Trends in the distribution of South African health care expenditure

D. E. McINTYRE, R. E. DORRINGTON

Summary

The lack of critical distinction between the public and the private health sectors and what they represent has allowed the claim to be made that South African health care expenditure levels compare favourably with international standards. This paper considers the distribution of health expenditure between the public and the private sectors in South Africa, within these sectors and also on the basis of population group.

The extent of maldistribution of health care resources among the people of South Africa is highlighted. The data analysed in this paper indicate that an increasing proportion of public sector expenditure has been spent on curative services, that the gap in real per capita expenditure between the 'homelands' and other public sector departments has been widening, and that per capita expenditure has been increasing more rapidly in the private sector than in the public sector, particularly in the 1980s.

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An understanding of past health care expenditure patterns is a prerequisite to any meaningful debate about future health care provision. In this study, health care expenditure data for the years 1971-1988 are collated and analysed, highlighting the distribution of expenditure by sector and population group.

A more detailed presentation and analysis can be found in the original conference paper,[1] while the methodology employed in deriving the public sector figures is described in a recent Health Economics Unit Working Paper.[2]

Definition of terms

Expenditure in this paper refers to health care expenditure in South Africa (including Transkei, Bophuthatswana, Venda and Ciskei). All real expenditure figures are expressed in terms of 1988 prices.

The name of the Central government department responsible for health services has changed a number of times in the past 2 decades. In this paper it will be referred to by its present name, the Department of National Health and Population Development.

The 'three tiers' of government refer to central government (tricameral parliament), provincial administration and local government (local authorities and divisional councils/regional services councils) respectively. 'Other' central government departments refers to the departments of defence, police and prisons.

Health Economics Unit, Department of Community Health, University of Cape Town
D. E. McINTYRE, B.COM., B.A. HONS, M.A.
Department of Business Science, University of Cape Town
R. E. DORRINGTON, B.A., B.COM., B.SC. HONS, A.S.A., E.I.A.

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The term 'homelands' is used to denote the 'independent black states' (i.e. Transkei, Bophuthatswana, Venda and Ciskei) and the 'self-governing black states'.

In considering the maldistribution of health care expenditure, it was necessary to use the terms 'whites', 'coloureds', 'Asians' and 'blacks'.* However, we would endorse the World Health Organisation's disclaimer in this regard: 'In South Africa, social, economic and political institutions are so structured by an all-pervasive racist ideology and practice that they have material effects on the incidence of disease and the provision of health care. It is therefore impossible to describe the daily reality for millions of South Africans in any other way, and such terms as "black", "white" and "coloured" cannot be avoided in this report. Their use, however, does not imply the legitimacy of racist terminology.'[3]

The 'services' refer to the Defence Force, the South African Police, the Prisons Department and Transnet.

Methodology

Public sector

Expenditure data for the first and second tiers of government were derived from some 600 Auditor-General reports and estimates of expenditure[4-7] and in the case of the third tier of government, from data compiled by the Central Statistical Services.[8-9] An attempt was made to include all expenditure relating to the provision of health services in the public sector. Certain 'hidden costs' that were not taken into account in previous studies,[10,11] such as central government's contributions to pension funds and housing subsidies, were accounted for.

Transfers between 'cost centres' within the public sector were deducted from the account of origin in order to avoid double counting. Income from the private sector (e.g. patient fees) was deducted from the public sector cost centre to obtain net public sector expenditure.

The 'homelands' include expenditure by the South African Development Trust and by the Department of Education and Training in respect of Ga-Rankuwa Hospital.

All public sector expenditure is reported in terms of financial years. To achieve comparability with private sector figures, public sector expenditure was converted to calendar years by taking one-quarter of one year's figure plus three-quarters of the subsequent year's expenditure.

Private sector

The only published source of national private sector health care expenditure is the Reserve Bank's estimate of private consumption expenditure on medical goods and services.[12] These data have been used as a proxy measure of private health care expenditure despite some apparent deficiencies,[13] which are discussed later in this paper.

* The authors used the term 'African' in order to distinguish it from the combination of the last three population groups mentioned above, but it is editorial policy to use the official terminology when referring to population groups.

The Reserve Bank's estimate of private consumption expenditure covers the rand monetary area, and thus the portion attributable to Namibia[14] has been excluded.

The analysis according to activity within the private medical scheme sector was based on data derived mainly from the reports of the Registrar of Medical Schemes and the reports of the Department of Health in the earlier years.[15]

Other data sources

Mid-year population estimates for the years 1970, 1980 and 1985 were derived from the most recent Human Sciences Research Council estimates (coloureds, Asians and whites;[16] blacks[17]). Other years were estimated by exponential interpolation or extrapolation. It should be noted that these figures include estimates of the population in the so-called 'TBVC countries'.

The consumer price index (CPI)[12] was used in this analysis because the medical price index (MPI) not only covers a very restricted and selective 'basket' of goods and services but has not been a consistent measure over the period under review.

Estimates of the gross national product (GNP)[12] were adjusted to exclude Namibia.[14]

Methodological note

Caution should be exercised when comparing the following results with those of other studies. Few of these studies include a detailed account of their methodology. In the case of international comparisons, it is likely that the methodologies used and the quality of the data on which they have been based may differ substantially from that used in this study.

Results and analysis

Table I outlines total expenditure figures in 1987, the most recent year for which reliable subdivisions of expenditure are available.

TABLE I. TOTAL SOUTH AFRICAN HEALTH CARE EXPENDITURE, 1987

	R million	%
Public sector		
Central departments	822,6	15,8
Provincial administrations	2 870,7	55,2
Local authorities	306,1	5,9
Homelands	883,6	17,0
Other departments	313,6	6,0
Total public	5 196,6	56,4
Private sector		
Medical schemes (excluding 'services')	2 690,9	67,0
'Services' (approx.)	378,3	9,4
Non-scheme (approx.)	949,8	23,6
Total private	4 019,0	43,6
Total health expenditure	9 215,6	
% of GNP	5,8%	

In the public sector, the provincial admininstrations were responsible for 55% of health care expenditure, the 'homelands' for 17% and the four central government departments of health for nearly 16%. (The departments of defence, police and prisons account for 6% of expenditure, about the same as that consumed by local government.)

When health departments in the three tiers of South African government were considered separately (i.e. excluding 'homelands' and the 'other' departments), the provincial administrations were the most financially powerful, particularly since the devolution of certain services in the late 1980s, and accounted for approximately 77% of health expenditure by the three tiers in 1988. Central government departments accounted for 15% of this total and local government for 8% in the same year.

These figures give some indication of relative expenditure on preventive and curative services. At present, the provincial administrations are largely responsible for curative hospital-based services and the financial resources that have been placed at their disposal indicate the emphasis placed on curative services in South Africa as opposed to preventive and promotive health services.

The bulk of private health care expenditure (approximately 76%) was attributable to medical schemes; 43% of this was spent on general practitioners, specialists and dentists, 25% on medicines and 20% on hospitalisation.

Health care expenditure as a proportion of the GNP

Health care expenditure as a proportion of the GNP is an indicator frequently used for the purposes of international comparison. This proportion has increased from 4,8% in 1971 to a peak of 5,9% in 1986 (Fig. 1). Health care expenditure in the public sector followed a similar trend to the total, increasing from 2,7% of the GNP in 1971 to a peak of 3,3% in 1986. It decreased marginally since then to 3,2% of the GNP in 1988. Private sector health care expenditure increased from 2,1% of the GNP in 1971 to 2,6% in 1988. Unlike the public sector, this proportion has increased fairly constantly since 1981.

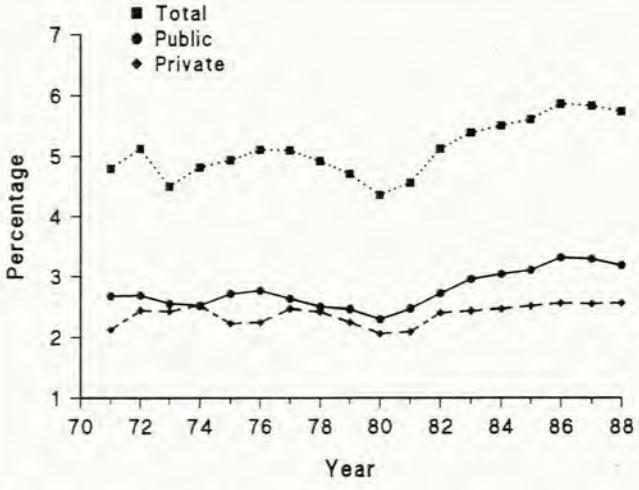

Fig. 1. Expenditure as % of GNP.

There are clearly many problems associated with this indicator, since GNP per capita can fluctuate significantly. This is demonstrated by the increase in health care expenditure as a proportion of the GNP from 1981 to 1986, which was not only a result of an increase in real per capita health care expenditure but, more significantly, was related to a rapid decrease in real per capita GNP.

Real per capita expenditure (expressed in terms of 1988 prices)

An analysis of health care expenditure is more meaningful if

the effects of demographic changes and inflation are removed, i.e. if real per capita expenditure trends are considered.

Total real per capita health care expenditure increased from R207,80 p.a. in 1971 to R283,65 in 1988 with a peak of R299,95 p.a. in 1984 (Fig. 2). The real growth over this period was thus approximately 37% with an average annual real increase of 5% from 1979 to 1984 but an average annual real decrease of nearly 1,4% thereafter.

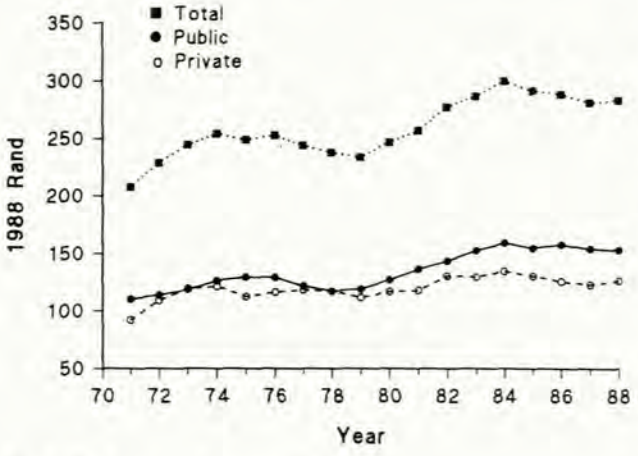

Fig. 2. Real per capita expenditure.

Both public and private expenditure followed similar trends with a peak in 1984, but the decline in the private sector per capita expenditure since then was less marked.

Real per capita expenditure — public sector

For the purposes of this analysis, it has been assumed that central, provincial and local government expenditure only covered the 'provincial population'. Data on 'cross-boundary' movements, particularly from the 'homelands', to utilise health care facilities outside of the respective residential boundaries, were not available but may be expected to have been significant.

The trends in public sector expenditure can be summarised as follows:

1. The devolution of certain services to the provincial administrations resulted in a dramatic increase in real per capita provincial expenditure in 1988, mirrored by a decrease of similar proportions in central government expenditure.

2. Growth in per capita expenditure has been substantially higher in the provincial administration than in any other department. This once again demonstrates the relative emphasis placed on curative health services in South Africa.

3. The 'homelands' experienced the lowest growth in per capita expenditure (an average of 2,3% p.a. since 1971 compared with 2,6% in the three tiers of South African government). In fact, there was an average annual decrease of approximately 4% since 1984. The gap between real per capita expenditure in the 'homelands' and the rest of South Africa increased from R118,55 in 1971 to R170,54 in 1988.

Real per capita expenditure — private sector

The most remarkable feature in the private sector was the growth in per capita expenditure by members of medical schemes from R318,43 p.a. in 1971 to R554,58 p.a. in 1987. This represents an average real growth rate of 3,5% p.a. (approximately 7,3% p.a. since 1982).

Since, according to the Reserve Bank's estimates, private consumption expenditure on medical goods and services remained fairly constant from 1982 to 1988, the corollary of this trend would be an unlikely decrease in real per capita expenditure by those who were not members of medical schemes. If the Reserve Bank figures are to be believed, and they appear to be consistent with various surveys of household expenditure,[15] in 1987 real private expenditure by people without medical scheme cover was only 56,6% per capita of what it was in 1982.

Three important trends emerge from an analysis of medical schemes expenditure data:

1. Per capita expenditure on general practitioner, specialist and dental services has increased in real terms over the period under review by at least 20% for each category. Real per capita expenditure increased most rapidly for dental services, at an average rate of approximately 4,4% p.a.

2. The growth in expenditure on hospitals and medicines followed a similar pattern to that above until 1981, but rose more rapidly thereafter. In the case of medicines, the real increase was more than 49% between 1981 and 1987, whereas for hospitals it was over 87%, which reflects an average real increase of 11% p.a.

3. Real per capita administrative expenditure fell slightly for most of the period under review but increased by almost 2,5% p.a. since 1983 — the year the number of beneficiaries started to fall.

Schemes coverage

Medical scheme expenditure constituted about 76% of private health care expenditure inclusive of members of the 'services'. It is thus informative to examine trends in the proportion of the population covered by medical schemes (Fig. 3).

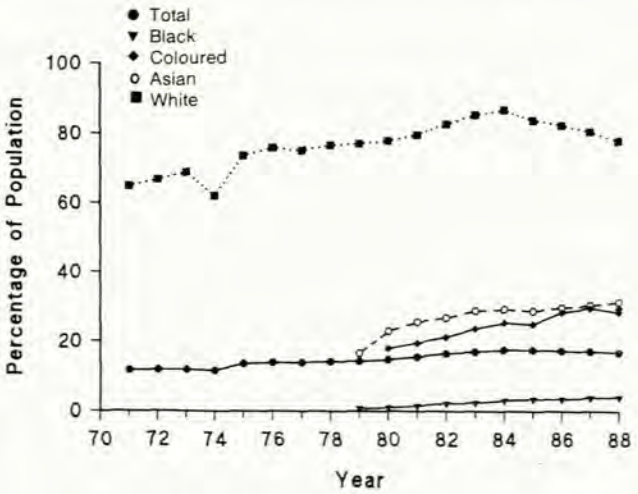

Fig. 3. Proportion covered by medical schemes.

The proportion of the total population covered by medical schemes peaked at 17,6% in 1983 and fell to 16,9% by 1987. This was mainly due to the significant decline in the proportion of whites covered from approximately 87% in 1983 to 78% in 1987.

Although coverage of the other population groups increased, there seems to have been a levelling off at around 30% for Asians and coloureds from 1984. Coverage of the black population was slightly over 4% in 1987 but showed the greatest increase since 1978. Blacks represented only 4% of the total scheme membership in 1978, but this proportion increased to 18% by 1987.

Discussion

Public sector

Considering the overall picture for the public sector, there was a positive real growth in expenditure since 1971. There may be three possible explanations for this real growth in expenditure:

1. The CPI may not adequately reflect the increase in public sector health care costs. This requires further investigation and there is a need for the development of an accurate MPI.

2. The growth in expenditure may reflect an increase in health services provided by these departments in response to increasing demands placed upon them due to demographic changes, rapid urbanisation and other factors. It is necessary to develop health service utilisation and health status indicators in order to consider this possibility fully.

3. Some of these increases may be directly attributable to the costs arising from the fragmentation and duplication of health services. Since the introduction of the tricameral parliamentary system which resulted in the formation of three additional departments of health at central government level, real health care expenditure in the first tier has increased by 5,9% p.a. The relevant health administration expenditure has been increasing at an average rate of 8,5% p.a. in real terms. This is substantially higher than the average real rate of increase of 3,5% p.a. before the introduction of the tricameral parliament, suggesting that the fragmentation of health services may account for some of the real increases in public sector expenditure.

Private sector

We have very little confidence in the accuracy of the overall private sector estimate provided by the Reserve Bank. It is, for example, very unlikely that real per capita expenditure by the non-medical scheme population would have fallen as substantially as the Reserve Bank estimates suggest. Overall private sector expenditure appears to have increased by a suspiciously similar proportion to expenditure in the public sector. Real per capita expenditure in the public sector increased by an average of 2% p.a. between 1971 and 1987 and by 1,8% p.a. in the private sector. This is particularly surprising in view of the rapid growth in the private hospital industry during this period as reflected in the Registrar of Medical Schemes data: real per capita expenditure by medical scheme members increased by an average of 3,5% p.a. during the same period.

Because the data obtained from the Registrar of Medical Schemes are more reliable, we can comment on some of the private sector trends based on this data. Firstly, real increases in per capita expenditure on general practitioners, specialists and particularly dentists have been maintained in the 1980s. Secondly, there has been a spectacular increase in real per capita expenditure on hospitals. This probably reflects the increasing use of private hospitals and reinforces our suspicions about the Reserve Bank estimates.

Maldistribution

The weighted average of the per capita expenditure by population group was calculated based on the assumption that each category of expenditure could be equally apportioned among the population groups covered by these categories (Table II). The ratio of black to white expenditure was 1:4,3. Even if it was assumed that members of medical schemes made no claim on public expenditure, the ratio of black to white per capita expenditure would have been 1:3,4.

TABLE II. PER CAPITA HEALTH CARE EXPENDITURE BY POPULATION GROWTH, 1987

Group	Rands p.a.
Blacks	**137,84**
Coloureds	**340,16**
Asians	**356,24**
Whites	**597,11**

The implication of the maldistribution is that although health care expenditure amounted to approximately 5,7% of the GNP in 1988, the proportion spent on whites was equivalent to 13 - 14% of the GNP, which is higher than the average in the USA, while that spent on blacks was equivalent to 3 - 3,5% of the GNP. This is well below the WHO target of 5%.

This maldistribution reflects to some extent the unequal distribution between the private and the public sectors. In 1987 per capita expenditure on the population covered by the public sector was R158,76 and that for private medical scheme members was R554,58. It is worth noting in this context that the public sector provides 80% of the hospital beds[15] and services to approximately 80% of the population, yet only 56% of total health care expenditure is attributable to this sector.

Although these figures should be used with caution, they indicate clearly that it is inadequate simply to cite the proportion of GNP spent on health care, as the majority of recent studies have done. It is also necessary to analyse the unequal distribution of those resources.

A case in point is a recent publication of the Department of National Health and Population Development in which it is stated: 'In 1985/86 South Africa spent 5,4% of its GNP on health. This figure is already above the WHO target of 5% for the year 2000.'[19] The implication is clear: South Africa is doing relatively well in the health arena.

We should, in fact, ask whether public sector health care expenditure of 3,2% of GNP (1988) is 'acceptable' for the provision of health services to 80% of the population. This question is particularly pertinent if the maldistribution *within* this sector are considered. As previously indicated, the vast majority of resources are devoted to curative, hospital-based health services. Despite the existence of significant 'cross-boundary' flows, provincial-based services are not available to a considerable portion of 'homelands' residents, who must utilise the relatively underfunded services provided by 'homelands' authorities.

Conclusion

While real per capita health care expenditure increased in both the public and the private sectors since 1971, the maldistribution of financial resources remained substantial. There was a tendency in the public sector to devote a progressively greater proportion of financial resources to curative services (through the provincial administrations). The increase in real per capita expenditure was lower in the 'homelands' than in any other public sector health department, which increased the gap between the 'homelands' and the rest of South Africa in real per capita terms.

There is a need for accurate data on private sector health care expenditure. It is possible that private sector expenditure exceeded the estimate of 44% of the total health care expenditure and that per capita expenditure has increased more rapidly than in the public sector, particularly in the 1980s.

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