

Equity in health care finance after the abolishment of user fees: the experience of South Africa

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INTRODUCTION

By 1996, all South Africans could utilise public primary health care facilities free of charge. The removal of user fees for public primary care sought to reduce the inequities in access to health care that characterised apartheid South Africa (Ntuli and Day, 2004). Removing user fees likely improves equity in access to health care by removing the financial barrier to utilisation and by reducing the financial burden of illness for households. This paper sets out to investigate inequities (vertical and horizontal) in out of pocket health care payments (OOP) in South Africa, six years after the removal of user fees at public primary care facilities. To this end, data from the 2002 World Health Survey will be analysed. Concentration curves/indices and Kakwani indices will be employed to determine whether OOP are regressive, proportional or progressive. Further, the paper seeks to determine whether the out-of-pocket payments of individuals of equal need and equal socio-economic status are the same. Multivariate methods will then be used to investigate which factors are associated with the financial burden of paying for health care (catastrophic payments, impoverishment, and falling deeper into poverty). Preliminary (descriptive) analyses yielded the following (tentative) results: household heads' membership of a health insurance plan/medical scheme did not provide many households with financial protection against out of pocket health care payments. In many of the households that incurred catastrophic spending, impoverishment or that fell even deeper into poverty, the household heads were members of health insurance plans/medical schemes. Larger households were also more likely to incur catastrophe, impoverishment, or to fall deeper into poverty. This might suggest that in some households, not many (if any) members other than the head are covered by health insurance. Secondly, out of pocket health care payments are seemingly progressive in South Africa, both in absolute and relative terms.

DATA

To analyse household health care expenditure, this paper uses data from the 2002 World Health Survey (WHS) for South Africa (WHO, 2002). The World Health Survey (WHS), a general population survey, was developed by WHO to address the need for reliable information and to cater to the increased attention to the role of health in economic and human development that has led to greater resources being committed to improving health in all settings. Seventy-one countries implemented various forms of the WHS in 2002. Sample sizes varied from 1,000 to 10,000. The survey included only randomly selected adults (i.e. older than 18 years of age).

VARIABLES

In this study, household consumption expenditure serves as a proxy for household income, and all spending variables are recorded on a monthly basis. Several authors (e.g. Xu et al, 2003; Xu et al, 2006) state that household consumption expenditure is a more reliable measure of household income than income reported in household surveys, because expenditure data is likely to be more reliable than income data in countries where informal sector activities are prevalent, and because household expenditure is fluctuates less than household income (Xu et al, 2006).

Total household consumption expenditure and total (out of pocket) household health care expenditure was constructed from the 2002 WHS-SA by summing the individual components comprising consumption and health care expenditure. Further, total consumption and total food expenditure was used to construct a household poverty line, as per Xu et al (2003). First, household food expenditure and household consumption expenditure were expressed in per capita terms. Secondly, the share of food spending in total spending was obtained. Thirdly, the 45th and 55th percentiles for food share was obtained, and mean food expenditure for households lying in the 45th to 55th percentiles (of food share)

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was estimated. This mean then served as a (per capita) poverty line. This per capita poverty line (which was found to be equal to R202.19 per month) was then multiplied by the size of the household, to obtain a household level poverty line (about R810 per month for a family of four). Households were deemed to be poor if their total consumption expenditure was less than the household poverty line.

In this paper the share of out-of-pocket health spending in total household spending was determined as follows, using the method employed by Xu et al, 2003: First, subsistence expenditure was defined the level of the above-mentioned household poverty line. Secondly, a household's capacity to pay (CTP) was defined as the difference between total consumption expenditure and the subsistence level for non-poor households. For poor households (food spending < subsistence level), the actual level of food spending was used instead of the subsistence level to determine CTP. Finally, out-of-pocket health payments were divided by CTP, to obtain out of pocket payments as percentage of CTP. In line with Wagstaff and Yu (2007) and Waters et al (2004), out of pocket payments were deemed catastrophic if these payments exceeded 10% of CTP. Table 1 below provides summary statistics for total consumption expenditure, out of pocket (OOP) health payments, catastrophic spending, as well as socioeconomic characteristics of the household. These socioeconomic characteristics include the sex of the household head, whether the household head has received at least some secondary education, whether the household head is covered by a health insurance plan/medical scheme, the size of the household, as well as the household's location (rural or urban). The table provides overall means, as well as means per household consumption quintile.

Table 1: Household expenditure, socioeconomic and demographic characteristics

| | Total | Quintile | | | | |
|------------------------------|---------|----------|--------|--------|---------|---------|
| | | 1 | 2 | 3 | 4 | 5 |
| <i>Household expenditure</i> | | | | | | |
| _consumption | 1925.46 | 252.50 | 554.50 | 923.36 | 1676.54 | 6172.09 |
| _OOP | 182.33 | 6.49 | 20.97 | 60.64 | 137.71 | 676.44 |
| _OOP as % of CTP | 4.19 | 2.35 | 3.80 | 6.28 | 8.32 | 8.08 |
| _% catastrophic | 0.18 | 8.79 | 14.61 | 21.26 | 26.33 | 19.26 |
| <i>Household head</i> | | | | | | |
| _insured | 16.98 | 9.19 | 13.43 | 18.11 | 20.11 | 24.51 |
| _education | 46.04 | 39.21 | 36.68 | 45.25 | 52.72 | 55.54 |
| _female | 34.82 | 40.94 | 41.24 | 36.98 | 29.63 | 32.50 |
| <i>Household</i> | | | | | | |
| _rural | 42.74 | 47.20 | 48.86 | 43.00 | 40.28 | 34.12 |
| _size | 4.19 | 4.42 | 4.32 | 4.41 | 3.92 | 3.95 |
| <i>Poor</i> | 43.59 | | | | | |

As is evident from Table 1, OOP is progressive (in both absolute and relative terms), with households in the lowest two quintiles spending less in total, and less as a share of CTP, than their counterparts in the top two quintiles. Furthermore, the probability of incurring catastrophic spending is higher for the top quintiles than for the bottom quintiles. This could perhaps be due to the fact that those in the bottom quintiles use free public primary care, or they choose not to seek care at all, while those in the higher quintiles possibly utilise more expensive primary in- and outpatient care. This matter will need further investigation. Additionally, the household head (unsurprisingly) is more likely to be insured as total household expenditure increases. In total, 43% of households were located in rural areas. The number of rural households drops off rather sharply as one moves from the bottom to the top expenditure quintiles, which seems to corroborate the observation that poverty in South Africa is more pronounced in rural areas. Lastly, 44% of households were classified as poor, using the household poverty line defined above.

Table 2 below compares some socioeconomic characteristics of households that incurred catastrophic health care payments, with those that did not, and the total sample. About 17% of households incurred catastrophic health spending. The striking feature of Table 2 is how much more households that incurred catastrophe spent (out of pocket) on health than households that did not incur catastrophe – a difference of about R880.

Table 2: Characteristics of households incurring catastrophic out of pocket expenditures

| | Catastrophic | non catastrophic | total |
|-----------------------------|--------------|------------------|---------|
| n= | 356 | 1697 | 2053 |
| <i>Spending</i> | | | |
| _consumption | 2310.77 | 1840.22 | 1925.46 |
| _out of pocket | 902.01 | 23.11 | 182.33 |
| <i>Household</i> | | | |
| _size | 4.50 | 4.13 | 4.19 |
| _rural | 49.78 | 40.75 | 42.38 |
| <i>Head of household</i> | | | |
| _female | 31.76 | 35.50 | 34.82 |
| _insured | 18.28 | 16.69 | 16.98 |
| _educ | 43.61 | 46.58 | 46.04 |
| <i>Socioeconomic status</i> | | | |
| _poor | 37.17 | 45.01 | 43.59 |
| _quintile1 | 10.51 | 23.07 | 20.80 |
| _quintile2 | 16.64 | 20.82 | 20.06 |
| _quintile3 | 22.95 | 17.95 | 18.85 |
| _quintile4 | 30.41 | 18.07 | 20.31 |
| _quintile5 | 19.49 | 20.09 | 19.98 |

As per Table 1, it was found that households with higher consumption expenditure were more likely to incur financial catastrophe, possibly due to the fact that higher income households are more likely to seek care, and more likely to seek more expensive private care, than their lower income counterparts. Further confirmation of this result is the observation that only 37% of households incurring catastrophe were poor. About half of households that incurred catastrophe were located in rural areas. Of some concern is the observation that 18% of household heads with household insurance/medical scheme membership still had out of pocket payments for health that exceeded 10% of the household's capacity to pay, as defined above.

Not all catastrophic health payments necessarily lead to household impoverishment. Impoverishing out of pocket household expenditure is defined as per Wagstaff and Yu, 2006: if total household consumption less total out of pocket health payments (i.e. non-health spending) is less than the household poverty line, and household consumption exceeded the poverty line (i.e. the household was classified as non-poor), then the out of pocket payments were deemed impoverishing. Table 3 below summarises some socioeconomic characteristics of households that were impoverished after paying for health care.

Table 3: Characteristics of non-poor households incurring impoverishing out of expenditures

| | Impoverished | not impoverished | total |
|--------------------------|--------------|------------------|---------|
| n= | 52 | 1102 | 1154 |
| <i>Spending</i> | | | |
| _consumption | 1476.84 | 3090.64 | 3004.72 |
| _out of pocket | 653.85 | 280.94 | 300.79 |
| _oop as % of CTP | 38.23 | 5.30 | 7.05 |
| <i>Household</i> | | | |
| _rural | 66.96 | 34.98 | 36.69 |
| _size | 5.49 | 3.02 | 3.15 |
| <i>Head of household</i> | | | |
| _female | 38.96 | 30.07 | 30.54 |
| _insured | 16.24 | 21.13 | 20.87 |
| _educ | 39.60 | 53.61 | 52.87 |

Only 4.5% of non-poor households faced impoverishment due to their out of pocket health care payments. Mean household consumption for impoverished households was less than half of that of households that were not impoverished, while the impoverished households spent 2.3 times more on

health (out of pocket), and had OOP-to-CTP ratios that exceeded those of their non-impooverished counterparts by a factor of 7.2. As per Table 2 above, it is concerning that 16% of households in which the head was insured faced impoverishment, while two thirds of households that were impoverished were located in rural areas. In addition, the impoverished households were much larger than their non-impooverished counterparts (in Table 2 above, households facing catastrophe were slightly larger than those that didn't face catastrophe). This could point to a possible reason for the seemingly ineffective financial protection offered by the head's insurance status: not all household members (or even any member other than the head) are covered by health insurance. This matter also warrants further investigation.

Another matter that deserves investigation is whether poor households fell even deeper into poverty because of paying for health care. In this study, any poor household that recorded a positive out of pocket payment for health care fell deeper into poverty. The socioeconomic characteristics of poor households that did and did not fall deeper into poverty are recorded in Table 4 below.

Table 4: Characteristics of poor households falling deeper into poverty due to out of pocket expenditure

| | Deeper poverty | not deeper poverty | total |
|--------------------------|----------------|--------------------|--------|
| n= | 196 | 703 | 899 |
| <i>Spending</i> | | | |
| _consumption | 699.81 | 480.44 | 528.85 |
| _out of pocket | 131.54 | 0.00 | 29.03 |
| _oop as % of CTP | 18.50 | 0.00 | 4.08 |
| <i>Household</i> | | | |
| _rural | 50.85 | 49.45 | 49.76 |
| _size | 6.03 | 5.41 | 5.54 |
| <i>Head of household</i> | | | |
| _female | 37.33 | 41.22 | 40.36 |
| _insured | 14.94 | 11.09 | 11.94 |
| _educ | 36.99 | 37.27 | 37.21 |

Almost 22% of all poor households recorded positive out of pocket payments for health, and were therefore classified as falling deeper into poverty. The mean consumption spending of those households that did fall deeper into poverty was about R220 more than those that did not make any out of pocket payments, while their mean OOP-to-CTP ratio exceeded 18% (on average, poor households that fell deeper into poverty also incurred catastrophic health spending). In about 15% of households that did fall deeper into poverty, the head of the household was insured, while these households also tended to be larger than their counterparts that did not fall deeper into poverty.

SUMMARY

The preliminary and very basic analysis conducted here yielded the following results: First, household heads' membership of a health insurance plan/medical scheme did not provide many households with financial protection against out of pocket health care payments. In many of the households that incurred catastrophic spending, impoverishment or that fell even deeper into poverty, the household heads were members of health insurance plans/medical schemes (about 18%, 16%, and 15%, respectively). Larger households were also more likely to incur catastrophe, impoverishment, or to fall deeper into poverty. This might suggest that in some households, not many (if any) members other than the head are covered by health insurance, and this matter warrants further investigation. Secondly, out of pocket health care payments are seemingly progressive in South Africa, both in absolute and relative terms – higher income households spend much more on health care than their lower income counterparts. This observation could perhaps be explained by the health care seeking behaviour of high income households relative to low income households, with the maintained hypothesis that, in South Africa, high income households can utilise more expensive (often private) health care more often than low income households. However, this matter also warrants further investigation.

Any concrete interpretations and policy recommendations would require much more sophisticated analysis than is presented here. Therefore, it is suggested that these preliminary findings must be supplemented by: conducting multivariate regression analysis to determine the factors that are significantly related to the probability of incurring catastrophic expenditure, impoverishment, or falling deeper into poverty (using logit/probit regressions); conducting multivariate regression analysis to determine the factors that significantly explain the absolute and/or relative level of out of pocket health care payments (OLS and tobit regressions); conducting more sophisticated descriptive analysis to determine whether out-of-pocket health care spending in South Africa is regressive or progressive (concentration curves, concentration indices, Gini coefficients, Kakwani indices).

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