Fiscal incidence analysis: Healthcare

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Stellenbosch Economic Working Papers: 12/09

KEYWORDS: NATIONAL GOVERNMENT EXPENDITURE, HEALTH
JEL: H5, I1

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A WORKING PAPER OF THE DEPARTMENT OF ECONOMICS AND THE
BUREAU FOR ECONOMIC RESEARCH AT THE UNIVERSITY OF STELLENBOSCH

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ABSTRACT

This study makes particular use of concentration curves to isolate distributional effects and information graphically. The main source for data is the GHS2006. However, the GHS2006 does not provide adequate income date for the incidence analysis. A distribution of household per capita income was consequently developed by the broader project combining income distribution information from the Income and Expenditure Survey of 2006 (Statistics South Africa) with asset information from the GHS2006. Concentration curves are used throughout to demonstrate possible distributional effects within the health system. It is found that the medical scheme population typically makes use of private health providers, while the non-medical scheme population predominantly uses the public provider system. The findings with regard to the non-medical scheme population indicate that certain conditions are biased toward low-income groups while others other biased higher-income groups. Within the former group are Tuberculosis (TB), Diarrhoea, and AIDS. However, AIDS is not as pronounced in the lowest income groups as is the case with TB and HT. Trauma appears to closely follow the equality line, while chronic conditions associated with lifestyle show a slight bias toward higher income groups. Satisfaction with services also differs according to income groups in which individuals are found.

Keywords: National government expenditure, Health
JEL codes: H5, I1

[1] This study was undertaken as part of a fiscal incidence study conducted by Prof. Servaas van der Berg on behalf of the National Treasury. The paper is also available on the website of the National Treasury: http://www.treasury.gov.za/publications/other/Fiscal%20Incidence%20Study/default.aspx

1. INTRODUCTION

This evaluation of the health function forms part of a broader assessment of the impact of government policy on social sector goals. Although the broader evaluation provides an evaluation of changes that can be measured from 2000 to 2006, this study focuses entirely on the year 2006 making use of income date produced by the project used in conjunction with the General Household Survey of 2006 (GHS2006) produced by Statistics South Africa.

The purpose of this analysis, within the context of the broader study, is to:

1. Provide an understanding of access to health services by income;
2. Evaluate how services are prioritised by income group;
3. Examine the impact of risk pooling within the private sector through medical schemes;
4. Examine how various medical conditions impact on income groups; and
5. Examine service satisfaction between the public and private sectors, as well as by income group.

This study makes particular use of "concentration curves" to isolate distributional affects and information and is shown graphically.

> *A concentration curve shows the cumulative proportion of spending going to cumulative proportions of the population. It is thus similar to a Lorenz curve. However, unlike the Lorenz curve, which shows the cumulative proportion of income earned by the cumulative population, a concentration curve can lie above the diagonal: The poorest 40% of the population cannot earn more than 40% of income, but they can indeed obtain more than 40% of spending on social grants, for instance.* (Van der Berg, 2005, p.7)

The concentration curves are used in relation to service utilisation, disease prevalence and incidence, and service satisfaction. Although under normal circumstances a fiscal incidence analysis would distribute utilisation in relation to cost, this is not done in this study as the GHS2006 provides no information on which particular hospital or service is used irrespective of whether it is in the public or private sector, or by level of care. Consequently, it is impossible to properly attribute the cost of a local service to a visit of one form or another. Aside from this, unit costs for services by type are relatively similar within the public sector due to the equalisation of budgets, with differences occurring only between levels of care (generalist versus highly specialised care in a central hospital).

For this reason the concentration curves assume a uniform unit cost for a service. This has the effect of focusing attention on the distribution of utilisation or preferences by income. It is important to note that if the GHS2006 provided usage by hospital type (district, regional, central) in the public sector, it would be impossible to work out what level of care they actually accessed, with a strong possibility that results could be distorted. Many central hospitals provide services found in district and regional hospitals.

Consequently, if a survey failed to identify the level of care used within a hospital, it would be impossible to draw any concrete conclusions.

2. METHODOLOGICAL ISSUES

2.1 Data used

The main source for data is the GHS2006. However, the GHS2006 does not provide adequate income date for the incidence analysis. A distribution of household per capita income was consequently developed by the broader project[2] combining income distribution information from the Income and Expenditure Survey of 2006 (Statistics South Africa) with asset information from the GHS2006. An income distribution before and after social grants was also generated. The distribution after accounting for social grants was used in this study, as no meaningful conclusions would be possible from the pre-grant income distribution. This is because behaviour in relation to services within the GHS2006 is in reality based on households experiencing with grants. As there would be no control group to compare the behaviour/utilisation difference in a pre-grant scenario, using this income distribution would merely distort the results.

2.2 Concentration curves

Concentration curves are used throughout to demonstrate possible distributional affects within the health system. This includes examination of sub-populations that need to be examined discretely. This includes the split between the population on a medical and those not on a medical scheme. Also, the split by province, for those not on a medical scheme is examined. Distinguishing between the medical scheme and non-medical scheme populations is important as these reflect mutually exclusive systems based on whether or not one earns an income.

Although it is fairly obvious that the income distributions will differ significantly for the medical scheme population relative to the non-medical scheme population, the question that needs to be examined is whether lower income groups within the medical scheme population are prejudiced. For this to be examined the income distribution for the population in medical schemes is broken into deciles.

A similar exercise is carried out for provinces, where income distributions by decile are produced for each province for the non-medical scheme population. If the national income distribution were used, a provincial analysis would be distorted where its income distribution varied from the national distribution. The results would only show this effect rather than variations in access by income within the province.

The following discrete income distributions were consequently developed:

1. National population;
2. National medical scheme population;
3. National non-medical scheme population; and

[2] This dataset was generated by Servaas van der Berg (University of Stellenbosch) for the project.

4. Provincial non-medical scheme population[3].

2.3 Service utilisation

The GHS2006 surveys the last service used by an individual in the past month. Consequently, if a person used a service more than once this would be missed. This distorts the reliability of the survey as it is not possible to extrapolate the result neatly into actual utilisation estimates. One obvious problem that materialises occurs where a patient released from hospital is provided with a prescription that must be collected from a pharmacy. Where the person concerned visits a pharmacy to collect a script, crude adherence to the survey (which includes a visit to a pharmacy in the survey) would mask a significant number of hospital visits. Furthermore, any service with more frequency of visits would disproportionately become the most recent visit than less frequent services (such as a hospital or specialist visit). For the results of this analysis not to be distorted, however, it is necessary to assume that this error will be the same across all income groups; at least generating a consistent distributional pattern even though the magnitudes may be unreliable.

2.4 Incidence and prevalence of conditions

In addition to service usage the GHS2006 surveyed whether or not a person was treated for a limited number of conditions in the past month. Although this question should not suffer from the same errors as service usage, it nevertheless does not allow for easy and reliable extrapolation. In particular it fails to distinguish between an acute or chronic condition. An acute condition would in all likelihood only occur in the previous month, and could be extrapolated to an annual prevalence by multiplying the survey result by 12. However, a chronic condition (e.g. diabetes, hypertension, AIDS) is ongoing, and the survey is predominantly measuring how many people have an ongoing condition at any point in time. This survey result cannot be multiplied by 12, and the survey result for the past month should be regarded as the annual prevalence for that condition.

The survey cannot properly distinguish between incidence (the number of new cases) and prevalence (the number of cases at any point in time). With acute conditions incidence and prevalence will predominantly be the same for a given time period. However, for chronic conditions only prevalence can be measured. For this reason this report only refers to prevalence, irrespective of whether the condition measured is chronic or acute in nature.

[3] No meaningful analysis would be possible looking at the medical scheme population by province and consequently this was not included in the study.

3. GENERAL CHARACTERISTICS OF THE HEALTH SYSTEM

3.1 Overview

Health sector users can be broken down broadly into those with access to medical scheme cover and those without. Those who have no medical scheme cover will generate a natural bias toward the use of private sector medical services. Those who do not have medical scheme cover nevertheless still make use of private services, but primarily on an out-of-hospital basis. To generate an accurate perspective of the health system as a whole, and its achievements in relation to access and equity, the two populations need to be evaluated discretely. For those not familiar with the health system, therefore, this section provides an evaluation based on the GHS2006 with the primary purpose of providing a context for the incidence analysis provided in the rest of the report.

3.2 Overarching dimensions

The GHS2006 estimates the total medical scheme population at 6.5 million with 40.8 million non-medical scheme members in 2006. However, the Council for Medical Schemes reported actual medical scheme members at 7.1 million, which is far higher. Overall medical scheme membership has also continued to rise to 7.7 million by the second quarter of 2008.[4]

The age profile of the non-medical schemes population differs considerably from the higher income medical schemes population, with far fewer younger people in medical schemes. However, this bias largely reflects the White population demographics, which accounts for 42% of the total medical scheme population. The African population also accounts for 42% of the medical scheme population, but has far fewer old people represented. The non-medical scheme population is predominantly made up of Africans and Coloureds.

[4] Unpublished 2nd quarter report by the Council for Medical Schemes for 2008. These reports are based on the quarterly management accounts submitted to the Council for Medical Schemes.

Figure 3.1: Breakdown of the non-medical scheme population by age and race (2006)

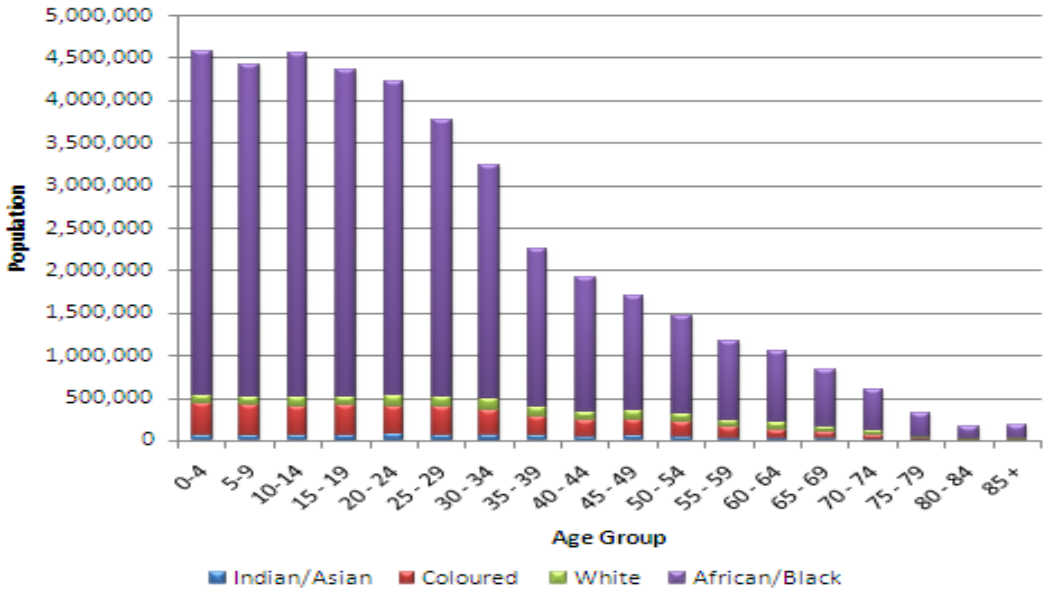
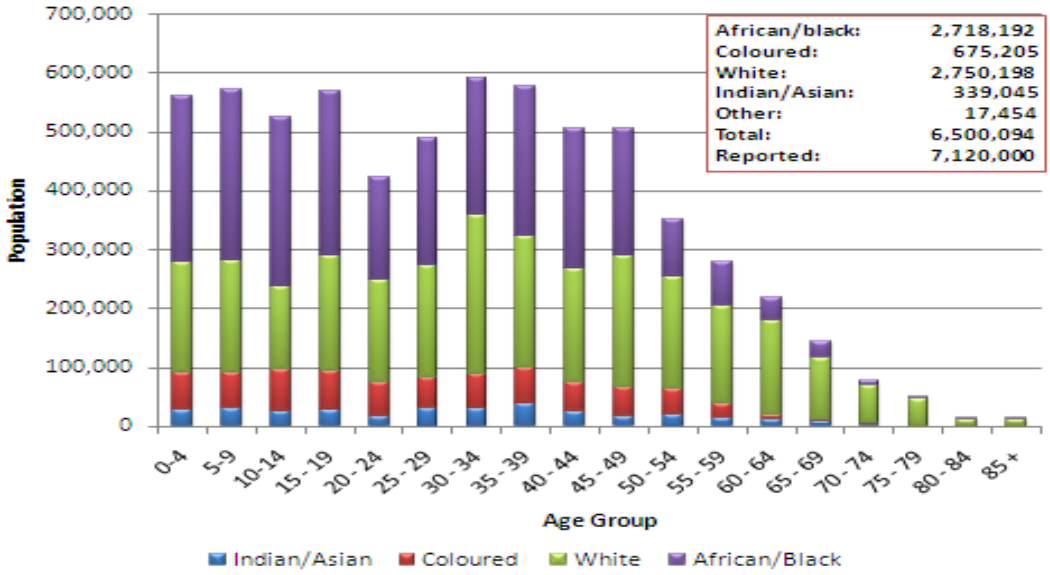


Figure 3.2: Breakdown of the medical scheme population by age and race (2006)

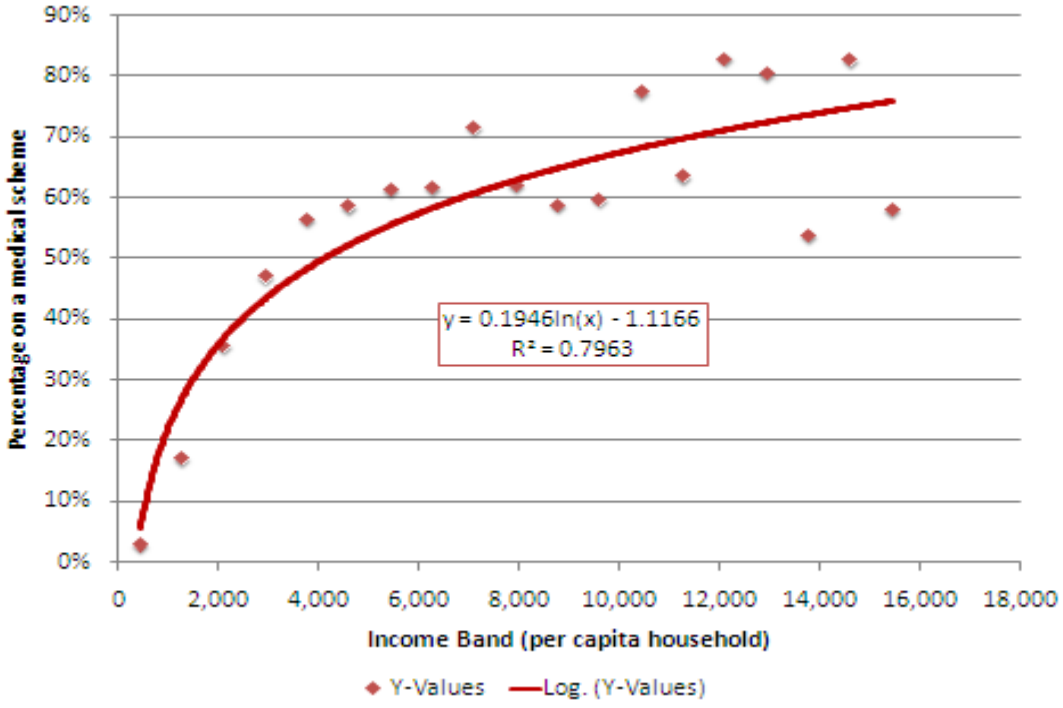


Source: GHS2006 and the Council for Medical Schemes Annual Report 2006/7

3.3 Medical scheme participation

Medical scheme participation is a function of income with the proportion of the population in medical schemes rising significantly as income rises. There is a rapid rise to around 60% participation from around R4,000 per month. This indicates that preferences for medical scheme cover are very high even amongst fairly low income groups.

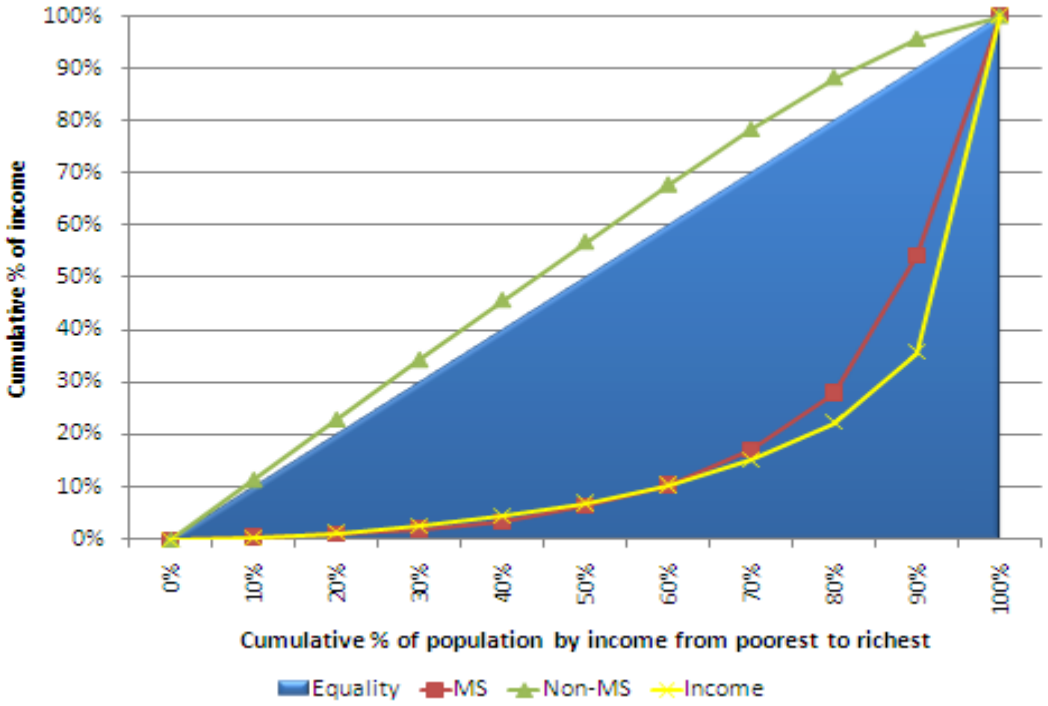
Figure 3.3: Medical scheme participation by income for households in the monthly per capita household income range R0 to R16,000 (2006)



3.4 Income characteristics

The non-medical scheme population demonstrates a slight bias toward low-income groups with the medical scheme population closely following the income distribution of the country as a whole. However, medical scheme participation is slightly more progressive than the distribution of income. (See **figure 4**).

Figure 3.4: Concentration curve comparing the cumulative proportion of income attributable to the cumulative proportion of the population by income (2006)



3.5 Conclusions

The health system can be divided into two discrete systems with their own dynamics. The medical scheme population typically makes use of private health providers, while the non-medical scheme population predominantly uses the public provider system. However, as will be shown below, even within the non-medical scheme population private sector participation increases with income for non-hospital services. Medical scheme participation also increases dramatically with fairly small rises in income, suggesting a very strong pull away from public services when the affordability barrier is overcome. For this reason medical scheme participation is more progressive than the income distribution of the country as a whole.

4. SERVICE USE

4.1 Overview

The GHS2006 questions relating to service use, although not reliable as an indicator of actual utilisation, can be used to show differences in preferences and potential access to services by income. The central focus here is to evaluate whether the survey can identify any distortion in utilisation patterns due to income. This would be expected where, for instance, clinics and hospitals are located only on more affluent areas, or where access is dependent upon some form of financial outlay. Lower income groups would be susceptible to both direct and indirect financial barriers, with user fees representing the form and transport costs and example of the latter. If any systematic bias in access favours higher income groups the concentration curves for utilisation would be expected to fall below the equality line.

Conversely, a bias in favour of low-income groups could exist where higher income groups are required to pay the costs of their service use while lower income groups are fully subsidised. Here higher income groups could be prejudiced if they are not able to risk pool in some way for their expected expenses. Although the bias, either in favour of, or against, low-income groups can be evaluated, the survey is not able to properly examine whether the health system treats higher income groups fairly. This bias is a feature of countries with strict means tests for free services, but where there inadequate social security arrangements exist for income earners.[5]

4.2 National

Service utilisation by the non-medical scheme population shows an increasing preference for private doctors/specialists as income rises, with a consequential decline in the utilisation of public sector clinics. Hospital service utilisation however does not vary significantly by income group. It is however expected that without access to a medical scheme, hospital use will concentrate on public sector services irrespective of income. Nevertheless, the concentration curve reveals that hospital utilisation slightly favours lower income groups.

The concentration curve for the medical scheme population (**figure 4.2**) shows that service use is biased toward lower income groups. This potentially demonstrates that private sector risk pooling, via medical schemes, reduces income biases in access to services.[6] By contrast, the absence of risk pooling, as occurs with the non-medical scheme population in relation to private doctor/specialist services, results in increasing utilisation with income (utilisation falls below the equity line in **figure 4.1**).

[5] The United States is a classic example of this problem where the most excluded group involves middle-income professionals and self-employed people unable to access affordable voluntary insurance.
[6] Although contributions may be regressive, once in the risk pool benefits are progressive.

Figure 4.1: Service utilisation from poorest to richest deciles of the non-medical scheme population (2006)

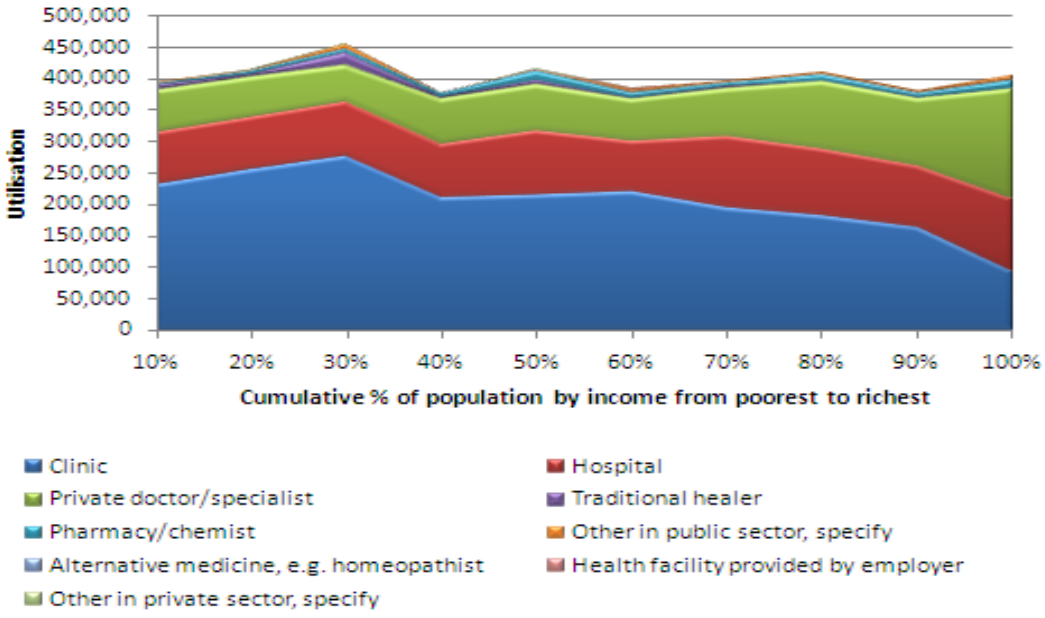


Figure 4.2: Non-medical scheme population: concentration curve of service use (2006)

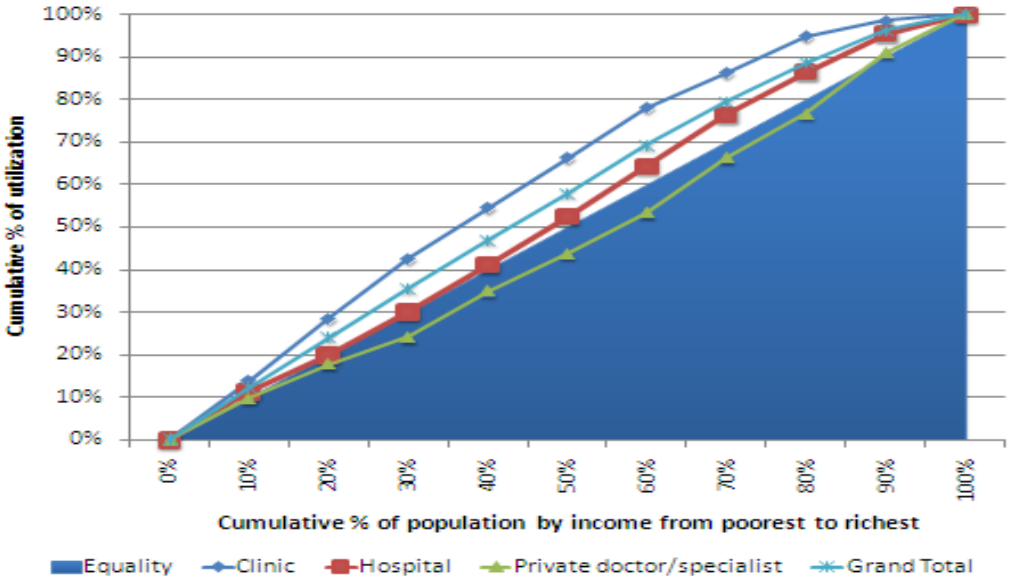
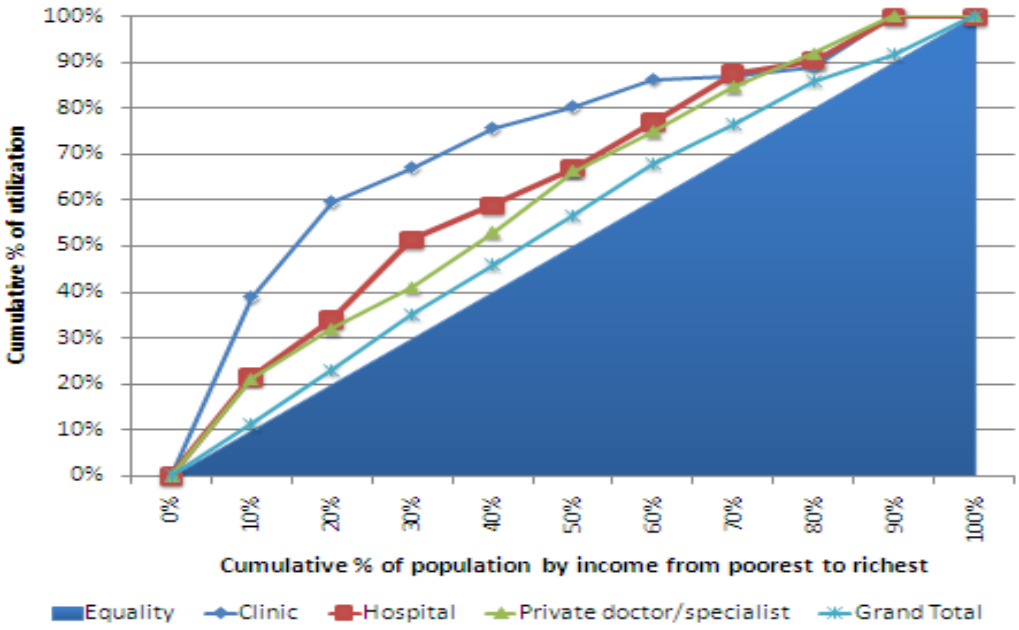


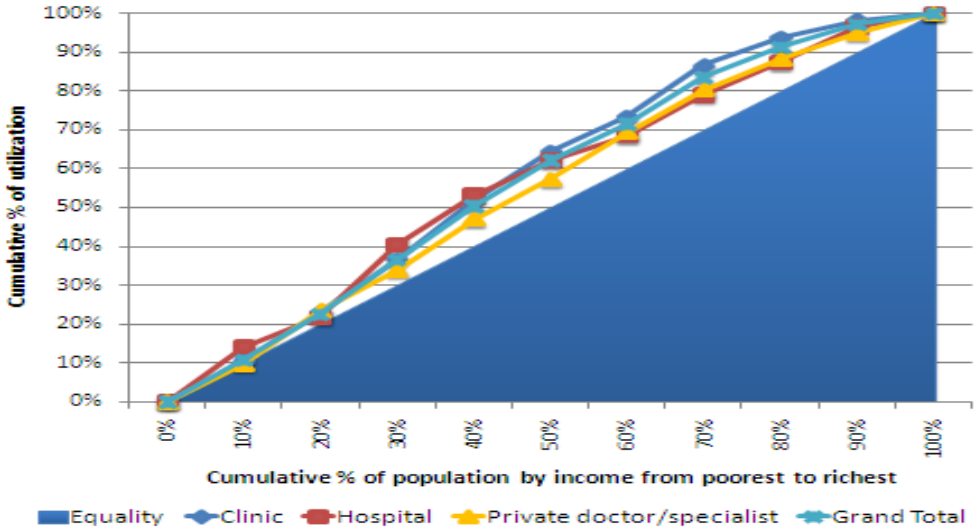
Figure 4.3: Medical scheme population: concentration curve of service use (2006)



4.3 Eastern Cape

For the non-medical scheme population in the Eastern Cape access to all major public sector services is biased slightly toward lower income services. Interestingly this bias can also be detected in access to private doctor/specialist services, which deviates from the national picture.

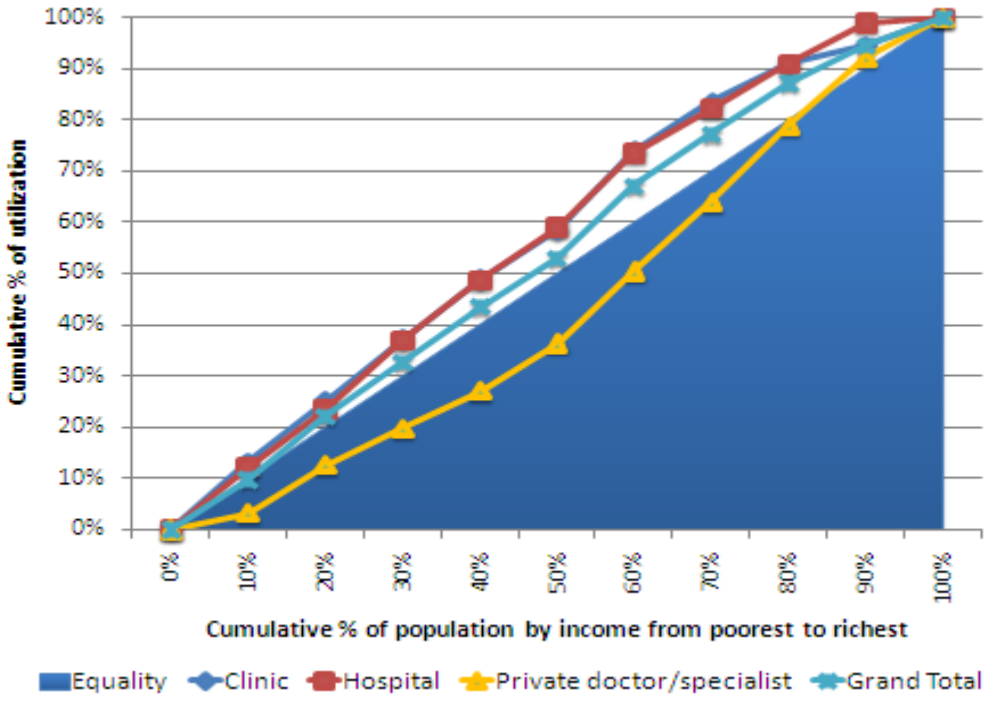
Figure 4.4: Non-medical scheme population: concentration curve of service use in the Eastern Cape (2006)



4.4 Free State

For the non-medical scheme population in the Free State access to public services is slightly biased toward low-income groups. Both hospital and clinic services demonstrate a similar pattern of use. Private doctor/specialist services, consistent with the national picture, are biased toward higher income groups (curve falls below the equality line).

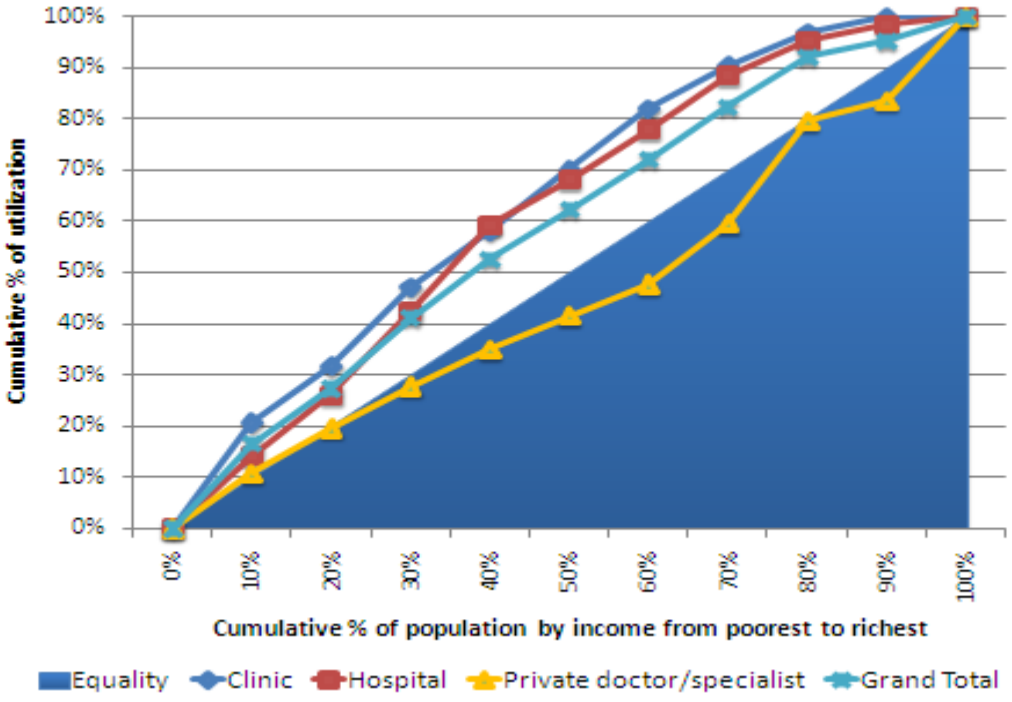
Figure 4.5: Non-medical scheme population: concentration curve of service use in the Free State (2006)



4.5 Gauteng

The non-medical scheme population in Gauteng shows a relatively pronounced bias toward lower income groups in the use of public sector services, with both clinic and hospitals services demonstrating a very similar pattern. Private doctor/specialist services, however, are slightly biased toward higher income groups (curve falls below the equality line).

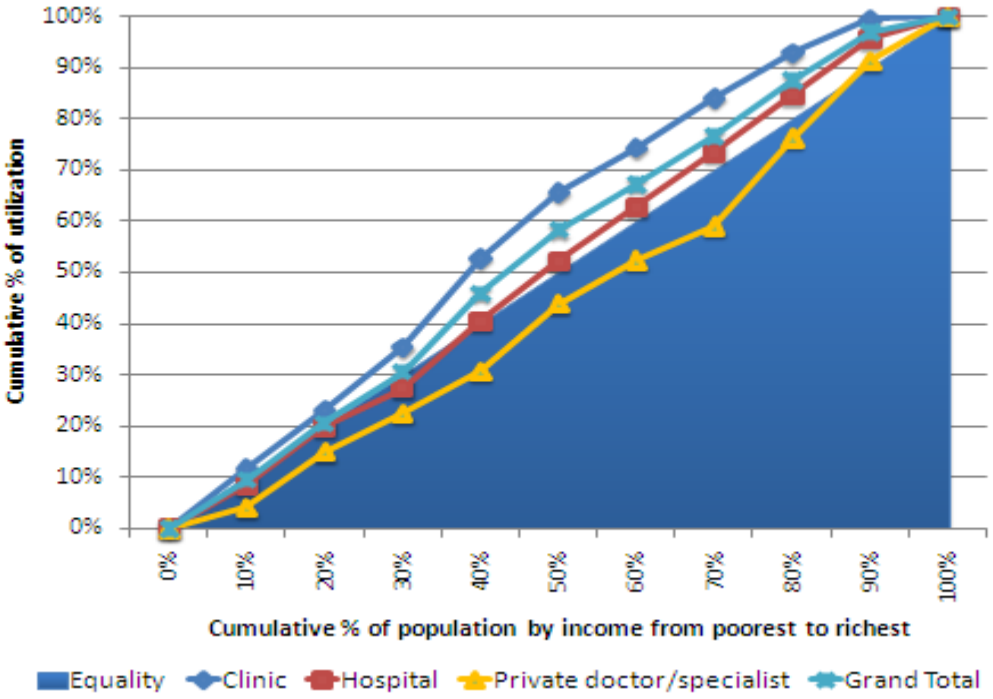
Figure 4.6: Non-medical scheme population: concentration curve of service use in the Gauteng (2006)



4.6 Kwazulu-Natal

The non-medical scheme population in Kwazulu-Natal is slightly biased toward lower income groups. However, the bias is more pronounced for clinic rather than hospital services. Consistent with the national pattern, private doctor/specialist services are biased toward higher income groups.

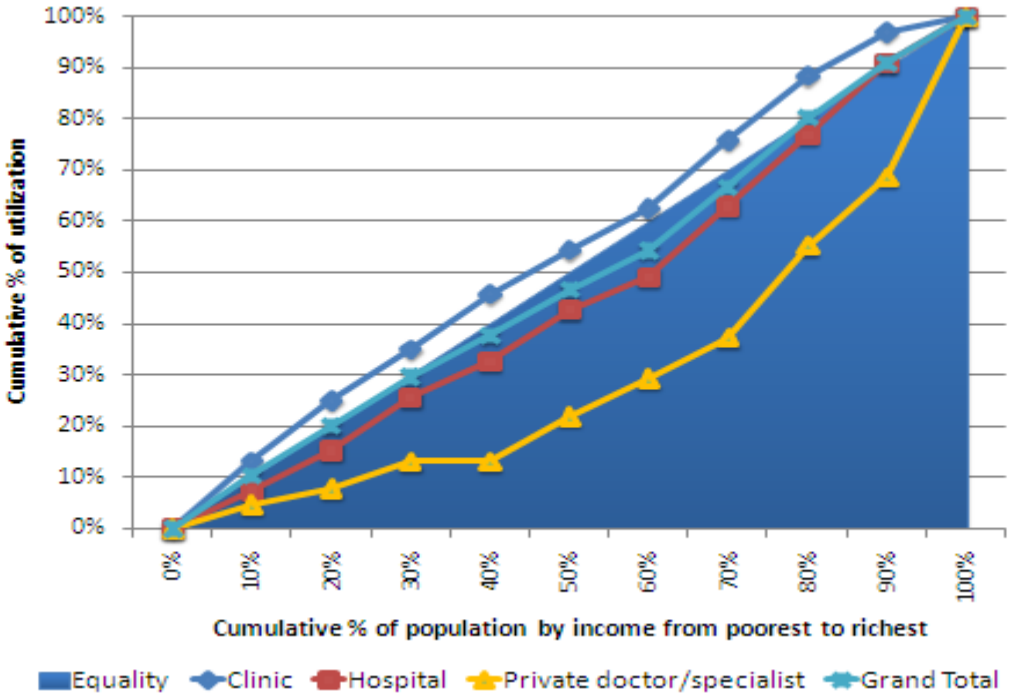
Figure 4.7: Non-medical scheme population: concentration curve of service use in the Kwazulu-Natal (2006)



4.7 Limpopo

The non-medical scheme population in Limpopo indicates that access to public hospital services is biased against low-income groups and is inconsistent with both the national pattern and the pattern exhibited in other provinces. Clinic services are however slightly biased in favour of low-income groups, but only just. The pattern of use for hospital services suggests an access problem for those with lower income. This pattern requires some further investigation to establish why this is occurring. One possible explanation may involve the need to incur significant transport costs to access public services, creating a slight income barrier. Interestingly, usage of private doctor/specialist services is strongly biased toward high-income groups, much more so than occurs in other provinces.

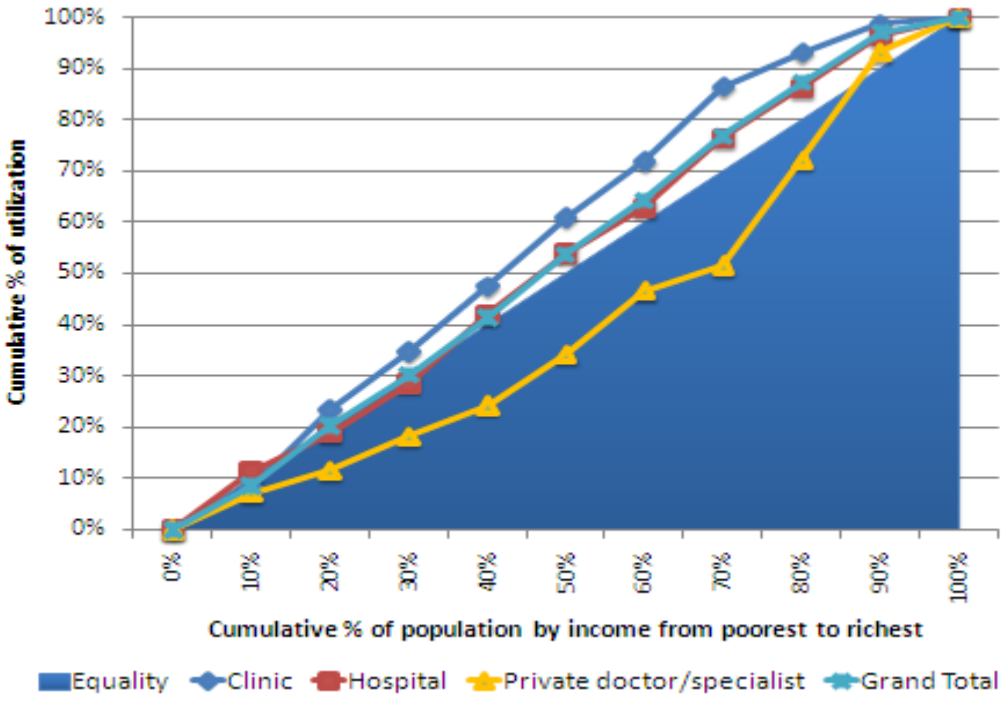
Figure 4.8: Non-medical scheme population: concentration curve of service use in the Limpopo (2006)



4.8 Mpumalanga

The non-medical scheme population in Mpumalanga demonstrates a slight bias toward low-income groups for hospital and clinic services. Hospital services are only very slightly above the equality line. Utilisation of private doctor/specialist services however demonstrate a fairly pronounced bias toward higher income groups, consistent with the national pattern.

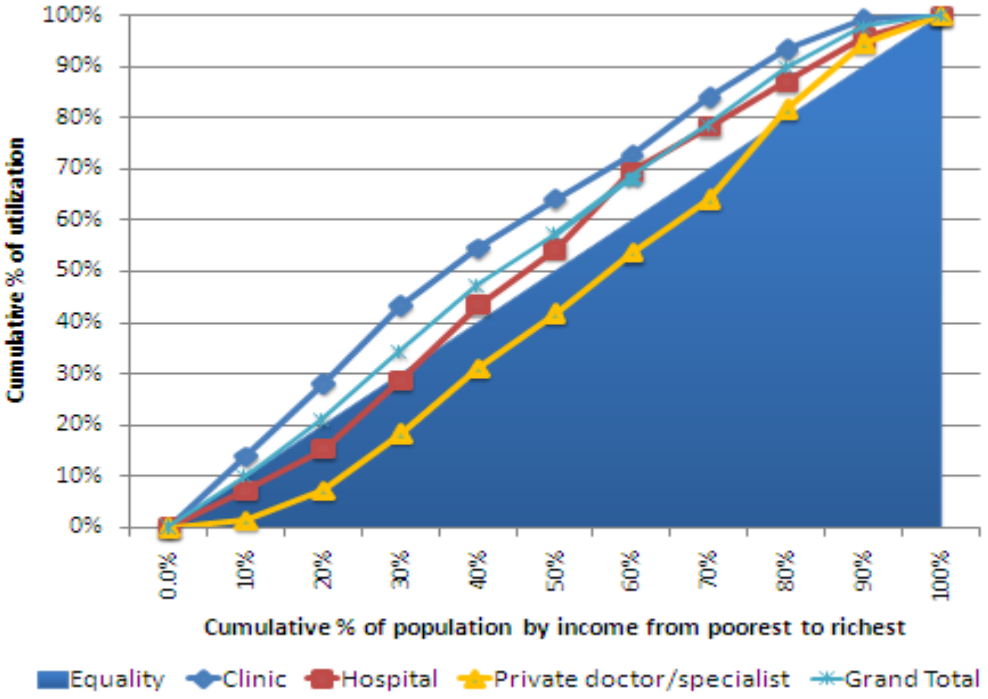
Figure 4.9: Non-medical scheme population: concentration curve of service use in Mpumalanga (2006)



4.9 North West

The non-medical scheme population in North West shows that hospital service use is only slightly biased toward low-income groups, with a more pronounced bias for clinic services. For the lowest three deciles, however, hospital utilisation falls below the equality line, suggesting some access problems for very low-income groups. As with Limpopo this could be explained by large distances between hospitals with an affordability barrier resulting from transport costs. However, the bias in the very low deciles is not carried throughout. Access to private doctor/specialist services follow the national pattern in falling below the equality line generally.

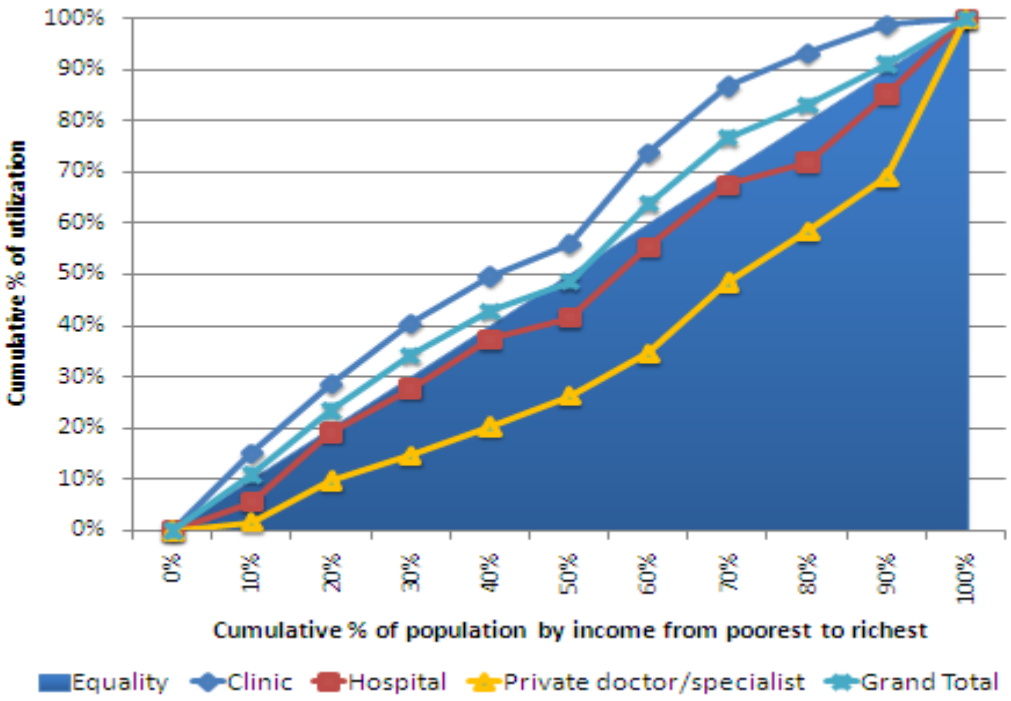
Figure 4.10: Non-medical scheme population: concentration curve of service use in the North West (2006)



4.10 Northern Cape

The non-medical scheme population in the Northern Cape demonstrates a slight bias toward low-income groups for clinic services, but a bias to higher-income groups for public hospital services. As with Limpopo and North West hospital service access may be affected by transportation costs. This is plausible in the Northern Cape given the very large distances that may need to be covered. Consistent with national trends, access to private doctor/specialist services shows a pronounced bias toward high-income groups.

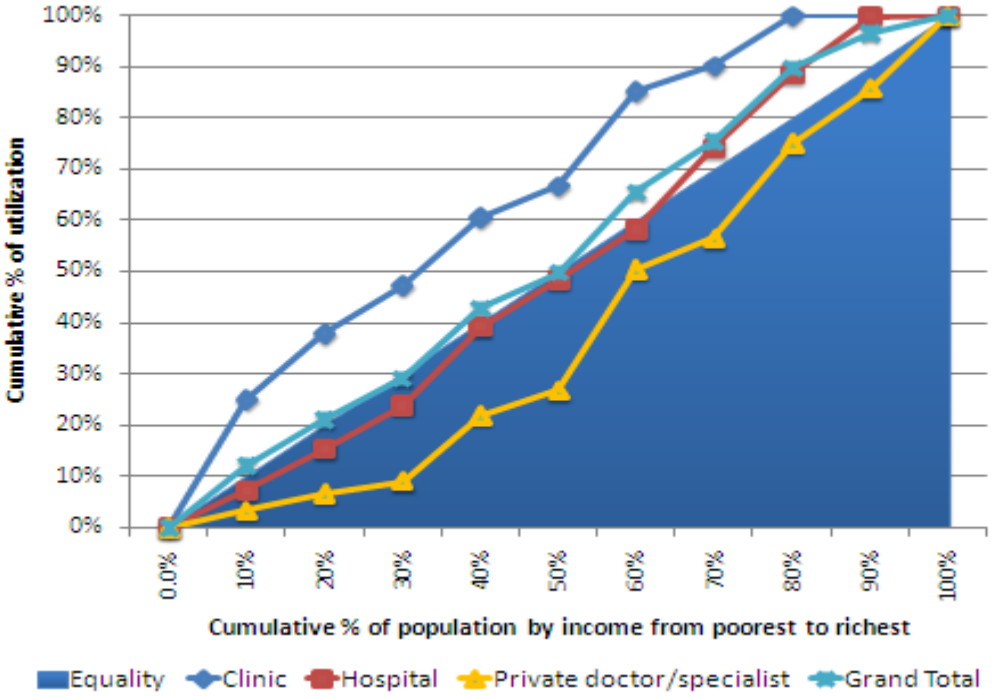
Figure 4.11: Non-medical scheme population: concentration curve of service use in the Northern Cape (2006)



4.11 Western Cape

The utilisation of services by the non-medical scheme population in the Western Cape shows a strong bias toward low-income groups for clinic services, but an ambiguous result for hospital services. Lower income deciles fall below the equality line while for higher-income deciles untilisation rises slightly above the equality line. What would cause this effect is unclear and it requires further investigation. To the extent that this results from transport costs as a barrier, it may suggest that public hospitals are inefficiently located in the Western Cape. The utilisation of private doctors/specialists however follows the national pattern with a bias toward high-income groups.

Figure 4.12: Non-medical scheme population: concentration curve of service use in the Western Cape (2006)



4.12 Conclusions

Nationally the utilisation of key services by the non-medical scheme population demonstrates that access is predominantly biased in favour of low-income groups. However, in four provinces, Limpopo, Mpumalanga, Northern cape, and the Western Cape, hospital services deviate from this pattern with slight biases toward higher income populations. The explanation for this is unclear, but suggests that some form of indirect income barrier must be in place.

As public hospitals are required to treat low-income people without charge, the cause must involve an indirect income-related barrier of some form. A likely candidate would be transport costs which can arise for at least two reasons. The first would be due to the geographical make-up of a province, with many small towns with great distances in-between. The second would involve the poor distribution of resources, such that geographical access favours a higher-income group. This issue would require further research and investigation to resolve.

The utilisation pattern for doctor/specialist services predictably biases higher income groups in all provinces. However, this pattern of use differs significantly from medical beneficiary use of doctor/specialist services which shows a bias toward the lower-income groups. The differences in utilisation bias indicate that income differentials are removed when risk pooling via a medical scheme is possible.

5. HEALTH CONDITIONS

5.1 Overview

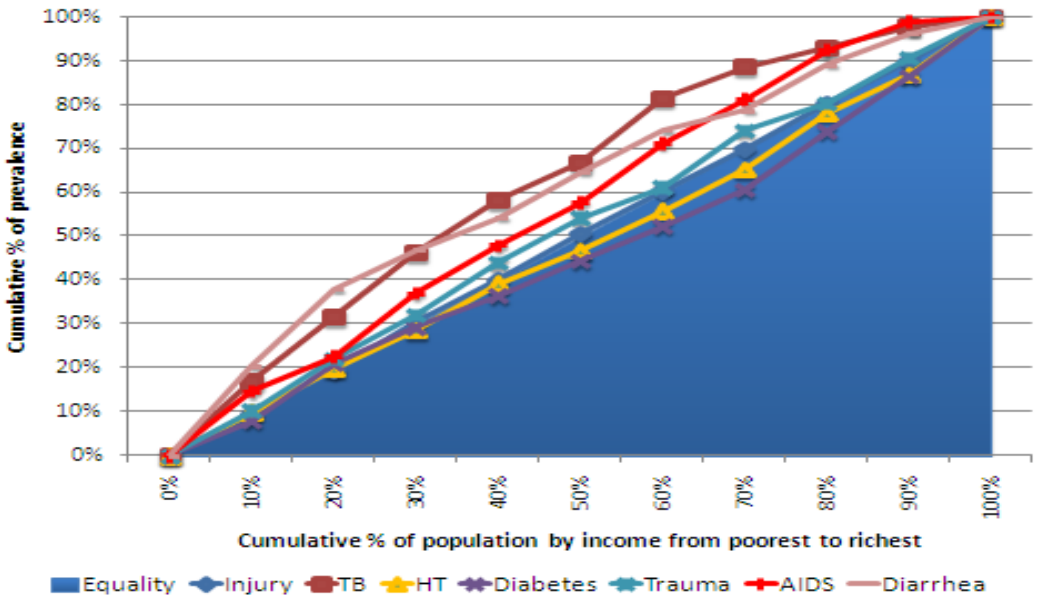
The GHS2006 requests information from respondents on any *conditions* they required treatment for in the previous month. As the survey requests information from lay people, the conditions are specified in very broad terms. Nevertheless, they are useful general indicators of specific priority conditions which are important from a public health perspective. A simple validation was performed on the age spread of the conditions against the expected morbidity profile against what would be expected (see **annexure A**). The results showed broadly consistent patterns, suggesting the data could at least reflect a reasonably consistent profile of morbidity. However, the survey does not necessarily provide an accurate picture of true prevalence.

The analysis here is performed entirely on the non-medical scheme population to determine variations in morbidity patterns by income.

5.2 Results

The non-medical scheme population indicates that certain conditions are biased toward low-income groups while others bias higher-income groups. Within the former group are Tuberculosis (TB), Diarrhoea, and AIDS. However, AIDS is not as pronounced in the lowest income groups as is the case with TB and HT. Trauma appears to closely follow the equality line, while chronic conditions associated with lifestyle show a slight bias toward higher income groups. This overall pattern is largely as expected, with infectious disease prevalence biased toward lower income groups and chronic conditions biased toward higher income groups. Both "injury and illness" and trauma show no important bias, suggesting these conditions are not affected by income level.

Figure 5.1: Concentration curves of prevalence for selected health conditions for the non-medical scheme population (2006)



6. SERVICE SATISFACTION

6.1 Overview

The self-assessed satisfaction by users of a health service does not amount to an indicator of service quality. It does however provide some indication of how responsive a service is to the comforts associated with receiving health treatment. Given that requiring medical treatment is generally regarded as an unpleasant experience and to be avoided, service satisfaction has as much to do with responding to creature comforts as to resolving the clinical condition resulting in the visit. Such creature comforts would include: reduced waiting times; comfortable waiting rooms; polite and sensitive staff; and pleasant surroundings. However, some discomforts also border on treatment quality: rude staff that make patients avoid further treatment; dirty premises and linen that cause hospital-based infection; the absence of adequate hospital food; and the failure to provide adequate access to family support.

Given the subjectivity involved, significant poor performance could be hidden in a response depending upon the pre-existing expectations of a patient. If expectations are generally poor and a service beats those poor expectations, a generally higher level of satisfaction may be reported.

> *Although many studies report that patients are generally satisfied with the quality of ANC services, the same studies show that quality was a problem. This maybe because expectations of a service are generally low. At a national level, quality of care in contraceptive services has shown that 20% of women reported that the provider shouted or scolded the patient in a family planning setting. (*King MS *et al*, 2006, p.18.)

This makes interpretation of the reported information problematic, but not without some value. The survey requests that respondents indicate their satisfaction at various levels: very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, and very dissatisfied. The category “somewhat satisfied” could be regarded as largely driven by expectations, as the service largely essentially matched what was expected. The “very satisfied” patient would however be indicating that expectations were exceeded. It is furthermore quite reasonable to assume that patients used to private sector services, such as those covered by a medical scheme, would not provide the same rating to a public sector services as those patients who conventionally only make use of public sector services.

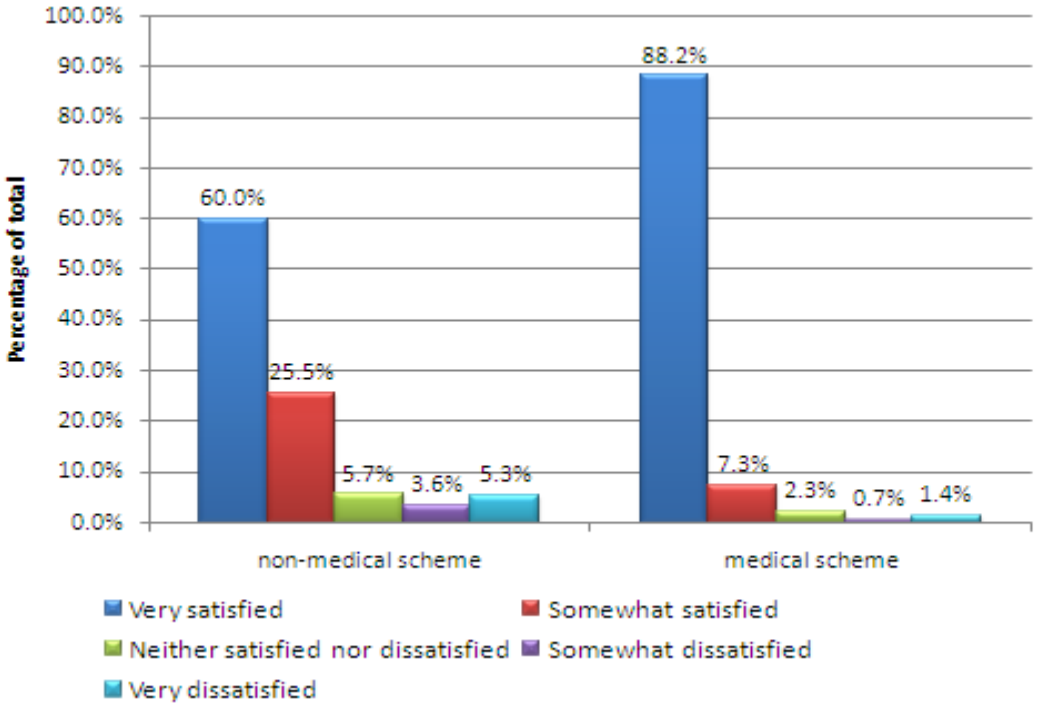
For these reasons the “very satisfied” category is potentially the most important indicator of service acceptability to patients with the “somewhat satisfied” category potentially ambiguous. The differences in the reported experience between the medical scheme and non-medical scheme populations are very significant for this category in relation to all three major service categories examined, suggesting a high level of dissatisfaction with public services.

6.2 Results

For hospital services, the medical scheme population reports 88.2% of patients are “very satisfied” compared to 60.0% the non-medical scheme population (accessing public

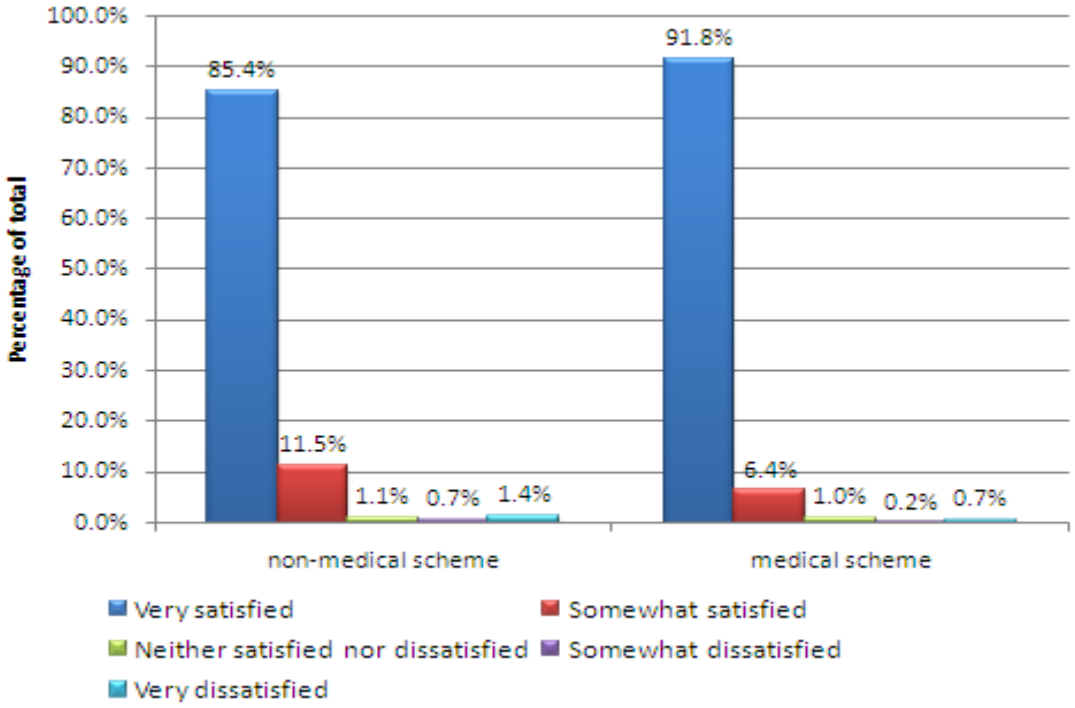
hospitals). This reflects a substantial difference in how patients are treated between the two sectors. Although 25.5% of the non-medical scheme patients are "somewhat satisfied", when seen against the backdrop of likely low expectations this is not a good result.

Figure 7.1:Satisfaction with hospital services



By contrast with hospital services, clinic services are rated far higher by non-medical scheme members than are hospital services. As these are used quite frequently in a year, the 85.4% "very satisfied" response suggests that patients are generally treated quite well. Interestingly, medical scheme members rate clinic services at 91.8% which is exceedingly high. It is however not clear what medical scheme members understand a clinic to be, as clinics are really only found in the public sector.

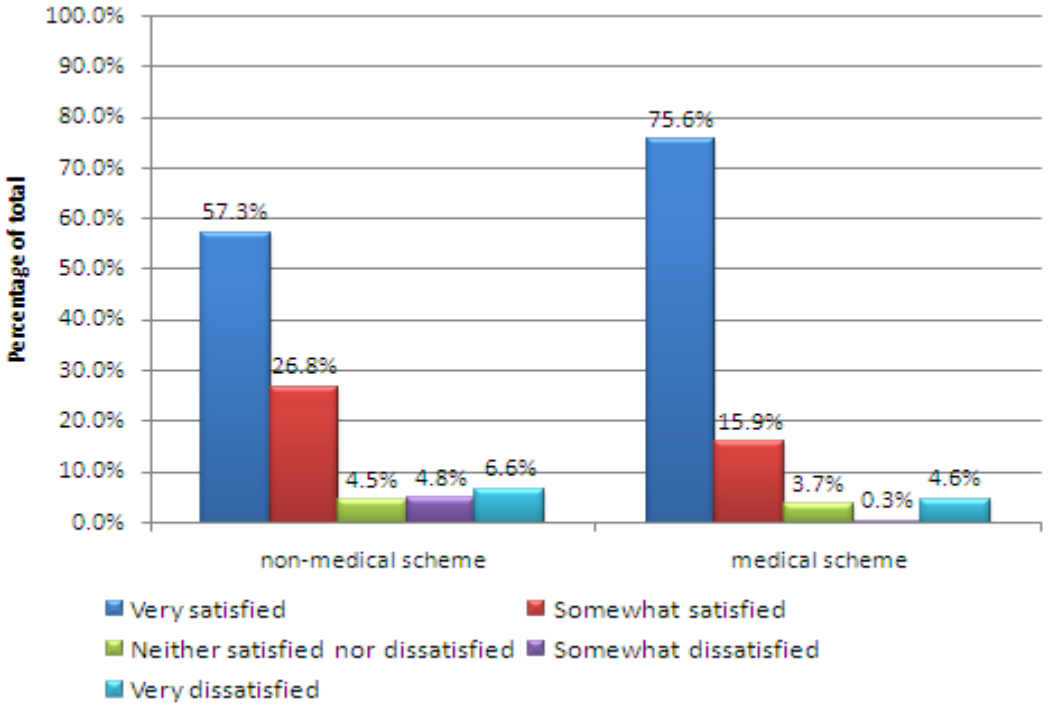
Figure 7.2:Satisfaction with clinic services



Despite a relatively high utilisation of private doctors/specialists by non-medical scheme patients in all income groups, only 57.3% are satisfied with the service compared with 75.6% on medical schemes. The low rating by non-medical scheme members is interesting as these services will be used on a discretionary basis (by choice). Furthermore, as indicated in **figure 4.1**, private doctor/specialist utilisation systematically substitutes for clinic services as incomes rise. It is possible that the low satisfaction levels result from a higher expectation from private relative to clinic services. It is also possible that private doctors/specialists treat non-medical scheme members differently to medical scheme members. Given the lower, and more unreliable, reimbursement likely from non-medical scheme members, consultations are likely to be shorter and less satisfactory than for medical scheme members.

The distinctly lower rating of private doctor/specialist services by medical scheme members relative to their rating of hospital services is also of interest. This may point to problems with the patient-doctor relationship within the private sector, which may be driven by commercial imperatives. However, as the survey does not distinguish between general practitioners (GPs) and specialists it is difficult to assess the source of the potential problem. However, if it is assumed that hospital-based care is most closely tied up with hospital care, which has a higher rating, it is possible that the lower satisfaction level is driven by the care provided by GPs. The same reasoning would apply to non-medical scheme members, who are potentially reflecting their experience of GP cash practices which, due to commercial imperatives, have a tendency to focus on patient turnover rather than quality.

Figure 7.3:Satisfaction with private doctor/specialist services



6.3 Conclusions

Although the results of the satisfaction survey cannot be regarded as conclusive, they reveal a number of important patterns which cannot be dismissed. For hospital services there are stark difference between non-medical scheme and medical scheme populations in their experiences of hospital and private doctor/specialist services, with non-medical scheme populations worse-off. Doctor/specialist services are preferred by higher income groups, but rated lower than hospital services and public sector clinics. It is likely that much of this result, by both non-medical scheme and medical scheme patients, is driven by experiences of GP services. With respect to the non-medical scheme population this may reflect their treatment in GP cash practices. The commercial imperatives underpinning GP practices may also affect medical scheme members. In the case of clinic-based services, the rating by both non-medical scheme and medical scheme populations is high, which suggests that their accessibility and centrality within their communities may be impacting on perceptions.

8. SUMMARY OF FINDINGS

8.1 General

Although there are concerns with the precision of the health-related questions in the GHS2006, the results of the survey is able to provide some indicative insights into a range of health issues relating to access and equity. Overall they show that access to public services is biased in favour of low-income groups, and participation in a medical scheme removes income-biases in access service through the removal of point of service affordability barriers.

8.2 National

The division between the medical scheme and non-medical scheme populations appears reasonably consistent with relevant reported information. Although the reported total medical scheme population is greater for 2006 by around 600,000, the household participation by income appears valid.

Overall the African population is now equal to the White population on medical schemes, with both standing at 42% of the total. However, the African population is far younger than the White population, suggesting that participation has occurred relatively recently, possibly within the past 15 years. It is therefore likely that in the next few years the African population will overtake the White population. In large measure this reflects the pattern of formal employment.

Medical scheme participation is highly correlated with increases in income, with a distinctive move into scheme cover for monthly per capita incomes lying between R2,000 and R6,000. These results suggest that the demand for scheme participation is very high once the affordability is lowered. This is also an indicator of general dissatisfaction with public sector services. This conclusion is also supported by the fact that the income distribution of medical scheme members is better than that for the country as a whole.

8.3 Service utilisation

Nationally the utilisation of key health services by the non-medical scheme population suggests that access is predominantly biased in favour of low-income groups. However, in the provinces of Limpopo, Mpumalanga, Northern Cape, and Western Cape, hospital services are biased toward higher-income groups. The reason for this may relate to the presence of indirect income barriers such as high transport costs.

The utilisation pattern within the non-medical scheme population for doctor/specialist services is predictably biased toward higher income groups, as these services will be accessed using out-of-pocket payments at the point of service. However, the bias is not as pronounced as the national income distribution, suggesting the existence of a strong preference for these services across all income groups.

By contrast with the non-medical scheme population, access to private doctor/specialist services is biased toward low-income groups, suggesting that the risk-pooling effect obtained through medical scheme participation significantly removes affordability barriers at the point of service and consequently any access bias in favour of high-income groups.

8.4 Prevalence of certain health conditions

Overall seven "conditions" out of the GHS2006 are reported on in this report and analysed using concentration curves to bring out variations by income. The results indicate that prevalence patterns generally reflect common-sense expectation, with infectious diseases (including AIDS and TB) biased toward low-income groups and chronic conditions (diseases linked to lifestyle) biased toward higher-income groups. However, trauma shows no significant bias by income.

8.5 Service satisfaction

Service satisfaction levels differ significantly between the medical scheme and non-medical scheme populations, indicative of differences in the quality of care offered between the public and private sectors. This is particularly pronounced in the case of hospital services. However, where both populations access private services a difference in satisfaction is evident; suggesting that private providers vary their behaviour depending upon whether or not someone is on a medical scheme.

The survey also indicates high levels of satisfaction by the non-medical scheme population with clinic services, which are public sector services. By comparison private doctor/specialist services are rated much lower despite the fact that their utilisation is preference-driven. This points to the existence both of differential treatment by private doctors/specialists depending upon medical scheme participation; and the possibility that expectations of service quality are higher for private services, which leads to dissatisfaction when expectations are not met.

Expectations in relation to clinic services, in contrast to private doctor/specialist services, are potentially generally low, leading to a better assessment when reasonable treatment is forthcoming. However, the fact that private doctor/specialist services are substituted for clinic services as incomes rise strongly suggests that these services are in reality rated higher. This would support the view that expectations are also higher for private services and probably distort findings on satisfaction.

The results for private doctor/specialist services possibly relate more to GP than specialist services for both the medical scheme and the non-medical scheme population. Consequently, the generally poor relative rating of these services by both populations is potentially indicative of some level of dissatisfaction with GP services.

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ANNEXURE A: INCIDENCE AND PREVALENCE GRAPHS FOR SELECTED CONDITIONS

Figure A1: Prevalence and count of Illness or Injury (2006)

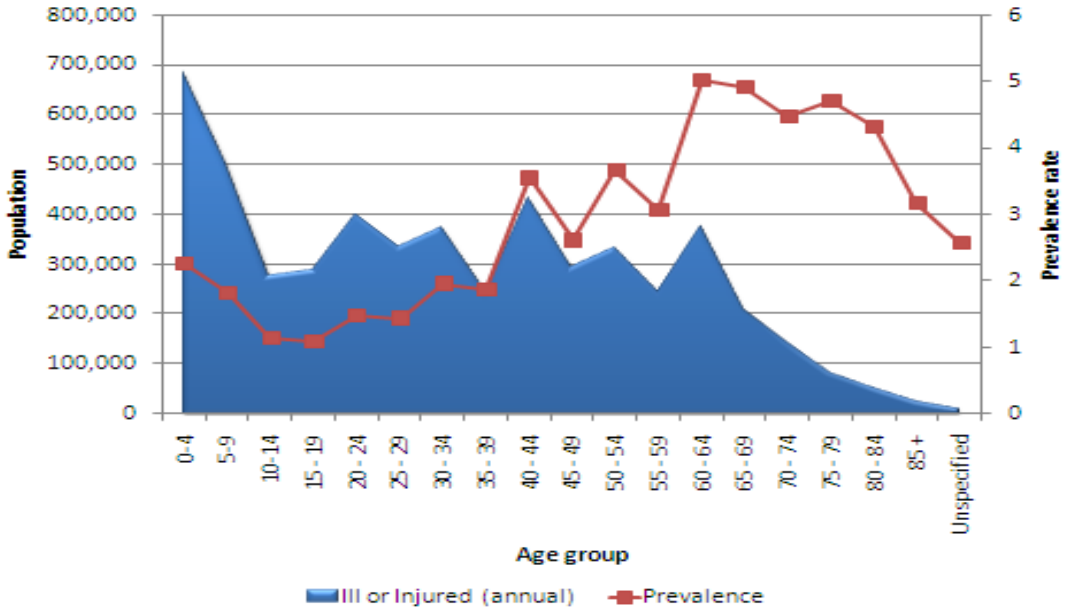

Figure A2: Prevalence and count of Tuberculosis (2006)

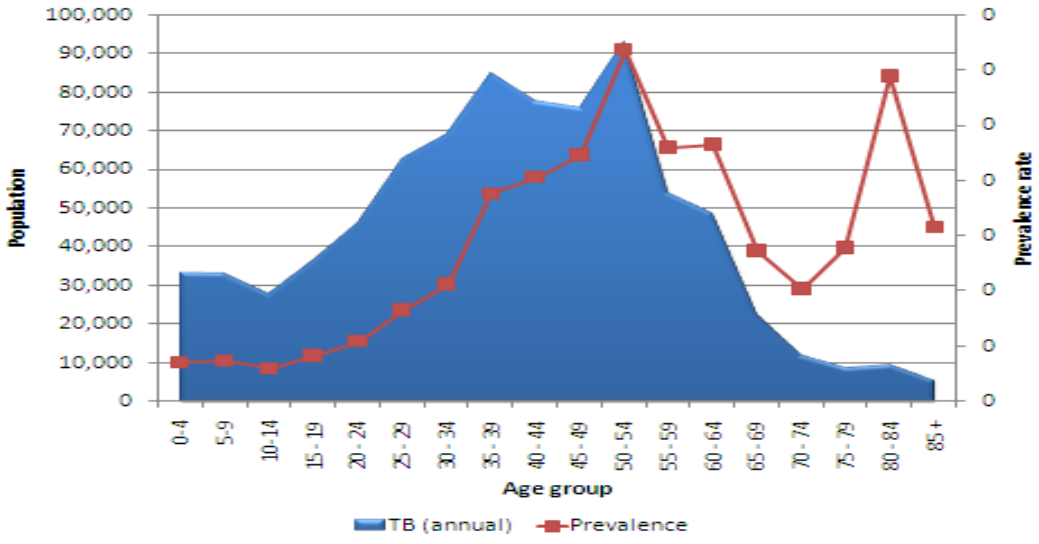

Figure A3: Prevalence and count of Hypertension (2006)

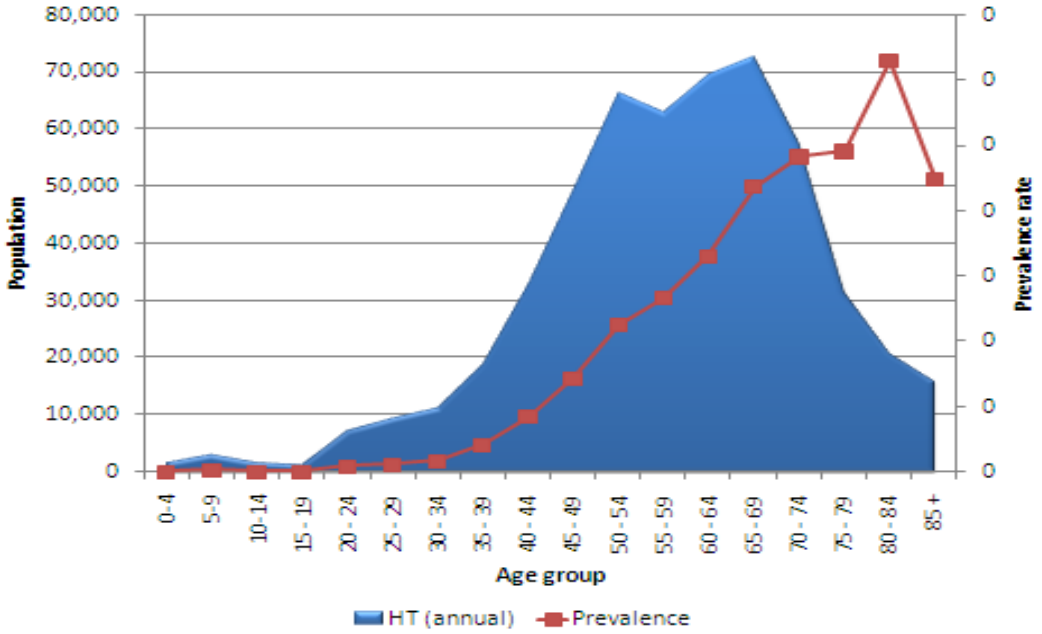

Figure A4: Prevalence and count of Diabetes (2006)

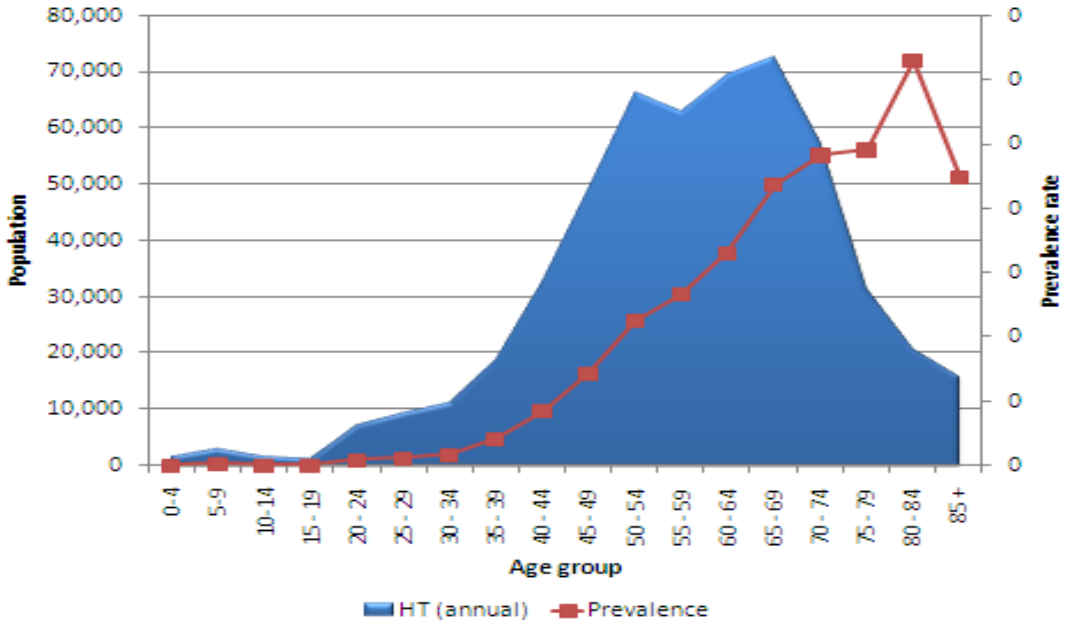

Figure A5: Prevalence and count of Trauma (2006)

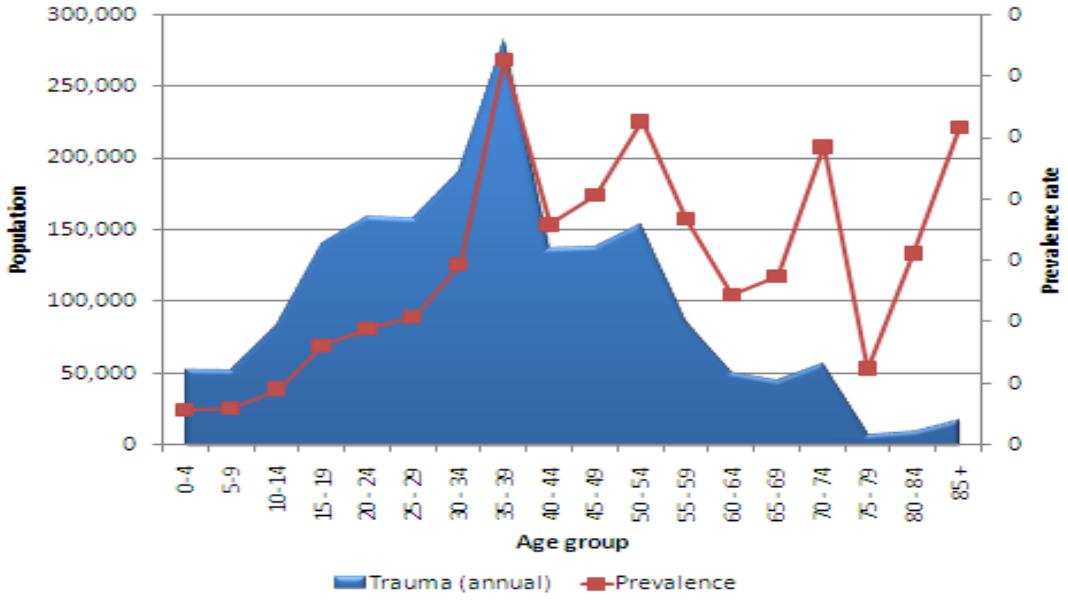

Figure A6: Prevalence and count of AIDS (2006)

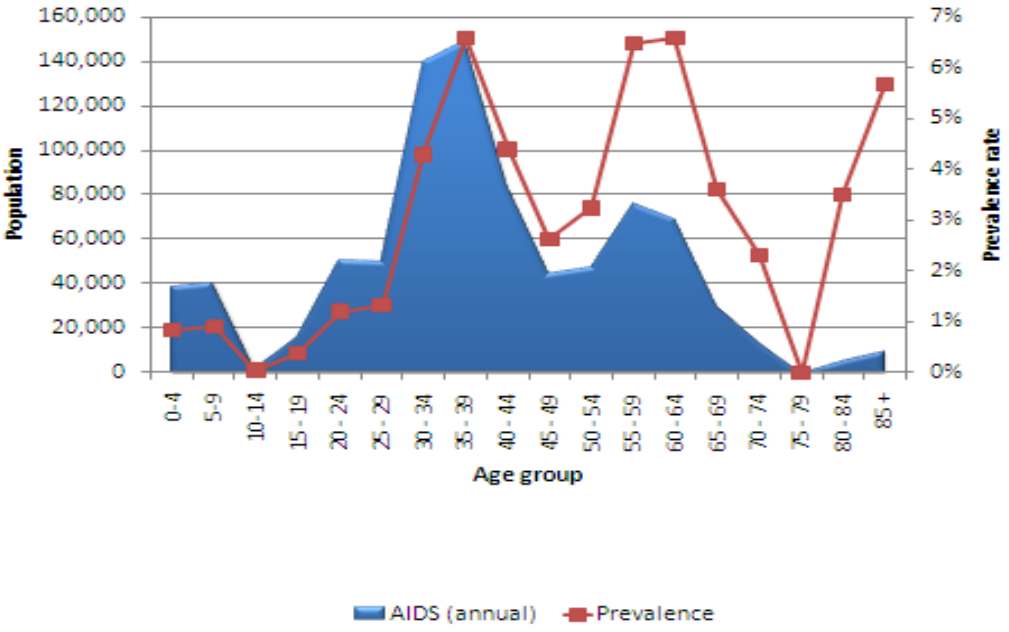

Figure A7: Prevalence and count of Diarrhoea (2006)