NATIONAL HEALTH ACCOUNTS (NHA) IN EASTERN AND SOUTHERN AFRICA:

A COMPARATIVE ANALYSIS
Executive Summary

Most of the sub-Saharan countries are implementing a number of health sector reforms that target improvement in efficiency and management of health services. NHA help to assess health system performance, and identify health sector problems and opportunities for change. The framework estimates and tracks total financing expenditure on health care. It also helps in the development of reform strategies and in the monitoring of the effects of reforms on health expenditures and financing (P. Berman 1998).

This paper presents the results of the analysis of Eastern and Southern Africa Countries (ESAC) National Health Accounts. It compares and contrasts the findings of the NHA exercises conducted recently across the ESAC region. Specifically, it identifies important similarities and differences in methodological approaches, as well as common obstacles to acquiring accurate and complete information; characterizes the different patterns of funding and financial flows, calculating health expenditure as a proportion of GDP and total public expenditure in each country; and discusses explanations and policy implications of the estimates reported. The focus of this paper is more on the breadth of comparison rather than an in-depth look at specific health expenditure estimates.

Data presented in this paper are primarily from financial year 1997/98 and individual country currencies were converted into US$.

Main findings

The data from NHA exercises shows that health expenditure, as a percentage of GDP and health expenditure as a percentage of total public spending remain low in most of the countries. This is a result of limited ability of most of the low-income countries to raise revenue, which translates into insufficient public finance for health care.

Private sources (principally households OOP) were the main sources of financing contributing on average 43% of the total health care expenditure and, were the main purchasers of health services at an average of 33%. Out of pocket payments have been noted to reduce equity since they impose a burden on those least able to pay and, the private sector is only affordable to small proportion of the population mainly in urban areas. In addition the existing regulatory mechanisms in most of the countries are weak. Government subsidies to the private sector and increased regulatory capacities may improve the overall availability and accessibility of health services to the majority of the population, while relieving the government of having to provide that additional care directly.

Donors on average contributed 27% of total health expenditure. The high dependency in donor funding in a number of countries is of concern. African health systems should aim at having enough reliable funding within a country’s own resources to maintain current health services for a growing population and, to cover the costs of raising quality and expanding availability to acceptable levels.
The results show that a number of countries in the region are spending US$12 as recommended by the World Bank to fund the basic package however, have not been able to provide a basic package of services to the population. This may imply that most of these countries health care systems suffer more from relative inefficiency than absolute inadequacy of financial resources. Thus, more effort should be directed at improving relative rather than absolute inadequacy of financial resources.

There are discrepancies between the per capita health expenditure and health indicators. However, the improvement in health outcomes is not solely the responsibility of the health sector as other variables like income, education, water and sanitation play significant roles.

The existence of many stakeholders in many of these health systems may impede the achievement of government health policy goals, hence, the need to put in place regulatory mechanisms that will promote attainment of policy goals.

The coefficient of variation shows that the degree of inequity is high in all countries for which the analysis is conducted. The distribution of resources is skewed towards urban areas is evidenced an indication that, countries are allocating public resources on the basis of existing infrastructure and historical spending patterns without due consideration of varying regional health needs. The challenge for the member countries is to increase resources to the under-resourced regions through objective and explicit resource allocation decisions.

There is poor combination of health care inputs in the region as evidenced by high proportion of expenditure on salaries compared to other equally important health care inputs to efficient and effective service delivery. This is a pointer to inefficiency and Governments should consider combining inputs in the most optimal way to maximize on the impact.

Hospital expenditure in the region is not as high as initially thought in relation to primary health care. Although information on primary care expenditure is central to policy monitoring and evaluation, the financial systems in most of the member countries do not reflect expenditure use by function. The challenge remains, for governments in the region to improve their accounting systems to reflect resource use at the various levels in the health care system. This will improve on future NHA estimates.
Glossary

CBoH   Central Board of Health
DHB   District Health Boards
ESAC   East and Southern Africa Countries
FY   Financial Year
GDP   Gross Domestic Product
HIV   Human Immunodeficiency Virus
IMF   International Monetary Fund
IMR   Infant Mortality Rate
LoC   Level of Care
MMR   Maternal Mortality Rate
MoH   Ministry of Health
NHA   National Health Accounts
NGO   Non-Governmental Organization
OOP   Out of pocket
PHC   Primary Health Care
SSA   Sub Saharan Africa
US$   United States Dollar
WHO   World Health Organization
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Section 1: Introduction

1.1 Background and Context

The health care systems of sub-Saharan African countries (SSA) are increasingly facing numerous threats in their efforts to extend health services of acceptable quality to the vast majority of population: severe budgetary constraints; over-concentration of resources on high-level health facilities (which are mostly in urban areas) that benefit relatively few people (World Bank, 1993, Barnum and Kutzin 1993); skewed distribution of health care resources between geographical regions (Makan, Valentine and Kirigia, 1996); prevailing health inequalities to the extent that the poor households in many countries have no access to quality care (World Bank, 1994); unfair financing systems (Murray and Frenk, 1999; WHO, 2000); rapidly growing but poorly regulated expensive private sector; excessive and; increasing dependency on out-of-pocket spending are only a few of the problems.

The severe shortage of health care resources is further compounded by a host of factors that include, poor macro-economic performance, cut backs in public spending, rapid population growth, the HIV/AIDS pandemic and an upsurge of diseases such as malaria.

Donors contribute a fairly substantial portion of the health budget in most African countries, which lessens the financial burden in the short-term. Countries will still continue to face the challenge of providing sustainable, high quality and easily accessible health services to the population. Further more, donors often have their own agenda, which often differs from the countries’ and may complicate the implementation of national policies by focusing on programs outside the national priorities. This has fragmented the health sectors of the African countries (World Bank 1993).

1.2 Objectives of the Paper

This paper compares and contrasts the findings of the National Health Accounts studies conducted recently across the Eastern and Southern Africa region (ESA). It’s objectives are:

- Identify important similarities and differences in methodological approaches, definitions and classifications, as well as common obstacles to acquiring accurate and complete information;
- Characterize the different patterns of financial flows indicating the percentage distribution of funding between public, private and donor sources, financial flows between public and private intermediaries, calculating health expenditure as a proportion of GDP and total public expenditure in each country, commenting on the expenditure patterns, equity and sustainability issues;
- Recommend areas for reform to improve the equity and efficiency of health sector financing and expenditure within the region and;
- Suggest strategies for improving future NHAs in the region.

1.3 Organization of the report:

The report is organised in four sections. After a brief history on the NHA regional network and policy relevance of NHA, section II outlines the methodology used in the comparative
analysis. Section III presents the detailed analysis of the results including the distillation of the main issues arising. Conclusions and recommendations are presented in section IV.

1.4 Development of NHA regional network

Partnerships for Health Reforms (PHR) initiated a series of National Health Accounts (NHA) exercises in Eastern and Southern African Countries (ESAC) in 1999. In each country, NHA teams composed of specialists with different areas of expertise in health system and expenditure analysis were formed. These were drawn from different Governmental, non-Governmental and research institutions.

A series of workshops were held in 1998, 1999 and 2000 to train regional researchers on the NHA methodology and assess progress at various stages. This facilitated development of skills and sharing experience in process and interim results. At present there are 10 African countries involved in what is referred to as the Eastern and South African NHA network, namely: Ethiopia, Kenya, Malawi, Mozambique, Rwanda, South Africa, Tanzania, Uganda, Zambia and Zimbabwe.

Through a series of regional meetings, representatives of the various country based NHA research teams were strongly motivated for a regional approach to the comparative analysis of NHA data. Following this, a working meeting was convened in Cape Town to carry out a collaborative regional analysis of the NHA data. This paper is a direct output of this initiative. At the time of this analysis, all the countries under the initiative had completed the NHA exercise though, reports for Kenya, Malawi, Tanzania and Zimbabwe were not yet in the public domain. Except Zimbabwe, NHA data for the countries in the network was included in the analysis.

1.5 Relevance of NHA in addressing key policy issues

Most sub-Saharan countries are implementing a number of health sector reforms that target improvement in efficiency and management of health services (Gilson and Mills, 1995). NHA is a valuable tool that can be used to help assess health system performance and, improve the capacity of decision-makers to identify health sector problems and opportunities for change. It can also help in the development of reform strategies and in the monitoring of the effects of reforms on health expenditures and financing (P. Berman 1998).

NHA contributes to health system policies in several important ways including:

1. It provides a comprehensive picture of the financial organization of a health care system in a way that is easy to understand and relevant for policy analysis.
2. When developed using standard international classifications, NHA helps national analysts compare their health care system with those of other countries. This provides valuable input on what can be achieved and helps in setting objectives and benchmarks for performance.
3. NHA provides a framework for analysing the financial impact of health system reform proposals, which can be used to develop financial projections and design monitoring efforts.
Section II: Methods

2.1 The Framework of National Health accounts

The NHA framework was used to estimate the total financial expenditure on health care in all the participating countries. The framework is based on a feasible and useful definition of the boundaries of the healthcare sector. It analyses health expenditures based on a flow of funds framework and presented in the form of matrices linking sources of expenditure, financing intermediaries or agents, and a variety of breakdowns of the uses of expenditures (Berman, 1997).

2.2 Definitions and classifications used:

The health expenditures reported in this paper refer to expenditures on activities whose “primary intention” (regardless of effects) is to improve health (Griffiths and Mills (1993). Although most countries adopted this broad definition, in practice, there were variations in adaptations as well as in the definitions to suit local needs (see annex A for details).

Classification of health expenditure was based on those entities who finance (sources), those who pay the entities providing the care (financing intermediaries), and those entities providing the care (providers).

2.2.1 Time Period and Currency used

Expenditures reported here are for financial year 1997/98. There was a mix of financial years ranging from 1994/95 for Kenya to 1999/2000 for Tanzania (see annex B for details). For purposes of analysis and comparison, NHA estimates for countries that conducted the exercise earlier or later than 1997 were inflated or deflated to allow for a common year of comparison. In addition, since member countries used different currencies for their NHA estimates, they were converted into a common currency to allow cross-country comparisons. Thus, all health expenditure figures reported in this paper are in US$.

2.3 Entities used:

Estimates for Health Expenditure were analysed in three ways, namely: by financing sources, agents/intermediaries and utilization/uses of funds. This was based on those entities, which make expenditure, and those entities passing and using funds

2.3.1 Financing sources

As those entities, which provide funds to the financing agents who are direct purchasers of or payers for health care. Three sources of financing were considered, namely: Public, Donors and Private. The public sources included the Ministry of Finance (MOF), Provincial and Local Government and Public Employers/Parastatals. Donor sources included the International Donor Organizations and Non Governmental Organizations (NGOs) where
applicable. Private sources included private employers, households/out-of pocket expenditure and all other unclassifiable financing.

### 2.3.2 Financing intermediaries

The financial intermediaries considered in this paper refer to those entities which, pay for or purchase health care services i.e. receive funds from sources and pay or transfer them to providers. They may own and operate provider institutions as the ministry of health or they may finance services provided by others, as the private health insurance. The report classifies them into two broad categories, namely, public and private agents. The former includes the Ministry of Health (MOH), social insurance, Other Ministries, public employers and provincial and local Government while the latter refers to Households, NGOs, Private employers and private insurance.

### 2.3.3 Uses of funds

The ‘uses’ of funds were analyzed in four ways, namely by: providers/institutions; level of care; line item and; geographical area as follows:

#### 2.3.3.1 Providers

In analyzing expenditure by provider type, those categories commonly used across countries were applied where possible.

*Hospitals:* Includes primary, secondary, and tertiary level care that is provided in all inpatient facilities. Hospitals also include all hospital-based outpatient clinics as well as all pharmaceuticals and administrative costs associated with the operation of these institutions.

*Outpatient care centres:* This category captures, expenditures incurred at health centres and clinics both rural and urban as well as dispensaries and health posts with the latter two categories being the lowest points of entry to the health system. Although it is recognized that occasional inpatient care is provided at health centres, this has been captured under the health center provider type not under hospital care.

*Public health programmes:* Public health programmes considered in this review includes the management of the vertical programmes, such as HIV/AIDS, at national level as well as programme delivery at the lower levels of the health system.

*Providers of pharmaceuticals and medical supplies:* In most countries, public sector expenditures on drugs is captured at the institution/provider level. However, countries such as Rwanda and Uganda have a central purchasing and distribution system. In the latter case drug expenditure was difficult to disaggregate by provider type and has been kept under its own provider category. Considering the private sector, this category includes commercial pharmacies, vendors and drug retail outlets.

*Administration:* Expenditure considered under this category includes administrative costs associated with the planning and management of the health system. However, where
administration could be related to a specific activity (such as hospital care or research) this was represented under that activity rather than at the generic administration classification.

*Expenditures under other providers:* Other providers include, those whose expenditure is such a small proportion of the overall total in the country. In which case, they were pooled together in the summary tables. A case in point is South Africa where this includes expenditures on ambulance services, nursing homes etc.

*Non Classifiable expenditure:* Largely show amounts that could not be allocated to any specific provider.

### 2.3.3.2 Level of care:

This analysis captures health expenditures under three levels of care namely, tertiary, mid-level and primary health care. Although this analysis is being called a level of care split, it is in fact considering only differing types of facilities. It does not distinguish between levels of care provided within the same institution (i.e. in- patient and out patient care). It is recognized though that, for example, tertiary facilities in most countries also provide outpatient care much of which is primary and other levels of inpatient care.

*Tertiary care:* This covers those larger and generally more central hospitals offering a higher level of specialization in care. It includes all tertiary, referral, specialist and teaching hospitals. This category is generally distinguished in all the countries NHA studies.

*Mid-level of care: (first and second level).* This includes institutions considered to be at an intermediary level of care provision (i.e. those not covered above). For purposes of our analysis, these institutions were pooled into the category of mid level care. In some countries this included two levels of hospital such as district and regional where as for others only one hospital type was considered.

*Primary level of care:* This is the lowest level of care and provides preventive, promotive and very basic curative care services. This is usually the entry point to the health care system and includes all urban and rural health centres, clinics, dispensaries and health posts.

### 2.3.3.3 Line items:

*Expenditure by line items:* Expenditures on line items were limited to expenditures incurred by the Ministries of Health. For purposes of analysis, they were grouped into two broad categories, recurrent and capital. Recurrent expenditures were further disaggregated into personnel costs, drugs and medical supplies, and other recurrent. This disaggregation may be extremely helpful when used as a marker for factors related to efficiency and quality in health care (P. Berman 1998). In doing so however, a number of problems were encountered. Principally, there were inconsistencies in the classification of expenditure categories between member countries (see annex A for details).
2.3.3.4 Geographical areas:

The comparison of geographical equity in expenditure is presented for South Africa, Mozambique and Kenya using per capita expenditure and is limited to public health expenditures. The geographical area considered is the Province or Region as may be referred to in some countries. Per capita expenditures differ in size and therefore influence the values of their means and the ranges. In this regard the Coefficient of variation has been used to make comparisons because it adjusts for the actual size of the figures and hence provides the same basis for comparison. It should be noted that the only proxy indicator of need used is population and the population of those insured was not subtracted from the total population figures, especially in South Africa where private insurance is a big financing intermediary. Other factors used to weight population such as; morbidity, mortality and deprivation factors to mention just a few were not available.

2.4 Data source:

Health expenditure data was obtained from country NHA reports, however it should be noted that some of the reports are still in draft form and subject to changes. Specifically data was retrieved from Ministry of Finance Budgets, Ministry of Health Budgets and financial statements, expenditure ledgers and accounts, household surveys, Demographic and health surveys, donor surveys, NGO surveys, employer surveys, utilization surveys and insurance firms. Other data sources include the World Development Report by the World Bank, United Nation’s National Accounts Statistics, and IMF Government Finance Statistics.

2.5 Data Limitations:

In analyzing the NHA reports and making comparisons between member countries, a number of methodological problems were encountered. Chief among them was lack of a common framework to organize and categorize information on health expenditures (see annex C for details).

Despite these limitations, the NHA estimates reported in this paper are valid in view of the fact that data were collected from primary sources in the countries under review following the NHA framework.
Section III: Results

3. Overview of the extent of health care expenditure in the ESAC NHA Net work

3.1 Health expenditure as a percentage of GDP:

This is reflected in figure 1 below. On average this stands at 5.4%, South Africa is the highest at 7.5% with Ethiopia and Mozambique being the lowest at 4%, See table 1 Annex D.

![Fig 1. Health expenditure as a percentage of GDP](image)

3.1.2 Public health expenditure as a percentage of total government expenditure.

On average this stands at 7.2%, with South Africa being the highest at 13.7% and Ethiopia the lowest at 2.7%; this is shown in Figure 2. See table 2 annex E.

We note that, a nation’s ability to raise revenues for health care depends on its aggregate economic capacity. This could explain the relatively high contribution for South Africa as compared to other countries in the region.
3.2 Sources

Contributions by the different sources are shown in Figure 3. Private sources (principally households OOP) were the main sources of financing contributing on average 43% of the total health care expenditure. This was much higher in Kenya at 63% and lowest in Mozambique at 26%. See tables 3 & 4 in annex F. Reliable international studies found that among non-socialist low-income countries, 40 – 50% of the national health expenditure comes from private sources mainly out-of-pocket payments; poor and low-income households bear a large share of these payments (Berman, P. 1999.) This suggests that there may be substantial willingness and ability to pay among relatively poor people in low-income countries. However, the general opinion about Out of pocket payments is that they reduce equity since they impose a burden on those least able to pay (Mukesh Chawla & Peter Berman 1996.) The challenge to policy makers therefore is how to improve the health status of the majority of the population given that the principal financing option for health care is direct OOP.

Public sources contributed on average 30% of total health care expenditure, however this ranges from as low as 10% in Rwanda\(^1\) to as high as 47% in South Africa. Contribution from public sources is mainly from general tax revenues and the amounts raises depend on a nation’s tax base and the ability of the governments to collect taxes. Low tax ratios in most of the low-income countries often translate into limited capacity and insufficient public finance for health care. South Africa’s high contribution could be due to the relatively better tax base as compared to other countries in the region. However this makes health sector funding vulnerable to macro economic policy and international market volatility.

\(^1\) The low tax base following the civil war could explain the low contribution from public sources in Rwanda.
Donors on average contributed 27% of total health expenditure. Mozambique has a notably high donor contribution at 52%, where as South Africa is at 0%. The high dependency in donor funding in a number of countries is of concern. In some cases, donors have funded recurrent items, which are critical for service delivery like drugs for example in Mozambique. The likelihood that external donor funding will dry up leaving a sizeable funding gap motivates financing reform. African health systems should aim at having enough reliable funding within a country’s own resources to maintain current health services for a growing population and, to cover the costs of raising quality and expanding availability to acceptable levels.

The World Bank (1993, 1994) recommended a per capita expenditure of US$12 to fund the basic package. The results show that a number of countries in the region are spending US$12 and above with the exception of Rwanda (US$4.29), Tanzania (US$10.47) and Mozambique (US$8.89). However, most of the countries have not been able to provide a basic package of services to the population. This may imply that most of these countries health care systems suffer more from relative inefficiency than absolute inadequacy of financial resources. Thus, more effort should be directed at improving relative rather than absolute inadequacy of financial resources.

Figure 4 shows a breakdown of contribution from the various sources. Among the private sources Households were the main sources financing on average 36%. Household contribution to health care is much higher than initially thought particularly in Ethiopia and Kenya where 53% of total health care financing is from households. Kenya’s large household contribution is mainly accounted for by urban areas specifically Nairobi. Given the high levels of poverty, poor health status as evidenced by the health indicators, the HIV/AIDS pandemic and other communicable diseases, equity and access is an issue to be considered.
Among the public sources, MoF was the main source financing on average 25%, while Provincial and Local Governments and, public employers accounted for 2% each of total expenditure. Ministry of Finance contribution ranges from as low as 2% in Rwanda to as high as 44% in South Africa. Ethiopia has a notably high contribution from the provincial and local government at 9%. Shifting both control and fiscal responsibility to the provincial or local level can raise horizontal equity issues since more prosperous areas can either finance the same services as poor areas do at lower tax rates, or better services at the same tax rate. This then necessitates establishment of interregional equalization funds, which may be quite complex to construct. This not only has to take into account need (based on population, illnesses, and income), it also has to create incentives to prevent poor regions from lowering their own tax efforts and free riding on the collective efforts of their neighbors.

3.3 Financial intermediaries:

Households are the largest purchaser of health services at an average of 33% as seen in figure 5. This is notably high in Ethiopia and Kenya at 53% and 49% respectively. See table 5 in annex G. Evidence from some countries shows that, user fees dissuade the poor from utilizing health care services (Creese 1991, et al), and the majority of the population in these countries are poor with poor health status, it is therefore more unlikely that their health status will improve should reliance on this form of financing healthcare continue.

Governments should critically look at this issue given that the private sector is only affordable to a small proportion of the population, and is mainly concentrated in the urban areas. Anecdotal evidence shows that the existing regulatory mechanisms are weak. Given that the costs in private sector are high, the government may consider giving subsidies to private providers in order to improve the overall availability and accessibility of health services and medicines, while relieving the government of having to provide that additional
care directly. On the other hand, ministries of health need to increase their capacities for regulating quality, enforcing standards and monitoring safety standards in the private sector (Leighton 1995.)

The MoH stands at an average 26% though; this varies from as high as 46% in Zambia to as low as 1% in South Africa. Provincial and local governments stand at an average of 15%, these play a major role in South Africa in facilitating the provision of health services where they account for 42%.

NGO’s stand at an average of 11%, however, these are a key purchaser of health services in Uganda and Rwanda at 25% and 23 % respectively

South Africa system is polarized (provincial governments 42% and private insurance 41%) compared to the fragmented system of the other countries in the region.

The existence of many stakeholders in these health systems may impede the achievement of government health policy goals, hence, the need to put in place regulatory mechanisms that will promote attainment of policy goals. However, we should note that, even with few stakeholders like the South African health system, which is polarised, it might not necessarily be easy to regulate and or deliver equitable health services

![Fig 5. Average percentage transfers through intermediaries](image)

### 3.4 Public/Private mix:

#### 3.4.1 Sources

Contribution from the private sources was higher than public sources with an average of 43% as opposed to 30% from public sources (donor are not included in the public sector and these are discussed in section 3.1). This is shown in figure 6.
3.4.2 Financing intermediaries:

The private sector is the largest purchasers of health services at an average of 53%. Only in Zambia and Mozambique are the public sectors larger than the private. Rwanda has the largest private sector accounting for 62%. Typically East African countries have the highest private health sectors and, further investigation is required to determine the reasons behind this. This is shown in figure 7 below.
3.5 Percapita health Expenditure and health indicators:

There are discrepancies between the percapita health expenditure and health indicators as seen in table 6 below. For example, Ethiopia (spending US$4 per capita) when compared with Rwanda (spending US$13 per capita). The former has better health indicators with an IMR of 105 per 1,000, MMR of 705 per 100,000 live births, life expectancy of 51 years at birth as compared to an IMR of 131 per 1,000, MMR of 810 per 100,000 live births and a life expectancy of 49 years at birth in Rwanda. However it should be emphasised that the improvement in health outcomes is not solely the responsibility of the health sector as other variables like income, education, water and sanitation play significant roles. The other issue to note is the context in which this expenditure takes place.

Table 6: Health Expenditure per capita and health indicators:

<table>
<thead>
<tr>
<th>Country</th>
<th>Per capita exp. US$</th>
<th>IMR</th>
<th>MMR</th>
<th>Life Expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malawi</td>
<td>13</td>
<td>134</td>
<td>620</td>
<td>42</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>4</td>
<td>105</td>
<td>705</td>
<td>51</td>
</tr>
<tr>
<td>Tanzania</td>
<td>10</td>
<td>99</td>
<td>529</td>
<td>52</td>
</tr>
<tr>
<td>South Africa</td>
<td>283</td>
<td>51</td>
<td>N/A</td>
<td>64</td>
</tr>
<tr>
<td>Mozambique</td>
<td>9</td>
<td>134</td>
<td>1,100</td>
<td>45</td>
</tr>
<tr>
<td>Uganda</td>
<td>12</td>
<td>97</td>
<td>205</td>
<td>41</td>
</tr>
<tr>
<td>Zambia</td>
<td>21</td>
<td>114</td>
<td>650</td>
<td>43</td>
</tr>
<tr>
<td>Kenya</td>
<td>21</td>
<td>76</td>
<td>590</td>
<td>51</td>
</tr>
<tr>
<td>Rwanda</td>
<td>13</td>
<td>131</td>
<td>810</td>
<td>49</td>
</tr>
</tbody>
</table>

N/A: Not available
Source: NHA country reports, MoH figures in the relevant countries

3.6 Uses of Funds

3.6.1 Expenditure by Level of Care:

3.6.1.1 Expenditure by types of provider across the region.

Table 7 shows the provider breakdown in expenditure by the public sector. Gaps in data along the provider categories does not mean that there was no expenditure on these provider types but rather it was not separated from the other providers shown in the table that have expenditure allocated to them.

International suspicion has always been that hospital expenditure was too high in relation to primary health care in developing countries. The evidence presented in our comparative analysis does not however tend to support this. Apart from South Africa, spending on the hospital sector in the Eastern and Southern African countries ranged between 24% and 46% of total public sector expenditure.

The results for Kenya and Rwanda however should be interpreted with caution for differing reasons. In Kenya spending on public health programmes could not be differentiated from national level expenditure and is therefore included in the non-classifiable amount. In Rwanda much expenditure on health centres is suspected to be enveloped in the
administration figure at a national level and is therefore not included in primary health care in this analysis.

Table 7 – Public sector expenditure by provider type

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>Kenya</th>
<th>Rwanda</th>
<th>Ethiopia</th>
<th>Uganda</th>
<th>Malawi</th>
<th>Tanzania</th>
<th>South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>39.2%</td>
<td>30.4%</td>
<td>35.9%</td>
<td>25.8%</td>
<td>23.9%</td>
<td>45.7%</td>
<td>60.8%</td>
</tr>
<tr>
<td>Out patient care centres</td>
<td>20.1%</td>
<td>8.4%</td>
<td>45.3%</td>
<td>17.4%</td>
<td>19.4%</td>
<td>18.3%</td>
<td>11.6%</td>
</tr>
<tr>
<td>Public Health Programmes</td>
<td>3.8%</td>
<td>25.4%</td>
<td>18.6%</td>
<td>5.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Providers of Pharm &amp; Med Supp</td>
<td>6.5%</td>
<td>25.3%</td>
<td>36.0%</td>
<td>13.9%</td>
<td>8.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>28.7%</td>
<td></td>
<td>30.1%</td>
<td>8.3%</td>
<td>9.9%</td>
<td></td>
<td>0.3%</td>
</tr>
<tr>
<td>Research</td>
<td>2.4%</td>
<td>2.7%</td>
<td>0.3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td>3.0%</td>
<td>4.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>9.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Classifiable</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

NB: Some expenditure represented under administration in Rwanda is likely to be monies spent on behalf of the health centres and therefore primary care expenditure is likely to be under-represented in this table.

Figure 8 below shows a comparison between primary health care expenditure and amounts spent on hospitals. This suggests that Malawi and Ethiopia spend more on primary care than hospital levels in their countries with Tanzania only spending slightly less as a proportion of their total public expenditure than on hospitals. Conversely South Africa has public expenditure greatly skewed toward the hospital sector. We note that Ethiopia’s highest expenditure is at outpatient centres level and, much as it has the lowest Percapita expenditure on health among all the countries under study, it’s health indicators are better than many of the countries. This could mean that putting more resources at this level yields better outcomes.

Figure 8:

As shown in table 8, the proportion of total expenditure going on hospital care tends to decrease in most countries with the addition of the private sector. This is however largely
due to the expenditure in pharmaceutical outlets in the private sector and this is difficult to classify into primary care or otherwise depending on the role that these outlets play.

For Tanzania the increase in hospital expenditure as percentage of total can be explained as many hospitals are run by religious organisations, which receive only subsidies from the government expenditure.

Table 8: Total expenditure by type of provider (includes NGOs and for profit private sectors).

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>Kenya</th>
<th>Rwanda</th>
<th>Ethiopia</th>
<th>Uganda</th>
<th>Malawi</th>
<th>Tanzania</th>
<th>South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>27.07%</td>
<td>33.44%</td>
<td>18.53%</td>
<td>10.14%</td>
<td>11.54%</td>
<td>53.29%</td>
<td>39.31%</td>
</tr>
<tr>
<td>Out patient care centres</td>
<td>21.46%</td>
<td>12.29%</td>
<td>33.15%</td>
<td>6.83%</td>
<td>24.41%</td>
<td>18.57%</td>
<td>5.44%</td>
</tr>
<tr>
<td>Hospitals &amp; clinics (where not sep)</td>
<td>22.81%</td>
<td>12.28%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Medical Practitioners</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16.12%</td>
</tr>
<tr>
<td>Public Health Programmes</td>
<td>21.79%</td>
<td>12.27%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.65%</td>
</tr>
<tr>
<td>Providers of Pharm &amp; Med Supp</td>
<td>23.46%</td>
<td>24.66%</td>
<td>33.07%</td>
<td>14.12%</td>
<td>2.87%</td>
<td>14.13%</td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>2.53%</td>
<td>23.92%</td>
<td>7.15%</td>
<td>4.75%</td>
<td>11.18%</td>
<td>11.90%</td>
<td>6.11%</td>
</tr>
<tr>
<td>Research</td>
<td>1.09%</td>
<td>0.66%</td>
<td>0.12%</td>
<td></td>
<td></td>
<td></td>
<td>0.25%</td>
</tr>
<tr>
<td>Training</td>
<td>1.17%</td>
<td>1.89%</td>
<td>1.79%</td>
<td></td>
<td></td>
<td></td>
<td>1.97%</td>
</tr>
<tr>
<td>Treatment Abroad</td>
<td></td>
<td>1.21%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional healers</td>
<td>4.31%</td>
<td>4.90%</td>
<td>1.46%</td>
<td>2.19%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0.16%</td>
<td>0.17%</td>
<td>0.66%</td>
<td>16.19%</td>
<td>23.11%</td>
<td>3.14%</td>
<td></td>
</tr>
<tr>
<td>Non Classifiable</td>
<td>23.23%</td>
<td>0.17%</td>
<td>0.66%</td>
<td>16.19%</td>
<td>23.11%</td>
<td>3.14%</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: NHA country reports

3.6.1.2 Analysis by level of care

Analysis by level of care shows that the mid level care has the highest proportion of expenditure allocated to it by the public sector, this is shown in figure 9 below. See annex H table 9 for details. This may impede the achievement of the goals contained in the health policies of the countries concerned where primary care is suggested to be the priority for expenditure.

Figure 9 – Breakdown of direct care delivery expenditure by level of care across the region as a whole (public sector only)

The study has shown that hospital expenditure in the region is not as high as initially thought in relation to primary health care. Information on primary care expenditure is central to
policy monitoring and evaluation. This is very difficult however when so much of the primary care level expenditure is captured by our financial systems at higher levels such as, under the district hospital that may supervise and implement public health programmes or clinics or even under the central level departments. The challenge remains, for governments in the region to improve their accounting systems, to reflect resource use at the various levels in the health care system. This will yield better NHA estimates to inform, monitor and evaluate policy decisions and; facilitate regional comparability.

3.6.2 Line items:

3.6.2.1 Expenditure shares to different types of health care inputs

Expenditures reported here refer to expenditures incurred on key health care inputs by the Ministries of health found in the participating countries. The definitions used vary between countries and are not perfectly comparable. Due to this limitation, comparison was only conducted for five countries (South Africa, Zambia, Mozambique, Malawi and Rwanda) which had comparable definitions. In the case of Zambia, these include expenditures by the Central Board of Health (CBoH) and District health boards (DHB).

Figure 10 portrays the distribution of public health spending (MOH) by line items in five countries. The figure reveals marked differences in the levels of spending between countries. Overall, the percentage of personnel costs in the five countries ranged between 31 percent and 66%. Compared to other countries, South Africa was spending the highest proportion on personnel costs (60%). This is also shown in table 10 & 11 in annex I.

The proportions of expenditure on drugs for South Africa, Malawi and Rwanda were similar, averaging 14%. The lowest was Mozambique with 5%. This is in part due to the fact that most of the expenditure on drugs and medical supplies in Mozambique are borne by donors. This applies to other countries as well though data was not available. Capital expenditures were lowest proportion of all expenditure categories ranging from 3 – 9 percent.

As noted above, majority of countries in the region had high expenditure on personnel costs relative to expenditure on drugs and other medical supplies. Where as this may impact negatively on the quality of care particularly, during budgetary cuts, it is also an indication of poor combination of health care inputs. This serves as a pointer to inefficiency in the mix of inputs used to provide health care. We often concentrate on staff per patient ratios and bed numbers but lack of drugs or other basic inputs for care may work against our policy objectives. The optimal combination of inputs for service delivery should be considered and, a balance should be made between human resources and other inputs. Donor funding should also be subjected to the same consideration, more often than not they have funded capital development whereas needs may be for more recurrent input support. By appropriately reallocating resources, health services to the general population can be improved without any additional funding.
3.6.3 Expenditure by Geographical Regions

3.6.3.1 Comparison of degree of geographical equity in public expenditure

South Africa had the highest per capita mean value due to a high overall per capita expenditure. The coefficient of variation shows that the degree of inequity is high in all countries with Mozambique having the most inequitable distribution, this is shown in table 12 below.

Table 12: Comparison of degree of geographical equity in expenditure

<table>
<thead>
<tr>
<th></th>
<th>South Africa</th>
<th>Kenya</th>
<th>Mozambique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>105.49</td>
<td>2.63</td>
<td>2.43</td>
</tr>
<tr>
<td>Std. Dev</td>
<td>28.28</td>
<td>1.04</td>
<td>1.72</td>
</tr>
<tr>
<td>Cv</td>
<td>0.268</td>
<td>0.396</td>
<td>0.706</td>
</tr>
<tr>
<td>Range</td>
<td>81.87</td>
<td>2.84</td>
<td>6.02</td>
</tr>
</tbody>
</table>

Considering the areas with the lowest and highest per capita values, there is a tendency for expenditures to be higher in urban areas compared to rural areas. This is more evident in the case of South Africa and Mozambique. In South Africa, Gauteng, an urban province had the highest per capita expenditure and Mpumalanga, a rural province had the lowest. Maputo an urban province in Mozambique had a highest per capita while Zambezia a rural province had the lowest per capita expenditure. For Kenya, the highest per capita expenditure was for North Eastern, a rural province with sparse population. Therefore, this explains the high per capita value. However, the lowest per capita expenditure was recorded also for a rural
province, Western. This further strengthens the earlier argument of rural areas receiving a lower proportion of public expenditure than urban areas.

In analysing further what was driving the inequity, for Mozambique donor expenditure was added to public expenditure. The per capita expenditures calculated according to the different regions reveal an interesting picture. The per capita expenditure for Manica, one of the provinces with initially US$1.87 shoots up to US$8.17. This is due to a high donor expenditures presence in this area. This is an indication that the practice of donors targeting specific geographical regions for implementing their programs has further increased inequalities in some countries.

The distribution of resources is skewed towards urban areas as is evidenced an indication that, countries are allocating public resources on the basis of existing infrastructure and historical spending patterns without due consideration of varying regional health needs. This is contrary to the explicit health policy priorities as stated in our countries. The challenge for the member countries is to increase resources to the under-resourced regions through objective and explicit resource allocation decisions taking to consideration the presence of donors in some geographical regions.
SECTION IV: Conclusion and Recommendations

This analysis has presented an initial comparison for the first findings of nine countries’ National Health Accounts studies in the ESA region. The tables and figures compiled in the report were derived directly from NHA matrices as reported by country teams. Based on the foregoing analysis, this paper confirmed the following:

The application of NHA concepts and definitions was not uniform across member countries. This was more pronounced at “uses” level were the categories were not perfectly comparable. Additional constraints in the analysis included lack of data and/or in some cases incomplete data. There is need for member countries to formulate and adopt common definitions at sources and agents as well as “uses” levels. This will ease cross-country comparisons in future. In addition, in order to facilitate cross-country comparisons in future, there is need for member countries to improve on the completeness and quality of data. This will ultimately improve NHA estimates for key analysis of efficiency and equity in health financing and expenditure in the region.

Health care financing in the ESA region is heavily dependent on households (private sources). In view of the high levels of poverty, poor health status as evidenced by the health indicators, the HIV/AIDS pandemic and other communicable diseases, this works against policy objectives of equity. There is need for Governments to explore alternative financing mechanisms as households are already overburdened. Options for consideration may include exploring the possibilities of introducing social health insurance schemes and changes in government budget priorities to increase health care allocation. Institutional, organisational, medical and clinical reforms are equally important.

The high dependency on donor funding in some of the countries is a cause for concern. African health systems should aim at having enough reliable funding within a country’s own resources to maintain current health services for a growing population and, to cover the costs of raising quality and expanding availability to acceptable levels.

Health expenditure (per capita) in most of the countries may be enough to finance the minimum health care package as recommended by the World Bank. However, most of the countries have not been able to provide a basic package of services to the population. This raises issues of efficiency and effectiveness in the use of resources as evidenced by the observed gross discrepancies between per capita expenditure and health outcomes. Much as the importance of other sectors in improving health outcomes cannot be underestimated, the relationship between health expenditure and health outcome across countries needs further investigation.

The private sector is the largest purchaser of health services in the region at an average of 54%. Given that the sector is only affordable to a small proportion of the population, and is mainly concentrated in the urban areas, there is need for Governments in the region to look at this issue critically. Anecdotal evidence shows that the existing regulatory mechanisms are weak, there is need for Governments to consider subsidising the private sector in order to increase access to the majority of the population.
There is poor combination of health care inputs in the region as evidenced by high proportion of expenditure on salaries compared to other equally important health care inputs to efficient and effective service delivery. This is a pointer to inefficiency and Governments should consider combining inputs in the most optimal way to maximize on the impact. Conducting micro-level efficiency (technical and allocative) analysis in the member countries will inform the debate as the analysis will point out by how much we are wasting resources and the required input reductions for the systems to operate optimally.

The arrangements for distributing public resources (Ministry of health) across geographical areas in the member countries are currently not based on the varying regional health needs. The allocations are based on the existing infrastructure and historical spending patterns. This is contrary to the health policy objectives as stated in member countries. Governments in the region should consider allocating resources based on the varying regional health needs. Developing an objective and explicit resource allocation criteria can facilitate member countries to attain their equity objectives. The criteria should take into account the existence of donors implementing programs in specific geographical regions as this has further increased inequalities in the region (e.g. in Mozambique).

The study has shown that hospital expenditure in the region is not as high as initially thought in relation to primary health care. Although information on primary care expenditure is central to policy monitoring and evaluation, the financial systems in most of the member countries do not reflect expenditure use by function. The financial systems capture primary care expenditure at higher levels (e.g. under the district hospital). The challenge remains, for governments in the region to improve their accounting systems to reflect resource use at the various levels in the health care system. This will ultimately yield better NHA estimates to inform, monitor and evaluate policy decisions and facilitate regional comparability.

The health care systems in the ESA region are characterized by the existence of many stakeholders. This may impede the achievement of Government health policy goals. There is need for Governments to consider instituting new or strengthening the existing mechanisms for regulating and coordinating the activities of stakeholders with a view to promoting the attainment of policy goals. We however note that even with few stakeholders like the South African health system, which is polarized, it might not necessarily be easy to regulate and or deliver equitable health services.
Bibliography

18. NHA report Uganda 1997/98
20. NHA report Zambia 1997/98
22. NHA report Rwanda 1998
23. NHA report Malawi 1997/98
24. NHA report Ethiopia 1995/96
25. NHA Report South Africa
ANNEXES
ANNEX A: Definitions and Classifications of Health Expenditures- Problems and Issues

1.1 Public sector
Malawi, South Africa, Ethiopia, Rwanda and Tanzania included all relevant public sector expenditure. Mozambique included all except for expenditure on military and justice while Uganda included all except for salary expenditure of civil servants (therefore liable to be an underestimate - current research trying to rectify this). Kenya included all except defense and Ministry of education (training component in medical schools).

1.2 Donors
Expenditure by donors in a number of countries including Malawi, Ethiopia and Uganda may have been inaccurate. Some countries presented Donor and NGO funds differently at the source level while others put all together under Donor sources. In this report this has been put together under Donor sources.

1.3 Private sector
In Kenya, the traditional healer sector was not covered.

1.3 Level of care
The classifications of levels of care between countries were not consistent. In particular, some countries classify health expenditures by level of care while others by provider type. Attempts to get one perfectly comparable category were fruitless.

1.4 Allocation of resources by region
Analysis of resource use in the public sector by region was conducted for eight (8) countries (all except for Uganda and Ethiopia). In Malawi, analysis was done for 3 big provinces with population ranging between 1 - 5 million. In Mozambique 11 provinces while in Kenya, Rwanda, Tanzania and South Africa analysis was done for 7, 11, 20 and 9 provinces respectively. There were huge variations in the distribution of population by regions within and across countries. In South Africa and Kenya, population per province ranged between 600,000 – 6 Million. While in Rwanda over 500,000.

1.5 Expenditure by line items
There were marked inconsistencies in the classification of line items between countries under review for example, in Uganda, except for project staff, public health expenditures excluded salary expenditures of civil servants while in Ethiopia, expenditure on administration were included under salary expenditure. For the latter this over-estimates on salaries while for the former underestimates public sector expenditures on health. In South Africa, personnel costs included among other costs training, and fees for contracting staff. Again this over-estimates salary costs. In Malawi, capital expenditure had a component of recurrent expenditure, which could not be disaggregated. Considering expenditures on drugs and other medical supplies, these could not be singled out from the total recurrent costs in Zambia. Other costs items not captured included drugs in the case of Kenya, and training (health) related costs in Zambia
ANNEX B: Base Year Used

NHA Base years for ESAC Region: Problems and issues

<table>
<thead>
<tr>
<th>Country</th>
<th>Year NHA conducted</th>
<th>Adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rwanda</td>
<td>1998</td>
<td>N/A*</td>
</tr>
<tr>
<td>Malawi</td>
<td>1997/98</td>
<td>“</td>
</tr>
<tr>
<td>Kenya</td>
<td>1994/95</td>
<td>Inflated</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>1995/96</td>
<td>“</td>
</tr>
<tr>
<td>Uganda</td>
<td>1997/98</td>
<td>N/A</td>
</tr>
<tr>
<td>Mozambique</td>
<td>1997</td>
<td>“</td>
</tr>
<tr>
<td>Tanzania</td>
<td>1999/2000</td>
<td>Deflated</td>
</tr>
<tr>
<td>Zambia</td>
<td>1997 or 1998</td>
<td>N/A</td>
</tr>
<tr>
<td>South Africa</td>
<td>1997/98</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* No adjustments required

The choice of the base year was based on the commonest year for NHA exercises among countries in the network. A majority of NHA surveys were conducted in 1997/98 financial years (covering July through to June) or 1998 calendar covering Jan through too December. Except for South Africa, countries under the former categories include Kenya, Zambia and Rwanda.
ANNEX C: Data Limitations

Although member countries used the NHA framework to characterize the flow of funds in their health systems, the applications cited in this report were not uniform across member countries. However, where possible, attempts were made harmonize them. The analysis was constrained by a number of methodological problems including lack of clear and consistent definitions and, unavailability of data.

1. Choice of a common year
   Member countries used different years for their NHA reports. However, for purposes of comparison, the base year used in this paper was the Financial Year 1997/98. Inflators and deflators were used to convert different years to a common year.

2. Lack of clear and consistent definitions
   At source level, there were inconsistencies in treatment of entities among member countries. For example, Uganda considered NGOs as a separate entity while Malawi included all NGOs in the Donor expenditure. In this report, all NGOs were included under Donors as one source of financing to ease inter-country comparisons. The composition of public and private sources varied among countries. For instance, in Kenya, data on the traditional sector was not obtained, thus making the definitions of source entities not comparable.

   In classifying the various categories of providers, there were problems in consolidating differing country’s expenditure into provider types. Countries, obviously, use provider classification according to their needs, which are not identical across countries. In addition, within member countries, the distinction of expenditure between providers was not clear. For example, in some instances, expenditure represented at the central level (National level of Ministries of Health) was made on behalf of other providers such as district hospitals or district level public health programs. This could not be accurately disaggregated.

   Considering care levels, the categorization of hospitals was different across countries. For instance, some countries have hospitals that are national, regional, district while others only regional. This means that there is little uniformity in the definitions. Similarly, classification of line items was not consistent to allow for perfect comparison.

3. Administration
   The disaggregation of what amounts were truly spent on administration versus other health care activities was very problematic. For example in Rwanda, at the time of the study (ie prior to the decentralisation of the budget), much of the expenditures made on behalf of lower levels of care such as the health centres, were captured under a central level administration category. This, however, could not be disaggregated and therefore remains under the title of administration. Care should be taken therefore in interpreting the administration figures for the countries concerned.
ANNEX D:

Table 1: Health expenditure as a percentage of GDP

<table>
<thead>
<tr>
<th>Country</th>
<th>Health expenditure as a percentage of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mozambique</td>
<td>4.0%</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>4.0%</td>
</tr>
<tr>
<td>Uganda</td>
<td>4.1%</td>
</tr>
<tr>
<td>Rwanda</td>
<td>5.0%</td>
</tr>
<tr>
<td>Kenya</td>
<td>5.3%</td>
</tr>
<tr>
<td>Zambia</td>
<td>6.2%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>6.8%</td>
</tr>
<tr>
<td>Malawi</td>
<td>7.2%</td>
</tr>
<tr>
<td>South Africa</td>
<td>7.5%</td>
</tr>
<tr>
<td>Average</td>
<td>5.4%</td>
</tr>
</tbody>
</table>
ANNEX E:

Table 2: Health Expenditure as a percentage of total government expenditure

<table>
<thead>
<tr>
<th>Country</th>
<th>PHE % Total government expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rwanda</td>
<td>3%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>5%</td>
</tr>
<tr>
<td>Uganda</td>
<td>5%</td>
</tr>
<tr>
<td>Kenya</td>
<td>6%</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>6%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>9%</td>
</tr>
<tr>
<td>Zambia</td>
<td>10%</td>
</tr>
<tr>
<td>Malawi</td>
<td>10%</td>
</tr>
<tr>
<td>South Africa</td>
<td>14%</td>
</tr>
<tr>
<td>Average</td>
<td>7%</td>
</tr>
</tbody>
</table>
## ANNEX F: Contribution from various sources

### Table 3: Percentage contributions from sources

<table>
<thead>
<tr>
<th>Country</th>
<th>Public Sources</th>
<th>Donor Sources</th>
<th>Private Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia</td>
<td>39%</td>
<td>9%</td>
<td>53%</td>
</tr>
<tr>
<td>Kenya</td>
<td>28%</td>
<td>9%</td>
<td>64%</td>
</tr>
<tr>
<td>Malawi</td>
<td>34%</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>22%</td>
<td>52%</td>
<td>26%</td>
</tr>
<tr>
<td>Rwanda</td>
<td>10%</td>
<td>51%</td>
<td>40%</td>
</tr>
<tr>
<td>South Africa</td>
<td>47%</td>
<td>0%</td>
<td>53%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>23%</td>
<td>25%</td>
<td>52%</td>
</tr>
<tr>
<td>Uganda</td>
<td>21%</td>
<td>43%</td>
<td>36%</td>
</tr>
<tr>
<td>Zambia</td>
<td>42%</td>
<td>25%</td>
<td>33%</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>30%</strong></td>
<td><strong>27%</strong></td>
<td><strong>43%</strong></td>
</tr>
</tbody>
</table>

**Source:** All data is from the country NHA reports and figures are for the financial year 1997/98.

### Table 4: Per capita contributions by source

<table>
<thead>
<tr>
<th>Country</th>
<th>Public Sources per capita US$</th>
<th>Donor Sources per capita US$</th>
<th>Private Sources per capita US$</th>
<th>Overall Sources per capita US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia</td>
<td>1.67</td>
<td>0.37</td>
<td>2.26</td>
<td>4.29</td>
</tr>
<tr>
<td>Kenya</td>
<td>5.77</td>
<td>1.80</td>
<td>13.19</td>
<td>20.76</td>
</tr>
<tr>
<td>Malawi</td>
<td>4.31</td>
<td>4.17</td>
<td>4.22</td>
<td>12.69</td>
</tr>
<tr>
<td>Mozambique</td>
<td>1.96</td>
<td>4.65</td>
<td>2.28</td>
<td>8.89</td>
</tr>
<tr>
<td>Rwanda</td>
<td>1.25</td>
<td>6.40</td>
<td>5.02</td>
<td>12.68</td>
</tr>
<tr>
<td>South Africa</td>
<td>132.92</td>
<td>0.46</td>
<td>149.59</td>
<td>282.97</td>
</tr>
<tr>
<td>Tanzania</td>
<td>2.45</td>
<td>2.59</td>
<td>5.43</td>
<td>10.47</td>
</tr>
<tr>
<td>Uganda</td>
<td>2.53</td>
<td>5.34</td>
<td>4.43</td>
<td>12.30</td>
</tr>
<tr>
<td>Zambia</td>
<td><strong>8.85</strong></td>
<td>5.15</td>
<td>6.93</td>
<td>20.93</td>
</tr>
<tr>
<td><strong>Average w/o South Africa</strong></td>
<td>3.60</td>
<td>3.81</td>
<td>5.47</td>
<td>12.88</td>
</tr>
</tbody>
</table>

**Source:** All data is from the country NHA reports and figures are for the financial year 1997/98.
ANNEX G:

Table 5: Percentage flows through intermediaries

<table>
<thead>
<tr>
<th></th>
<th>Public sector</th>
<th>Private sector</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ministry of Health</td>
<td>Other Govt. Ministries</td>
<td>Social Insurance</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>5%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Kenya</td>
<td>24%</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>Malawi</td>
<td>42%</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>54%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Rwanda</td>
<td>19%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>South Africa</td>
<td>1%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>19%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Uganda</td>
<td>27%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Zambia</td>
<td>46%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Average %</td>
<td>26%</td>
<td>3%</td>
<td>1%</td>
</tr>
</tbody>
</table>
ANNEX H:

Table 9: Health expenditure by level of care for the public sector

<table>
<thead>
<tr>
<th>Level of Care</th>
<th>Ethiopia</th>
<th>Rwanda</th>
<th>Mozambique</th>
<th>Uganda</th>
<th>Malawi</th>
<th>South Africa</th>
<th>The Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tertiary</td>
<td>11%</td>
<td>25%</td>
<td>38%</td>
<td>11%</td>
<td>11%</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>Mid level (2nd and 1st)</td>
<td>33%</td>
<td>53%</td>
<td>36%</td>
<td>37%</td>
<td>24%</td>
<td>53%</td>
<td>52%</td>
</tr>
<tr>
<td>Primary Care (non hosp)</td>
<td>56%</td>
<td>22%</td>
<td>26%</td>
<td>52%</td>
<td>65%</td>
<td>24%</td>
<td>25%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
ANNEX I: Public spending by line items

Table 10: Proportions within countries

<table>
<thead>
<tr>
<th>Line Item</th>
<th>South Africa</th>
<th>Zambia</th>
<th>Mozambique</th>
<th>Malawi</th>
<th>Rwanda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel emoluments</td>
<td>66%</td>
<td>31%</td>
<td>41%</td>
<td>39%</td>
<td>42%</td>
</tr>
<tr>
<td>Drugs and medical supplies*</td>
<td>14%</td>
<td>5%</td>
<td>17%</td>
<td>42%</td>
<td>12%</td>
</tr>
<tr>
<td>Recurrent</td>
<td>14%</td>
<td>64%</td>
<td>44%</td>
<td>42%</td>
<td>46%</td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>5%</td>
<td>5%</td>
<td>9%</td>
<td>3%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Line Item</th>
<th>South Africa</th>
<th>Zambia</th>
<th>Mozambique</th>
<th>Malawi</th>
<th>Rwanda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel emoluments</td>
<td>73.43</td>
<td>3.51</td>
<td>0.75</td>
<td>1.03</td>
<td>0.44</td>
</tr>
<tr>
<td>Drugs and medical supplies*</td>
<td>15.97</td>
<td>0.00</td>
<td>0.10</td>
<td>0.45</td>
<td>0.12</td>
</tr>
<tr>
<td>Recurrent</td>
<td>15.99</td>
<td>7.21</td>
<td>0.81</td>
<td>1.10</td>
<td>0.49</td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>5.31</td>
<td>0.58</td>
<td>0.16</td>
<td>0.07</td>
<td>0.00</td>
</tr>
</tbody>
</table>