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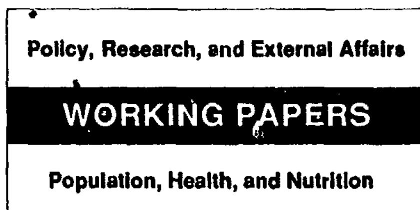

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Health Insurance in Sub-Saharan Africa

A Survey and Analysis

Ronald J. Vogel

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The middle class, not the poor, benefit from the little health care insurance that exists in Sub-Saharan Africa. Encouraging the development of private health care insurance could free up more funds for the poor. Prepaid capitated health insurance will encourage efficiency by health providers; deductibles and coinsurance will have similar effects on health consumers.

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Based on a survey and analysis of health insurance in 23 countries in Sub-Saharan Africa, Vogel reached certain conclusions:

Most Ministry of Health (MOH) budget expenses in these countries (with the possible exception of Tanzania and Ethiopia) are skewed to a small, well-defined population. The well-to-do pay for the "best" health care in the private sector, out of their own pockets or through insurance policies (usually from foreign sources).

Most poor people rely on the MOH budget as an implicit or informal form of national health insurance or on traditional healers for whose care they must pay out of pocket — paying more for traditional healers and drugs than they might co-pay on health insurance. MOH spending is low in the geographical areas where the poor live and for the kinds of health care the poor use, so the poor benefit little from these informal national health insurance systems.

The small middle class benefits most from health insurance in Sub-Saharan Africa. In the private sector, employers provide health care either directly or on contract — which is effectively health insurance. As government employees, they get preferential treatment under formal and informal health insurance, even national health insurance. The countries in Sub-Saharan Africa have not given the poor more, or more equitable, access to formal health insurance.

And the forms of health insurance adopted in Sub-Saharan Africa do not encourage efficiency. Zimbabwe, for example, where private insurance has grown rapidly since independence, has used the U.S. Blue Cross/Blue Shield model that existed in the United States in the 1960s and 1970s — in which the tax system heavily subsidized health insurance, all kinds of medical risk were covered (even for frivolous purposes), and neither the providers or consumers of health care were encouraged to restrain costs — so that health costs increased rapidly. One way or another, all the health insurance arrangements Vogel studied have the same perverse incentive effects that those open-ended, cost-based retrospective Blue Cross insurance payments had on health care providers.

Reform of these arrangements will be politically difficult. In countries with an implicit national health coverage, more equity for the poor requires that more of the MOH budget be directed their way. One way to do this would be to eliminate any favorable treatment government employees receive in the health care system. The availability of more private health insurance would similarly free more MOH resources. Governments must examine the regulatory and incentive atmosphere to be sure they are not inhibiting the development of private health insurance.

But they must also be careful that the private health insurance that does develop fosters more efficient health care. Prepaid capitated health insurance will encourage efficiency by health providers; deductibles and coinsurance have similar effects on health consumers.

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Health Insurance in Sub-Saharan Africa: A Survey and Analysis

by
Ronald J. Vogel

Table of Contents

I. Introduction 1

II. What Constitutes Health Insurance? 2

III. The Prevalence of Health Insurance 5

IV. The Contribution of Insurance to Health Finance 7

V. The Characteristics of the Health Insurance 10

VI. Analysis of the Major Issues in Health Insurance and Lessons to be Learned 14

VII. Summary and Conclusions 21

References 25

Tables 27

This study was conducted as part of the Africa Regional Studies Program on Health Financing in Sub-Saharan Africa, managed by the Africa Technical Department, Population, Health, and Nutrition Division, with financial support from NORAD and SIDA.

I. Introduction

In recent years, there has been a slow-down in economic activity in many Sub-Saharan African countries, brought about by severe droughts in the region, the worldwide recession in the early and mid-1980s, and unfavorable changes in the terms of trade for their agricultural and mining products. Falling per capita real incomes, a worsening external debt situation, and widening budget deficits have been the consequence. As a result of these economic circumstances, Ministry of Health (MOH) budgets have tended to decrease as a percent of the total government budget and even to decline on a real per capita basis.

Within this context, Ministries of Health have increasingly looked for ways of mobilizing additional resources in order to meet the health needs of the population. Health insurance is one in a portfolio of options that are available to augment government budgetary resources for health-care spending. Yet, little comparative information is available on the kinds of health insurance that are presently extant in Sub-Saharan Africa. The purpose of this paper is to fill that gap in knowledge. The next section of this paper attempts to define "health insurance". Then, the three following sections discuss, respectively: (a) the prevalence of health insurance, (b) the contribution of health insurance to health finance, and (c) the characteristics of the health insurance. A following section analyzes these schemes with respect to insurance criteria developed in the research literature on health insurance. The final section of the paper summarizes what has been learned and the conclusions that can be drawn.

II. What Constitutes Health Insurance?

Health insurance might be defined in various ways. For example, at some level of abstraction, a government health care system, financed through general tax revenues and provided without charge to the population could be considered to be a form of national health insurance, albeit an implicit or informal one. Likewise, throughout Sub-Saharan Africa, many firms provide free health care to their employees and to their families, either in the form of company-run clinics, or through contracts with private physicians and clinics. In some countries (e.g., in Zaire), this kind of coverage is mandated by government. At another level of abstraction, this too could be considered to be "health insurance", because, in effect, the employer is required to maintain a pool of funds for health care (analogous to a sinking fund for the depreciation of physical capital), and, depending upon elasticities of the demand for and supply of labor, much of the "premium" may be shifted onto labor. In other countries (e.g., in Zimbabwe), employers voluntarily provide company clinics or pay for health care for their employees and their families through contracts. Human capital theory would allow this practice to be considered to be providing health insurance, particularly for skilled and not-easily-replaced employees; in effect, the employer is self-insuring against the loss of skilled labor, particularly where the skilled labor is highly specialized, and hence, highly scarce.

Table 1 provides a typology for thinking about the nature of the conceptual problem in defining "health insurance". Health-care risk-spreading mechanisms (health insurance) can either be mandated by government, or government and the private sector can offer risk-spreading plans that are voluntary. Because one of the major objectives of many government health

insurance arrangements is usually to pool risk (or to redistribute the paying for the pooling of risk), participation in government arrangements is almost always compulsory. As shown in Table 1, government implicit and explicit health insurance arrangements in Sub-Saharan Africa can be broadly characterized as ranging from (A) free health care provided and financed for all citizens (e.g., Tanzania), or through (B) health care provided by government and financed through the general tax fund and through cost recovery (e.g., Ghana), (C) compulsory Social Security for the entire formal labor market (e.g., Senegal), (D) a special health insurance fund for government employees (e.g., Sudan), (E) a discount at health care facilities for government employees (e.g., Ethiopia), (F) other public "insurance", such as government employees being entitled to private medical care as a fringe benefit (e.g., Kenya), and finally (G) mandated employer coverage of health care for employees (e.g., Zaire). Likewise, in the private sector, one observes (A) private insurance policies bought from insurance companies (e.g., Zimbabwe), (B) small local voluntary risk pools (e.g., Rwanda), and (C) employers voluntarily providing medical care directly (e.g., Zambia) or providing medical care on contract with private health-care providers (e.g., Nigeria). Each one of these arrangements spreads risk in varying degrees, and the incidence of the payment for the spreading of the risk also varies, depending upon elasticities of supply and demand for labor, and the progressivity of the tax system used to finance the governmental arrangements.

Having considered these conceptual problems, some operational definitions had to be made. Therefore, for purposes of this paper, "health insurance" is defined as a formal pool of funds, held by a third party, (or by the provider, in the case of a Health Maintenance Organization, which relies on prepayment

by its insurees), that pays for the health-care costs of the membership of the pool. This third party can be a governmental social security or other public insurance fund-pool, or any private fund-pool. Given this conservative definition of formal health insurance, employer-provided health care is not considered "health insurance"[1]. Nonetheless, it must also be pointed out that, to the extent that these employer arrangements exist, they do free-up resources for MOH expenditures for the rest of the population.

By way of summary to this section, and as a general introduction to the next three sections, we briefly describe Tables 2, 3, and 4. These three Tables summarize the information on the health insurance schemes that exist in the Sub-Saharan countries that have been recently researched, and their contents will be more fully described and analyzed in each of the following three sections of the paper. The sources for the data in all three Tables are listed under the last column of Table 4. Table 2 is entitled, "Coverage of Health Insurance in Sub-Saharan Africa". The countries are listed in alphabetical order. The main purpose of Table 2 is to ascertain what percent of the population is covered by health insurance; health insurance is divided into the three mutually exclusive categories of "Social Security", "Other Public Insurance", and "Private Insurance." The final column in Table 2 shows the percent of the population that is insured in each country.

Table 3 shows the contribution of health insurance to health finance in each country. The column headings show six sources of health-care financing: in the public sector, (1) the MOH budget, (2) the Social Security Budget, (3)

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[1]However, some entries in Tables 2, 3 and 4 do try to give some estimate of the extent to which this arrangement exists, in countries where data are available.

Other Public Budget, and in the private secotr, (4) Out-of-Pocket, (5) Private Insurance, and (6) Other Private. The last three columns of Table 3 show, respectively, (1) the share of out-of-pocket in total national health expenditures, (2) the share of private insurance, and (3) the share of public insurance.

Table 4 shows the characteristics of health insurance in Sub-Saharan Africa, according to: (1) groups covered, (2) type of management, (3) number and percent of the total population enrolled, (4) services covered (inpatient, outpatient, preventive, and drugs), (5) unit of enrollment, (6) uniform premium, (7) copayment and/or deductible and (8) the total budget of the insuring entity. The last column in Table 4 contains clarifying comments on the other column entries in Table 4, and the sources for the data in Tables 2, 3, and 4.

III. The Prevalence of Health Insurance

Table 2 summarizes the extent of explicit, or formal, health insurance coverage relative to population size in the 23 countries studied. As might be expected, there is a wide variation in the percentage of the population covered. Many countries simply have no formal health insurance arrangements. For the 7 countries with formal health insurance (as defined above), the percentage of the total population insured ranges from a high of 11.4 percent in Kenya to .001 percent in Ethiopia. Thus, an important source of additional finance is being neglected and the relatively poor are bearing a larger share of the risk than the rich. Table 2 shows that government employees are always given preferential treatment within public forms of health insurance. In Ethiopia, for example, government employees receive a 50 percent discount at

government facilities, whereas the rest of the population, except for the very poor, does not receive the discount. As another example of this kind of preferential treatment, civil service employees in Kenya are entitled to private medical care as a fringe benefit; this fringe benefit is paid from funds in the MOH budget, and cost 2.2 percent of the total MOH budget in 1986. Government employees are exempt from hospital admission charges in Guinea. In Mali, each ministry is expected to pay for 80 percent of its employees' health-care costs. Also, there is wide variation in the use of the Social Security system as a vehicle for health insurance.

The prevalence of private formal health insurance in Sub-Saharan Africa is extremely small, as evidenced by the low percentage of the population covered. Private insurance has a foothold in only 6 countries: Cote d'Ivoire, Ethiopia, Kenya, Nigeria, Swaziland and Zimbabwe. Even in Zimbabwe, where private insurance is comparatively well-developed, it only covers 4.6 percent of the total population. In Kenya, about 60,000 persons are covered by private health insurance plans, although the private insurance market for hospital care, at least, seems to have been preempted by the National Hospital Insurance Fund (NHIF), established in 1967, which is similar to Social Security in other Sub-Saharan countries, and which covers 2.1 million persons in Kenya[2]. Most private health insurance schemes seem to cover the upper-income classes in the countries for which such information is available. As was alluded earlier in this section and can be seen in the various footnotes

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[2]In Zimbabwe, the National Association of Medical Aid Societies (NAMAS), which is the national association of private insurers, estimates that eventually it will be able to reach about 10 percent of the population of Zimbabwe, i.e., only about 10 percent of the population can afford to pay for private health insurance. The 2.1 million persons covered by the compulsory NHIF in Kenya is approximately 10 percent of the population of Kenya.

for the countries in Tables 2, 3 and 4, many private companies in the countries directly provide free health care to their employees or contract for it. In this respect, Lesotho is a curious case, because many of its workers obtain employer health coverage in South Africa, into and out of which they migrate for work; apparently their wives and children who remain in Lesotho depend upon the government of Lesotho for health care.

Finally, in studying the contents of Table 2, particularly for a country like Kenya, one wonders how many resources could be freed for the use of the poor, if expanded insurance coverage were provided to any more groups. In Kenya, at least, there already appears to be fairly widespread insurance coverage of the middle and upper classes, such that it would seem to be politically possible to devote more MOH resources to the poor. However, the Kenyan health-care system remains urban and hospital intensive, even though the large majority of the population lives in rural areas.

IV. The Contribution of Insurance to Health Finance

Table 3 shows the contribution of health insurance to health-care finance. Total recurrent expenditures are divided between the public and private sector, and between public and private insurance sources; out-of-pocket expenditures are also included. However, the definition of out-of-pocket expenditures does pose some conceptual difficulties, depending upon whether the patient goes to a modern or traditional healer. For example, some governments practice cost recovery. If a person goes to a government health-care facility, he/she may pay for 20 percent of the cost of the care. This is clearly an out-of-pocket payment. If the same person goes to a traditional healer, and the cost of the treatment there is only one-fifth that in a

government facility and the person pays 100 percent of this cost, he/she has paid the same total amount as at the government facility. The basic problem here is directly related to the definition of total health expenditures in a country. The truth of the matter is that estimates of expenditures for traditional care vary widely from country to country (Vogel 1989a) and from analyst to analyst[3]. These traditional health expenditure estimates make up part of the "total" for each country in Vogel (1989a), but they appear unreliable. To the extent that they cannot be used in the base for health-insurance ratio comparisons, the percent of health expenditures that is insured becomes distorted. For the share (ratio) comparisons in the last three columns of Table 3, traditional health care expenditures are excluded from both the category "out-of-pocket" and from the base, simply because they appear to be too variable and unreliable (Brunet-Jailly, 1988).

Estimates on the percentage share of out-of-pocket expenditures, including user fees and private expenditures, in the total range from 7.3 and 7.4 percent in Malawi and Mozambique, respectively, to 70.1 and 72.1 percent in Uganda and Mali[4]. Part of this variability may be due to imprecision in the measurement of the total-expenditure base of the ratio. Although every effort was made to include only those foreign aid expenditures in the total that were clearly for recurrent expenditures, some investment expenditures may have slipped into the estimates in the reports for each country that were used as sources.

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[3]As an example, see the discussion in Brunet-Jailly (1988).

[4]These estimates come from the source documents listed in the last column in Table 4.

One pattern that seems to emerge with respect to out-of-pocket costs is that in countries where there are large mining and enterprise interests, such as in Swaziland, Zaire, Zambia and Zimbabwe, the percentages of out-of-pocket expenditures (at least for formal care) seem to be lower than in countries where such activity does not exist. What makes all of these estimates difficult though is the paucity and unreliability of the existing data on expenditures upon traditional care. For example, the out-of-pocket share for Burkina Faso, an extremely poor country, is 25.4 percent and it is 29.9 percent in Guinea, which seem to be low relative to the 56.9 percent in the Cote d'Ivoire. However, these percentages may simply reflect the fact that the Cote d'Ivoire has been a relatively large importer of pharmaceuticals (see Vogel 1989a) for which people willingly pay cash at the many private pharmacies located around the country, but principally in the more affluent cities. Because of a lower per capita economic base and lower rate of economic growth, people in Burkina Faso and in Guinea do not have the pharmaceuticals available for purchase, and therefore turn to traditional healers; these people may be spending as high a share out-of-pocket, or even higher, than the people in the Cote d'Ivoire, but this will not be reflected in the kind of data in Table 3.

The share of private insurance in the total ranges from zero in 16 of the 23 countries to 15.0 and 16.5 percent in Senegal and Zimbabwe. The estimate on private insurance expenditures in Zimbabwe is fairly firm, because the National Association of Medical Aid Societies (NAMAS, the approximate equivalent of the Blue Cross/Blue Shield Association in the U.S.) keeps good statistics. The large share of private insurance for Senegal (15 percent) may simply be an artifact of the large expatriate community (mostly French) living

in Senegal[5]. The expatriates are usually insured by sources outside of Senegal, such as the French Prevoyance Sociale, that pay expatriate health care bills in Senegal. As a case in point, the private Hopital Principal in Dakar is totally supported by insurance payments and out-of-pocket expenditures by its clientele which is largely expatriate. The annual budget of the Hopital Principal is about one-third the size of the Senegalese MOH budget.

The interpretation of the share of formal public insurance in the total is also subject to some ambiguity. For example, in Burundi (16.4 percent), public insurance is dominated by the Mutuelle de la Fonction Publique which is for civil servants. On the other hand, Table 3 shows no public health insurance in Nigeria, yet some 30 million (out of a total population of some 103 million) government employees and their families receive free health care from government facilities. Likewise, in Zambia public insurance finances 24.1 percent of recurrent health expenditure. This figure results from the fact that the parastatal, Zambian Consolidated Copper Mines (ZCCM) has established a formal health insurance pool for the employees of the association.

V. The Characteristics of the Health Insurance

Table 4 presents the characteristics of the health insurance that is presently available in Sub-Saharan Africa. It shows type of management, services covered, and whether there are deductibles and/or coinsurance. Table 4 somewhat relaxes the definition of health insurance that has been previously

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[5] One estimate puts the number of expatriates at about 30,000.

used in this paper, in order to give an idea of the variety of the types of "health insurance" coverage arrangement in Sub-Saharan Africa. For example, in Nigeria, five large parastatals provide extremely comprehensive care for their employees and their families, either through their own health-care facilities or through contracts, and the 2,751 registered private employers (out of a total of 8,794 registered employers), who responded to a Ministry of Health questionnaire, provided similar combinations of coverage for their employees and families (Nigeria, Federal Ministry of Health, 1988). The chief complaint from those employers who provided care for their employees either directly or on contract was the cost of the health care provided; it averaged about 6 percent of payroll for those employers who responded to the questionnaire. Also, many of the employers, who used contracts, thought that many of their employees were abusing their health-care privileges by too-frequent use. In general, these Nigerian plans cover all kinds of treatment, inpatient, outpatient, and drugs.

In Kenya, an estimated 2.1 million employees and their families participate in the National Hospital Insurance Fund (NHIF) that was established in an Act of 1967. Persons with a taxable income of Ksh 1,000 or more per month are required to contribute 20 shillings a month to the Fund. This 20-shilling amount has remained constant since 1967, with the result that, while only 40,000 persons qualified in 1967, inflation in wages and salaries had driven the number to 90,000 by 1988. Benefits include a fixed daily payment to the hospital of Ksh 200 with an upper limit of 180 days per year. There is no deductible, and the sole "copayment" consists of paying the difference between the maximum Ksh 200 per hospital day and any more expensive hospital care that is chosen. Only inpatient care is covered. In addition,

public employees have a fringe benefit whereby 2.2 percent of the total MOH recurrent budget is used to subsidize their use of private medical care; this fringe benefit covers inpatient, outpatient and drug care. There is no deductible, but there is a coinsurance provision where the government employee pays a coinsurance rate that varies inversely with the employee's government grade level. Finally, about 60,000 employees and their families benefit from group health insurance policies, the benefits and premiums of which vary by company. All of these private plans have set annual limits to the claims that they will pay for the individual, and these private health insurance benefits are in addition to those obtained under the NHIF, which is reported to have led to too frequent and frivolous use of covered in-patient services.

The kind of private health insurance that exists in Zimbabwe is of some interest because it very closely approximates the old Blue Cross/Blue Shield model of health insurance that prevailed in the U.S. during the 1960s and 1970s, with all of the consequent perverse efficiency effects that the model had on both the consumers and producers of health care in the U.S. Prior to the 1980s, Blue Cross/Blue Shield offered almost complete coverage of hospital care and generous physician reimbursement. Because of its service-benefit payment method, which was essentially cost-based, and paid retrospectively, and because of low deductibles and coinsurance, neither consumers nor providers had any incentive to economize in the consumption and production of medical care. Moreover, just as in the U.S., employer contributions are 100 percent deductible under the enterprise income tax laws in Zimbabwe, and, until recently, 100 percent of the employee contribution was also deductible under the individual income tax law there, thus contributing, at the margin, to the "overpurchase" of health insurance, and then to the "overpurchase" of

medical care, driven by the insurance[6]. By "overpurchase" economists refer to any incentives that are offered by government or by any other entity that would induce consumers to buy more of anything, at the margin, than personal economic prudence and personal unsubsidized budgets would allow. The National Association of Medical Aid Societies (NAMAS), which is the national association for the non-profit medical aid societies (the analogs of the individual Blue Cross/Blue Shield plans in the U.S.) estimates that it had enrolled about 384,000 employees and their families by 1987, which was about 4.6 percent of the total population of Zimbabwe. The total enrollment was 224,000 employees in 1981 at independence, which indicates that the medical aid societies that are members of NAMAS have enjoyed rapid growth in their enrollees. Perhaps the major reason for this rapid growth is that the premiums charged (even apart from the tax deductibility) do not represent the true cost of care, particularly in government hospitals and in the large and sophisticated government-owned Parirenyatwa tertiary hospital, where NAMAS enrollees enjoy a large subsidy which is the difference between what it costs the hospital to provide a day of care and what NAMAS member insurers pay. For example, only 3.5 percent of NAMAS expenditures went to government (MOH)

[6]In the U.S. a great deal of analysis and empirical work has been done on the consequences and costs of this health insurance provision in the U.S. tax law. For a summary of this work, see Pauly (1986). With the reform of the Zimbabwean individual income tax law in 1988, now only 20 percent of the premium can be deducted by individuals on their income-tax forms.

hospitals in 1987[7]. The largest percentage, 48.6 percent, went to private physicians and dentists with whom NAMAS negotiates fee schedules, and which presumably does reflect the true marginal cost of private physician and dental practice. NAMAS estimates that its maximum market penetration in Zimbabwe would ultimately be about 10-11 percent of the total population, given the lower income of the other 90 percent of the population. The premiums that NAMAS member societies charge employers/employees vary with the income of the employee, so that some intra-plan cross subsidization among employees does take place. NAMAS plans do not use deductibles, but a copayment is required for the purchase of drugs.

VI. Analysis of the Major Issues in Health Insurance and Lessons to be Learned

Tables 1-4 reveal the diversity of the health insurance arrangements that exist in Sub-Saharan Africa. These arrangements are both explicit (formal) and implicit (informal), according to the typology contained in Table 1. One can use at least five criteria for evaluating these different forms of health insurance. These criteria are : (1) who benefits from them; (2) the incentives for efficiency that are built into them; (3) the equity of the financing mechanisms; (4) their ease of administration; and (5) their political acceptability.

[7]Private hospitals/nursing homes received 15.3 percent of total NAMAS expenditure. The small percentage going to government hospitals can be attributed to (a) below marginal-cost prices in the government hospitals, particularly at Parirenyatwa, and (b) inefficient billing on the part of the hospitals. For example, Parirenyatwa is months behind in its billing because of an unworkable arrangement that it has with the government central computing office in Harare.

(1) __Beneficiaries__. In the prototypical case of the Sub-Saharan countries, the majority of the population is informally insured by the Ministry of Health, with free care financed through the general tax fund, and if there is cost recovery, everyone but the poor pays some deductible and/or coinsurance. However, the distribution of health care facilities and MOH health expenditures is such that the poor do not even receive a proportional share of the health care. This situation can be changed by redistributing the given budget for health expenditures towards the poor. If such a direct redistributive policy is not politically possible, then government must resort to indirect means of redistribution. One way of doing this is to mandate formal health insurance for those in the formal labor market either through (a) requiring the employer to provide health care for his/her employees, or (b) requiring the employer to provide health insurance (both (a) and (b) being implicit taxes on labor), or (c) requiring the employer and the employee to contribute to a health insurance fund (the incidence of this implicit tax will depend upon elasticities of demand for and supply of labor). The proceeds from implicit taxes (a), or (b), or (c) then augment the total resources available for health care expenditures, and a greater percentage of the MOH budget can then be spent upon the poor.

Another strategy would be for the government to create a formal national health insurance for the formal labor market, financed by an explicit payroll tax. Again total resources for health expenditures are increased, and a greater percentage of the MOH budget can be spent upon the poor; the incidence of the explicit tax depends upon the elasticity of demand for and supply of labor. With either arrangement of financing, total demand for health care will have increased, and, depending upon medical-care supply elasticities, the

price per unit of medical care should increase. How large the new subsidy for medical care for the poor should be can only be a value judgement, unless the decision is based upon a cost-benefit analysis. The basic economic argument for the subsidy is that there are externalities in the consumption of medical care by the poor[8], and that employers/employees in the formal labor market are willing to bear the implicit or explicit taxes rather than having the pre-existing MOH budget redistributed, in order that more care go to the poor.

The primary beneficiaries of the implicit (informal) kinds of national health insurance that exist in the sixteen countries where there is no formal health insurance seem to be government employees. In most cases, they receive some kind of preferential treatment over the rest of the citizenry, either in the form of not having to pay any cost-recovery fees or in getting some kind of discount, at least for hospital and physician services, but even for drugs in some cases (e.g., Ghana). Likewise, because most government employees tend to live in or near major cities, where most of the health-care facilities are located, their time-costs for obtaining care would be lower. In the countries where there is formal health insurance, government employees again seem to receive much more favorable treatment than the rest of the population (e.g., the government-employee fringe benefit in Kenya). In most countries with employer-provided health care or "insurance", the employees in the formal labor market benefit, and to the extent that the demand for skilled labor is relatively inelastic, the employer probably bears the major burden of the

[8]These externalities in the consumption of medical care arise when society makes a collective judgement that the poor do not have enough medical care, because the poor cannot afford to pay for the medical care. Therefore society as a whole benefits from transfering resources to the poor in order to enable them to consume more medical care.

"tax" for this coverage and/or insurance. As a case in point, the employees of Zambia Consolidated Copper Mines (ZCCM) constitute only 6.1 percent of the total population of Zambia, but 24.1 percent of the country's total health expenditures are spent for them. In none of these countries, perhaps with the exception of Tanzania (see Vogel, 1987) or Ethiopia, where the two governments have made strong efforts to provide care in rural areas, do those in the non-formal labor sector seem to benefit from either non-formal or formal health insurance, both because they are either not covered or because they live in areas of the country where the government spends very little on health care.

Also, it should be noted that public insurance efforts can compete with or even replace private insurance for some groups, which may not be a desirable outcome. There are ways in which private insurers can be encouraged by government policy (e.g., by reinsurance or by stop-loss provisions; see Vogel, 1989b), without the government becoming a provider of health insurance. Employer-provided care at least lessens the financial burden on the public sector, for an insurable group that is willing to pay.

(2) Incentives for Efficiency. Considerations about efficiency center upon efficiency in the consumption of medical care and efficiency in its production. Efficiency in consumption refers to having an incentive structure that induces persons to consume health care in an economically prudent manner (i.e., the absence of "frivolous" consumption). Efficiency in production refers to having an incentive structure that induces providers to take into account the economic costs of the treatment that they render. Efficiency in consumption can be encouraged by the insurance coverage giving the correct insurance price signals to consumers. If only hospital care is covered by the insurance, and out-of-pocket payment must be made for outpatient care,

hospital care will be overconsumed at the margin. Likewise, the insurance benefit structure should be such that it gives strong incentives to use the referral system. The insured should also have insurance price incentives to seek out less costly forms of health care and not to overutilize the health care. Deductibles and coinsurance (related to income, if administratively possible) are usually used for this purpose.

Perhaps, more important than efficiency in consumption is efficiency in production. Fuchs (1982) shows that, although the patient-consumer initiates the health-care encounter by deciding to go for health care and to what kind of provider, the provider then begins a chain of treatment decisions for the patient that can have large cost implications. If the insurance mechanism reimburses the provider in such a manner that the provider bears no financial risk, then the provider will behave differently than if he/she is placed at financial risk for the treatment decisions taken. Pre-paid capitated forms of insurance reimbursement are usually seen as the vehicle that is most conducive to shifting financial risk to the provider of treatment.

Because most of the health insurance reimbursement in Table 3 is an open-ended cost-based type (e.g., Zimbabwe), or represents transfers from ministry to ministry (e.g., Mali), the producers of the health care are at no financial risk, and therefore have no incentive to be efficient. Consumers of health care face low deductibles and coinsurance, or none (e.g., Zimbabwe or Nigeria), and they too have no financial incentive to exercise ordinary economic prudence in the consumption of medical care. Even when there is insurance, decuctibles/copayments of some type are a desirable feature to prevent moral hazard. Insurance, therefore, does not replace a user-fee system; there should always be some form of deductible/copayments.

(3) Equitable Financing. Given that the objective of the formal health insurance initiative is to pool risk for everyone and to cover the externalities in the consumption of medical care by the poor (i.e., that society as a whole benefits when the poor have more access to medical care, without having to pay for it), it would always be preferable, on equity grounds, to finance the increase in total resources for the MOH with a progressive income tax, rather than with the implicit or explicit payroll taxes outlined in (1) above. Payroll taxes, particularly those with an upper limit on the base of the tax rate, are regressive to income. In the cases in (1) above however, the poor are not required to pay the implicit or explicit taxes unless they participate in the formal labor market, so that the implicit and explicit taxes in (1) above are not as regressive to the income of the different income classes as would be implicit or explicit payroll taxes that would be applicable to all income classes. With respect to equity in the financing of additional health services for the poor in Sub-Saharan Africa, we can assume that a progressive income surtax earmarked for health care cannot be enacted for the same political reasons as why the preexisting MOH budget cannot be reallocated more toward the poor.

The contents of Tables 2, 3 and 4 reveal that much of the informal and formal insurance is provided by government to upper and middle-income government employees. The tax systems used to finance this insurance are, at best, proportional, and in many cases, regressive to income. Therefore, in general, these governmental health insurance systems can be judged to be regressive to income, both in who benefits from them and in who pays the taxes to finance them. Many of the private employer schemes appear to be proportional or progressive to income, to the extent that the employer bears

the incidence of the "tax" (premium) in tight labor markets for skilled personnel.

(4) Administrative Aspects. Because the major policy goals of introducing health insurance into Sub-Saharan Africa are to mobilize more resources for health care for the poor and to create incentives for greater allocational and internal efficiency within the health care system, a major design imperative for this health insurance is that it be one that can be administered as easily and inexpensively as possible. Otherwise, for a given amount of additional MOH expenditures for the poor, the implicit or explicit taxes that will have to be levied on the formal labor market will have to be higher, thus creating additional dead-weight losses to the economy from the implicit or explicit tax system used to finance the additional, unnecessary administrative costs.

There is little empirical evidence on the administrative costs of health insurance in the Sub-Sahara. The costs of administration of the Prevoyance Sociale in Mali may approach as much as 50 percent of revenues (Vogel, 1988), but NAMAS in Zimbabwe indicates that its member Medical Aid Societies' administrative costs are probably less than 10 percent of revenues. There are many practical problems to be solved in designing health insurance that is financially sustainable, including actuarial data on the costs of care and the amounts of services that will be demanded (Borch, 1990).

(5) Political Acceptability. Finally, the design of the formal health insurance should take into account its probable political acceptability by employee-consumers, employers, providers, and government. If those employees/employers who are taxed (either implicity or explicitly) do not believe that they benefit from the health insurance, or do not believe that

the consequent freed-up funds in the MOH budget are used efficiently and effecitvely upon the poor, there will be taxpayer resistance and non-compliance, over and above that which would have occurred with a well-designed formal health care insurance. Likewise if the providers of health care believe that they are not treated fairly and reasonably in the transfer of financial risk, they will not respond to the incentives offered by the health insurance in an optimal fashion[9]. Assuming that the formal health insurance is designed at the Ministry of Health, it will not become a reality and function smoothly for its redistributive and efficiency objectives, if it does not find approval at the Ministry of Finance, in the Parliament and at the Presidential level.

VII. Summary and Conclusions

This paper has attempted a survey and analysis of health insurance in 23 Sub-Saharan countries. Perhaps the most useful way to approach the subject of health insurance in Sub-Saharan Africa is to think about it as a phenomenon of income class and income distribution. Put clearly and simply, the larger percentage of MOH budgetary expenditures in these countries (with the possible exception of Tanzania and Ethiopia) is skewed towards a well-defined smaller population. In all of these countries, the well-to-do pay for the "best"

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[9]Due to the initial amount of opposition to the Medicare health insurance program for the elderly by physicians and the American Medical Association, and by the American Hospital Association, there was a great deal of apprehension on the part of the U.S. Department of Health, Education and Welfare on July 1, 1966, when the program went into effect. Officials in the Department were afraid that physicians and hospitals would refuse to treat the elderly under the new insurance program. Because physicians and hospitals quickly realized how generous Medicare payments were, given the manner in which reimbursement was done, they quickly adjusted to it. In effect, they bore no financial risk in the program.

health care in the private sector, either out of their own pockets or through insurance policies that usually come from foreign sources, such as the French Prevoyance Sociale. The large majority of the population that is poor relies upon the MOH budget as an implicit or informal form of national health insurance, or upon traditional healers for whose care they must pay out-of-pocket. Because MOH per capita budgetary expenditures are relatively low in the geographical areas where the poor live or for the kinds of health care facility that the poor use, the poor do not much benefit from these informal national health insurance systems. Indeed, fragmentary evidence indicates that the poor spend a relatively large percentage of their annual income on traditional healers and on drugs when they are available (de Ferranti, 1985).

The data and analysis in this paper seem to indicate that the greatest beneficiaries, as a class, of the health insurance that currently exists in Sub-Saharan Africa are the relatively small middle-class. When they are employed in the private sector, their employers either provide health care directly or on contract, which means, in effect, that they are insured. When they are employed by the government, they usually enjoy preferential treatment under both informal forms of national health insurance and formal forms of health insurance. This finding is really not surprising, in view of the fact that in richer countries, such as in North America and in Western Europe, the middle and upper classes enjoy greater financial and geographic access to health care, via health insurance, even national health insurance[10]. Be that as it may, it seems safe to conclude that the development of health insurance

[10]For example, in Sweden, where income is more equally distributed than in most countries and where there is a well-funded national health insurance, the Swedish government has a great deal of difficulty in finding physicians to serve in the rural areas of the north.

to date in Sub-Saharan Africa has not promoted greater equity in the access to health services by the poor, nor has it permitted greater access.

When one examines the efficiency aspects of the health insurance that is in place in the Sub-Sahara, it must be concluded that the forms of health insurance that have been adopted do not encourage efficiency for the most part. On the consumption side, many kinds of insurance do not have deductibles and coinsurance, and the most frequent complaint is that employees and their families abuse the access to health care that they have. In Zimbabwe, where private insurance has grown rapidly since independence, the model that has been apparently used is the one that existed in the U.S. in the 1960s and 1970s, where the purchase of health insurance is heavily subsidized by the tax system, where all kinds of medical risk are covered, ranging from hospital care to dental and eyeglass care, and where the insuree has no disincentive to use health care, even for the most frivolous purposes. Analysis of this model has shown its deleterious effects upon government policy objectives of slowing the growth of excessive health-care expenditures (Pauly, 1986). On the production side, we now understand the perverse incentive effects that open-ended, cost-based retrospective insurance payments can have on the providers of health care. There is no incentive to be efficient, and medical costs escalate. In one way or another, all of the health insurance arrangements studied in this paper pay the provider in that manner.

Reform of many of these health insurance arrangements will not be an easy task, simply because the redistribution of income is politically difficult. In countries where there is implicit national health insurance, greater equity for the poor requires that a larger percentage of the MOH budget be directed

toward the poor. One obvious way of having some of the resources to pursue such a policy would be to eliminate any favorable treatment that government employees receive in the health-care system. Similarly, more MOH resources could be freed in all of these countries, if there were more private health insurance available to those who could afford to pay for it[11]. Governments must carefully examine the regulatory and incentive atmosphere to make sure that they are not inhibiting the development of private health insurance. Nevertheless, governments must also be careful that the kinds of private health insurance that do develop are designed to foster efficiency in the production and consumption of health care. The empirical research literature indicates that prepaid capitated health insurance fosters efficiency on the production side, and that deductibles and coinsurance have similar effects on the consumption side.

[11] It could be argued that more private health insurance would increase the demand for health care on the part of the well-to-do who could afford the health insurance, and thus make the distribution of access to health care even more inequitable. This result need not necessarily follow. First of all, if the private health insurance is well-designed (such as being capitated, and/or only catastrophic), then the demand for health care by the well-to-do need not necessarily increase. Secondly, even if the health insurance is not well-designed, the existence of the health insurance should bring forth a private health-care supply-side response, which, if the MOH budget is not cut back, should increase total national resources going to health care. Finally, if the well-to-do no longer use MOH facilities, or use them less than in the past, the MOH can spend more per capita on the poor. Therefore, depending upon the design of the private health insurance and/or the private health-care supply response, the poor may actually capture a greater share of total and/or government health-care resources than they did in the past.

V. References

Akin, John C., N. Birdsall, and D. de Ferranti, 1987. Financing Health Services in Developing Countries: An Agenda for Reform, Washington, D.C.: World Bank.

Amenyah, Joseph. 1985. Prefeasibility Study National Health Insurance Scheme. Ghana, mimeo manuscript. August.

Blair, Roger D. and Ronald J. Vogel. 1978. "A Survivor Analysis of Commercial Health Insurance". Journal of Business, July.

Borch, Karl. 1990. Economics of Insurance. Amsterdam, North Holland.

Brunet-Jailly, J. 1988. Le Financement des Couts Recurrents de la Sante au Mali, Premiere Redaction, Geneva: World Health Organization.

De Ferranti, David. 1985. Paying for Health Services in Developing Countries: An Overview. World Bank Staff Working Papers No. 721. Washington, D.C.: World Bank.

Feldstein, Paul J. 1988. Health Care Economics, 3rd ed. New York, N.Y.: Wiley.

Fuchs, Victor R. 1982. Who Shall Live? New York, N.Y.,: Basic Books.

Nigeria. Federal Ministry of Health. 1988. Report of the National Committee on the Establishment of Health Insurance Scheme in Nigeria. Vol I. Lagos, Nigeria: MOH. September. Vol II, Appendices to the Report of the National Committee on the Establishment of Health Insurance Scheme in Nigeria.

Pauly, Mark V. 1986. "Taxation, Health Insurance, and Market Failure in the Medical Economy". Journal of Economic Literature, 24 (2), June 1986: 629-675.

Vogel, Ronald J. 1987. Financing the Health Sector in Tanzania: A Public Expenditure Review. Washington, D.C.: World Bank. December.

Vogel, Ronald J. 1988. Cost Recovery in the Health Care Sector: Selected Country Studies in West Africa. Technical Paper Number 82. Washington, D.C.: World Bank.

Vogel, Ronald J. 1989a. Trends in Health Expenditures and Revenue Sources in Sub-Saharan Africa. Paper prepared in conjunction with World Bank Africa Health Policy Paper. PHRHN. Washington, D.C.: World Bank. March.

Vogel, Ronald J. 1989b. "Cost Recovery in the Health-Care Sector in Sub-Saharan Africa". University of Arizona Working Paper. Tucson, AZ. November.

World Bank. 1988. Kenya: Review of Expenditure Issues and Options in Health Financing. Washington, D.C.: World Bank. June.

World Bank. 1989. Zimbabwe: Issues in the Financing of Health Care. Washington, D.C.: World Bank. August.

Table 1
Typology of the Forms of "Health Insurance" in Sub-Saharan Africa

I. Government: Mandated or Voluntary

A. Free health care for all citizens (Tanzania)[1].

B. Free health care for the poor, and cost recovery for those who can afford to pay (Ghana).

C. Social Security, or National Health Insurance (Senegal)[2].

D. Government employees health insurance fund (Sudan).

E. Discount for government employees (Ethiopia).

F. Other public insurance (Kenya).

G. Mandated employer coverage of employees, either in directly providing health care, or contracting for it (Zaire).

II. Private Sector: Voluntary

A. Private insurance policies bought from insurance companies (Zimbabwe).

B. Voluntary (self-insuring) risk pools (Rwanda).

C. Employer provided, medical care directly in clinics (Zambia), or through contract (Nigeria).

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[1]Countries in brackets are examples of where this form of "insurance" exists.

[2]Senegal has Social Security (the Prevoyance Sociale); no country in Sub-Saharan Africa presently has National Health Insurance (NHI), as it exists, say, in Great Britain, although forms of NHI that would cover fairly large segments of the formalized work force are under various phases of discussion in Ghana, Nigeria and Zimbabwe.

Table 2: Coverage of Health Insurance in Sub-Saharan Africa*

Country	Year	Population Size (Millions) (mid-1986)	Population Covered by: Social Security	Other Public Insurance	Private Insurance	Total**	Percent of Population Insured (Including Family Members)
Burkina Faso	1981	6.7 (1982)	Caisse Nationale de la Securite Sociale (CNSS) covers 60,000 workers in private sector and government employment, but no number of government employees is given for the government employees covered.				
Burundi	1986	4.9 (1986)		.070[a]		.070	1.4%
Cameroon	1984	9.3 (1982)	b	--	--	--	--
Cote d'Ivoire	1985	10.2 (1985)	Data not available on numbers of people insured, but a small private health insurance.				
Ethiopia	1986	43.5	c	d	.060	.060	.001%
Ghana	1987	13.2	e	--	--	--	--
Guinea	1985	6.1 (1985)	Government employees are exempt from hospital admission charges.				

Table 2 cont.

Country	Year	Population Size (Millions) (mid-1986)	Population Covered by: Social Security	Other Public Insurance	Private Insurance	Total**	Percent of Population Insured (Including Family Members)
Kenya	1985	21.2	2.1[f]	.251[g]	.060	2.4[h]	11.4%
Lesotho	1986	1.6	No insurance because of (a) large migratory labor force to South Africa where employers usually provide health care, and (b) enterprise coverage of local workers with health care provided.				
Madagascar	1985	10.3 (1985)	Apparently no formal insurance.				
Malawi	1985	7.2	--	--	[i]	--	--
Mali	1986	7.6	.250	.200[j]	--	.250[k]	3.3%
Mozambique	1986	14.2	--	--	--	--	--
Niger	1984	6.1	--	--	--	--	--
Nigeria	1986	103.1	--	[l]	.426	.426	.04%
Senegal	1987	6.8	[m]	--	--	--	--
Sudan	1986	22.6		[n]		--	--
Swaziland	1984	.721	--	--	Private insurance exists, but data not available from source.		

Table 2 cont.

Country	Year	Population Size (Millions) (mid-1986)	Population Covered by: Social Security	Other Public Insurance	Private Insurance	Total**	Percent of Population Insured (Including Family Members)
Tanzania	1987	23.0	--	--	--	--	--
Uganda	1987	15.2	--	--	--	--	--
Zaire	1986	32.2	--	--	--	--	--
Zambia	1981	5.6 (1980)	--	.342	--	.342	6.1%
Zimbabwe	1987	8.7	--	--	400,200	400,200	4.6%[o]

*The sources for the information contained in Tables 2, 3, and 4 are given for each country as the last entry for each country heading, in Table 4.

**As explained in the text, in some countries (e.g. Zaire) private companies may be required to furnish health care or pay for health care for their employees. At some level of abstraction, this may be considered to be "health insurance". Here, for purposes of consistency of treatment, "health insurance" means formal health insurance, where contributions (either voluntary or by law) are placed into an insurance pool, and then withdrawn to pay medical bills. What the law in Zaire does, in effect, is force employers to self insure for its employees' health care. Because of space limitations in the Tables, numbers of people are always given in the millions. Thus, for example, the total population Burundi is 4.9 million, and the total number of people insured is .070 million (or 70,000).

[a] Mutuelle de la Fonction Publique. 3% of salary paid by employee and 4.5% paid by government. Covers government employees and their families.

[b] Report (see sources) has an entry for "National Social Insurance Fund", data "not available".

[c] Social Security and Pension Fund not involved in health care-- long range plan to adopt ILO guidelines for health insurance in Social Security plan.

[d] Government employees receive 50% discount at Government facilities.

[e] Government has been studying the possibility of National Health Insurance (NHI) (mandated contributory) since 1985.

[f] Equivalent to more than half the urban population (NHIF-National Hospital Insurance Fund).

[g] Public service employees entitled to private medical care as a fringe benefit. Coverage is funded through MOH budget. Cost to MOH budget was Ksh 34.7 million in 1985-86, or 2.2% of total MOH recurrent expenditure.

[h] Does not include workers in private sector who receive medical care from employer or have employer pay for medical care directly: see Table 3.

[i] Public fee schedule distinguishes between those with and without insurance, but no information on health insurance available.

[j] Each government ministry is expected to pay 80% of health care costs for its employees.

[k] Social Security and Other Public Insurance are not additive because public employees belong to both.

[l] Government employees and their families receive free government health care; but because cost recovery is so low, most of the rest of the population also receives free health care.

[m] Senegal has a Social Security System, the Institutions de Prevoyance Maladie (IPM). No data are available on the number of members. Every firm with 100 or more employees is required to form an "Institution" that will pay most of the costs of outpatient medical care and pharmaceuticals and, generally, all of the costs of hospitalization, including deliveries of children. Firms with less than 100 employees can join together to form an "Institution". The actuarial construction violates most insurance principles, because it ignores the law of large numbers, which protects against adverse selection (see Vogel, 1988).

[n] Government employees receive small monthly deduction from paycheck (1% for "regular" employees) in return for free health care at government facilities.

[o] Does not include workers in industry, mines, and commercial farms; see Table 3.

Table 3: Contribution of Health Insurance to Health Finance

Country	Year	Currency	Recurrent Health Expenditure, by Source* — Public: MOH Budget	Public: Social Security Budget	Public: Other Public Budget	Private: Out-of-Pocket	Private: Private Insurance	Private: Other Private	Total	Share of Out-of-Pocket in Total	Share of Private Insurance in Total	Share of Formal Public Insurance in Total
Burkina Faso	1981	FCFA (millions)	3,086	203[a]	3,607[b]	2,352[c]	--	--	9,248	25.4%	--	0.220%
Burundi	1986	FBu (millions)	1,2[illegible]7[a]	489[b]	1,076[c]	628[d]	--	--	2,984	21.0%	--	16.4%
Cameroon	1983	FCFA (millions)	22,140	--	331[a]	--	--	6,100[b]	28,571	--	--	--
Cote d'Ivoire	1985	FCFA (millions)	29,085	300[a]	--[b]	39,585[c]	562		69,532	56.9%	.081%	.043%
Ethiopia	1986	BIRR (millions)	79.0[a]	--	20.0	196.5	0.6	5.7	301.8	65.0%	.02%	--
Ghana	1987	Cedi (billions)	5.5	--	--[a]	11.0	--	2.5	19.0	57.9%	--	--

Burkina Faso:
[a]Amount only available for government employees.
[b]Includes: (i) Other Ministries, 1,068; (ii) Foreign Aid, 2,349; (iii) Local government, 190.
[c]Includes: (i) Drug purchases, 2,298; (ii) Payment of hospital fees, 54.

Burundi:
[a]Includes: (i) MOH 1,077; (ii) MOE 181; (iii) MSA 9.
[b]Includes: (i) Mutuelle de la Fonction Publique, 476; and (ii) social security, 13.
[c]Foreign aid.
[d]Includes missions (210 FBu), which are almost totally financed by out-of-pocket (210 FBu of 215 FBu).

Cameroon:
[a]Foreign assistance for recurrent costs.
[b]No information on private sector available for Cameroon, except for the NGOs that spent the 6,100 million.

Cote d'Ivoire:
[a]CNPS (Caisse Nationale de Prevoyance Sociale).
[b]Mutuelle Generale de Fonctionnaires and contained in MOH budget.
[c]Of this amount, 32,641 for drugs.

Ethiopia:
[a]Government employees receive 50% discount at Government facilities.

Ghana:
[a]MOH employees and trainees receive all care free and 40% of all drugs issued at a sample of hospitals studied in 1988.

Table 3 cont.

Country	Year	Currency	Recurrent Health Expenditure, by Source[a]: Public: MOH Budget	Public: Social Security Budget	Public: Other Public Budget	Private: Out-of-Pocket	Private: Private Insurance	Private: Other Private	Total	Share of Out-of-Pocket in Total	Share of Private Insurance in Total	Share of Formal Public Insurance in Total
Guinea	1983	Sylis (thousands)	518,240	--	35,000	236,000	--	--	789,240	29.9%	--	--
Kenya	1984	Kenyan Shilling (millions)	1,232.2	109.0[a]	227.3[b]	1,175.6	35.3	96.6[c]	2,876	40.9%	1.23%	3.8%
			[a]NHIF-- National Hospital Insurance Fund. [b]Includes: (i) Appropriations in Aid to MOH, 3.7; (ii) Municipalities, 152.6; (iii) International Donations, 71.0. [c]Includes: (i) Missions, 29.3; (ii) Other NGOs, 13.4; (iii) Private companies, 53.9.									
Lesotho	1986	Maloti (thousands)	20,938	--	3,122	10,726	432	26,519[a]	61,737	17.4%	.070%	--
			[a]Includes: (i) Foreign Industry, 20,460; (ii) Foreign private Aid, 1,174; (iii) Local Voluntary Bodies, 1,024; (iv) Missions, 3,861.									
Madagascar	1985	FMG (millions)	13,693	--	8,051[a]	13,921	--	4,753[b]	40,418	34.4%	--	--
			[a]Includes: (i) Other ministries, 3,599; (ii) Foreign aid, 4,452. [b]Includes: (i) Collectivities, 399; (ii) NGOs, 934; (iii) Private enterprise, 3,420.									
Malawi	1986	Malawi Kwacha(K)	36,753	--	8,600[a]	3,578[b]	--	--	48,931	7.3%	--	--
			[a]Includes: (i) Value of drugs in foreign assistance, 6,000; (ii) Foreign medical personnel in technical assistance, 2,600. [b]Includes: (i) Fees at MOH facilities, 1,048; (ii) Fees at PHAM facilities, 2,530 (estimated).									
Mali	1986	FCFA (millions)	4,025	380[a]	640[b]	13,036	--	--	18,081	72.1%	--	2.1%
			[a]About 50% of these funds go for administrative expenses. [b]Includes: (i) Other Ministries, 98; (ii) Foreign aid, 542.									

Table 3 cont.

Country	Year	Currency	Recurrent Health Expenditure, by Source* — Public: MOH Budget	Public: Social Security Budget	Public: Other Public Budget	Private: Out-of-Pocket	Private: Private Insurance	Private: Other Private	Total	Share of Out-of-Pocket in Total	Share of Private Insurance in Total	Share of Formal Public Insurance in Total
Mozambique	1985	Metical	698.8	--	--[a]	55.9[b]	--	--	754.7	7.4%	--	--
Niger	1984	FICA (millions)	4,455	--	4,045[a]	3,000[b]	--	--	11,500	35.2%	--	--
Nigeria	1985	Naira (millions)	177.2	--	592.1[a]	698.9[b]	--	74.9[c]	1543.1	45.3	--	--
Senegal	1981	FCFA (millions)	6,890.4	175.7	9,479.9[a]	6,919.9[b]	4,156.8[c]	--	27,622.4	25.1%	15.0%	.06%

Mozambique:

[a] According to source, donor contributions have been substantial in recent years; amount not known.

[b] Cost recovery revenues. In 1987, in the face of growing financial difficulties, a new, more comprehensive cost recovery scheme was introduced, consisting of (i) a flat one-time fee for outpatient consultations, (ii) payment for outpatient drugs, and (iii) a daily inpatient fee in urban hospitals.

Niger:

[a] Includes: (i) External assistance, 2,500; (ii) Ministry of Higher Education, 350; (iii) Ministry of Finance, 1,090 (of which 800 for foreign evacuations); (iv) Others, 105.

[b] Includes: (i) Drugs, 2,800; (ii) Other, 200.

Nigeria:

[a] Includes: (i) State expenditures, 436.6; (ii) Local government authorities, 155.5.

[b] Estimated from Over and Denton (1988), para. 5.14 and Table 5.3; 103.1 x .16 x 42.37 (population x %ill x average expenditure).

[c] Assumes that only the respondents to MOH questionnaire provide care; see "Comments" column in Table 3.

Senegal:

[a] Includes: (i) Special budget for civil servants, 1,201.2; (ii) External contributors, 4,530.9; (iii) Parastatal expenditures, 1,525.1; (iv) Local government expenditure, 1,179.1.

[b] Includes: (i) Community participation, 425.0; (ii) Import of pharmaceuticals, 6,494.9.

[c] Includes: (i) Hopital Principal, 2,294.0; (ii) Private doctors, 562.8; (iii) Private clinics, 1,300.0.

Table 3 cont.

Country	Year	Currency	Recurrent Health Expenditure, by Source* — Public — MOH Budget	Social Security Budget	Other Public Budget	Private — Out-of-Pocket	Private Insurance	Other Private	Total	Share of Out-of-Pocket in Total	Share of Private Insurance in Total	Share of Formal Public Insurance in Total
Sudan	1986	LS (millions)	131.0[a]	--	--	479.1[b]		7.5[c]	617.6	77.6%	--	.09%[d]
Swaziland	1984	E (thousands)	9,745	--	3,500[a]	3,600	1,200	3,100[b]	21,145	17.0%	5.7%	--
Tanzania	1987	Tanzania Shilling (millions)	1,838	--	3,376[a]	--[b]	--	--	5,214	--	--	--
Uganda	1988	Uganda Shilling (millions)	62,417	--	43,090[a]	290,000	--	14,861[b]	410,368[c]	70.1%	--	--

Sudan:
[a]Includes LS5.9 from deductions from monthly pay of government employees.
[b]Average of high and low estimate.
[c]Expenditure by private firms.
[d]5.9/617.6, where 5.9 is deducted from government employees-- see [a].

Swaziland:
[a]Includes: (i) Other ministries, 600; (ii) Foreign assistance, 2,900.
[b]Includes: (i) Missions, 800; (ii) Voluntary organizations, 300; (iii) Industry and mines, 2,000.

Tanzania:
[a]Includes: (i) Ministry of Local Government and Cooperation, 1,358; (ii) Office of the Prime Minister, 1,112; (iii) Donations of Drugs by Danida, 770; (iv) District and Urban Development Levy, 136.
[b]All health care at government facilities is officially free. Users of some mission facilities pay government-regulated fees. Many of the fees are for the drugs donated by Danida, but only at mission facilities. The expenditure amounts are unknown.

Uganda:
[a]Includes: (i) Mulago Hospital and Complex, 35,093; (ii) Ministry of Local Government, 7,997.
[b]NGOs.
[c]"Old" Shillings.

Table 3 cont.

Country	Year	Currency	Recurrent Health Expenditure, by Source*: Public: MOH Budget	Public: Social Security Budget	Public: Other Public Budget	Private: Out-of-Pocket	Private: Private Insurance	Private: Other Private	Total	Share of Out-of-Pocket in Total	Share of Private Insurance in Total	Share of Formal Public Insurance in Total
Zaire	1986	US$ (millions)	10.0[a]	--	--	41.0	--	154[b]	205.0	20.0%	--	--
			[a]Also covers health care of government employees. [b]Includes: (i) Private-sector firms, 144.0; (ii) Donors and NGOs, separate breakdown not available, 10.0.									
Zambia	1981	Kwacha (millions)	72.9	--	30.9[a]	19.9	--	4.5	128.2	15.5%	--	24.1%
			[a]Zambian Consolidated Copper Mines (ZCCM), the state mining corporations.									
Zimbabwe	1987	Z$ (millions)	310.18[a]	--	99.32[b]	63.90	105.00	57.81[c]	636.21	10.04%	16.51%	--
			[a]Central Government. [b]Includes: (i) Municipalities, 25.00; (ii) Foreign Assistance 74.32. [c]Includes: (i) Church missions, 2.56; (ii) Industries, Mines, Commercial Farms, 50.75; (iii) Voluntary Organizations, 4.50.									

*Includes only recurrent expenditures and excludes expenditures on traditional medicine for reasons given in text.

Table 4: Characteristics of Health Insurance in Sub-Saharan Africa

Country	Plan	Year	Group(s) Covered	Type of Management	Enrolled		Services Covered				Unit of Enrollment	Annual Premium	Uniform Premium	Copayment	Deductible	Total Budget	Comments and Sources of Data
					Number	Percent of Population	Inpatient Care	Outpatient Care	Preventive Care	Drugs							
Burkina Faso	CNSS	1982	Private workers in formal sector and government workers.	Public	60,000 workers in private sector; number in public sector not known.		Limited to medical expenditures and disabilities due to occupational injuries, and to the provision of MCH services for beneficiary families in towns.				Employee	Deduction of 2.5% of salaries paid.	Varies with salary.			203[a]	The CNSS covers workers in both the private and public sector; 60,000 workers in private sector and 203 million FCFA total spent in 1982. Insurance limited to medical expenditures and disabilities due to occupational injuries. Financing is met through 2.5% deduction from salaries paid. Source: Upper Volta: Health and Nutrition Sector Review, November, 1982. Staff Appraisal Report, Burkina Health Services Development Project, May, 1985.
			[a]In 1984, Medecine du Travail was introduced (contributory system) but no further information is given on this. SAR, May, 1985.														
Burundi	Mutuelle de la Fonction Publique.	1986	Civil Servants and families.	Public	.078	1.4%	?	Yes	Yes	Yes	Person Employed.	3% of salary.	Varies with salary.	Yes-- 20%	None	496.0	The Mutuelle was begun in 1980 for civil servants and their families and (as of 1987) will be gradually extended to include employees of parastatals and commercial firms. The insurance is currently financially viable. State currently spending US$ 27 per capita on civil servants and US$ 2 on remaining population. Source: Staff Appraisal Report, Burundi Population and Health Project, November, 1987.
Cameroon	The Source seems to indicate that there is no health insurance in Cameroon, except for the "National Social Insurance Fund" for which no data exists.																Supposedly, there is a National Social Insurance Fund, but no data exists. Source: Cameroon, Health and Nutrition Sector Review, October, 1984
Cote d'Ivoire	1. Caisse Nationale de Prevoyance Sociale.													Data of this type presently not available for insurance types 1. 2. 3.			Source: F. Decaillet et G. Desrochers, Analyse du Systeme de Sante et Financement de Son Fonctionnement, Rapport de Mission en Cote d'Ivoire, aout, 1988 (2 ieme Partie). R. Vogel, Cost Recovery in the Health Care Sector: Selected Country Studies in West Africa, May, 1988.
	2. Mutuelle Generale de Fonctionnaires.																
	3. Numerous private insurance plans, including (a) group policies-- for professional groups;										Person and Family.	156,000 per annum.	Apparently				
	(b) individual policies.										Person and Family.	250,000-300,000 per annum.	Apparently				
Ethiopia	Ethiopian Insurance Company.	1986	Private persons.	Private	.006	.001%	Yes	Yes	Yes	Yes	Family	230 BIRR		Upper limits on Birr per visit and number of visits per year.		0.6	When economic conditions improve, Ethiopia plans to implement the ILO guidelines to develop health insurance benefits within its Social Security and Pension Fund. The Ethiopian Insurance Company now has acquired valuable administrative experience, albeit for a small group of people. Source: Sector Review, Ethiopia, A Study of Health Financing and Options, February, 1987.
Ghana	NHI under consideration.				--[a]												Employers provide health care for employees, but there are no existing data on the subject. As of January 1, 1989, MOH employees and trainees will have to pay the full cost of drugs that they use, as with all other persons subject to cost recovery. Source: Ghana Population, Health and Nutrition Sector Review October, 1988 and R. Vogel, Cost Recovery in the Health Care Secto 1988.
			[a]Potential contributors include: (i) 200-300 thousand independent cocoa farmers; (ii) 2 million employees in formal labor markets; (iii) 200 thousand civil servants.														
Guinea	None Exists.													None exists.			Government workers are covered by a "health insurance system" that exempts them from hospital admission charges (treated as an internal transfer between MOH and MOF). Source Guinea: Population, Health and Nutrition Sector Review, May, 1986.

Table 4 cont.

Country	Plan	Year	Group(s) Covered	Type of Management	Enrolled: Number	Enrolled: Percent of Population	Services Covered: Inpatient Care	Services Covered: Outpatient Care	Services Covered: Preventive Care	Services Covered: Drugs	Unit of Enrollment	Annual Premium	Uniform Premium	Copayment	Deductible	Total Budget	Comments and Sources of Data
Kenya	NHIF	1986	People with taxable income of Ksh 1,000 or more per month.	Public	2,100,000		Yes	No	No	If in hospital.	Employees	Ksh 240	Varies by income	Yes[a]	No	109.0	Source: Kenya: Review of Expenditure Issues and Options in Health Financing, June, 1988.
			[a]Benefits consist of fixed daily payment to hospital of Ksh 200 for 180 days per year. This covers some hospitals, but in others, patient pays the higher difference.														
	Public Employees	1986	Public Employee Fringe Benefit for private medical care.	Public (MOH)			Yes	Yes	Yes	Yes	Government Employee.	0	0	Yes[a]	No	Ksh 27.12	This fringe benefit represents 2.2% of total MOH recurrent budget.
			[a]Varies inversely with employee grade.														
	Private Plans (c8 insurance firms)	1986	Private employees and some families of employees.	Private	60,000		Yes	Yes	Yes	Yes	Group insurance for company employees.			Varies by Company.	Varies by Company.		All private plans have set annual limits to claims by individual. Private insurance benefits are in addition to those obtained under NHIF which has led to over-consumption of covered in-patient sources.
Lesotho	NONE	1986															Health insurance is not operated by any companies operating in Lesotho and generally is not viewed as a business worth developing (Source, p. 77). This is probably due to the fact that enterprises spend so much on health care for their more well-to-do employees (in fact, as much as MOH spends). The Lesotho Civil Service Medical Aid Scheme has ceased to operate (no reason given). Similar Aid Schemes continue to operate in Botswana and Swaziland. Source: Health Financing in Lesotho 1987.
Madagascar	Apparently no formal insurance.													Apparently no formal insurance.			Source: Madagascar: Population and Health Sector Review, July, 1987.
Malawi	There is no health insurance in Malawi.																Private medical practice is limited to about 35 physicians in urban areas. The Private Hospitals Association (PHAM) provides about 45% of the country's health services. PHAM is church-related. Local government authorities and other agencies such as the army, police, estates and industries provide curative and preventive services for their employees. No medical school and chronic physician shortage. Source: Staff Appraisal Report, Malawi Second Family Health Project, February, 1987.
Mali	Institut National de Prevoyance Social (INPS).	1986	Public and Private Sector Employees and their Families.	Public	250,000	3.3%	Yes	Yes	Yes	Yes	Employee and Family.	Employer contributes 2% of employee's salary for health insurance portion of INPS.	Varies with salary.	Care provided free in INPS industrial medical clinics.		380	Because drugs are rarely available in public-sector facilities and INPS clinics, patients must buy them in private market. Source: J. Brunet-Jailly, Le Financement des Couts Recurrents de la Sante au Mali, Premiere Redaction, septembre, 1988.
	Government Employees.	1986	Each Ministry is expected to pay 80% of its employees' and families' health care costs.	Public	200,160	2.6%	Yes	Yes	Yes	Yes	Government Employee and Family.	0		Yes	No	Indeterminate	In practice, Ministries rarely pay the 80% of treatment costs, so that government health facilities end up absorbing the loss. Source: Ronald J. Vogel, Cost Recovery in the Health Care Sector: Selected Country Studies in West Africa, 1988.

Table 4 cont.

Country	Plan	Year	Group(s) Covered	Type of Management	Enrolled: Number	Enrolled: Percent of Population	Services Covered: Inpatient Care	Services Covered: Outpatient Care	Services Covered: Preventive Care	Services Covered: Drugs	Unit of Enrollment	Annual Premium	Uniform Premium	Copayment	Deductible	Total Budget	Comments and Sources of Data
Mozambique	There is no health insurance in Mozambique.																Unlike in many African countries, drug procurement is relatively efficient. The allocation of resources within the health system has been mostly consistent with stated government policies emphasizing PHC and preventive activities. Recurrent expenditures declined from 10.5 percent of government budget in 1980 to 3.9 percent in 1988, due to growing military needs. Source: Staff Appraisal Report, Mozambique Health and Nutrition Project, September, 1988.
Niger	There appears to be no health insurance in Niger.																Source: Staff Appraisal Report, Niger Health Project, February, 1986.
Nigeria Five large parastatals.	(1) National Insurance Corp. of Nigeria (NICON).	1984	Staff, wife, and children under 18.	Parastatal	1,500		Yes	Yes	Yes	Yes	Employee	₦400 per staff--paid by parastatal.		None	None	600,000	Staff submits photographs of self, wife/wives and children in order to avoid abuses. NICON uses Mount Sainair hospital. Retainers at weekends, for admissions and child delivery. All other medical services are obtained from the Nigerian Railway Corporation Hospital which charges a minimal fee of ₦25 per visit.
	(2) National Electric Power Authority (NEPA).	1984	Staff, wife, and children under 18.	Parastatal	28,000		Yes	Yes	Yes	Yes	Employee	₦428.51 per staff--paid by parastatal.		None	None	12,000,000	Staff submits photographs of self, wife/wives and children. Referral letters are issued in triplicate.
	(3) Nigerian Ports Author..y (NPA).	1984	Staff, wife, and children under 18.	Parastatal	22,000		Yes	Yes	Yes	Yes	Employee	₦272.72 per staff--paid by parastatal.		None	None	6,000,000	NPA stopped the use of retainers at the end of 1984, due to rising costs. Now the authority runs its own clinic and refers admiss.on cases to government hospitals and the Lagos University Teaching Hospital (LUTH).
	(4) Nigeria Airways Ltd.	1984	Staff and family. Also treats retired staff.	Parastatal	8,967		Yes	Yes	Yes	Yes	Employee			None	None	1,400,000	Nigeria Airways has always had its own Clinic prior to 1978. It referred its outpatients to Lagos University Teach Hospital. These became unreliable during the period of the oil boom, so in 1978, it started using retainers.
	(5) Nigeria Railway Corp. (NRC).	1984	Staff and family. Children over 18 and employed, not covered.	Parastatal	35,000		Yes	Yes	Yes	Yes	Employee	₦282.85 per staff--paid by parastatal.		None	None	9,900,000	Provides dentures, but not reading glasses. NRC has always had its own Clinic. Emphasis is on maximum utilization of its medical personnel, which at present stands at 1,082, and the control of amount spent on drugs and maintenance.
Private Companies.	2,751 employer responses to 7,400 questionnaires sent to 84% of registered private firms (8,794) in Nigeria.	1988	Varies[a]	Private	330,394		Yes	Yes	Yes	Yes	Employee	₦200--average cost per staff family per year, or ₦16.67 per month.		Varies	Varies	45,020,863 (6.5% of total payroll) for the 1,031 firms that responded to this question.	There are 8,794 registered private employers in Nigeria and these employers have a total of 1,162,854 employees (or, an average of 132.2 employees per firm). In 1988, the NCEHISN sent out 7,400 questionnaires to private employers and had a response rate of 37.2% (2,751). Of these, 887 employers supplied in-house care. 1,854 employers had private arrangements on doctor premises, and 1,829 employers reimbursed employees in part or in whole. The average cost of a hospital admission was ₦127.00. Source: Federal Ministry of Health, Appendices to the Report of the National Committee on the Establishment of Health Insurance Scheme in Nigeria (NCEHISN), September, 1988.

[a] Details for each private firm are not available; only averages are given.

Table 4 cont.

Country	Plan	Year	Group(s) Covered	Type of Management	Enrolled		Services Covered				Unit of Enrollment	Annual Premium	Uniform Premium	Copayment	Deductible	Total Budget	Comments and Sources of Data
					Number	Percent of Population	Inpatient Care	Outpatient Care	Preventive Care	Drugs							
Senegal	Health insurance in Senegal comes from two sources: (a) the IPS and (b) private insurance. No documentation is presently available for the IPS. Private insurance is pervasive among the some 30,000 expatriates (mostly French) in Senegal, the expenditures of which largely go to finance the Hopital Principal, but no data are available.																The IPS requires a 6% contribution on the part of employers and employees (92%). There is no data presently available on the number of firms/people enrolled, nor on the finances of the IPS. Source: Staff Appraisal Report, Senegal Rural Health Project, November, 1982 and R. Vogel, Cost Recovery in the Health Care Sector, May, 1988.
Sudan	MOH	1986	All Government Employees.	Public			Entitles GOS employees and their families to free Class II or "B" hospital beds for duration of stay.				Employee	1% of salary	Varies with salary.	None	None	15.59	Due to GOS financial difficulties in 1980s, rapid growth of private sector, e.g. 1983, 3 private hospitals in Khartoum area; in 1987, 15 private hospitals. Source: Sudan: Population, Health and Nutrition Sector Review, June, 1987.
Swaziland	No data available from Source.													No data available from Source.			Source: Swaziland: Population and Health Sector Review, May, 1985.
Tanzania	There is no health insurance in Tanzania.																Tanzania has no health insurance. Per capita health expenditures have continued to decline during the 1980s, despite Danida's large donations of pharmaceuticals. The GOT is becoming increasingly interested in some form of cost recovery. Source: Tanzania Population, Health and Nutrition Sector Review, October, 1988 and R. Vogel, Financing the Health Sector in Tanzania: A Public Expenditures Review, December, 1987.
Uganda	There is no health insurance in Uganda for the indigenous population.																Private health insurance does exist for the expatriate community (i.e. for those employed in international concerns, e.g., the banks), but for the indigenous population, private health insurance has not emerged as a source of financing. The health insurance that does exist for the expatriates often entails expenditures abroad. Source: K. Lee, W. Hull and G. Moore, The Cost and Financing of Health Services in Uganda, December, 1987.
Zaire	Mandated Coverage.	1986	Private Sector Employees and families.	Private	7.2	22.4%	Yes	Yes	Yes	Yes	Person Employed.	0		None	None	144.0	By law, employers are required to furnish health care or pay for the health care of their employees. In 1986, 10% of personnel expenses in the private sector went for health care. Private enterprise expenditures were $20 per person, while MOH expenditures were $0.33. Source: Zaire: Population, Sante et Nutrition, Etude Sectorielle, septembre, 1988.
Zambia	State Mines	1981	Employees and families.	Public	.342	6.1%	Yes	Yes	Yes	Yes	Person Employed.	0		None	None	30.9	In theory, health care is free for all persons in Zambia. But, employees at the ZCCM only constitute 6.1% of the population, but have 26.1% of total country health expenditures spent upon them. Source: Zambia: Population, Health and Nutrition Sector Review, May, 1984.
Zimbabwe	NAMAS[a]	1987	Employees and families.	Private	384,050	4.6%[b]	Yes	Yes	Yes	Yes	Employee	Z$ 275[c]	Varies by income.	No[d]	No	105.00	Insurance heavily subsidized by tax deductibility on part of both employer and employee. Source: Zimbabwe: Issues in the Financing of Health Care, August, 1989.

[a]National Association of Medical Aid Societies.
[b]Percentage estimate of total population, column 5 contains only employees (384,050) not their family members.
[c]Average annual premium paid.
[d]Only copayment required for Drugs.

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