Reflections on South African medical education

Paul Alters sits down anxiously at the small table. This will be his first consultation since arriving at the mission clinic in the rural area of the Suurveldt. Will he be able to cope as the only doctor in the region?

The previous night he had been talking to Sister Euphemia at the dinner table about the patients who normally attend the clinic - the 'TBs', 'VDs', the severely malnourished geriatrics, the occasional patient with difficult-to-diagnose leprosy, the diabetics having difficulty with dietary control, the dehydrated babies, the desperate, 'irreversibly' infertile young woman, the stroke victims with nobody to care for them and even the three AIDS patients they saw the previous month.

As the night proceeded, they had also discussed the problem of 'epidemic' teenage pregnancy and alcoholism in the area, the need for him to attend to the water-borne illnesses associated with the pit-privies which contaminated the extremely high water tables and open wells, and the meeting he was to have with the traditional healers, scheduled for the next day. He has also to develop the sorely neglected health education and prevention programme in the area. Will he be able to cope? Where are his Community Health and Family Medicine teachers now that he needs them? He has his trusty Merck Manual at his side. It has helped him through all the years at medical school and in the wards. Now he doubts whether 'Merck' has ever heard of water-logged pit-privies!

Paul had completed his degree at Wits, then after doing house-jobs at Coronation Hospital, he had 'done' medicine, paediatrics and gynaecology at the Johannesburg Hospital. Surely this training, which is recognised around the world as being amongst the best, will enable him to cope with problems closer to home.....

The Alma Ata Declaration of the World Health Organisation (WHO) and Unicef to achieve "health for all by the year 2000" was a challenge to the medical schools of the world to ensure that the education they offer is relevant to the health needs of the societies they serve. I believe that most of the faculty boards of our medical schools have not seriously addressed this issue through adequate evaluation of the health needs of the majority of the people of Southern Africa. This does not suggest, though, that some departments have been tardy in this regard.

What are some of these health needs which should be addressed by the medical schools, especially for undergraduate education?

The need to understand and control factors affecting one's health

The role of doctors in illness is much easier to define than their role in health promotion and education. The role that the profession has created for itself has little to do with health but a lot to do with medical intervention when disease occurs. As Morgan (1) has written, "the depth of illness treated rather than the heights of health promoted, have traditionally measured the physician's prestige". Patient education, particularly, is a sorely neglected area in the undergraduate medical curriculum. This is particularly important as society itself may not perceive health education and promotion as a priority.

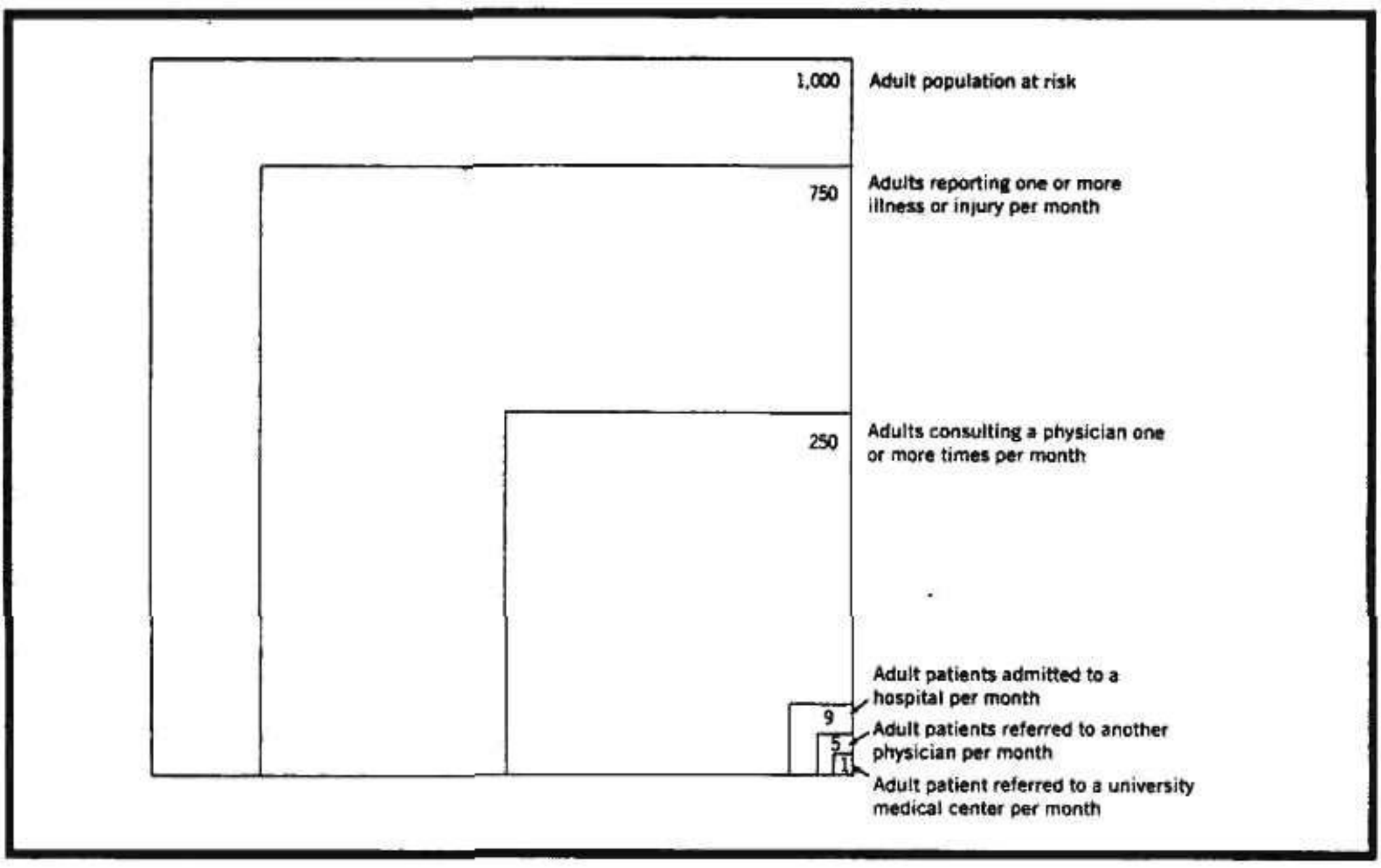


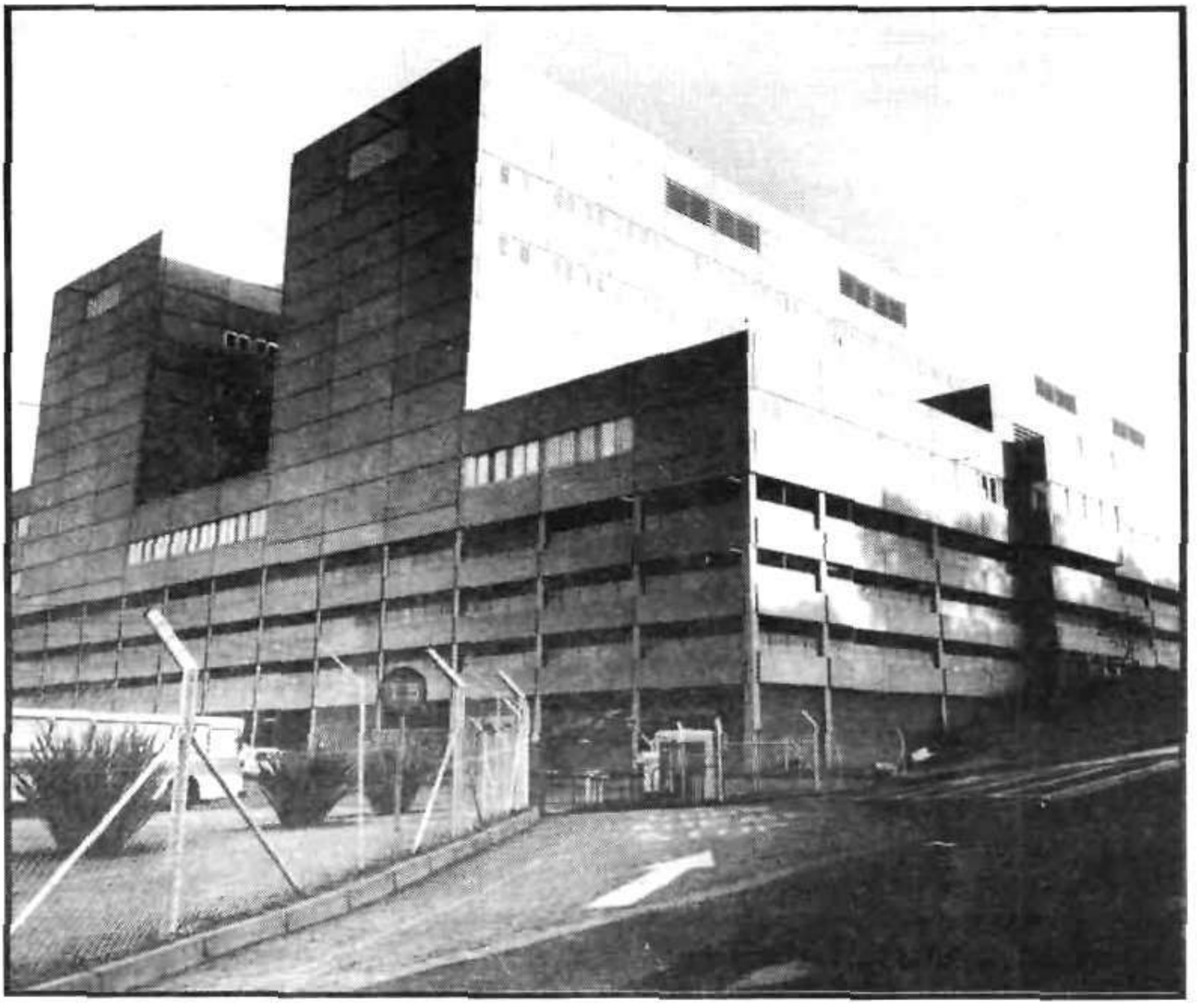
Fig 1: Prevalence of illness and utilisation of medical resources among 1 000 adults in the United States and Great Britain (from White, Williams, and Greenberg, 1961)

White et al (2) have studied the utilisation of health services in the United States and Great Britain (Figure 1). One significant aspect of this study indicates that 500 of the 750 adults with illnesses or injuries in a month, (i e half of the adult population over the age of 16 years) were assessing and managing their problems without the assistance of health professionals. The consultation rate in South Africa

is probably less than 1 in 4, so possibly the number practising self-help is much greater. Our students are, in general, not taught the skills and attitudes required for patient education. One only has to listen to our medical experts on 'Radio Today' to realise that their vocabulary is inappropriate to a non-medically orientated audience!

The need for access to personalized, safe, efficient and effective health care geared towards common problems

Access to health care includes not only physical access, but also attitudinal acceptance by health personnel. Such access should not be tempered by prejudice or discrimination of any kind. In South Africa, however, access to primary care is still largely racially and economically determined.



Most of the medical student's training occurs in teaching hospitals although only a very small percentage of the adult population reach these facilities

Disease	Number of years
Meckel's diverticulum	1
Pyloric stenosis (boy)	4
Congenital heart	5
Spina bifida	6
Klinefelters	10
Intussusception	12
Hydrocephalus	12
Cleft palate and hare lip	12
Cystinuria	15
Mongol	16
Pyloric stenosis (girl)	19
Cot death	20
Anencephaly	25
Hypospadias	25
Congenital dislocation of the hip	37
Fibrocystic disease of the pancreas	37
Encephalocoele	50
Cleft palate alone	62
Oesophageal atresia	75
Exomphalos	80
Renal agenesis	87
Pseudocholinesterase deficiency	120
Imperforate anus	120
Situs inversus	180
Intestinal atresia	240
Phenylketonuria	240
Muscular dystrophy	480
Cri du chat syndrome	480
Achondroplasia	480
Haemophilia	600
Hirschsprung's disease	600
Pierre Robin syndrome	720
Retinoblastoma	825
Waardenburg's syndrome	1050
Pentosuria	1200
Ectopia vesicae	1200
Osteogenesis imperfecta	1200
Galactosaemia	1725
Fructosuria	2400
Mucopolysaccharidosis	2400
Retinitis pigmentosa	2400
Maple syrup urine disease	6250
Glycogen storage disease	7000
Wilson's disease	100 000
Double penis	137 000

Fig 2: Expected number of years in which one new case will enter an average general practice of 2 500 patients

Safety, efficiency and effectiveness of health care are primarily dependent on the standards and scope of health care training. Undergraduate medical training occurs mainly in teaching hospitals, and yet, according to White et al (2), only 0.1% of the adult population reach these facilities. These patients are usually the elderly, chronically ill, or those with exotic or gross signs and symptoms. In South Africa most children attending the white teaching hospitals are in the chronic and exotic category. The early undifferentiated illnesses, venereal diseases, family and social problems and problems affecting working people, which in all account for 25% of the adult population in the United Kingdom, are seen in the community by generalists. The figures for this country may well be similar.

The content of training medical undergraduates also requires analysis. Students are shown patients with rare diseases and are provided with theoretical training which is often inappropriate. Few students would fail a question on Wilson's disease, or pass a simple test on Rubella (German measles), and yet it would take about 100 000 years for a new case of Wilson's disease to be detected in a practice of 2 500 patients (Figure 2). The table also shows the incidence of many rare conditions which are stressed in the curriculum as if they were commonplace in the community.

Holistic care involves sensitivity to patients' psychological and social needs as well as attention to their physical problems

It must not be assumed from the above that clinical acumen and standards and an understanding of the pathogenesis of diseases should be discarded in favour of socially orientated problems and conditions. More time and teaching should be allocated to the conditions that affect the majority of our people! It is interesting to note that about half of South African graduates enter Family Medicine, either in private practice or clinics, and yet there is only limited exposure to the discipline. At Wits each student spends only seven and a half days of their entire six years in Family Medicine! Cape Town and Durban universities have still to establish chairs in Family Medicine.

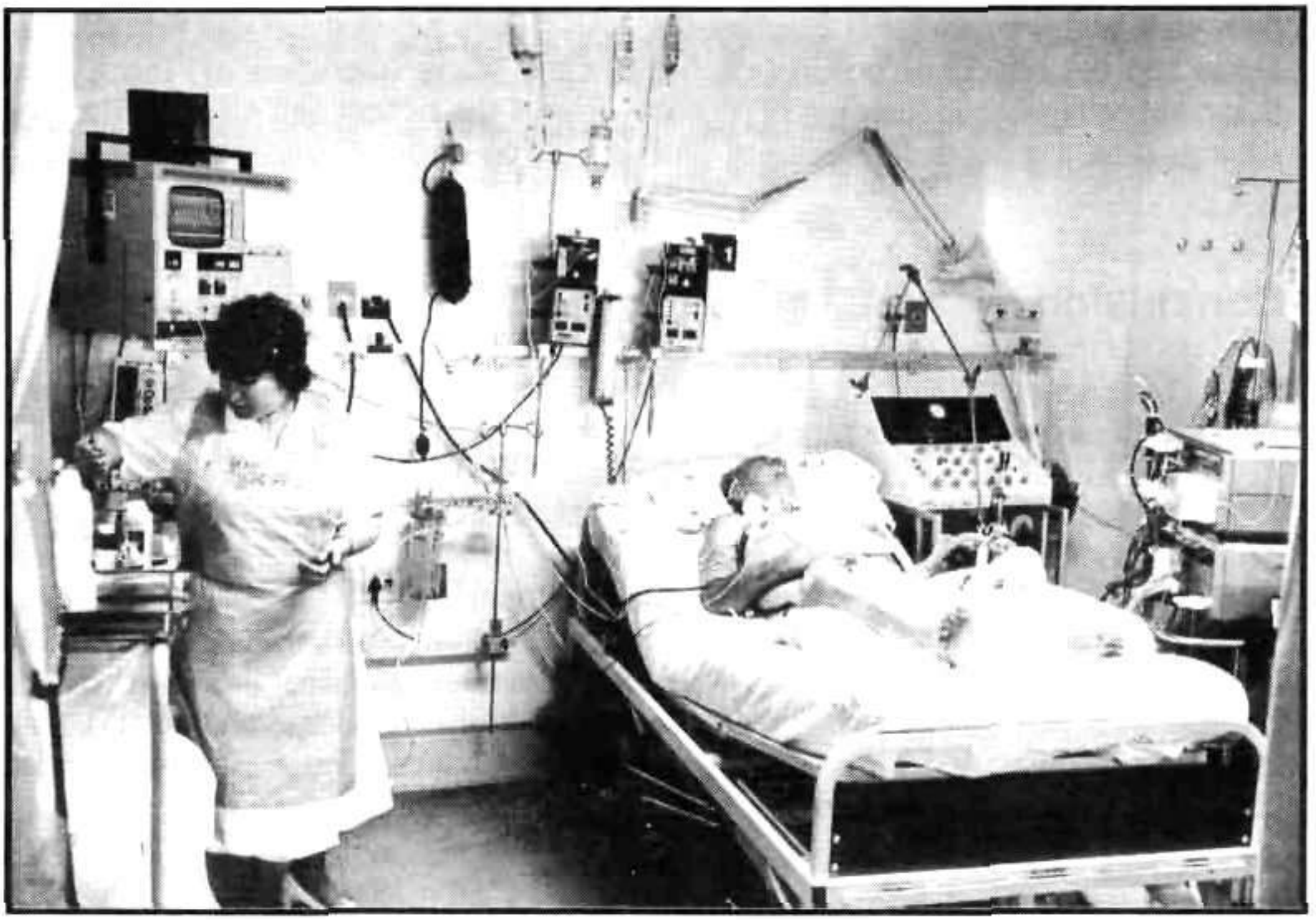
The curriculum should place greater emphasis on producing appropriately trained primary care generalists who can work in integrated teams within the community, instead of a plethora of specialists who aggregate around high-technology hospitals. Unfortunately, the predominant exposure to specialists sets role models for the students to follow. This primary care training should take place in the community. Verby et al (3) have said that "learning primary care medicine in a university is like trying to learn forestry in a lumberyard".

The need to be trained as a whole person through personalized care

Every person who is ill, or who believes him/herself to be ill, wishes to be treated with dignity, confidentiality and caring through personalized consultation with a health worker whom s/he trusts.

Holistic care encompasses physical, psychological, social and spiritual aspects of health. This can only be achieved if one takes the time to discuss these aspects with the patient. It also requires the practitioner to understand the family influences on the illness or problem. These perspectives are difficult to achieve in our fragmented specialized clinics and hospitals. It is also a problem facing overburdened 'primary care clinics' where the load of patients is said to preclude continuity and holistic care.

I believe that with the proper training ALL doctors, wherever they are, can be more sensitive to these issues. Some have suggested that this can be overcome by teams of health workers in practices with whom the patient can identify. However, no one wishes to be treated by a team; one needs an individual whom one can trust and with whom one can share one's innermost thoughts. This moment of sharing and trust is the consultation, the basis of any doctor-patient interaction. The tragedy is that students are taught how to take a history and conduct an examination (often of single systems) but are rarely taught the consultative process and the essentials of patient-centredness.



Families may be devastated by the illness of a relative. Doctors should be taught skills to enable them to cope with these situations

The need for a happy, well-adjusted healthy family

The burden of a physically, or psychologically ill family member can have devastating effects on a family. Bereavement, too, can have far reaching effects on survivors. Every patient who consults a doctor is admitting that he or she is not as self-sufficient as before and is usually fearful of the outcome of the meeting.

The student who has to cope with individual and family problems requires a knowledge of the elements of general systems theory, family dynamics, sociology, psychology, the family life cycle, deviant behaviour and many other aspects of the behavioural sciences. Unfortunately, too few students have a working knowledge of these aspects nor do they have counselling skills. Some have 'done' basic courses in first year as soft options. There has been very little input from the medical school departments to establish some clinical relevance for these subjects, nor has there been extension into the subsequent years.

Words such as 'community', 'family' and 'psycho-social' are met with groans and grimaces. Mennin et al (4) have observed that "in traditional curricula many students skim over the psychological aspects of case problems in the classroom. But when the students are involved with the care of real patients in the community,

then they become genuinely engrossed in such issues as occupational health, child abuse and the effects of poverty on health care. Many (members of) faculty feel that community-based learning is probably one of the richest and most challenging settings for applying the elements of problem-based learning".

Conclusion

In this brief article I have not attempted to address the many other aspects of health needs such as housing, sanitation, feeding, water, mental health nor the GOBIFFF (growth monitoring, oral rehydration therapy, breast-feeding, immunisation, family spacing, female health education and food supplementation) strategies relating to child health. These aspects are of great importance too and are also given little or no place in the present medical curriculum. My personal preference would be for a problem-orientated programme and appropriate community-based education. Our medical schools must seriously address these issues for the sake of the communities they serve. This should occur at both undergraduate and postgraduate levels. Unfortunately, as someone once said, "to change a medical curriculum is like trying to move all the graveyards of England".

..... Paul looks out to the open door and the courtyard beyond. Shuffling towards the door is an elderly man in tattered clothes. He has obvious Parkinson's disease. This Paul can handle .... or can he?

References

1 Morgan P P; *Health Education and Risk Assessment: A New Role for the Physicians in Primary Prevention.* Can Med Assoc Journal;19:623-6.
2 Kerr White L, Williams T F, Greenberg B C; *The Ecology of Medical Care.* N. Engl J Med, 1961;265:885.
3 Verby J E, Schaefer M T, Voeks R S; *Learning Forestry out of a Lumberyard.* JAMA, 1981;246:645-7.
4. Mennin S P, Woodside W F, Bernstein E, Kantrowitz M, Kaufman A; *University of New Mexico, USA: Primary Care Curriculum.* In: Innovative Tracks at Established Institutions for the Education of Health Personnel. Geneva:WHO,1987:149-176.

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