
Policy Brief: How pro-poor is the South African Health System?

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KEYWORDS: FISCAL INCIDENCE, SOUTH AFRICA, HEALTH
JEL: H51, I18

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Policy Brief: How pro-poor is the South African Health System?ⁱ

Ronelle Burgerⁱⁱ

ABSTRACT

This chapter investigates how effective recent changes in the South African public health care system have been in transforming the inequitable system inherited from the apartheid-era government. How has post-apartheid budget reallocations, decentralisation, the elimination of primary health care user fees and expansion of the network of clinics changed the incidence of spending and the quality of services provided? Have these changes benefited the poor?

The results from research conducted indicate that the distribution of health spending on hospitals and clinics is driven by utilisation patterns. The decision by the affluent to opt-out of the public health system means that the most affluent receive a dramatically smaller proportion of the budget than the rest. There is, however, not much evidence of pro-poor targeting for the rest of the income distribution. However, in terms of spending equity, South Africa compares well with other developing countries.

It is clear that health services have become more accessible and more affordable for the poor. Yet, the government is still far from achieving universal access and the desired degree of equity. In addition, there are concerns regarding the quality of services provided by public sector clinics and hospitals. Dissatisfaction among users of public sector services has increased and complaints include long waiting times, staff rudeness and problems with the availability of drugs.

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1. Introduction

There are three possible sources of inequity in health, namely funding, delivery and health status (McIntyre, 1997). Whereas the first two dimensions of inequity clearly relate to health services, the last dimension is considerably broader and is also influenced by factors outside the scope of health services including the individual's environment, lifestyle choices, occupational safety, health knowledge and genetics.

The focus of this chapter is an investigation of how pro-poor the South African public health system is. It looks at the first and second dimension of equity as outlined above. Although public sector health care is clearly influenced by and linked to the private health care provision, this chapter focuses solely on the public health system.

There is substantive research on regional bias of public health spending, but few have attempted a thorough analysis of the fiscal incidence of the government's health expenditure. This is partly due to lack of appropriate data. Admittedly, the household surveys available for this analysis have their flaws, but by making a few reasonably innocuous assumptions the data can be used to provide an indication of how pro-poor the public health system is in South Africa.ⁱⁱⁱ Previous studies asking the same question used the 1993 Project for Statistics on Living Standards and Development survey, which is not suitable for this analysis because it fails to distinguish between private and public health services.

2. Equity in Health Funding

A key question in assessing equity in health funding is how big a share of government spending on health is allocated to the poor? Previous studies^{iv} in other countries have found that it is common for public health systems to exhibit an anti-poor bias, which stems mainly from two causes.

Firstly, the unit cost of service provision to the poor can be lower. Unit costs for an income group may be lower if the income group is likely to use less expensive services (e.g. immunisation instead of expensive specialized operations) or because the income group tends to live in areas where the average cost of service provision is lower (e.g. income groups that have a tendency to live in more densely populated areas where service delivery may be less expensive due to economics of scale). Secondly, poor households could use public health services less frequently due to structural factors, longer travel time to health facilities or because poor households are not as well informed about the availability of health care services.

2.1 Examining Differences in Unit Costs

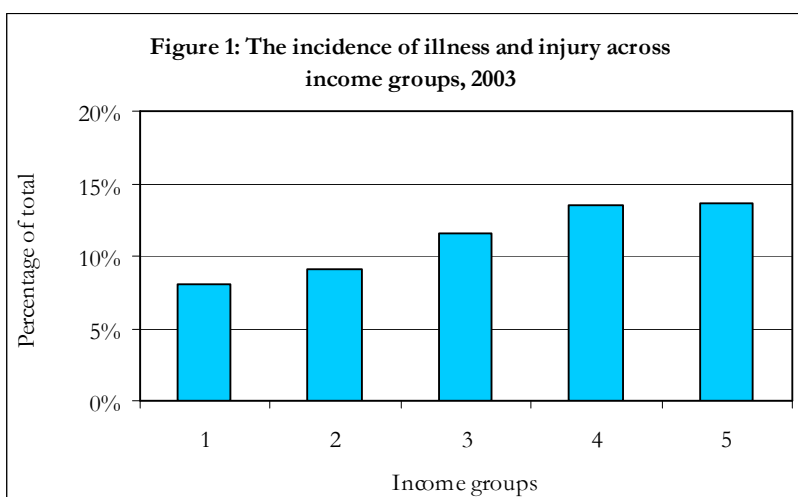
To investigate the first source of spending bias, the average cost per visit for hospitals and clinics were compared per province. This aggregation may mask important cost patterns within provinces, however the administrative data available do not allow for a more detailed analysis. There are large inter-provincial differences in the average cost per visit for hospitals^v and clinics^{vi}, but there is little evidence of an anti-poor bias in unit costs. When provincial unit costs are used to calculate average unit costs for five constructed income groups^{vii} of equal size, the differences in cost are significant. The analysis shows that it is not necessarily the provinces where most of the poorer households reside that have the lowest average expenditure per visit^{viii}. The findings provided no evidence of systematic variations in the unit cost of health services and hence the rest of the chapter assumes equal unit costs. Although neither the assumption made nor the data source used in the analysis here is infallible, it is to the author's knowledge the most appropriate data source and the soundest feasible empirical method available for estimating anti-poor bias in unit cost.

2.2 Examining Differences in Utilisation Patterns

The second source of anti-poor bias in spending is studied by examining how utilisation patterns vary across income groups. The household surveys available for such analysis^x only track the health care visits of individuals who reported being ill or injured. Preventative care and facility visits by pregnant mothers are thus excluded.

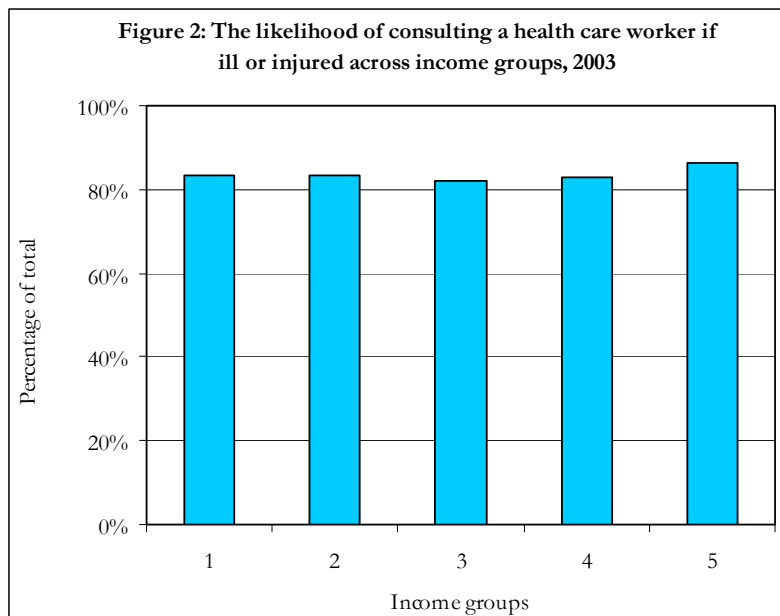
The survey shows that individuals from poor households are less likely to complain of being ill or injured (Figure 1). This tendency has been documented in previous studies. Demery^x attributes this result to what he calls 'perception bias.' It appears that individuals from different income groups may have very different ideas of what it involves to be ill or injured. The threshold level of pain, discomfort and health risk associated with terms such as 'illness' and 'injury' may be higher for individuals from poor households.^{xi} This interpretation is supported by another pattern identified in the survey. A very high proportion of individuals from affluent households that reported being ill or injured, indicated they did not consult a health worker because it was not considered necessary, which suggests that the illness was possibly not serious. Far fewer individuals from poor households (who reported being ill or injured) reported not seeking advice from a health worker because the illness or injury did not warrant it. This apparent discrepancy in the understanding and use of the terms 'illness' and 'injury' complicate the analysis of the likelihood to consult a health worker when ill or injured, but will not affect the investigation of the utilisation shares of income groups (where the denominator is the whole income group and not just those reporting illness and injury).

Partly due at least to the definition problems outlined above, there is only a small difference in the reported tendency to consult a health worker when ill or injured. Individuals from poorer households are only slightly less likely (84%) than the affluent (87%) to consult a health worker when ill or injured (Figure 2). However, this pattern becomes much starker when those who reported not visiting a health worker because the illness or injury did not necessitate it, are eliminated from the sample. All ratios rise after this group is removed from the sample and there is a widening of the gap between the likelihood to consult a health worker when ill or injured for the poorest (88%) and the most affluent groups (95%).



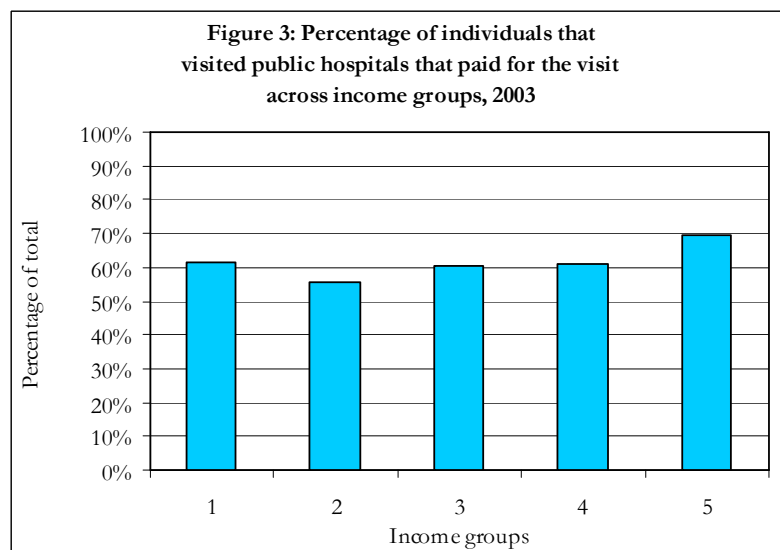
Source: GHS 2003

The high ratio and relatively narrow band of variation of this variable across income groups could be construed as suggesting that there are no major problems for the poor to access health care. However, given the definition problems discussed earlier, these results should be interpreted with caution.

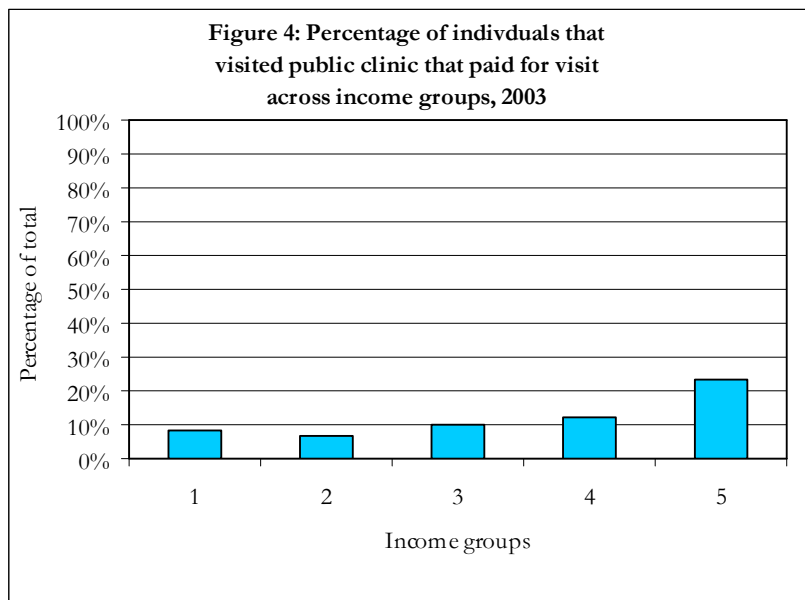


Source: GHS 2003

There is some evidence of pro-poor patterns in the waiver of user fees. A larger proportion of affluent individuals reported paying for their visit to public sector hospital and clinics. However, there is little evidence of progressivity in the rest of the distribution. There is almost no discernable difference between the likelihood to pay for the bottom two quintiles (traditionally used as a crude classification of the poor) and the two quintiles above them (Figure 3 and 4). Although primary health care user fees were eliminated in 1996, the survey reported several cases of payment. Nine percent of public sector clinic users reported paying for the service.

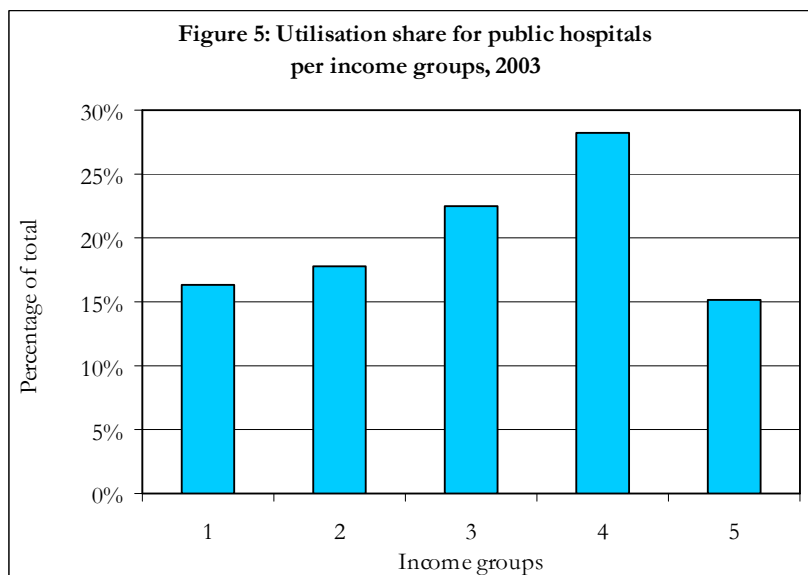


Source: GHS 2003

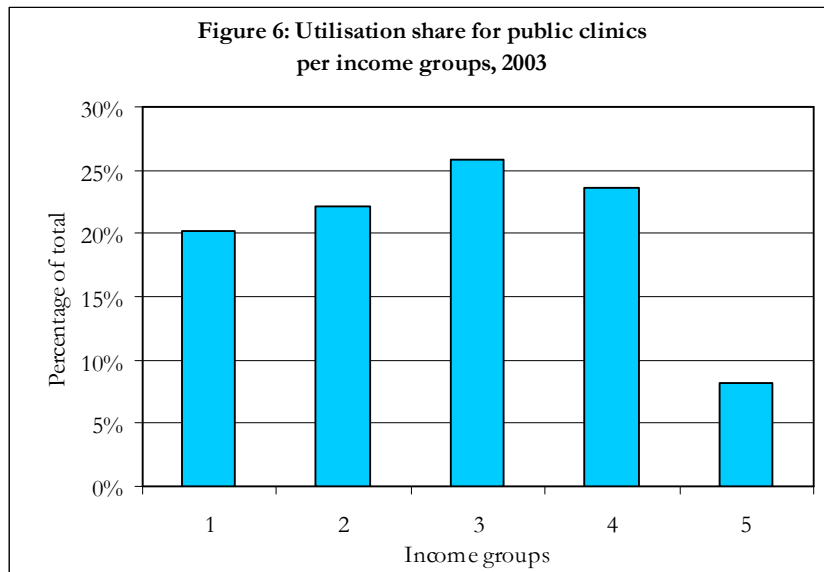


Source: GHS 2003

There is some evidence of anti-poor bias in the utilization of public health services among the bottom four of the five income groups. Individuals in the bottom income groups make less frequent use of public sector clinics and hospitals. However, the drop in utilisation at the top of the income distribution is considerably more pronounced and dominates the anti-poor bias detected among the bottom four income groups (Figure 5 and Figure 6). As expected, those in the top income group are more likely to use public sector hospitals than public sector clinics.



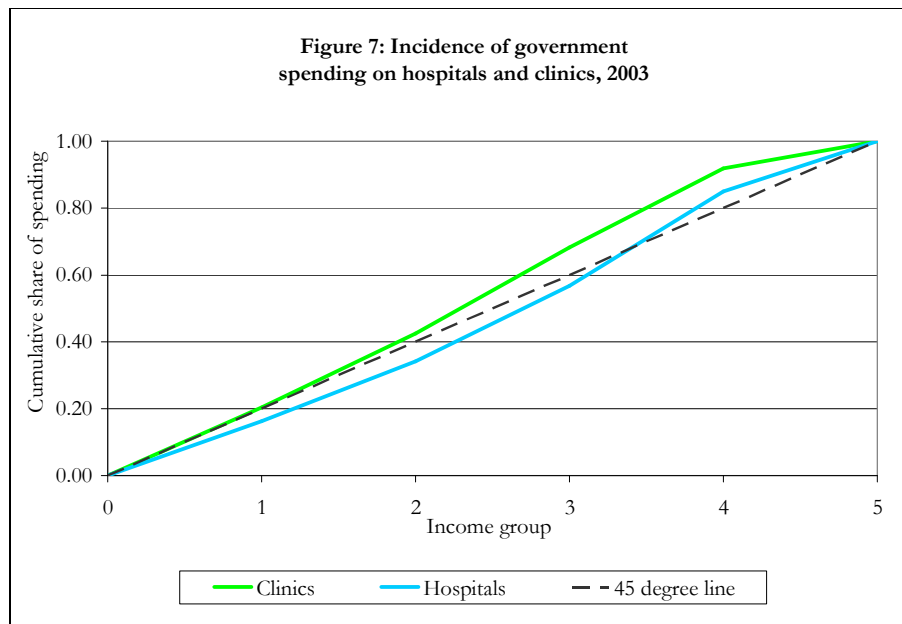
Source: GHS 2003



Source: GHS 2003

But how large a share of the government's health spending is allocated to the poor? To compare each income group's share of the total health subsidy for clinics and hospitals, the total spending by government on this item for 2003 is divided by the weighted number of total users to arrive at an estimate for the average government expenditure per visit. As shown earlier, the assumption of equal unit cost is justified based on calculations that showed that regional differences in unit costs did not influence the unit cost distribution across income groups.

For each income group the estimated average user fee per visit (not including the cost of drugs or transport^{xiii}) is deducted from the average government expenditure per visit to compute the average subsidy per visit. User fees represent a very small proportion of government expenditure and do not influence the outcome of the analysis of spending, thus the method used for calculating these estimates is not outlined here. ^{xiii} To calculate the total subsidy for each income group, this average subsidy per visit is multiplied by the number of visits by individuals in the income group. The income group's share of subsidy is simply their allocated subsidy divided by the total subsidy (for all income groups). Utilisation patterns are the main determinant of spending patterns due to the assumption of equal unit cost of service. Consequently, the shares of subsidies are virtually identical to the utilisation shares of the income groups. The most affluent group of individuals received a substantially lower share of subsidy than other income groups. In the remaining four income groups, the richer quintiles appear better off.

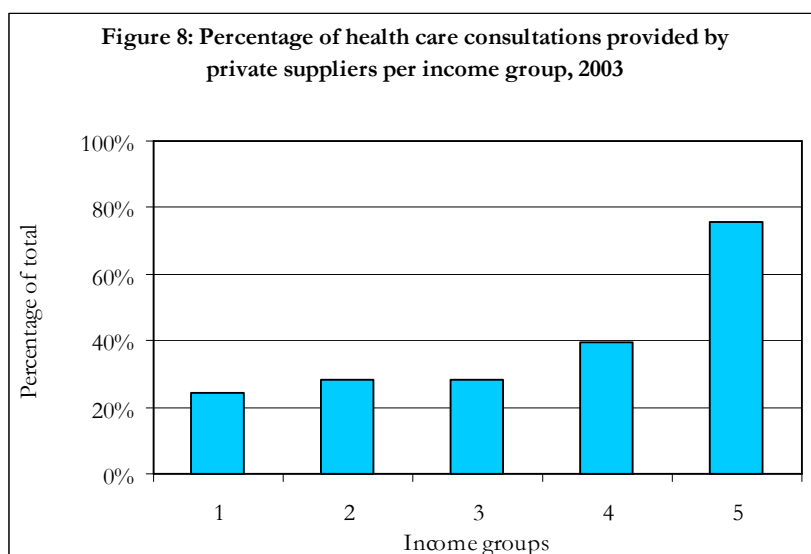


Source: GHS 2003

Due to the dominant effect of the much lower utilisation of most affluent income group, spending on both clinics and hospitals are classified as pro-poor. Figure 7 above depicts the incidence of public spending on hospitals and clinics using two concentration curves. A concentration curve plots the cumulative share of public health spending against the cumulative share of the sample. The cumulative share of the sample is calculated using a grouped income variable with the poorest income groups at the bottom and the richer groups at the top. The value opposite the number 3 on the horizontal axis would for instance represent the cumulative share of public health spending consumed by the bottom three income groups. The 45 degree line is the line of equality, i.e. where each income group receives the same public health subsidy.

As expected, the concentration curve shows that spending on clinics is more pro-poor than spending on hospitals. Based on comparisons with the work of Yaqub (1999), South Africa's progressive spending patterns appear to compare well with the incidence patterns of government health spending in other developing countries.

Government expenditure means very little if money is not spent effectively and efficiently. What matters ultimately is not spending per se, but the services that the spending secures, and even more importantly, the outcomes that these services can help to generate. Hence, the following section considers how much poor South Africans benefit from South Africa's public health system.



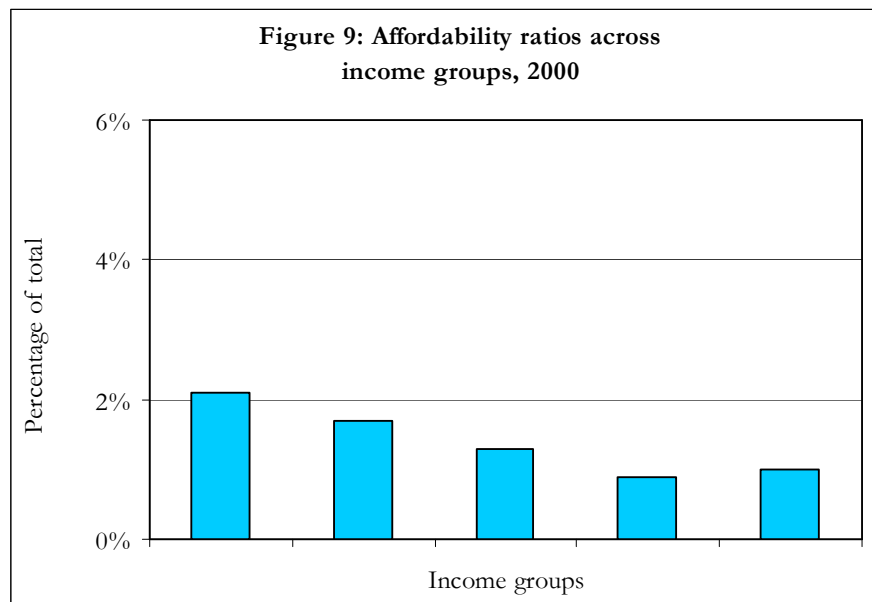
Source: GHS 2003

However, it is important to bear in mind that to a large extent the pro-poor spending was achieved not by targeting, but by providing a public good of such variable quality that it is not used by a considerable proportion of those who can afford alternatives. Even the poorest households frequently choose to pay for consultations with the private health practitioners^{xiv} despite the availability of considerably cheaper or free public sector health services (Figure 8). A study by Palmer (1999) attempted to explain why poor individuals would pay R100 for a private clinic visit when public sector clinics were free. Her work suggested that the perceived higher quality of diagnosis, prescription and counselling, the lower average waiting time and the increased privacy that private clinics offered were important motivating factors.

3. Equity in Service Delivery and Quality

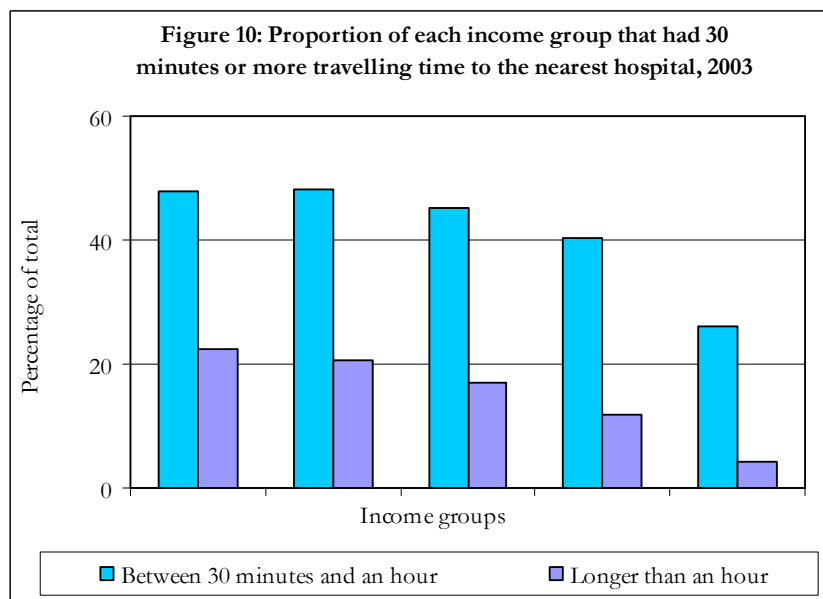
The results presented in the previous section suggest that poor households have reasonably good access to public sector health care. The likelihood of consulting a health worker when ill or injured is relatively high and reasonably constant across income groups. Furthermore, among the bottom four income groups the variation in the utilisation shares for public sector clinics and hospitals are within a narrow band.^{xv}

To obtain a clearer view of affordability of public health services, the affordability ratio is often used to gauge whether health services are within the means of the poorest households. It calculates what share of per capita non-food household expenditure the costs associated with a visit to a health worker represents. The calculated ratios are interpreted by comparing them to benchmark ratios. If ratios are higher than the benchmark this is regarded as an indication of excessively high charges. Using Demery's (2003) suggested benchmark of 5%, it is clear that in 2000 the affordability ratio was far below this benchmark for all income groups (Figure 9).^{xvi} However, cost considerations remain an important factor in the health care decisions of the poor. Thirty four percent of those who were ill or injured, but did not consult a health worker, cited affordability as the reason. This again illustrates their preference for the more expensive private service, and little trust in the free public service.

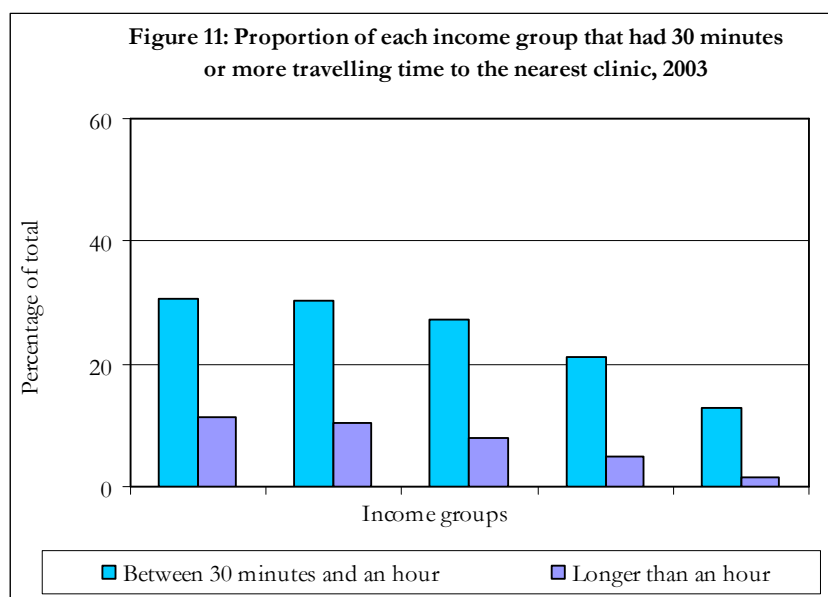


Source: IES/LFS 2000 & GHS 2003

Geographical access also remains problematic. A substantial portion of households of all income groups, but especially the poor, still live more than an hour's travel away from the nearest hospital or clinic (Figures 10 and 11). Hence, it is not surprising that traveling distance is cited as the reason for not consulting a health worker by approximately 21% of those in the bottom income group who did not visit a health worker when ill or injured. Those in lower income groups are considerably more likely than those in the top brackets to cite distance to the health facility and prohibitive costs as reasons for not consulting a health worker. In most cases when individuals in the top income brackets chose not to consult a health worker, it was because the illness did not necessitate it.



Source: GHS 2003



Source: GHS 2003

The number of rural residents reporting that they decided not to consult a health worker because the facility was too far away is much higher than that for urban workers (21% vs. 5%). Also, a far higher proportion of rural residents had to travel an hour or more to the closest clinic (15% vs. 0.98%) or hospital (28% vs. 5%). Compared to private health facility patients, users of public health facilities are significantly less likely to be satisfied with the services they receive (13% dissatisfaction vs. 6% dissatisfaction for private facility users). Users of public health facilities were considerably more likely to complain about long waiting times, unavailability of medicines, incorrect diagnosis and rude staff, while users of private facilities were more likely to be dissatisfied with the price of the service. This is consistent with the findings of Palmer (1999). Her focus group discussions indicated that users of private clinics were very satisfied with the service they were receiving whereas, users of public facilities complained of ineffectiveness, poor staff attitudes, long waiting times and poor drug supplies. In contrast, users reported that they were treated with respect in private clinics and that the staff “made [them] feel very important.” (Mills et al, 2004). The study also identified large differences in waiting times. At private clinics patients waited between 10 and 40 minutes versus 50 minutes to 3 hours at public sector clinics.

Average satisfaction with health services is highest among the most affluent households. Part of the lower satisfaction among the poor may also be attributable to their limited access to doctors. Satisfaction levels are positively correlated with consulting a doctor. Only 43% of those in the bottom income group who visited a public health facility were seen by a doctor, while 85% of those in the top income group consulted a doctor (Table 1).

TABLE 1: Percentage of each income groups that consulted a doctor, 2003

	Did not see a doctor	Did see a doctor
1	56.97	43.03
2	51.15	48.85
3	49.89	50.11
4	36.51	63.49
5	15.21	84.79

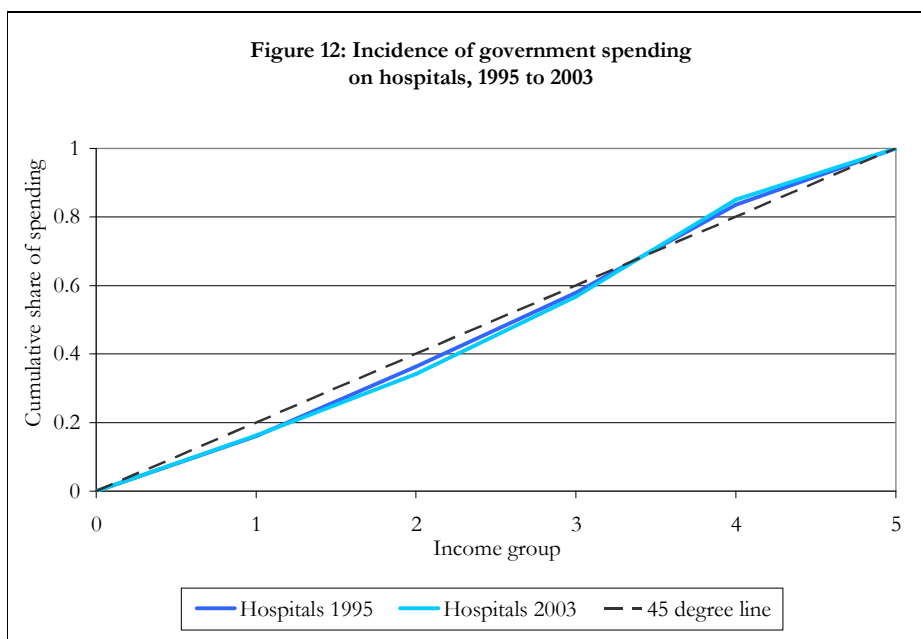
Source: GHS 2003

4. Has the Public Health System become more equitable?

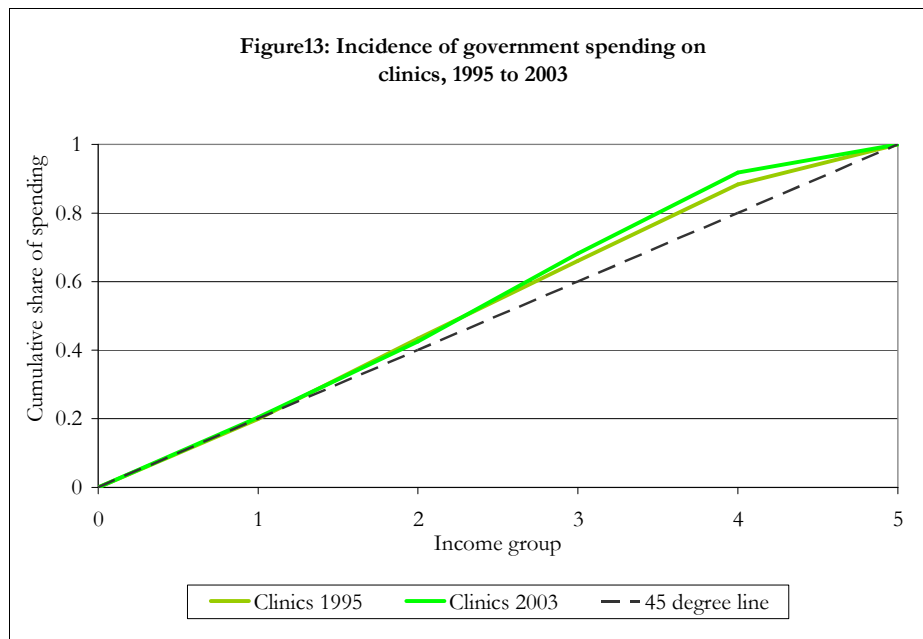
The past decade has witnessed a number of far-reaching changes in the public health system, aimed at making health services more physically accessible and affordable for the poor. There has been an increasing focus on the role of clinics, prompting an expansion of the network of clinics, the elimination of user fees in 1996 and budget reallocations in favour of primary health care. Also, some effort has been made to achieve fairer provincial health budget allocations. Have these changes benefited the poor?

This question is answered by comparing changes in spending patterns and service provision. Due to data limitations, the earliest feasible comparison is in most cases with 1995. As 1995 predates most of the major shifts mentioned above, a comparison between 1995 and 2003 should be able to capture most of the consequences from these changes. Where comparable data exist for the 1993 Project for Statistics on Living Standards and Development survey, these numbers were added to the comparisons.

The analysis shows that government spending on health has, overall, become more pro-poor. The incidence of hospital spending has not, however, changed significantly. In fact, at many points it is difficult to distinguish the two concentration curves (Figure 12). Spending on clinics has, in contrast, become more progressive (Figure 13) and the growing share of the health budget allocated to clinics has further improved the pro-poor incidence of the government health budget.



Source: IES/OHS 1995, IES/LFS 2000 & GHS 2003



Source: IES/OHS 1995, IES/LFS 2000 & GHS 2003

The government's greater emphasis on accessibility is evident from the decrease in travelling times. It is clear that a noticeably smaller proportion of individuals need to travel more than one hour to reach the nearest clinic or hospital (Table 2).^{xvii} Despite these improvements, affordability and geographical access remain the main constraints to utilisation. In 2003, 43% of poor individuals claimed that they did not consult a health worker because it was too expensive and 14% cited travel distance as the reason why they did not see a health worker.

There is however not much of improvement in the affordability of health services for the over this period, but this may be due to problems of comparability (Table 3). It is vital to note that the affordability ratios for of health services are now below the benchmark level of 5%.^{xviii}

TABLE 2: Percentage of health centre users with travel time exceeding 30 minutes, per income group, 1993 - 2003

	Clinics				Hospitals			
	1993		2003		1993		2003	
	30 - 59 min	60 min or more	30 - 59 min	60 min or more	30 - 59 min	60 min or more	30 - 59 min	60 min or more
1	36.1	28.7	22.5	15.2	25.2	50.5	50.0	20.0
2	35.2	22.2	28.7	7.3	27.2	51.9	40.4	23.9
3	31.6	18.2	29.9	9.5	33.7	36.0	43.5	16.2
4	24.2	13.9	21.1	6.2	36.2	25.4	39.6	12.6
5	27.3	13.9	14.4	5.0	33.8	14.5	20.8	3.6

Source: PSLSD 1993 and GHS 2003

TABLE 3: Affordability ratio across income groups, 1995 - 2000

	1995	2000
1	1.5	2.1
2	0.9	1.7
3	0.7	1.3
4	0.5	0.9
5	0.9	1.0

Source: IES/OHS 1995 and IES/LFS 2000

The quality of health care is notoriously difficult to measure and the best measure of this that the surveys provide is user satisfaction, which could possibly be regarded as an approximation of perceived quality. There is no data on user satisfaction for 1995 or 1993, but such data do exist for 1998. The comparison between 1998 and 2003 suggests growing dissatisfaction with public health services (Table 4). At the same time satisfaction with private health services has more or less stayed level. As mentioned in the previous section, the most frequent complaints that users of public health services had were regarding long waiting times, rude staff and the lack of drugs. The first may be indicative of an overburdened health system, which to a certain extent is not surprising given the rapid pace of change and the associated increases in the utilisation of public health facilities. Staff rudeness and problems with the availability of medicines may to some extent be symptoms of the same ailment. However, these two complaints seem more avoidable than the first complaint, given that it is not purely an issue of resource shortages. It is at least partly also a problem of effective motivation and allocation of resources. Although not a cure-all, improved and enhanced management; and planning systems may contribute significantly to lowering the incidence of these types of complaints.

	1998	2003
Public sector hospital/clinic	88.31	81.78
Private hospital/clinic	93.26	92.22

Source: DHS 1998 and GHS 2003

The findings of Palmer et al. (2003) confirm that there may be inefficiencies lurking in the public health system. They concluded that at comparable costs, the sample of private clinics they examined managed to provide a superior quality of service than the sample of public sector clinics they investigated.^{xix} The authors interpreted these results as evidence of the importance of management and efficiency. The quality of public service provision is unlikely to be upgraded unless the government is willing to make substantial investments in management systems of this sector and the management skills of decision-makers in the public health system.

5. Conclusion and Recommendations

The analysis shows that health spending in the SA public sector is progressive and has become more so in recent years. Poorer individuals pay hospital fees and make more frequent use of public health facilities than those at the top of the expenditure scale, who often prefer to use private health services.

The expansion of the clinics network and the elimination of user fees for primary health care appear to have enhanced the affordability and accessibility of health care for the poor. However, satisfaction with public health services has declined between 1998 and 2003. Long waiting times, rude staff and the problems with the availability of drugs were the main complaints.

How can the quality of service provision to the poor be improved? Due to fiscal constraints, substantial increases in resources may be an unrealistic demand. It is likely that substantial advances in the quality of service provision could be realised by effectively managing the resources available in the public health system.

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ⁱ This paper draws on work with Christelle Swanepoel. For more details regarding the calculations reported here, consult Burger and Swanepoel (2006).

ⁱⁱ The author thanks Servaas van der Berg and Mark Blecher for feedback on an earlier version of this chapter. The author also acknowledges invaluable research assistance by Christelle Swanepoel with the estimation of a model to generate welfare quintiles in the GHS 2003. This chapter is based on work done for Treasury for a Fiscal Incidence project, headed by Servaas van der Berg. The full project report is available from: <http://www.treasury.gov.za>. All errors remain the responsibility of the author.

ⁱⁱⁱ Burger and Swanepoel (2006) give more detail on the available surveys as well as the assumptions. Arguably, the most important assumption is equal unit costs (discussed in a subsequent section).

^{iv} See Demery (2003), Sahn and Younger (2000) & Yaqub (1999)

^v An average for clinic cost per visit was computed by dividing expenditure per clinic by each clinic's utilisation by patients older than 5 in 2002. The expenditure data was unfortunately only available for four of the nine provinces. The rest of the provinces were assigned the utilisation-weighted average unit cost from the provincial clinic unit costs available.

^{vi} An average for hospital cost per visit was calculated by dividing the total recurrent expenditure of each hospital by the total number of inpatients the hospital treated in 2002. Provincial averages were estimated by summing the hospital unit cost averages, using the total number of inpatients as a weighting factor. Specialised hospitals were excluded from the sample for the calculation of the average. Inpatient days were selected as the appropriate unit for this calculation partly because it is an important cost driver, but also partly because the loss in sample size (hospitals) that the incorporation of outpatient days would imply is too large to make this option worthwhile.

^{vii} Here the average unit cost for each income group was calculated using the provincial residency shares for each of the income groups. Per capita household expenditure quintiles are used here as an approximation for income and welfare. The expenditure data in the General Household Survey was not sufficiently detailed and comprehensive to allow for the construction of quintiles and hence a model of predicted expenditure was constructed, using the merged Income and Expenditure Survey / Labour Force Survey of 2000. The model for predicted expenditure is detailed in Burger and Swanepoel (2006).

^{viii} It is interesting to note that provincial biases in health budget allocations may not be noticeable in average expenditure per visit numbers. Hypothetically, spending biases could be hidden because lower spending may result in problems with accessibility and quality, which may decrease the number of visits, thus raising the average expenditure per visit.

^{ix} There are a few household surveys that contain information regarding utilisation of health services, but only the Income and Expenditure survey/October Household survey 1995 has sufficiently detailed information about both household income and utilization patterns. The Income and Expenditure survey/Labour Force Survey 2000 has comprehensive information on income and expenditure, but does not contain data on the utilisation of health services. To construct more updated comparisons of utilisation per income group, this analysis uses the Income and Expenditure Survey/Labour Force Survey 2000 to construct a model of predicted expenditure that can be applied to the General Household Survey of 2003. The General Household Survey of 2003 contains detailed information on the utilisation of health services, but it does not have enough information on income and expenditure to facilitate the construction of welfare quintiles.

^x Demery (2003) and Lindelow (2005) both find that poorer individual's levels of reported illness was lower. The authors researched health services in Ghana and Mozambique respectively.

^{xi} This phenomenon may be associated with the higher reported cost associated with illness for lower income groups. Also, in general poor people are more likely to be accustomed to adversity and frustrating circumstances.

^{xii} The impact of travel is considered in more depth in the next section. Although there is not information on the travel cost, the distances to the nearest clinic or hospital may be considered to be suggestive of the cost in terms of money and time.

^{xiii} The method for calculating the user costs is quite involved and outlined in detail in a footnote of Burger and Swanepoel (2006).

^{xiv} According to the 1995 Income and Expenditure Survey/ October Household survey, the poorest income quintile and second poorest income quintile are responsible for 7% and 9% respectively of total private health care utilisation. For the two bottom quintiles private health services represent more than a fifth of the group's overall utilisation of health services. The 2003 GHS data (with predicted expenditure) allow us to distinguish between different private providers. According to this data, those in the poorest income group are responsible for 6% of all private hospital utilisation, 7% of private clinic utilisation and 9% of the utilisation of private doctors. For individuals in the second poorest quintile, the utilisation shares are 10% (private hospitals), 9% (private clinics) and 11% (private doctors).

^{xv} When the top quintile is ignored, utilisation shares are relatively stable across income groups, ranging between 22% (bottom quintile) and 26% (top quintile) for public clinics and between 19% (bottom quintile) and 33% (top quintile) for public hospitals.

^{xvi} It is important to note that the affordability ratios include neither travel costs nor loss of income associated with the consultation of a health worker. There is debate about the question of an appropriate benchmark and the application of the same benchmark affordability ratio to all income groups.

^{xvii} For both periods this cross-tabulation only includes individuals who visited a clinic or hospital because they were ill or injured. This may thus present a more optimistic picture than the actual as those who do not visit health centres because of long travel time will be excluded from this sample. Although it does not represent the full picture, it is still useful because it provides some basis for comparisons over time.

^{xviii} For the calculation based on the PLSLD 1993 the household's medical expenditure was the sum of reported user fees and charges for drugs. In the IES/OHS 1995 and the IES/LFS 2000 medical expenditure was constructed from a range of items, i.e.: Flat rate in respect of services and medicine obtained at hospital/clinic, doctors, dentists, psychiatrists, specialists, opticians, nurses, homeopaths, paediatricians, traditional healers and therapists, etc.; Hospitals, nursing-homes, clinics, etc., including ambulance services; medicines, ointments, disinfectants, bandages, etc.; Therapeutic appliances and equipment. In all cases, the affordability ratios for each quintile was calculated by estimating an average medical expenditure (drugs plus user fee) for those households without medical aid that utilised medical services and representing this as a ratio of non-food expenditure. Medical aid users were not included in the estimation of the average because there appeared to be a difference over time in how they reported their medical expenditure.

^{xix} However, the report noted that private clinics did not offer a comprehensive primary care service and were concentrated in urban areas. The limited evidence available indicated that private clinics provided a superior quality of curative care, but their chronic care record was weaker when compared to public sector clinics. Also, private clinics referred patients to public sector clinics or GPs for immunisation and TB treatment. Private clinics also offered no after-hours emergency services.