care for pregnant women and children under 6 years of age on 24 May 1994. This was followed by an increase in patient visits in small towns also. At Stanger Provincial Hospital in Natal, said Dr Docrat, chief medical superintendent, patient visits to the paediatric clinic nearly doubled in the two months after the announcement, from 2616 in May 1994 to 4967 in July, and visits to the antenatal clinic also increased, from 83 to 1384 (figure). Similar increases were not seen in the other departments, such as orthopaedics, said Dr Docrat. According to Dr Pretorius, the response varied in different parts of the country, from slight to significant—for example, Eastern Transvaal Province had a threefold increase in attendance. As records were maintained for patients under the age of 12, not under 6, many areas lack data to make valid comparisons.



After free health care for pregnant women and children under 6 years was announced, in May, visits to clinics at Stanger Provincial Hospital, Natal, nearly doubled

A change for the worse?

Not all changes are for the better. Even before the elections, hospitals in some regions were affected by several wildcat strikes by health workers other than doctors. These were seen as a part of the struggle against apartheid, but they continued even after the elections and the demands were better pay and working conditions. Said Dr Pretorius, "Many people naïvely thought that there were going to be changes the next day. We have had strikes on a daily basis in our hospitals for months. I wouldn't be able to count them. This has been a frequent phenomenon in most of the provinces. We have had a variety of strikes, some with complete stoppage of work, where patients had to be sent home or transferred. Some were token strikes. They have been very damaging and unacceptable for patient care. We never had strikes in the health services in the past." This could of course have been due to the repressive regimen, which would not have tolerated strikes.

These strikes angered many doctors. Said Dr Docrat, "Pouring out milk, running taps dry, and not feeding patients—including babies—is completely irresponsible behaviour from health care workers." When I spoke to Dr Laljith Dwarkapersad, chief medical superintendent of the King Edward VIII Hospital in Durban, he was still furious about the strike that had traumatised his hospital. He felt that the behaviour of the paramedical staff was completely unethical, inhuman, and destructive: "The staff have become militant, and they are not prepared to take instructions. They do not work like they normally used to. Professionals are not expected to behave as they feel like, and take part in illegal strikes like the ones we have had. We have had strikes at any time of the day, and for minor reasons."

Interestingly, the management of this hospital had decided to democratise the institution a year ago and had formed committees to discuss issues like salaries, pensions, and conditions of work.[8] Radicals soon took over the newly formed Central Workers Forum, which saw more confrontation than discussion. The strike that followed was accompanied by intimidation and threats and dragged on, despite instructions to the contrary from trade unions and the African National Congress.

End of the honeymoon? Striking health workers may have had unrealistic expectations

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Tumultuous honeymoon

These strikes reflect in part the unrealistic expectations of the health workers. Whatever the merits of their demands, it was irrational of them to expect the new government to deliver them in so short a time. These strikes could be due to unrealistic hopes generated by the political events and a representative government, or they could be the reaction to decades of

repression inflicted by the previous regime, or perhaps orchestrated by radical union leaders. Whatever the explanation, they show that the maturity displayed by the South Africans at the time of the elections has not been shown by its striking workers. The honeymoon phase between South African politicians and their electorate is becoming tumultuous and the honeymoon is being threatened.

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Evidence based medicine: an approach to clinical problem-solving

William Rosenberg, Anna Donald

See pp 1126, 1146, 1141 and editorial by Davidoff et al

Doctors within the NHS are confronting major changes at work. While we endeavour to improve the quality of health care, junior doctors' hours have been reduced and the emphasis on continuing medical education has increased. We are confronted by a growing body of information, much of it invalid or irrelevant to clinical practice. This article discusses evidence based medicine, a process of turning clinical problems into questions and then systematically locating, appraising, and using contemporaneous research findings as the basis for clinical decisions. The computerisation of bibliographies and the development of software that permits the rapid location of relevant evidence have made it easier for busy clinicians to make best use of the published literature. Critical appraisal can be used to determine the validity and applicability of the evidence, which is then used to inform clinical decisions. Evidence based medicine can be taught to, and practised by, clinicians at all levels of seniority and can be used to close the gulf between good clinical research and clinical practice. In addition it can help to promote self directed learning and teamwork and produce faster and better doctors.

Doctors must cope with a rapidly changing body of relevant evidence and maximise the quality of medical care despite the reduction in junior doctors' working hours and scarce resources. We are deluged with information, and although much of it is either invalid or irrelevant to clinical practice, an increasing amount comes from powerful investigations such as randomised controlled trials. Yet we continue to base our clinical decisions on increasingly out of date primary training or the overinterpretation of experiences with individual patients,[1] and even dramatically positive results from rigorous clinical studies remain largely unapplied.[2] Doctors need new skills to track down the new types of strong and useful evidence, distinguish it from weak and irrelevant evidence, and put it into practice. In this paper we discuss evidence based medicine, a new framework for clinical problem solving which may help clinicians to meet these challenges.

What is evidence based medicine?

Evidence based medicine is the process of systematically finding, appraising, and using contemporaneous research findings as the basis for clinical decisions. For decades people have been aware of the gaps between research evidence and clinical practice, and the consequences in terms of expensive, ineffective, or even harmful decision making.[3,4] Inexpensive electronic databases and widespread computer literacy now give doctors access to enormous amounts of data. Evidence based medicine is about asking questions, finding and appraising the relevant data, and harnessing that information for everyday clinical practice.

Most readers will recognise that the ideas underlying evidence based medicine are not new. Clinicians identify the questions raised in caring for their patients and consult the literature at least occasionally, if not routinely. The difference with using an explicit, evidence based medicine framework is twofold: it can make consulting and evaluating the literature a relatively simple, routine procedure, and it can make this process workable for clinical teams, as well as for individual clinicians. The term "evidence based medicine" was coined at McMaster Medical School in Canada in the 1980s to label this clinical learning strategy, which people at the school had been developing for over a decade.[5]

Evidence based medicine in practice

Evidence based medicine can be practised in any situation where there is doubt about an aspect of clinical diagnosis, prognosis, or management.

Four steps in evidence based medicine

- Formulate a clear clinical question from a patient's problem
- Search the literature for relevant clinical articles
- Evaluate (critically appraise) the evidence for its validity and usefulness
- Implement useful findings in clinical practice

SETTING THE QUESTION

A 77 year old woman living alone is admitted with non-rheumatic atrial fibrillation and her first bout of mild left ventricular failure, and she responds to digoxin and diuretics. She has a history of well controlled hypertension. An echocardiogram shows moderately impaired left ventricular function. She is an active person and anxious to maintain her independence. During the ward round on the following day a debate ensues about the risks and benefits of offering her long term anticoagulation with warfarin, and rather than defer to seniority or abdicate responsibility to consensus by committee, team members convert the debate into a question: "How does her risk of embolic stroke, if we don't give her anticoagulant drugs, compare with her risk of serious haemorrhage and stroke if we do?"

The questions that initiate evidence based medicine can relate to diagnosis, prognosis, treatment, iatro-

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