



THE DEVELOPMENT OF HEALTHCARE EXPENDITURES IN SUDAN: 2000–2011

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Abstract

Purpose: This study attempts to examine trends, size, and composition of health expenditures in Sudan during 2000–2011 using simple descriptive and analytical approaches. Healthcare expenditures in Sudan are analysed for the years 2000 to 2011 using six key indicators.

Design/methodology/approach: The study adopted simple descriptive and analytical approaches using secondary data. In addition to the reviewed literature, statistical records of the World Health Organization (WHO) were used to collect data. However, in the absence of other sources of data, WHO health expenditures data can provide a useful starting point in analysing the way in which health expenditures and health systems are developing.

Findings: The main findings revealed a slight increase in public health spending in Sudan between 2000–2011; a significant shift toward private expenditures, which appears increasingly to be substituting rather than supplementing public expenditures; and a constant or a very small increase in total and public health spending per GDP despite growth in GDP and national income. Many possible results for this situation are put forward; the most important one is the deterioration of the health sector in Sudan, affecting the availability, utilisation and quality of health services.

Keywords: Healthcare expenditure, Sudan, Public health

Paper type: Research paper



INTRODUCTION

Over the last decade there have been an increasing number of studies analysing healthcare expenditures in low-income countries. One motivation of such studies is the desire to evaluate the expansion, scope and quality of healthcare services coupled with the share of spending devoted to healthcare.

Expenditures data at the national level provide important information for planners, analysts and policy-makers to assess the situation of healthcare services with changes in healthcare expenditures. It is beneficial to answer questions such as to what extent have economic changes affected public health financing, how healthcare services now look after various changes in health expenditures, and what is the effect of introducing user charges in government health facilities, etc.

In addition, investigating healthcare expenditures is a useful starting point in order to answer questions concerning access to health services, the provision of health services, the cost and quality of health services provided.

While normative questions concerning the optimum level of health spending are complex, in the literature there is a direct relationship between health expenditures and the characteristics of health services provided.

This study attempts to analyse the changes in healthcare expenditures in Sudan during the period 2000 to 2011. This period follows many changes in the Sudanese economy, and it is characterised by widespread health sector reform, including a significant push towards decentralising health systems and increasing government revenues after oil exports.

RESEARCH OBJECTIVES

This study attempts to examine trends, size and composition of health expenditures in Sudan during 2000–2011 using simple descriptive and analytical approaches. These expenditures will be initially analysed using six key indicators, which are as follows:

1. The development of total health expenditures during 2000–2011, including general government and private expenditures.

2. General government expenditures on health as a percentage of GDP.
3. General government expenditures on health as a percentage of overall general government expenditures.
4. General government expenditures on health as a percentage of total health expenditures.
5. Per capita government expenditures on health.
6. Out-of-pocket expenditures as a percentage of total health expenditures.

Each indicator tells us something different regarding health services. For example, general government expenditures on health as a percentage of GDP and general government expenditures on health as a percentage of overall general government expenditures reflect the size of the health sector within the economy as a whole; this will reflect many things, such as the political priority given by the government to the provision of health services.

Out-of-pocket expenditures as a percentage of total health expenditures represent an important indicator to reflect inequalities in access, especially in countries with a high percentage of poor, such as Sudan.

Per-capita government expenditure on health is a useful indicator, telling us the level of government resources available for the provision of health services, taking into consideration population growth. It explains what a system can actually afford and whether, across time, more resources are available for the provision of health services to the population.

DATA LIMITATIONS

Data for health expenditures are not available in official documents from Sudan, so the study uses a limited set of data that offers a sample of how health expenditures have changed. These data on health expenditures in Sudan are taken from secondary sources, with the WHO providing the main source of data. The most comprehensive and consistent data on health financing are generated from the Global Health Expenditures Database.

We believe that the enhancement of these data with simple quantitative analysis effectuates the achievement of most of the objectives of this study; more data and more focused analytical methodology are

needed to achieve further analysis of health expenditures and their relation to a health system's performance and development.

LITERATURE REVIEW

The Millennium Development Goals (MDGs) adopted at the Millennium Summit of the United Nations in September 2000 are regarded as the main issues that affect the design and operation of different economic and social policies in developing countries. Some goals are directly related to the health sector and others are indirectly related. The feasibility of meeting the MDGs in the developing and low-income countries widely depends on the availability of an effective and efficient health sector.

Regarding the health sector in developing countries, the Commission on Macroeconomics and Health (CMH), which was established by the World Health Organization (WHO) Director in 2000, concluded that low- and middle-income countries would commit additional domestic financial resources, political leadership, transparency and systems for community involvement and accountability to ensure that adequately financed health systems can operate effectively and are dedicated to key health problems (Sachs, 2004, p. 4).

The CMH has found that extending the coverage of crucial health services to the world's poor could save millions of lives each year, reduce poverty, spur economic development and promote global security. The CMH offers a new strategy for investing in health for economic development involving two key initiatives: one, a significant scaling-up of resources currently spent in the health sector by poor countries and donors. Two, tackling the non-financial obstacles that have limited the capacity of poor countries to deliver health services (Ibid, p. 4).

Globally in 2006, expenditures on health were about 8.7% of gross domestic product, with the highest level in the Americas at 12.8%, and the lowest in the Southeast Asian region, at 3.4%. This translates to about US\$716 per capita on average, but there is tremendous variation, ranging from a very low US\$31 per capita in Southeast Asia to a high of US\$2,636 per capita in the Americas.

The share of government in health spending varies from 76% in Europe to 34% in Southeast Asia. Where government expenditures

in health are low, the shortfall is made up in low-income countries by private spending, about 85% of which is out-of-pocket. This means that payment is made at the point of accessing health services. Such payment does not allow for pooling of risks and leads to a high probability of catastrophic payments that can result in poverty for the household (World Health Statistics, WHO, 2009).

The level of health spending in low-income countries is insufficient to address the health challenges they face. The least developed countries average approximately US\$13 per person per year in total health expenditures, of which budgetary allowances are just US\$7. Other low-income countries average approximately US\$24 per capita per year, of which budgetary allowances are US\$13 (Sachs, Op. cit, p. 16).

However, African health systems face huge financing deficits. Compared to a global average of 5.4 per cent of GDP, current government spending averages 2.5 per cent of GDP and falls far short of that needed to even provide basic care. While spending on healthcare in high-income countries in 2001 exceeded US\$2,000 per person per year, in Africa it averaged between US\$13 and US\$21 (Commission for Africa, 2005).

The CMH recommended that spending for healthcare in sub-Saharan Africa should rise to US\$34 per person per year by 2007, and to US\$38 by 2015, which represents roughly 12 per cent of GNP. This is the minimum amount needed to deliver basic treatment and care for major communicable diseases (HIV/AIDS, TB and malaria) and early childhood and maternal illnesses. Similarly, some argue for a massive scaling-up of public health and other social sector expenditures (Sachs, 2004).

Despite significant increases in public expenditures on health, education and other social services, a majority of the people continue to live below the minimum poverty line of US\$1 (in purchasing power parity terms) a day (World Bank, 2003). Similarly, wide disparities continue to exist in terms of access to basic social services such as health facilities, sanitation facilities, safe drinking water and basic education in many developing countries. Furthermore, the indicators of healthy living or health status, such as infant mortality rate (per 1,000 live births), under-five mortality rate (per 1,000) and life expectancy at birth (years) have not witnessed significant improvement over the years (Mamotlohi, 2004, p. 2).

In Africa, public outlays can be wasteful or misdirected, as when too much devoted funding goes towards high-tech curative services for urban elites in the capital cities, and not enough for essential interventions to control communicable diseases for the rural poor or to respond to the basic needs for curative and maternal/child health services for the poor more generally (Ibid, p. 59).

In this inadequate level of health spending, if poor countries allocated more domestic resources to health, such measures would still not resolve the basic problem: poor countries lack the required financial resources to meet the most basic health needs of their populations. The Commission recommends that out-of-pocket expenditures in poor countries should increasingly be channelled into “community financing” schemes to help cover the costs of community-based health delivery (Ibid, pp. 59-60).

The World Health Report 2010 makes the case that all countries could do at least one thing to move closer to universal coverage or to protect the gains already made. Options for immediate action include:

- raising more funds for health domestically;
- reducing financial barriers to services by increasing forms of prepayment and the pooling of funds, rather than relying on direct out-of-pocket payments;
- Improving efficiency and equity in the way resources are used.

The report urged that richer countries continue to support lower-income countries in all of these areas. In the case of the first two options, national health accounts and other forms of expenditure tracking can provide very useful information (The World Health Report 2010, WHO, p. 9).

Models on how public spending influences health status are conceptualised in Figure 1.

The idea as explained by Figure 1 is that all things being equal, public spending will impact health status by lowering the effective price of health-enhancing input. Within the framework conceptualised in this figure, the consensus of opinion to improve health status is that firstly, it must create effective health services, secondly, the existence of new public services has to change the total of effective health services consumed by the population, and finally, the additional services consumed have to be cost effective in improving health.

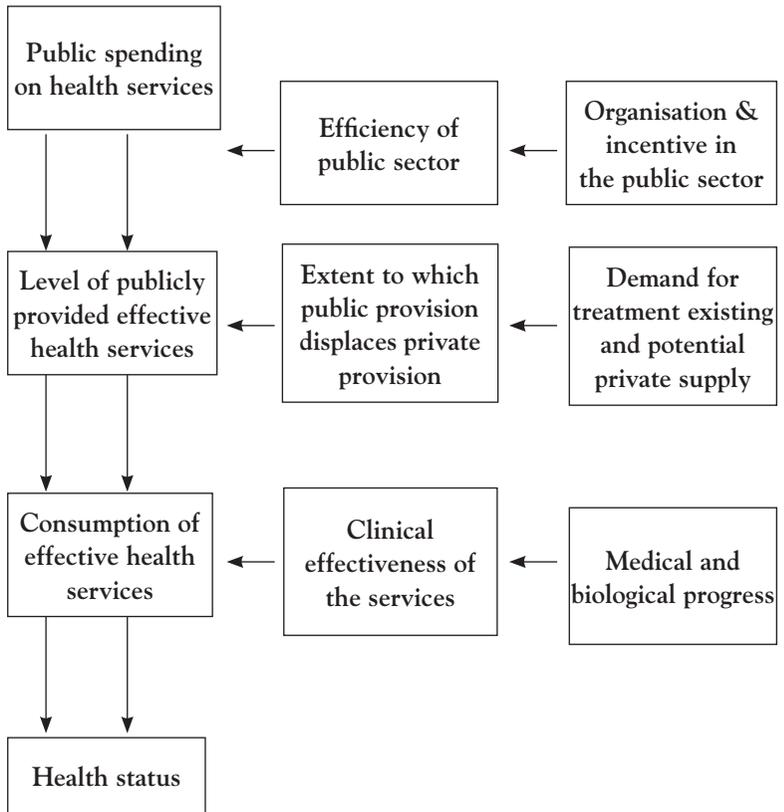


Figure 1. How public spending influences health status

Source: Adapted from Filmer and Pritchett (1999)

Several studies have examined health expenditures in less-developed countries and many concluded that structural adjustment led to reductions in government health spending. UNICEF (1987), Cornia *et al.* (1988), Bell and Reich (1988) and Cooper Weil *et al.* (1990) are the most notable investigators of the social and health impact of economic adjustment policies. These studies agree that economic adjustment policies have a negative impact on health but they differ in determining the magnitude of this negative impact.

HEALTH STATUS IN SUDAN DURING 2000–2011

The health sector in Sudan is organised primarily around the activities of the federal and state Ministries of Health, which play dual roles

of policy-making and care provision. Historically, from the colonial period until the beginning of the 1990s, the government was virtually the sole provider of health services in Sudan; health services were offered free of charge. Due to the pressures of economic hardship and the prescriptions of the International Monetary Fund (IMF) and World Bank (WB) through the Structural Adjustment Programmes (SAPs), the government started progressive change in the healthcare system. Under the federal system, which had been in place since the mid-1990s, the responsibility of financing and managing most of the health system was moved to states and localities. User fees were introduced in the early 1990s as part of the economic reforms and adjustment programmes (Suliman, 1999).

The government health system in Sudan was challenged during the 1990s by a combination of decentralisation of responsibilities and funding cuts. The public health services in Sudan are therefore administratively organised in a three-tiered system: the Federal and State Ministries of Health, and the local health authorities (municipalities). In addition to the public system, universities, the police, the military, NGOs and private groups also run clinics and hospitals and contribute to the delivery of healthcare services.

On the one hand, only the most wealthy states and localities have sufficient financial resources and managerial capacity to fully take up their new responsibilities. On the other hand, government austerity measures have limited transfers of financial resources from the centre to the states. These factors have led to the deterioration of the primary healthcare system, particularly in rural and peripheral areas. One estimate is that less than half of primary healthcare units are staffed with community health workers. Another outcome of these factors is significant regional disparities in health services, which follow the centre-periphery pattern shown by MDG indicators (Sudan Health Status Report 2003, p. 7).

A. INFANT MORTALITY RATE (IMR)

There is improvement in the general situation as the IMR declined from 135/1,000 in 1955–65 to 108/1,000 in 1983. The rate then rose to 116/1,000 in 1980–85. Estimates for the period 1985–90 show a decline to 104/1,000. However, the rate rose again to 110/1,000 in 1993 (Government of Sudan and UNICEF, 1996).

B. LIFE EXPECTANCY

Available data show that in recent decades, Sudan has been unable to achieve an increase in life expectancy at birth of more than 12 years. Life expectancy at birth was estimated to be approximately 41 years at the time of independence (1956). It then increased to 53.9 in 1993 (Sudan Programme of Action for Development [2000–2010], 2001, p. 22).

Babiker (2000) made a comparison between life expectancy at birth in Sudan and other African countries. He showed that life expectancy at birth for Sudan is one of the shortest in Africa, as can be seen from the gap between Sudan and the African average for the selected years for both sexes (Babiker, 2000).

C. NUMBER OF HOSPITALS AND HOSPITAL BEDS

The number of hospitals per 100,000 of the population remained at the virtually constant level of 0.9 during the period 1993–98. Hospital beds per 100,000 reflect a declining trend since 1993. However, the figures are low when compared to the Sudan National Comprehensive Strategy (SNCS) 1992–2002 target of 40,000 people to one hospital (Sudan in Figures, Central Bureau of Statistics, 1988–2000, 2002–2006).

In addition, there is an unfair geographical distribution of health facilities between states in Sudan. All statistics (e.g. Annual Statistics, FMOH) revealed that health facilities are concentrated in Khartoum, Gezira and the Nile River states.

D. HEALTH WORKERS

Health manpower indicators saw a slight improvement during the period 2000–2007 due to an expansion in higher education. Every year approximately three hundred graduate physicians join the services from national universities in addition to between fifty and one hundred who arrive from other countries after qualification (UN, Final Report, 1998, p. 25).

Despite this, the increase in the total number of medical practitioners is low. This is attributed to the service's low rewards within Sudan and the consequent migration of physicians to oil-rich countries and to Europe.

In addition, the bulk of health manpower is concentrated in urban areas, particularly in the capital city, to the neglect of rural areas.

HEALTH EXPENDITURES IN SUDAN 2000–2011

The development of health expenditures in Sudan is clarified in the following table:

Table 1 shows that total expenditures on the health sector increased during 2000–2010 from L.s 1,065 million to L.s 12,322 million, an increase of about 1,056%. General government expenditures on health during 2000–2011 also increased from L.s 292 million to L.s 3,499 million (about 1,098%). Private expenditures on health have the highest share to total expenditures on health, and this increased during 2000 to 2011 from L.s 773 million to L.s 8,823 million.

Table 2 shows substantial increases during the period 2000–2011 for the three indicators. Total expenditures on health as a percentage of GDP increased from 3.3% to 8.4%. General expenditures on health as a percentage of GDP increased from 1% to 2%, while private expenditures on health as a percentage of GDP increased from 2.4 to 6. (Private expenditures on health included private insurance, out-of-pocket expenditures and non-profit institutions serving households [e.g., NGOs]). Out-of-pocket expenditures had the highest share in private expenditures on health in Sudan, as in 2000; private expenditures on health was 773 million Sudanese pounds (about 708 million Sudanese pounds being out-of-pocket expenditures), while 17 million and 7 million Sudanese pounds went towards private insurance and non-profit institutions respectively.

Comparing the trend of data with the context of economic performance in Sudan during the same period, Sudan shows an average growth of GDP 5% per annum over the same period, which is surprising given the reported increase in general government health expenditures as a percentage of GDP.

The World Bank Report (2003) recorded government spending on health in absolute and relative terms at perhaps US\$4 per capita, meaning that government health spending in Sudan ranks among the lowest in the world (World Bank, 2003).

Table I. Total expenditures on health, General Government Expenditures on Health (GGHE) and private expenditures on health 2000–2011

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total expenditures on health (L.s millions)	1065	1212	1404	1777	2281	2645	3821	5645	8375	9045	11125	12322
General government expenditures on health (L.s millions)	292	337	398	530	734	914	1273	1878	2774	2676	3072	3499
Private expenditures on health (L.s millions)	773	875	1006	1246	1547	1730	2548	3767	5601	6370	8053	8823

Source: World Health Organization, National Health Account Database. Available at: <http://apps.who.int/nha/database/DataExplorer/Regime.aspx>

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total Expenditures on Health as a % of GDP	3.3	3.5	3.6	3.8	4.1	4	4.8	6	6.9	7.2	7.2	8.4
General Government Expenditures on Health as a % of GDP	1	1	1	1	1	1	2	2	2	2	2	2
Private Expenditures on Health as a % of GDP	2.4	2.5	2.6	2.7	2.8	2.6	3.2	4	4.6	5	5.2	6

Source: World Health Organization, National Health Account Database. Available at: <http://apps.who.int/nha/database/DataExplorer/Regime.aspx>

Table 2. Total, general government, and private expenditures on health as a percentage of GDP in Sudan during 2000–2011

The World Bank Report (2003) added that although no data are available on household health spending, it is estimated total out-of-pocket expenditures are as large or larger than total government health spending (that is, 1% or more of GDP). In addition, the national health insurance scheme similarly spends around 1% of GDP, so that total health expenditures in Northern Sudan are likely to be in the range of 4% or 5% of GDP, or US\$15 to \$20 per capita, consistent with the low range of total spending in countries in Sub-Saharan Africa.

Table 3 shows that out-of-pocket expenditures as a percentage of total health expenditures represent a high percentage during 2000–2011. It varies between 66% in 2000 to 69% in 2011. In addition, in 2002, Elidrissi estimated out-of-pocket expenditures as approximately 60% of total health spending (Elidrissi, 2002).

As a result of high out-of-pocket payments, the World Bank (2003) concluded that health spending in Sudan seems to be highly skewed towards the affluent. Out-of-pocket payments, of course, are typically for the wealthy more than the poor, while insurance systems cover only 8% of the population, mostly government employees. At the same time, much government spending is focused on hospitals, which tend to be used less by the poor (World Bank, 2003).

Table 4 compares General Government Expenditures on Health (GGHE) as a percentage of THE and private expenditures on health as a percentage of THE. This table shows that private expenditures on health as a percentage of THE have the highest percentage throughout the period 2000–2011.

Private health services in Sudan are concentrated mainly in urban and better-off rural areas. These services are perceived to be of better quality than government services, and tend to be accessed more by the wealthy. In Khartoum State, an increasing number of hospitals and clinics are run by the private sector, leaving lower-level primary care facilities to the public sector. There are 39 private hospitals, compared to 39 government facilities; and 450 private clinics, compared to 118 government health centres (World Bank, 2003). This level and structure of health services has had adverse equity effects on health services in Sudan.

Table 5 shows that general government health expenditures (GGHE) (a percentage of general government expenditures [GGE]), range

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Out-of-pocket exps. as a % of THE	66	66	66	65	63	60	62	63	64	68	70	69

Source: World Health Organization, National Health Account Database. Available on: <http://apps.who.int/nha/database/DataExplorer/Regime.aspx>

Table 3. Out-of-pocket expenditures as a percentage of Total Health Expenditures (THE) in Sudan during 2002–2011

Table 4. General Government Expenditures on Health (GGHE) and private expenditures as a percentage of Total Health Expenditures (THE) in Sudan during 2000–2011

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
GGHE as a % of THE	27	28	28	30	32	35	33	33	33	30
Private exp-s as a percentage of THE	73	72	72	70	68	69	67	67	67	70

Source: World Health Organization, National Health Account Database. Available on: <http://apps.who.int/nha/database/DataExplorer/Regime.aspx>

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GGHE as a % of GGE	8	8	8	7	7	6	7	8	10	10	10	11

Source: World Health Organization, National Health Account Database. Available on <http://apps.who.int/nha/database/DataExplorer/Regime.aspx>

Table 5.
The General Government Expenditures on Health (GGHE) as a Percentage of General Government Expenditures (GGE) in Sudan

Table 6. Per-capita total health expenditures at average exchange rate in Sudan (PPP into \$)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Per-capita total exp. on health	12	13	15	19	24	28	45	69	97	93	111	104

Source: World Health Organization, National Health Account Database. Available on: <http://apps.who.int/nha/database/DataExplorer/Regime.aspx>

between 8% and 11% during 2000 to 2011. This reflects the low share of the health sector to government expenditures; other sectors such as defence, security, etc., have the dominant share of general government expenditures.

Data for total health expenditures per capita are important for explaining financial sustainability, as total health expenditures must increase at the same rate as population growth. Table 6 indicates that there was an increase in per capita total health expenditures, but when we compare this with Table 4 it is clear that this increase is due to an increase in private spending on health and the shift away from reliance on public health expenditures.

DISCUSSION

Total expenditures on health in Sudan during 2000–2011 show an increase, yet government health spending in Sudan ranks among the lowest in the world, as the World Bank cited in 2003. General expenditures on health in Sudan as a percentage of GDP remained constant during 2000–2005 at a rate of 1%, and then increased slightly to 2% during 2006–2011. These data can be compared with the context of the economic performance of Sudan's economy, which shows an average growth of about 5% per annum over the same period. This comparison indicates that although the Sudanese economy experienced some rate of economic growth, the health sector did not receive significantly extra resources, at least at the same rate as general economic growth.

Although total expenditures on health in Sudan increased during 2000–2011, many economists assert that without some indication of efficiency in spending and high benefits gained from each pound spent, this increase is not particularly useful. The WHO estimates that about 20% to 40% of spending on health was lost and did not reach the true beneficiaries as a result of mismanagement, weaknesses in planning and supervision.

Regarding this issue, the Khartoum State Minister of Health argued that many plans and programmes applied in the health sector in Sudan during the last period must be reassessed, such as:

- The independence of big hospitals
- The Internal Medication Programme

- The co-share of the private sector in managing private flats inside public hospitals
- The failure to apply Primary Health Programmes that are issued by the WHO and assigned by Sudan's government (*Al Sudani* newspaper, 19th June 2013, p. 14).

The first impression of these programmes is the lack of efficiency and effectiveness, as many resources are not directed for the benefit of people. Private expenditures on health have the highest share of total expenditures on health. In addition, private expenditures on health as a percentage of GDP increased from 2.4% to 6% during 2000–2011, and out-of-pocket expenditures had the highest share in private expenditures on health. Out-of-pocket expenditures as a percentage of total health expenditures during 2000–2011 increased from 66% to 69%.

All of these data reflect a shift in the burden of health financing away from government towards individuals and families. However, this has implications for equity of access to health services in Sudan. This confirmed what the World Bank declared in 2003: health spending in Sudan seems to be highly skewed towards the affluent. Out-of-pocket payments, of course, are within reach of the wealthy rather than the poor.

SOME RESULTS OF LOW SPENDING ON HEALTH IN SUDAN

Many researchers assume that the low level of health spending represents one of the main reasons behind the deterioration of the health sector in Sudan. This situation is clear in basic health status indicators such as life expectancy and the under-5 mortality rate. For example: the under-5 mortality rate in Sudan was estimated at 108 per 1,000 in 2009, while life expectancy at birth in 2009 was 59 years. The infant mortality rate in 2009 was 69 per 1,000.

An interim poverty reduction strategy paper concluded that the lack of significant progress in the health sector is due to the extremely low level of public expenditures on health (Mohamed, 2007). The World Bank Report (2003) found that the deterioration of the health sector was a result of a low level of health spending negatively affecting the availability, utilisation and quality of services. The report found that coverage of basic services in many areas is low, sometimes extremely low. For example, measles immunisation coverage in 1999–2000 was 58% and

coverage of skilled delivery care was 57% in Northern Sudan. Overall averages mask large urban/rural and regional disparities in services' availability and utilisation. For example, a 2000 survey in Northern Sudan found that 61% of under-5 children with reputed fever in urban areas were treated with anti-malarial medication, compared to 42% in rural areas (World Bank Report, 2003, p. 9).

The World Bank Report (2003) also found that the poor have less access to services. The report indicates that based on household survey data on care-seeking behaviour for children with ARI symptoms, households with a higher economic status are more likely to obtain treatment with a private doctor or hospital, while poorer households are more likely to go to informal providers (traditional healers and drug sellers) or not seek treatment at all. In addition, the World Bank (2003) concluded that there is some evidence of gaps in quality. For example, a 1997 assessment of 60 health facilities in three states in Northern Sudan found that only 21% of children with diarrhea were correctly managed (Ibid, p. 10).

Abbas (2004) found that the impact of low levels of public spending on the health sector are represented through many aspects such as the high cost of health services, where many fees and charges are imposed on patients. Likewise, the quality of services is affected due to meager state spending, something that is reflected—among other things—on the state and condition of hospital buildings. Laboratory and diagnostic services also deteriorated, owing to the severe shortage of equipment, instruments and apparatus. These requirements are not up-to-date in terms of technology. Moreover, other aspects emerged, such as: the poor standard of cleanliness, the sorry state of toilets, the poor meals, and the infrequent and irregular visits of specialists to their patients (Abbas, 2004, p. 188).

Babiker, 1996, mentioned that the low level of health-related spending not only affected the efficiency of health services delivery through brain drain and under-utilisation of fixed health assets such as buildings and equipment, but also via the demoralisation of remaining staff due to extremely low salaries and incentives for medical and paramedical personnel (Babiker, 1996). Babiker (2008) also concluded that, the level and structure of health spending has had adverse equity effects. This is basically due to the large share of out-of-pocket spending as a percentage of total spending (Babiker, 2008).

Mossialos (1998) noted that there are many factors that lead to the expansion of private health services, one being the perceived deterioration of the quality of services provided by the public institutions as a result of cutbacks in government expenditures on health (Mossialos, 1998, p. 43).

It is clear, therefore, that the shift towards private expenditures appears increasingly to be substituting rather than supplementing public expenditures. This is confirmed by Abbas (2004) who found that people opt for private medical services after going to public hospitals, and that they shift towards private services as a result of many factors, such as the deterioration of public hospitals and the availability of good medical staff and better care in private services (Abbas, 2004, p. 165).

CONCLUSION

In the absence of other information, WHO health expenditures data can provide a useful starting point in analysing the way in which health systems in Sudan are developing. From the data presented, the following general conclusions can be put forward:

- A slight increase in total expenditures on health during 2000–2011 resulted almost exclusively from private sources, which increased substantially over the period.
- General expenditures on health as a percentage of GDP during 2000–2011 increased from 1% to 2%, while private expenditures on health as a percentage of GDP increased from 2.4% to 6%.
- Out-of-pocket expenditures have the highest share in private expenditures on health in Sudan.
- Out-of-pocket expenditures as a percentage of total health expenditures represent a high percentage during 2000–2011.
- Private expenditures on health as a percentage of total health expenditures have the highest percentage compared to general government expenditures on health.

RECOMMENDATIONS

- More effort should be made to assess the impact of public health expenditures on health status in Sudan.
- Better health status in Sudan seems to be associated with higher public health spending, so the government of Sudan must channel

more resources to the health sector and increase the share of public spending on health.

- Expenditures should be redirected in the health sector in Sudan to focus on cost-effective methods to prevent and treat diseases and conditions that disproportionately affect the poor or by directing funds, staff and supplies to areas where the poor live, work and learn.
- The government needs to be sure that health expenditures reach their intended beneficiaries, and resources in health must be allocated efficiently.

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