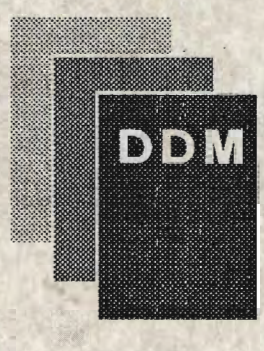
Non-Government Financing and Provision of Health Services in Africa: A Background Paper

Kara Hanson
Peter Berman



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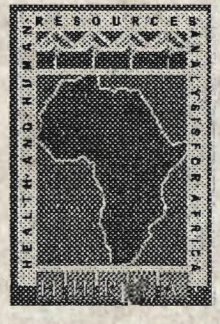

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Kara Hanson
Research Associate
Department of Population and International Health
Harvard School of Public Health

Peter Berman
Associate Professor of International Health Economics
Department of Population and International Health
Harvard School of Public Health

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Data for Decision Making Project
Department of Population and International Health
Harvard School of Public Health
Boston, Massachusetts

Data for Decision Making

The Data for Decision Making (DDM) Project was established in 1991 at Harvard University as a consortium with the Research Triangle Institute and Intercultural Communication, Inc, and with support from the United States Agency for International Development. The mission of the project is to work with governments and their senior decision makers to develop national capacities to manage health sector reform. Development of health sector capability requires making optimal use of available data and advanced analytical techniques to identify problems, develop policy, and strengthen management in the health care sector.

In the 1990s, health systems worldwide face a multitude of challenges: providing services for all, responding to the needs of growing and aging populations, and sustaining the child survival gains achieved in the 1980s. Governments and their Ministries of Health increasingly call for health sector reform to provide quality services more efficiently, to reduce inequalities, and to develop new linkages between the private and public sectors.

The DDM project works with countries by making its technical staff available for fact-finding or advisory visits. Host country officials and DDM project experts develop mutually agreeable problem-solving strategies. DDM tools and studies include: priority setting and cost-effectiveness analysis; political mapping; national health accounts; private-public sector linkages; geographic information systems; research communication; budget tracking system; and democracy and health.

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Data for Decision Making Project
Department of Population and International Health
Harvard School of Public Health
665 Huntington Avenue
Boston, MA 02115 USA

Telephone *617-432-4610*
FAX *617-432-2181*
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List of Acronyms

DDM	Data for Decision Making Project
DHS	Demographic and Health Surveys
EME	Established market economies
FSE	Former Socialist Economies of Europe
GDP	Gross Domestic Product
HMO	Health Maintenance Organization
IMF	International Monetary Fund
LAC	Latin America and Caribbean
MEC	Middle Eastern Crescent
NGO	Non-governmental organization
OAI	Other Asia and Islands
OPEC	Oil Producing and Exporting Countries
SSA	Sub-Saharan Africa
USAID	United States Agency for International Development
WDR	World Development Report
WHO	World Health Organization

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Introduction

Recent years have seen a growth in interest in what has often been termed the "public/private mix" in health services. Particularly in developing countries this focus has stemmed from a desire to increase and make better use of the total resources available to the health sector. The motivation has also emerged from a recognition of the fact that the private sector is already a significant provider of health services, and that substantial amounts of the resources being spent on health care come from private sources. In addition, changing political ideology questioning prior statist policies in Western countries has been influential.

African countries are no exception to this general trend. The processes of reforming the way in which health services are organized and financed which are underway in many countries include policies to change the balance of public and private provision and financing of services. Many of these reforms have been part of a more general process of structural adjustment, including public sector reform. Although these policies have had limited success in stimulating renewed economic growth in the region, the process of public sector reform has included defining a new role for government in the organization and provision of social services.

Despite this policy agenda, very little is known about the private health sector in Africa[1]. Much of what we know is based on anecdotal evidence and *ad hoc* data collection. Within these data limitations, this paper represents a synthesis of what is known. Not surprisingly, one of the main conclusions of this summary is the need for careful country-level data collection and analysis.

There is considerable diversity within the continent, both with respect to levels of expenditure and orientation of health system. Table 1 groups countries into high, medium and low spending countries. The differences in per capita health expenditure levels are substantial, with total spending ranging from US$38-40 in the high spenders to $2-3 in the low expenditure countries. Further, many health systems are in a process of reorientation from, at least officially, wholly public to "mixed" systems (for example, Angola, Zambia and Tanzania have recently legalized various types of private practice (World Bank, 1992; Mujinja et al., 1993). This combination of diversity and dynamism suggests that global policy recommendations are likely to be inappropriate. It also provides further justification for detailed country studies in which levels or quantities of services, public/private composition, and changes in these variables over time can all be

1/ Throughout this paper the term "Africa" refers to sub-Saharan Africa.

Table 1

Groupings of Health Expenditure Levels - Selected Countries

High	*Medium*	*Low*
(Total expend. $38-40 p.c.; Govt expend. $16 p.c.)	(Total expend. $6-11 p.c.; Govt expend. $4.50 p.c.)	(Total expend. $2-3 p.c.; Govt expend. $1 p.c.)
Botswana	Burundi	
Lesotho	Cameroon	Burkina Faso
Mauritius	Gambia	Ethiopia
Swaziland	Ghana	Nigeria
Zimbabwe	Kenya	Somalia
	Liberia	Sierra Leone
	Malawi	Zaire
	Mali	Uganda
	Niger	
	Rwanda	
	Senegal	
	Togo	
	Zambia	

Source: World Bank data

carefully documented.

This paper is organized as follows: Section 1 defines the private sector and considers alternative criteria for measuring the importance of the private sector from a public policy perspective. Section 2 looks at the available information regarding the composition of health expenditures. In Section 3 we review the existing data on health service provision. Section 4 reviews some of the recent experience of policy reform in Africa, particularly looking at policies directed at changing the balance of public and private provision and financing of health services. Section 5 outlines a research agenda for analyzing the private sector in Africa, an agenda which should include both determining the appropriate policy interventions and identifying the conditions under which they are most likely to be successful.

Defining and Describing the Private Health Sector

It is essential to define what we mean by the private sector, and to identify the criteria along which the importance of the private sector in health systems can be measured. We begin by describing the major dimensions of a typology of the private health care sector. An attempt is then made to describe the private health sector in Africa. Finally, in line with our concern for public policy interventions, we identify different criteria which could be adopted to assess the importance of different actors in the private sector.

Dimensions of a Definition of the Private Health Sector

As has been noted elsewhere, a basic distinction must be made between private provision and private financing (Bennett, 1991 and 1992; Berman and Rannan-Eliya, 1993). Publicly-provided services can be privately financed, as in the case of user charges for services offered in government facilities. Alternatively, although less common in Africa, certain forms of social insurance system represent an example of the public financing of privately-provided services.

Following Bennett (1991) and a recent WHO meeting (WHO, 1991) we consider private health care provision to refer to all health care providers working outside the direct control of the state. These can further be divided into for-profit and not-for-profit providers. These differences in economic orientation suggest that these two sectors may play quite different roles - both in terms of the population served and of the services provided, although this has not been formally demonstrated. Type of organizational form, ranging from the informal single provider to more complex multi-institutional forms such as HMO's, provides yet another dimension along which the private sector can be described. Finally, the therapeutic system adopted (allopathic or "modern" and "traditional" or "indigenous") is a further distinction which can be made to describe the private sector (Berman and Rannan-Eliya, 1993).

We would define private health care financing to be spending on health goods from non-government sources. This includes out-of-pocket expenditure for services or insurance, private corporate health expenditure and expenditures by private insurers. Public expenditure includes all expenditure on health services by central and local government, funds spent by state-owned and parastatal

enterprises, as well as government social insurance contributions. Foreign aid may contribute to both public and private financing, e.g. including grants and loans to governments as well as to non-government organizations[2].

Describing Private Health Care Provision in Africa

Although a comprehensive typology of private health care providers in Africa must await the outcome of country-level research[3], currently available information suggests a broad range of private health care providers in Africa. The private "modern" sector in Africa includes both for-profit as well as not-for-profit (NGO and, often, religious mission) providers. Large hospitals with advanced technical capabilities, Health Maintenance Organizations (HMOs) and private diagnostic services such as laboratory and x-ray can be found in many capital cities. Ancillary services such as private blood banking facilities may be operated as part of these organizations. Employer-provided services, particularly in the highly organized industrial sector, would also fall into the category of the modern formal private sector. Official "modern" services are also provided in some countries by nurses and other paramedical staff who are permitted to set up private clinics. Modern but more informal services may be provided by government providers outside of official hours. Pharmaceutical products may be sold either in licensed pharmacies or by informal drug sellers in marketplaces. There exists also a large "traditional" sector about which relatively little is known. The range of traditional providers includes spiritual healers, herbalists and bone-setters.

Measuring the Importance of Private Sector Actors

Which parts of the private sector in Africa are the most important from a public policy point of view? First we need to identify how importance is measured: by the level of expenditure; by numerical importance; by level of utilization; by public health impact? All of these are reasonable criteria, but are likely to provide quite different answers to questions about which parts of the private sector deserve the most attention from policy makers.

Assuming that the essential goal of public policy is to improve the access of the poor to a basic package of preventive and curative services, it is likely that the most important non-government players in the African context will be mission and other religious services, informal modern services including drug sellers, and traditional healers[4]. It is these providers which are predominantly located in rural areas serving relatively poor populations and/or providing basic health services. The least important are likely to be the for-profit physician and hospital services in urban areas which tend to cater largely to wealthy elites and expatriates, and account for many of the services of lower cost-effectiveness. Unfortunately, as

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2/ Any categorization of public and private financing and provision will give rise to grey areas. These often involve "quasi- public" actors, such as state-owned companies, or jointly financed institutions such as insurance funds which collect government, employer, andemployee contributions. In Zambia during the mid-1980's, for example, health expenditures incurred by the parastatal copper mines amounted to 24% of total health expenditure (Vogel, 1990). There is no universally accepted definition of "public" and "private" to apply

will be seen in the sections which follow, information about private providers tends to be available in inverse relation to their anticipated importance.

3/ Four country studies (Kenya, Senegal, Tanzania and Zambia) have been funded by the Africa Bureau at USAID which will provide valuable information about the breadth, size and activities of the private sector. Results are due to be available in October 1994.

4/ We owe this point in particular to the discussions held at the USAID consultation on the Private Sector in Africa, held in Washington DC in September 1993.

The Public/Private Mix in Health Expenditures

Composition

Any discussion about health expenditures must necessarily start with the difficulties of making good estimates of health expenditures[5]. In general the information regarding levels of public expenditure are fairly accurate: the most common sources include Ministry of Health expenditure records, public expenditure figures from the IMF's Government Financial Statistics, and World Bank sector reviews. Sometimes these sources ignore government spending at the state/province and local level. There is also usually reasonably accurate information regarding external aid flows, although these resources may also be included in estimates of government expenditures, leading to double-counting. Increasing enthusiasm on the part of donor agencies for direct funding of the activities of NGOs has complicated the task of estimating overall aid flows.

Available data regarding private expenditures is, however, considerably less reliable, and available for rather fewer countries. Sources of information about household expenditures on health care are primarily household surveys. National income accounts sometimes provide estimates, but these are less reliable. Use of general household budget surveys in estimating health expenditures is also possible, but tends to underestimate them (Rannan-Eliya, forthcoming).

Reasonable estimates of private health expenditures are available for 10-15 African countries. These figures, along with averages for other regions, appear in Table 2.

These recent estimates suggest that almost half of all health expenditure in Africa is private, and that sub-Saharan Africa lies within the range of other regional averages. There is great diversity within the continent. At one end, 80% of all health expenditure in Zaire is private, while at the opposite extreme, private expenditure constitutes less than 25% of total health expenditure in Benin, Burkina Faso, Burundi and Chad.

As has already been mentioned, non-donor private expenditure is made up of private, out-of-pocket payments, direct corporate spending and private insurance expenditures. The latter two items are likely to be relatively small in sub-

5/ As in the 1993 World Development Report, health expenditures include outlays for prevention, promotion, rehabilitation and care; population activities; nutrition activities; programme food aid; and emergency aid specifically for health. Water and sanitation expenditures are not included. This definition reflects the need for standardization of terms, and does not negate the impact that these areas of expenditure have on health status.

Table 2

Health Care Expenditures by Source in Selected African Countries, 1991, in Comparison with Other Regions

Country	*Public Health Expenditure as a % of Total Expenditures*	*Aid Flows as a % of Total Expenditures*	*Private Health Expenditure as a % of Total Expenditures/5*
Benin	32	46	22
Burkina Faso	10	75	15
Burundi	62	13	25
Cameroon	40	18	43
Chad	31	53	16
Cote d'Ivoire/1	68	5	27
Ethiopia	28	8	64
Ghana/2	30	14	56
Kenya	40	22	38
Madagascar	29	21	50
Mali/2	20	21	61
Mozambique	21	54	25
Nigeria	47	8	45
Rwanda	19	50	31
Senegal/3	31	17	51
South Africa/2	52	0	48
Tanzania/4	11	27	62
Uganda	13	34	53
Zaire/2	5	16	80
SUB-SAHARAN AFRICA	47	10	43
SUB-SAHARAN AFRICA (Excluding S. Africa and Nigeria)	36	20	43
CHINA	58	1	41
INDIA	20	2	78
OTHER ASIA AND ISLANDS	38	1	60
LATIN AMERICA	76	<1	24

Source: Derived from estimates prepared for the World Development Report, 1993. Where indicated the WDR estimates have been replaced with DDM estimates, when this was warranted for reasons of accuracy. The regional groupings are the ones used in the report. Regional averages are weighted according to GDP, and reported as in the WDR. All figures are for 1990 except where indicated below. Figures may not sum to 100 because of rounding. Notes to table: (1) DDM estimate for 1987; (2) DDM estimate for 1990; (3) DDM estimate for 1989; (4) DDM estimate for 1991. (5) WDR does not distinguish whether Aid Flows are going to government or NGO's, hence the private expenditures are likely to be underestimated.

Saharan Africa. We assume that private out-of-pocket expenditure makes up the bulk of private non-donor spending in most countries. What services are being purchased with these funds? User fees for public services are one possibility, while services provided in mission or other non-profit private facilities are a second. Unofficial payments for public services are believed to be widespread in certain countries, although relatively little information is available about the magnitude of these payments. One study found that private payments for government services in Guinea amounted to three times the official price on average (Devillé et al., 1991). Services provided by the traditional sector would be included in the figure for private expenditure, as would those provided by modern private-for-profit providers. Finally, private pharmaceutical expenditure is known to be significant in many African countries, with drugs purchased in pharmacies, markets and by travelling drug peddlers. Out of pocket expenditure on drugs is estimated to account for almost half of private health expenditures in Kenya (Bloom and Segal 1993).

Determinants

Analysis of the determinants of private and total health expenditures for approximately 60 countries is currently being undertaken by a team at Harvard University. The preliminary results suggest that income does not have a significant independent effect on the level of private expenditures as a percentage of GDP. There is some suggestion that former British colonies spend less privately than average, whilst former French colonies spend more, implying that there may be certain structural features determined at least in part by colonial heritage that affect the patterns of health expenditure. Such findings may be significant in explaining differences between East and West Africa. OPEC countries also appear to spend less than average as a percentage of GDP which would make sense given their higher levels of government revenue. There is a negative relationship between overall government expenditure, measured by government consumption as a proportion of national income, and private expenditures, suggesting some substitution between public and private sector spending.

Because of the potential inaccuracies in estimating national income, and particularly because these inaccuracies may be quantitatively greater in Africa than elsewhere, private expenditure as a proportion of total health expenditures may be a more appropriate dependent variable in future analysis. Similarly changes in the public-private composition of health spending should be interpreted cautiously, as a rising private finance role may be caused by slowed or falling public expenditures, as is common during structural adjustment.

Incidence of Private Expenditure

In economic terms, the incidence of private expenditures refers to the composition of the group which incurs these expenses. Little is known about the incidence by income group of private health expenditure. A study in Kenya (Bloom et al. 1986) looked at the distribution of private health expenditure by place of residence and family income level over the period 1981 to 1983. The results appear in Table 3. Although expenditures on services provided by traditional healers may be underestimated due to difficulties in valuing payment in kind, the extent to which private expenditure is dominated by upper income groups, and by those living in urban areas is striking.

Table 3

Incidence of Private Health Expenditure, Kenya, 1981-3

Income Level	*Urban (%)*	*Rural (%)*	*Total (%)*
Upper	52	4	56*
Middle	29	8	37
Lower	2	5	7
	83**	17	100

Source: Bloom et al., (1986)

* Upper income families constituted approximately 5% of all families

** Cities had 15% of total population at that time

Household surveys in other African countries show broadly similar results, summarized in Table 4. These figures indicate substantial differences in the absolute levels of health expenditure by income group as well as differences in average spending levels across countries. In every case, higher income groups spend more in absolute terms.

Information about the type of services purchased with this private expenditure is fairly limited. Sources of care vary across countries, depending on both health seeking patterns (including the extent to which different providers and provider-types are consulted for a single episode of illness), the variety of providers available, and the pattern of charges in public facilities. In Mali, for example, 80% of household expenditure is spent on pharmaceuticals, 12% on traditional medicine, 4% on user fees, and 3% on clandestine health services (Coulibaly and Keita, 1993). Clearly, both the incidence and composition of private expenditures are key areas for future research.

Table 4

Per Capita Household Health Expenditures, Selected African Countries

Household Quintile	*Ghana 1987-88/a*	*Cote d'Ivoire 1985/a*	*Guinea Bissau 1991/b*	*Nigeria 1985-86/c*	*Senegal 1991- 92/d*
Lowest	$2.55	$3.99	$3.88	$2.58	$4.90
2nd	4.25	6.59	4.63	5.88	10.27
3rd	6.19	14.33	4.38	10.07	13.44
4th	8.54	17.04	2.44	14.08	25.34
Highest	14.83	46.38	8.34	35.16	61.82
Average	7.27	18.88	4.74	15.05	23.14
Per capita income	239.00*	911.31**	196.00	400.00	393.00
Average as % of per capita income	3.00	2.10	2.40	3.80	5.90

Source: World Bank 1993b, table II p. 172

Note: Household expenditures include traditional and modern health services as well as medicines

Data sources:

(a) Serageldin and others 1993

(b) 1991 Income and expenditure survey

(c) 1985/86 Consumer expenditure survey

(d) 1991/2 Priority Survey (Direction de la Prevision et de la Statistique)

* IMF Report

** Grootaert, 1985-88. The Evolution of Welfare and Poverty during Structural Change and Economic Recession - The Case of Cote d'Ivoire

Health Insurance in Sub-Saharan Africa[6]

Health insurance systems can represent an important additional source of financing health care. Unlike Vogel (1990), in which free health services, or free medical services for civil servants, without a contribution from the employees themselves, are considered as a form of health insurance, we consider only those public and private insurance systems in which contributions by and on behalf of individuals are pooled to cover their health care risks.

In sub-Saharan Africa, such systems include contributory insurance schemes covering formal sector private workers and civil servants (Burkina Faso), an income-based compulsory hospital insurance fund (Kenya), and mandated coverage of private sector employees by their employers (either direct provision of services or paying for privately-provided services) in Zaire.

6/ The following sub-section draws heavily on Vogel (1990).

The size of the population covered also varies within the continent, although generally coverage is very low, ranging from less than 1% in Ethiopia to 11.4% in Kenya. Only in Burundi, Kenya, Mali, Zambia and Zimbabwe does the proportion of the population covered exceed 1%. Both public and private insurance schemes can be identified. These involve combinations of public and private financing, may pay for public and private providers, or use dedicated facilities owned by public, quasi-public, or private entities. As in other regions, systematic classification of insurance into public and private components is difficult. (We use private insurance to refer to for-profit non-government entities.)

The share of insurance financing in total health expenditures varies but is relatively low in most cases: looking first at the share of private insurance in total health expenditure, only in Kenya, Senegal and Swaziland do private insurance payments exceed 1% of total health expenditure. In the case of public insurance, expenditures constitute more than 1% of total health expenditure only in Burundi, Kenya, Mali and Zambia. Even for these countries it appears that these expenditures benefit a relatively small proportion of the population: in Zambia, for example, 24% of total health expenditure (the amount spent by the self-insuring parastatal copper mining company) is spent on slightly more than 6% of the population (Vogel, 1990). Similarly in Burundi, the 16% of national health expenditures incurred by the Mutuelle de la Fonction Publique directly benefit less than 1% of the population.

It is sometimes noted that the absence of widespread health insurance is a major constraining factor in the development of the private sector in Africa, although the experiences of a number of both developed and developing countries does not support this proposition (cf. the United States, the UK, Thailand, India, and Japan). The evidence above certainly suggests that insurance financing is a relatively unimportant part of overall health expenditure, and that it is concentrated on the small group of individuals who work in the urban formal sector or are civil servants. This may have important implications both for the future demand for private health services, and for access to these services.

In summary, private health expenditures are clearly significant in African countries, although their importance appears to vary between countries. Questions remain about the composition of private expenditures, as well as their incidence across socioeconomic-economic groups. This, in turn, will have implications for the equity effects of efforts to expand the private sector. Further country-level studies are needed to examine these issues. Better information as to the magnitude of private health expenditure is needed, since at present we have reliable data for only 10-15 countries. More comprehensive regional analysis of the determinants of the private/public composition of health expenditures requires better information.

The Public/Private Mix in Health Care Provision

This section deals with the other side of the public/private mix coin - the provision of health services. There is relatively little data regarding the size of private health care provision in Africa. Information about both the type of services offered in the private sector as well as the relative efficiency and quality of those services is limited to anecdotal evidence. This section is divided into three parts. First, we consider existing information regarding the number of providers in the private sector . The second sub-section looks at the quality and efficiency of private services. Finally we turn to evidence regarding the composition across providers of the utilization of health services (the demand side).

Private Provision of Health Services

A distinctive feature of health services in Africa is that at least for "modern" or allopathic services, the absolute number of physicians is relatively low when compared with other regions (Figure 1). This is at least partly compensated for by a greater number of nurses per physician (Figure 2), though the absolute number of nurses is still relatively low (Figure 3).

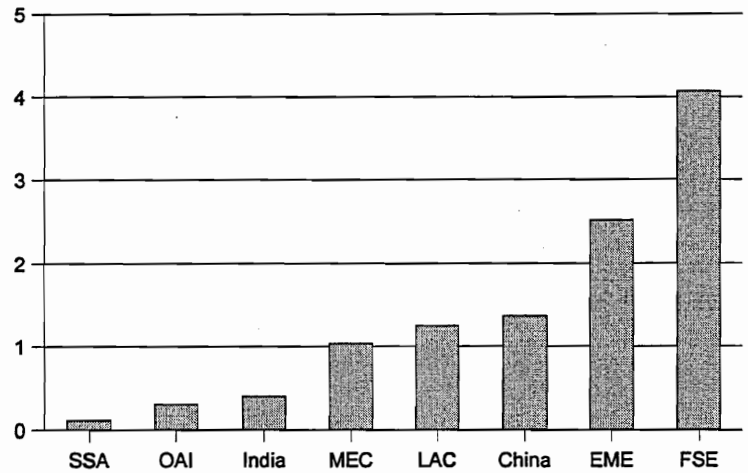
As usual, regional averages conceal important differences between countries in the continent: For the number of physicians, South Africa, for example, has 0.61 per thousand, Nigeria 0.15 per thousand, and Malawi, Rwanda and Guinea all have 0.02 per thousand compared with a regional average of 0.12 per thousand. In the case of the nurse:physician ratio, although the regional average is 5.1 nurses per physician, Niger has 11.3, while Rwanda has only 1.7 and Chad 0.9 nurses per physician. The relatively low supply of human resources for health, and low incomes and population densities in many countries will limit the development of private markets for health services.

In terms of the public/private composition of providers, data are even more limited. Most countries do not keep up-to-date registers of numbers of private providers even for the most basic categories such as registered physicians and hospital beds. Typically registration and licensing is a one-time event, without correction for death and migration.

Measurement errors also threaten the reliability of any measures of provision. It

Figure 1 Supply of Health Personnel

Physicians per 1000 Population, 1990



Source: World Bank (1993)

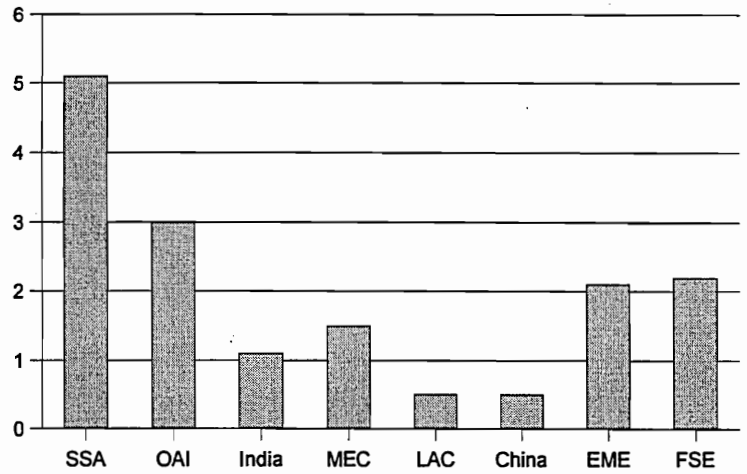
SSA = Sub-Saharan Africa; OAI = Other Asia and Islands; MEC = Middle Eastern Crescent; LAC = Latin America and Caribbean; EME = Established Market Economies; FSE = Former Socialist Economies of Europe

is well known that many public providers also provide services privately, outside of normal working hours. This means that even accurate estimates of full-time private practitioners systematically underestimate the size of the private provision sector. Population-based surveys may not provide an accurate estimation of the public/private mix in service provision, since service users may not easily distinguish between a public and a private service when these are both provided by the same individual. Also, measuring service provision as is often done, by the number of providers in the public and private sectors (say, for example, hospital beds or clinics) may provide misleading estimates of the proportion of services provided privately, since utilization levels may differ significantly between sectors. Finally, although there have been many descriptive (primarily anthropological) studies of the traditional and informal modern sectors (including, for example, drug peddlers or "needle men") there is virtually no quantitative data for these providers.

A recent review of existing data sources on the public/private mix in the provision of health services has produced the information available in Table 5 (Berman and Hanson, forthcoming). The most noticeable feature of this table is that information about the quantity of providers is restricted to the formal modern sector, with no systematic data concerning the number of providers in either the informal or traditional sectors. Even within the formal modern sector, the num-

Figure 2 Supply of Health Personnel

Nurse-Physician Ratio, 1990



Source: World Bank (1993)

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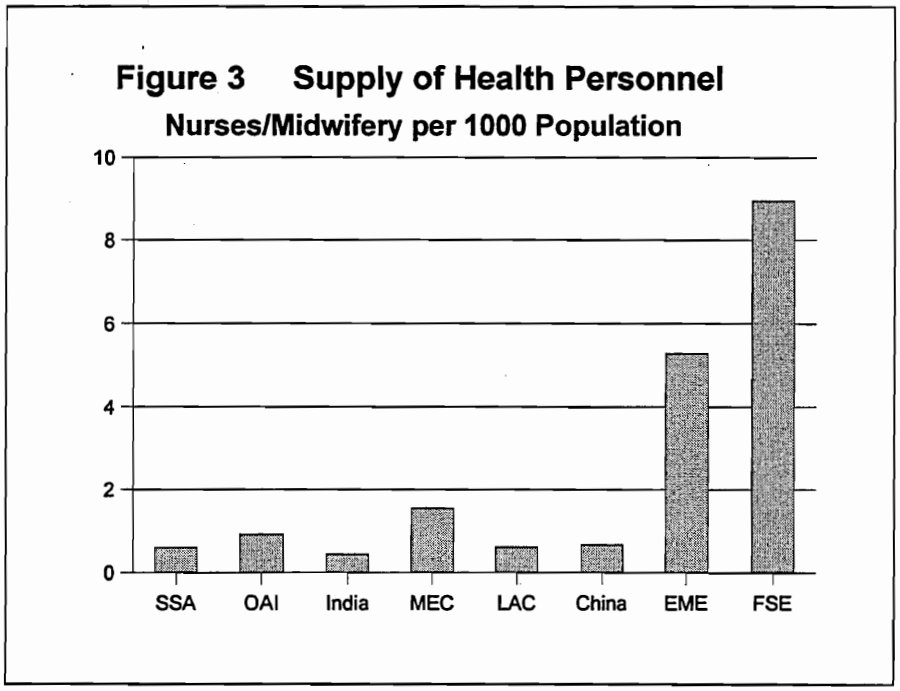
ber of countries for which data about the number of private providers is available is limited, and generally does not distinguish between the for-profit and not-for-profit sectors. This is understandable given that in most cases the data was not collected with this objective in mind. Table 5 shows large variations in the size of the private provision sector for doctor and hospitals. The former ranges from 7 to 67 percent of physicians; the latter from 7 to 59 percent of hospital beds. For-profit hospital beds are negligible. Not-for-profit beds account for almost half or more of all beds in several countries.

The Modern Private For-Profit Sector

There is evidence that private-for-profit providers are largely concentrated in urban areas. For example, in Cote d'Ivoire in 1987 there were 40 private clinics with a total of more than 500 private beds, all of which were located in Abidjan and Bouaké (World Bank, 1988). It also appears that modern private-for-profit provision is dominated by physician services: there are very few private-for-profit hospitals in Africa, and where these exist they serve a predominantly elite or expatriate clientele. We know little about the service mix in the for-profit sector, particularly about non-curative services. Government information systems typically do not include the private for-profit sector and private professional



Source: World Bank (1993)

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organizations collect little data. The for-profit sector may also be subsidized by the public sector, as for example, when private insurance premia are tax deductible in Zimbabwe (Chandiwana and Chiutsu, 1993; WHO, 1991).

In addition to physicians, other cadres of health personnel may be involved in the private for-profit health sector. Since the mid-1980 's, for example, the Government of Kenya has allowed nurses and clinical officers to establish medical practices. Anecdotal evidence suggests that these providers may be becoming important providers of basic health services. Other types of providers, such as pharmacists, laboratory staff, and other diagnostic personnel may also function as providers in some cases. In addition, large numbers of unqualified for-profit providers are reported to exist, but are not documented.

Pharmacies and Drug Sellers

Pharmacies represent another "sector" when considering private provision of health services. Similar to other private providers, formal private pharmacies are usually concentrated in urban areas: in Senegal 87% of locally-owned pharmacies were located in the capital city.

In many countries both over-the-counter and prescription drugs can be pur-

Table 5

Public and Private Provision of Modern, Formal Health Services in Africa

Country	*Physicians*			*Hospital Beds*			
	% Private (for profit and not-for-profit)	*% For-Profit*	*% Not-for-Profit*	*% Private (for-profit and not-for-profit)*	*% For Profit*	*% Not-for-Profit*	*% of Total Expenditure Private/8*
Burundi, 1982/1	7	n/a	n/a	n/a	n/a	n/a	48
Cote d'Ivoire, 1987/1	11	n/a	n/a	7	n/a	n/a	n/a
Ghana, 1988/2	n/a	n/a	n/a	30	n/a	n/a	51
Kenya, 1985/1	40	n/a	n/a	31	10	21	37
Liberia, 1983/1	41	n/a	n/a	n/a	n/a	n/a	n/a
Malawi, 1987/3	25	n/a	n/a	41	0	41	42
Senegal, 1988/1	37	n/a	n/a	59	14	45	38
South Africa, 1989/4	59	n/a	n/a	29	n/a	n/a	43
Tanzania, 1985/5	n/a	n/a	n/a	49	0	49	n/a
Zambia, 1990/6	n/a	13	n/a	n/a	n/a	n/a	31
Zimbabwe, 1990/7	67	n/a	n/a	n/a	n/a	56	48

Sources: (1) World Bank country memoranda; (2) Adusei and Dakpallah (1993); (3) Ngalende-Banda and Simukonda (1993); (4) Price et al (1993); (5) Mujinja et al. (1993); (6) Government of Zambia (1990); (7) Chandiwana and Chiutsu (1993); (8) Aid Flows destinations are not distinguished in WDR, hence, private expenditures may be underestimated.

chased in shops and market places. This type of outlet has also been a focus of social marketing programmes aimed at extending the distribution of condoms as well as sales of Oral Rehydration Solution (ORS).

The Modern Not-For-Profit Sector

The modern not-for-profit sector is an important provider of services in many African countries, and may make up a significant proportion of the private sector. In Cameroon, for example, church missions support 40% of health facilities, and profit-making facilities are only 4% of the total non-government facilities (World Bank, 1984). The Public Health Association of Lesotho is responsible for one-half of all hospitals and 60% of clinics (Vogel, 1989). In Uganda and Malawi, NGO's provide approximately 40% of all health care (DeJong, 1991).

The level of public-mission collaboration differs substantially between countries. In many countries the Ministry of Health finances an important part of the recurrent costs of non-profit private providers (for example, in Tanzania and Swaziland, fully government financed NGO hospitals may function as the official district or regional hospital). The Church Mission Association of Zambia receives

approximately 1/3 of the recurrent budget of the Ministry of Health. In other countries, the management and financing of mission services are quite separate from the government: in Cameroon, for example, 95% of personnel are expatriates, and government support amounts to only 1-2% of total expenditure (Awantang, 1983). In Burundi, there is little collaboration between the public and mission sectors other than the collection of statistical information, although government does permit mission facilities to order pharmaceuticals from the central medical stores (World Bank, 1983).

It is generally believed that NGO/mission facilities are more likely to be located in rural areas, and to serve isolated or poor communities. In Burundi more than one-third of health services in rural areas are provided by mission clinics (World Bank, 1983). In Zambia, missions offer health care to 50% of the rural population and 35% of the total population (DeJong, 1991).

The Traditional Sector

Although the traditional sector is known to constitute an important part of private health services in many African countries, information about the number of practitioners and levels of utilization is not available. Other evidence is suggestive of its significance as a sector: in Zambia in 1984, an amount equal to 40% of the total government health budget was spent on traditional care, and in Madagascar, 32% of people first seek the care of a traditional healer.

Traditional providers are, of course, not a unified group, nor are they necessarily similar in different parts of Africa. While a rich anthropological literature exists on traditional health care, we found no systematic review of the role of traditional providers in national systems. Traditional practitioners may operate on a for-profit basis (surveys often report them as relatively high cost). They may also provide services on non-commercial terms.

Quality and Efficiency of Private Services

Few studies have directly compared the quality of public, private-for-profit, and not-for-profit health services. In considering quality issues it is important to distinguish between technical quality and perceived quality. The non-government sector is more likely to respond to those areas of quality most important to users themselves (for example, drug prescription practices, politeness, etc), a feature which is borne out in some countries by levels of utilization of mission and public services. In Burundi, for example, there is evidence that mission facilities are twice as heavily-utilized by outpatients as government facilities (World Bank, 1983). There have been fewer assessments comparing the technical quality of public and private providers. A study of the government and mission facilities in one region of Tanzania suggests that there may be more

incorrect prescribing of antibiotics in church than government units, although levels were high in both with proportions of incorrect prescriptions exceeding 85%. Significantly higher administering of injections was also noted in mission facilities (Gilson et al, forthcoming). A study of one district in Burundi found evidence of inappropriate treatment of pediatric diarrhoea in mission facilities compared with government facilities (Hanson and Nkunzimana, 1992). A study comparing the quality of public and private facilities is currently underway in Senegal, through the Health Financing and Sustainability project, although only quality assessments for public facilities are available to date (Bitran and Makinen, 1993).

Similarly, the premise that the private sector will necessarily be able to provide services more efficiently than the public sector has not been conclusively demonstrated in the African context. Many factors make a comparison of efficiency in the mission and public sectors difficult, including different input mixes, as well as the problem of valuation of donated inputs in mission facilities.

Utilization of Non-Government Health Services

When assessing the importance of the private sector, the level of supply as reflected in the number of providers tells only part of the story. The extent to which private services are utilized is as important a measure of the significance of the private sector, and reflects demand factors as well as supply factors. The magnitude of private service utilization differs by region and country, by service and by income group.

Evidence from DHS data suggests that utilization of private services may be relatively less important in Africa than elsewhere, despite the large amount of private expenditure (Berman and Rose, forthcoming). There may, however, be particularly high levels of private utilization for specific services, for example family planning services (see Table 6)[7]. There is also some evidence of specialization by the non-profit private sector in certain services. For example, NGO's provide up to 95% of total care for the elderly in Zimbabwe (WHO, 1991).

An important source of information about the importance of the private sector in health service provision is household surveys of health-seeking behavior. Mwabu (1986) reports the findings of a household survey looking at provider choice in Kenya. It appears that the non-government sector is at least as, if not more, important than the public sector. He found that after the initial visit, mission clinics dominate all other facilities as a treatment source; that pharmacies are also important as a source of care at the early stages of an illness, but that their importance declines with the duration of illness; and that the number of patients using government facilities is low relative to other sources of care. Other disease-specific studies reinforce this picture of the significant role played by the mission sector. Snow et al. (1992), for example, show this for the treatment of

7/ The impression that private utilization is particularly high for family planning services may be an artifact due to the particular interest on the part of the donor agencies in family planning services, and especially, in the potential for using private providers to extend coverage.

Table 6

Percentage of Contraceptive Users Served by the Private Sector

Country	*Gov't*	*Private for - Profit*	*Nonprofit/NGO*	*Other*
Botswana, 1988	92	[--------8--------]		1
Burundi, 1987	87	[--------2--------]		11
Cameroon, 1991	30	[-------61-------]		5
Ghana, 1988	39	25	20	1
Kenya, 1989	73	9	17	1
Liberia, 1986	37	17	46	15
Mali, 1987	76	2	8	4
Mauritius 1985	71	6	19	2
Mauritius 1991	66	9	23	
Niger, 1992	93	[-------61-------]		0
Nigeria, 1990	37	47	4	9
Senegal, 1986	47	[-------43-------]		10
Sudan, 1989	58	[-------35-------]		6
Swaziland, 1988	78	7	14	1
Tanzania, 1991	73	7	14	2
Togo, 1988	51	26	12	11
Uganda, 1988	56	10	31	3
Zambia, 1992	67	24	3	6
Zimbabwe, 1988	88	4	2	6

Source: DHS data in Population Reports, 1992

childhood malaria in Kenya.

Household surveys are likely to be the only way to measure the use of the informal and traditional sectors. A study in Sierra Leone (Fabricant and Kamara, 1991) found "medical" treatment (including public, mission and private-for-profit practitioners) to make up less than half of all treatments chosen in response to illness (Table 7), while treatment from traditional healers constituted around 21% of actions, and drugs from peddlers around 28% when averaged across dry and rainy seasons.

Utilization patterns may also differ by income group. Table 8, which shows utilization of public, private modern, pharmacy and traditional services by income group suggests that utilization of public facilities decreases with income, while

Table 7

Sierra Leone: Treatment Chosen in Response to Illness by Season (% of all actions)

Source	*Dry Season*	*Rainy Season*
Public district hospital	1.8%	1.8%
Public clinic	37.0	29.4
Mission hospital	4.8	5.9
Private practitioner	4.0	3.1
All medical	47.7	40.2
Traditional healer	20.6	21.2
Drugs from peddlers	25.6	33.5
No treatment	6.0	5.3

Source: Fabricant and Kamara, 1991

utilization of private services increases with income. Use of pharmacies and traditional healers appears to be relatively constant across income groups.

One important justification for our interest in the private sector lies in extending access to basic health services to the majority of the population. Although the available data do not provide conclusive evidence, this review of provision and utilization of private health services suggests that the private providers most likely to be most important in pursuing this agenda are not the for-profit modern providers who practice predominantly in urban areas and cater to upper income groups. Rather, it appears that the mission sector, traditional practitioners and

Table 8

Source of Care by Income Group, Ogun State, Nigeria, 1991

Income Group	*Government (maternity, clinic, health centre, hospital)*	*Private (maternity, clinic, hospital)*	*Pharmacy*	*Traditional Healer/ Spiritualist*
Lowest	76	14	5	4
Second lowest	73	19	4	5
Third lowest	69	22	4	4
Fourth lowest	63	29	5	4
Highest	53	33	8	5

Source: Adapted from World Bank (1991).

informal private (modern) providers such as drug peddlers are the most important actors . New partnerships between and across the public and private sectors, such as community financing, are also likely to provide an important path towards the achievement of this public health agenda.

Policy Reform and Private Health Care: Some Recent Reviews of Experience

A variety of health reform policy tools are available which can be expected to have a significant effect on the development of private health care and the public-private mix. Berman and Rannan-Eliya (1993) list the following: public provision/production of services; public sector health financing policies; economic incentives/disincentives, in the form of taxes, fees, subsidies; administrative actions, such as regulation and licensing; and public information. These can be applied directly to final provision of services, or could be used to influence the availability and cost of inputs to health care, such as medical personnel, drugs, and equipment. In a recent review, Gilson and Mills (1993) also note the importance of reforms in the organizations of the public sector, such as decentralization, contracting out, personnel reforms, etc.

Many of these strategies have been applied in Africa, although documentation of their effects has been limited. Reforms may be intended to influence private health care or the public-private mix, or they may have unintended or secondary effects. A complete review of these efforts and their results are too ambitious to be included in this background note. Some examples are provided below.

Much attention has been focused on the efforts to institute fees for public services in Africa. Recent reviews of experience include McPake (1993), Creese and Kutzin (1994) and , on the Bamako Initiative, McPake et al.(1993). Although efforts to date have had limited success as revenue generation strategies, they have probably had some effect on the market for public and private services by altering the relative prices of treatment at different sources .

Bennett (1992) notes that there is some experience of "contracting out" in Africa, but that there has been little evaluation of this experience. The small size of the private sector appears to have limited the gain from such efforts. For example, the contracting out of equipment maintenance services in Zimbabwe seems to have increased the cost without a concomitant improvement in the quality/effectiveness of the service. This is believed to be partly due to the monopolization of the equipment maintenance industry by a few firms. In other cases, however, the resulting quality improvements have outweighed the increased cost (WHO, 1991). Other contracting out experiences include the provision of hospital meals in Nambia, billing and fee collection for insurance patients in Zimbabwe (Bennett, 1992) and certain hotel services in hospitals in Cote

d'Ivoire (World Bank, 1988). Certainly, two features appear to be important prerequisites for successful contracting out: first, sufficient managerial capacity in the public sector to handle the process of contracting out (including specification of appropriate quality standards and monitoring criteria); and second, sufficient capacity within the private sector to fulfil the contract, and preferably enough to ensure some level of competitive bidding (WHO, 1991).

As noted earlier, many governments in Africa have close financial relations with not-for-profit private providers, such as NGO's and church missions. In Zambia, approximately 70 percent of the budgets of mission facilities are financed by the government. The proportion has reportedly been increasing in recent years, as external funds become tighter. The government's recent adoption of a fiscal decentralization strategy now threatens this support, since local governments may be given more autonomy to decide on grants to mission facilities and may view such grants as reducing funds for government-owned facilities.

Not-for-profit organizations also face a variety of different fiscal incentives through the tax system. For example, imported pharmaceuticals may be taxed in the market, but not as in-kind contributions. Expatriate medical personnel may be an expensive source of skilled labor, but represent no cost to the local organization in salaries, taxes, or benefits obligations.

Reporting the results of the limited regulatory reform which has occurred in developing countries, Gilson and Mills (1993) note that private sector promotion efforts are very recent (cf. Tanzania and Angola) so that there has not yet been any evaluation of the impact of this policy change. Guinea Bissau and Malawi are currently considering the possibility of allowing physicians to work privately on a limited basis (World Bank, 1991; Ngalende-Banda and Simukonda, 1993).

Towards a Research Agenda

Three major policy and programmatic issues emerge from this review, which should be reflected in the research agenda regarding the private sector in Africa:

First, how can the private sector best be used to increase coverage of "public health activities", particularly focusing on the mission, traditional and informal modern sectors?

- how many of these providers exist and how important are they in terms of utilization;
- who is using them (breakdowns by gender, by socioeconomic status, by geographical area, by type of illness);
- what services are they already providing;
- what policy or programme tools can be used to take advantage of their existing patient contacts;

Second, what are the ways to reduce the extent to which the public sector subsidizes inappropriate or ineffective private sector activities?

- how is the public sector already subsidizing the private sector (i.e. what are the mechanisms?) and what is the magnitude of this subsidy?

Third, where can private services substitute for inappropriate public sector activities to reduce the public burden of provision of services which are best undertaken by the private sector?

- which services are most efficiently provided by the private sector, and how can private providers be encouraged to provide these services;
- where do the political economy constraints enter into the picture: which areas of policy intervention are available and which must be ruled out due to political limitations;

As should be clear from this review, even basic descriptive data about the non-government sector in Africa is lacking. Existing sources tend to be highly general and often grounded more in opinion and casual observation than in actual fact and analysis, so that much scope exists for careful country-level studies. Some balance, however, needs to be reached between descriptive studies, case stud-

ies of "natural experiments", and analytic studies which may require more demanding data-collection, such as longitudinal data.

In addition, better use needs to be made of existing data sources. For example, although no single country survey can provide a complete picture of the size and scope of the private sector in health care provision and utilization, many countries have a number of studies looking at disease-specific health care seeking patterns. These results may be collated and triangulated to put together a picture of the importance of the private sector for a number of different health conditions, age groups, socioeconomic groups and geographical areas, without embarking upon a major new data collection effort.

As was recognized in the introduction to this review, many countries are already contemplating if not implementing reforms aimed at altering the roles of the public and private sectors. There is an urgent need for information to ensure that these changes are based on a sound understanding of the nature of the private sector and its strengths and weaknesses.

Bibliography

Adusei J and Dakpallah GF (1993) *The Public/Private Mix for Health Care in Ghana* (Paper prepared for Workshop on the Public/Private Mix for Health Care in Developing Countries, London School of Hygiene and Tropical Medicine, 11-15 January 1993).

Awantang FN (1983) *The private sector in the provision of health services in the United Republic of Cameroon* (unpublished mimeo).

Bennett S (1991) *The Mystique of Markets: public and private health care in developing countries* (London: London School of Hygiene and Tropical Medicine, PHP Departmental Publication no. 4).

Bennett S (1992) "Promoting the private sector: a review of developing country trends" *Health Policy and Planning* 7(2):97-110.

Berman P and Hanson K (forthcoming) *Private Health Care Provision in Developing Countries: A preliminary analysis of levels and composition* (Boston, MA: Data for Decision Making).

Berman P and Rannan-Eliya R (1993) *Factors affecting the growth of private health care provision in developing countries* (A Phase I Applied Research Report for the Health Financing and Sustainability Project).

Bitran, R and M. Makinen (1993) *Economic Analysis and Research Tools for Health Policy in Developing Countries* (Paper presented at the conference on "Health Sector Reform in Developing Countries: Issues for the 1990's", September 10-13, Durham New Hampshire).

Bloom G, Segall M and Thube C (1986) *Expenditure and Financing of the Health Sector in Kenya* (Nairobi: Ministry of Health) cited in Roemer, 1993 National Health Systems of the World, volume II: The Issues (Oxford: Oxford University Press).

Bloom G, Segall M (1993) *Expenditure and Financing of the Health Sector in Kenya* (Institute for Development Studies, Commissioned paper No.9).

Chandiwana S and Chiutsu A (1993) *The Public/Private Mix for Health Care in Zimbabwe* (Paper prepared for Workshop on the Public/Private Mix for Health Care in Developing Countries, London School of Hygiene and Tropical Medicine, 11-15 January 1993).

Coulibaly S and Keita M (1993) *Les comptes nationaux de la sante au Mali: 1988-1991* (New York: UNICEF BIMU Technical Report no. 18).

Creese A and Kutzin J (1994) *Lessons from Cost-Recovery in Health* (Draft) (Geneva: World Health Organization,mimeo).

DDM (forthcoming) *Information on private provision available from DHS surveys* (Data for Decision Making Project working paper).

DeJong J (1991) *Nongovernmental organizations and health delivery in sub-Saharan Africa* (World Bank PRE Working Paper 708).

Devillé L, Diallo H, Diallo TS, Facinet Y, Hanson K (1991) *Guinea Country Study - Bamako Initiative Evaluation* (London: Health Policy Unit, London School of Hygiene and Tropical Medicine).

Fabricant SJ and Kamara CW (1991) *The Financing of Community Health Services in Sierra Leone: Seasonality, Socio-Economic Status, Gender and Location Factors affecting access to services* (New York: Bamako Initiative Management Unit, UNICEF).

Gilson L, Jaffar S, Mwankusye S, Teuscher T (forthcoming) Assessing prescribing practice: a Tanzanian example. *International Journal of Health Planning and Management*.

Gilson L and Mills A (1993) *Health Sector Reforms in Lower Income Countries: Lessons of the last 10 years* (Paper presented at the conference on "Health Sector Reform in Developing Countries: Issues for the 1990's", September 10-13, Durham New Hampshire).

Government of Zambia (1990) *Health Policy Reform Document* (Lusaka, Ministry of Health).

Hanson K and Nkunzimana F (1992) *Les coûts et l'utilisation des ressources dans les centres de santé de la province de Muyinga, Burundi* (New York: Bamako Initiative Technical Report no. 13, UNICEF).

McPake B (1993) "User charges for health services in developing countries: a review of the economic literature" *Social Science and Medicine* 36(11):1397-1405.

McPake B, Hanson K and Mills A (1993) "Community Financing of Health Care in Africa: An Evaluation of the Bamako Initiative". *Social Science and Medicine* 36(11): 1383-1395.

Mujinja PGM, Urassa D and Mnyika KS (1993) *The Tanzanian Public/Private Mix in National Health Care* (Paper prepared for Workshop on the Public/Private Mix for Health Care in Developing Countries, London School of Hygiene and Tropical

Medicine, 11-15 January 1993).

Mwabu G (1986) "Health care decisions at the household level: results of a rural health survey in Kenya" *Social Science and Medicine* 22(3): 315-319.

Ngalende-Banda EE and Simukonda HPM (1993) *The Public/Private Mix in the Health Sector in Malawi* (Paper prepared for Workshop on the Public/Private Mix for Health Care in Developing Countries, London School of Hygiene and Tropical Medicine, 11-15 January 1993).

Population Reports (1992) "The Reproductive Revolution: New Survey Findings" *Population Reports*, Series M, Number 11:19.

Price M, Masobe P and Booysen M (1993) *The Public/Private Mix for Health Care in South Africa* (Paper prepared for Workshop on the Public/Private Mix for Health Care in Developing Countries, London School of Hygiene and Tropical Medicine, 11-15 January 1993)

Rannan-Eliya R (forthcoming) *Use of household surveys in the estimation of health expenditures* (DDM discussion paper).

Roemer M (1993) *National Health Systems of the World, Volume II: The Issues* (Oxford: OUP).

Serageldin I, Elmendorf AE and El-Tigani E (1992) *Structural Adjustment and Health in Africa in the 1980's* (World Bank mimeo)

Snow RW, Peshu N, Forster D, Mwenesi H and Marsh K (1992) The role of shops in the treatment and prevention of childhood malaria on the coast of Kenya. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 86:237-239.

Vogel RJ (1988) *Cost Recovery in the Health Care Sector: Selected country studies in West Africa* (Washington: World Bank Technical Paper no. 82)

Vogel RJ (1989) *Trends in Health Expenditure and Revenue Sources in sub-Saharan Africa* (Paper prepared in conjunction with the World Bank sub-Saharan Africa Health Policy Study, March)

Vogel RJ (1990) *Health Insurance in sub-Saharan Africa A Survey and Analysis* (Washington DC: PRE Working Paper 476)

World Bank (1983 - 1992) *Country Population and Health Sector Reviews.* (Washington: Unpublished country memoranda)

World Bank (1993a) *World Development Report 1993* (Oxford University Press)

World Bank (1993b) *Better Health In Africa* (Washington, DC: World Bank Africa Technical Department, Human Resources and Poverty Division, Technical Work-

ing Paper no. 7)

World Health Organization (1991) *Report on the Interregional Meeting on the Public/Private Mix in National Health Systems and the Role of Ministries of Health* .

DATA DECISIONS

Data for Decision Making Project
Department of Population and International Health
Harvard School of Public Health
665 Huntington Avenue
Boston, Massachusetts 02115

Telephone: (617) 432-4610
Fax: (617) 432-2181