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An Evidence-Based Policy Brief

Promoting access to high quality primary health care services in Sudan

Executive Summary

+ Included:

- *Description of a health system problem*
- *Viable options for addressing this problem*
- *Strategies for implementing these options*

✗ Not included: recommendations

This policy brief does not make recommendations regarding which policy option to choose



WORLD HEALTH ORGANIZATION
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Who is this policy brief for?

Polymakers, their support staff, and other stakeholders with an interest in the problem addressed by this policy brief

Why is this policy brief prepared?

To **inform deliberations** about health policies and programmes by **summarizing the best available evidence** about the problem and viable solutions

What is an evidence-based policy brief?

Evidence-based policy briefs bring together **global research evidence** (from systematic reviews*) and **local evidence** to inform deliberations about health policies and programmes

Systematic Review: A summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise the relevant research, and to collect and analyse data from this research

Full Report

The evidence summarised in this Executive Summary is described in more detail in the [Full Report](#)

This policy brief was prepared by newly developed Knowledge Translation Platform in Sudan

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Key messages

The Problem:

Access to high quality PHC services is one of the major problems of Sudan's health system, in term of the following three main factors:

1. The burden of communicable and non-communicable diseases is rising which put more demand on PHC services.
2. PHC minimum package is below the standard that most of the needy do not have access to it. Nevertheless, the package is not provided in an integrated and proactive manner.
3. On top of the above, the current health system governance, financing and delivery practices do not support best access to high quality PHC services.

The Policy Options:

This brief displays four options to promote proper access to high quality PHC services. Each of these options has its implication on the two above mentioned PHC dimensions (access and quality of PHC services):

Option 1: Expand social health insurance system by generating revenues in order to improve coverage, access and reduce out-of-pocket-expenditure

Option2: Increasing the share expenditure on PHC in Sudan by improving the resource allocation formula

Option 3: Strengthening the quality of primary healthcare either by ensuring PHC is emphasized within the existing higher council for quality accreditation, or by establishing a separate PHC higher accreditation body

Options 4: Building the capacity of primary health care settings to enable them to deliver the integrated health package

Barriers to Option Implementation

1. Small size of health insurance pool and low revenue to health due to lack of unified health financing policy.
2. “Hospital centrism” approach of health system and lack of PHC oriented policies and laws jeopardize access to good quality PHC services.
3. PHC standards are not inclusive and its implementation is not enforced.
4. Low resources are directed to peripheries and remote areas which hinder the expansion of PHC in these settings.

Implementation Strategies:

The overall strategies to deal with the above-mentioned barriers are:

1. Development of national health system financing policy supported by the necessary health system reform.
2. Shift of health system orientation towards PHC through development of PHC supporting policies and laws and support PHC management capacity.
3. Development of comprehensive PHC accreditation system while ensuring resources for its implementation.
4. Reform of PHC implementation policies and financing scheme as well as mobilization of resources.

Executive summary

The problem:

Lack of access to high quality primary health care services

Sudan health system is based on the district health system approach, which emphasizes the principles of primary health care (PHC). Nevertheless, the decentralization of the public sector resulted in more deterioration of the PHC system particularly in rural and peripheral areas due to lack of financial resources and managerial capacities. The local health system act gave the responsibility of management of PHC level to the localities while, this wasn't accompanied by ensuring availability of sufficient financing resources to localities to run this function. This condition is worsened by the focus of government spending on hospitals leading to an unbalanced health system. For instance, 36% of the total health expenditure goes to the secondary and tertiary hospitals. Moreover, over 90% of the government health expenditure is directed to the secondary and tertiary hospitals (SNHA, 2008).

This problem manifested in terms of the very low access to PHC in Sudan. One quarter of the population has no access to health facilities with considerable inter-state, urban and rural disparity. Many rural areas are underserved by the health system in terms of functional facilities, in particular health centres and hospitals, which are found to be clustered in towns and cities. It should be noted that 33.2% of the population live in urban areas. Furthermore, the minimum PHC package is provided by 19% of PHC facilities which hamper the adequacy and quality of PHC services. Therefore, one of the major problems of Sudan's health system delivery is the lack of optimal access to high quality PHC services. This problem can be better understood by considering:

- The burden of diseases, including chronic ones, which places greater demands on the health care delivery system
- Minimal package services do not reach all beneficiaries, and PHC that they receive is often not as proactive and coordinated as would be optimal; and

Current health system arrangements do not ensure optimal access to PHC. These arrangements include financing, delivery and governance arrangements.

Policy options:

Promotion of optimal access to high quality PHC services can be addressed using various approaches. These include improving: PHC services financing and budgeting mechanisms; quality of PHC services via introduction of national regulatory system and population access to essential PHC package. These approaches can be presented in terms of the following options:

Option 1: Expand social health insurance system by generating revenues in order to improve coverage and access and reduce out-of-pocket expenditure.

Option 2: Increasing the share expenditure on PHC in Sudan by improving the resource allocation formula.

Option 3: Strengthening the quality of PHC either by ensuring that PHC is emphasized within the existing higher council for quality accreditation, or by establishing a separate PHC higher accreditation body.

Option 4: Building the capacity of primary health care settings to enable them to deliver the integrated health package.

Barriers & Implementation strategies:

Implementation of each option requires carrying out a package of interventions to deal with either existing or future anticipated health system challenges. All suggested options require implementation of strategies targeting human and financial resources, involvement of health system stakeholders including the beneficiaries and improvement

of capacity of existing bodies to perform its functions. Barriers to options implementation are:

1. Low government health expenditure, fragmentation of health financing system, difficulty of enrolment of the informal sector hamper the expansion of the health insurance services.
2. Preference of hospitals over PHC by the community and policy makers combined with lack of adequate information challenges development of formula to re-allocate sufficient resources to PHC to improve access to good quality PHC services.
3. Inadequate PHC level management capacity, resistance to change by health providers and the need for further resources -at least at the beginning- defy accreditation of PHC.
4. Shortage of qualified human resources in remote areas and cost implication of expansion of PHC facilities towards uncovered populations confront promotion of capacity of PHC facilities to deliver the PHC package.

The overall strategies to deal with the above-mentioned barriers are:

1. Increase revenue to the health sector from the government, as well as improve health system financing efficiency either at governance or at health care practice level.
2. Development of policies that promote the use of PHC and advocate the use of PHC among the community and politicians.
3. Development of guidelines, legislation and regular supervision, audit and feedback combined with mobilization of resources to deal with that.
4. Human resources retention and deployment policies, implement task-shifting strategies, contracting private sector and integration of programs at delivery level.

The Main Report

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Preface

The purpose of this report

The purpose of this report is to inform deliberations among policy makers and stakeholders through providing evidenced informed policy reform to PHC planning and management. It summarises the best available evidence regarding promotion of optimal access to good quality PHC Services.

The report is prepared as a background document to be discussed in at meetings of those engaged in development of PHC Services policies, including its financing and implementation. Furthermore, the report is intended to inform other stakeholders and engage them in the deliberation of those policies to envision the way forward for its reform.

How is this report structured?

This policy brief has a list of key messages, an executive summary, and a full report to present policy-relevant research evidence about promotion of access to better quality PHC. Although the report entails some thorough information, the key messages and summary are displayed in a self-informative format.

How was this report prepared?

This policy brief brings together international research evidence and national evidence to inform deliberations about optimizing access to high quality PHC. Relevant evidence was used to describe the problem and identify options to address the problem. Further evidence synthesis was made to oversee impact of options, barriers to apply such options and implementation strategies to deal with identified barriers. Information was extracted mainly from systematic reviews, original research studies, other reports and documents.

Limitation of this report

This policy brief is built from available systematic reviews and international research studies. For some parts where we couldn't access relevant systematic reviews tried to fill this gap by using other relevant research studies or international reports. We collected

these documents either through focus search or national resource person's contact and expert advice.

Analysis of evidence entails judgement about which one to include, its quality, and relevance. How the evidence is interpreted, summarized and reported was also subjected to personal influence. We tried throughout this process to be transparent about these issues. However, this report unavoidably includes judgement made by review authors or ourselves.

The problem:

Proper access to high quality PHC services is one of the major challenges of the health system of Sudan. This problem manifests in three inter-acted and inter-related factors. Firstly, burden of communicable and non-communicable diseases which put more emphasis on PHC services. Secondly, expansion of PHC minimum packages is below the standard that was not accessed by most of the neediest. Moreover, the package of services is not provided in an integrated and proactive manner. Finally, the current health system governance, financing and delivery practices do not support best access to high quality PHC services.

Background

Sudan is one of eastern African countries with land area of 1.8 million square kilometres; its population nearly 31 million people with 33.2% out of the population live in urban setting while 8% are nomads. Almost 2% of the population are internally displaced. The average household size is 5-6 persons, while the fertility rate is 3.9. Life expectancy at birth is 59.8 and the annual death rate is 16.7% out of the total population (CBS Sudan, 2011).

Sudan is one of the well off countries in term of national resources. Oil production is the major cause of the economy's growth the country witnessed during the resent years. The nominal growth domestic product (GDP) grew from US \$ 9.9 billion in 1980 to US \$ 57.9 billion in 2008. However, this growth was not broad-based, investments and services are concentrated around the capital and big cities. There are wide disparities between urban and rural areas and between regions (Sudan Millennium Development Goals Progress Report, 2010). Poverty remains widespread with Sudan ranking 157th in 2010 (down from 147 in 2005) out of 169 countries on human development index (Human Development Report, 2011, Human Development Index, United Nations Development Programme, 2011). About 46.5% of the population live below poverty line with less than 1\$ earning a day, while 8% live in extreme poverty. The unemployment rate for 15 years and above is 13% with 9% for males and 23% for females (Sudan National Baseline Household Survey, CBS, 2009). The country witnessed decades of conflicts and there is ongoing emergency in Darfur region, this made health a major challenge.

Sudan has a federal system of governance with three levels of administration. Health is included in the concurrent list of the Interim Constitution (2005) and follows the principles of devolution envisaged by the Local Government Act (2003) with the powers of governance distributed between federal government, states and the localities.

The service delivery norms for the public sector health services are organized at three levels: primary, secondary and tertiary. This is based on the recently endorsed health systems standards following a consultative process involving states (Specifications and Standards for Health System in Sudan 2010).

The primary level constitutes family health units (FHU) which serve between 5000 and 10,000 population, the family health centres (FHC) which serve a population of 10,000 to 20,000 and the local hospital which serves a population of 100,000 to 250,000). The state general hospitals (SGH) are the referral centre for the whole state, while the specialized centres and hospitals constitute the tertiary level.

Sudan's Interim Constitution specifies the government's commitment to "promote public health, establish, rehabilitate and develop basic medical and diagnostic institutions and provide free primary health care and emergency services for all citizens. " The national health policy (2007) describes the minimum contents of PHC package which includes promotion of child health (immunization against vaccine-preventable diseases, nutrition counselling, and growth monitoring, and implementation of integrated management of childhood illnesses package), promotion of reproductive health (safe motherhood and family planning); treatment of common health problems and control of endemic diseases (malaria, tuberculosis, HIV/AIDs, Schistosomiasis etc.); protection and promotion of environmental health and sanitation; and treatment of simple diseases, injuries and mental health, basic Emergency Obstetric Care; Comprehensive Emergency Obstetric Care. FHU provide the first five services while the last two are specific to rural hospitals. Only 19% of PHC facilities provide all of the components of the minimum package.

Problem Underlying Factors

There are key factors that compose the challenge of having optimal access to high quality PHC services in Sudan. These factors are the high burden of diseases either communicable or non-communicable, the inadequate access to PHC minimum package and ineffective mode of its delivery, and health system governance, financing and delivery arrangements.

1. Burden of Diseases, Communicable and Non-communicable

Sudan's epidemiological profile is characterized by marked disease burdens differentials between states, urban and rural areas. Its morbidity table is still dominated by communicable diseases and causes of death are due to easily treatable communicable diseases and traumas. Pneumonia, diarrhoea and malnutrition still feature among major causes of death among children. Tuberculosis and malaria are major public health problems and while HIV prevalence is still low, the threat of generalized HIV/AIDS problems remains real and inadequately addressed. Evidence from surveys and routine service statistics point to an emerging public health problem from non-communicable chronic diseases as changes in lifestyle occurs. For instance there is rising epidemic of DM, heart diseases, hypertension and renal diseases. Available information indicates importance of cancer diseases as one of the critical health problems.

Although overall health indicators in Sudan are more or less better than some Sub-Saharan Africa averages (FMOH and WB Development Indicators 2011), this comparison masks significant urban-rural and regional disparities, related to conflict, displacement, and chronic poverty. These produce unfavourable health situations and determinants.

According to Sudan Household Survey 2010 (SHHS, 2010), the infant mortality rate is estimated at 57 per 1000 live births. More than 50% of these are neonatal deaths. At the same time the under 5 years mortality is estimated at 78 per 1,000 live births, 26.8% of children aged 5 to 59 months had diarrhoea and 18.7% with suspected pneumonia. The survey indicated that the prevalence of less than 5 years children who were severely under weight is estimated at 12.6%, while 15.7% of them were severely stunted. Malnutrition is mainly caused by protein-energy malnutrition and micronutrient deficiencies. The maternal mortality rate is estimated at 215 deaths per 100,000 live births with wide inter-state variations. A quarter of women who had a live birth during the last two years had no antenatal care. Births that are attended by skilled health staff is estimated at 72.5%. Only 9% of married women in the age range of 15 to 49 use contraceptives while the unmet need for family planning is estimated at 29%. Fourteen per cent of women age 20 to 24 have had live birth before age 18 (SHHS 2010).

2. Expansion of Minimum PHC Package

According to the Sudan PHC Facility Survey (2010), 19% of PHC facilities provide the full PHC minimum package while 5% only provide the comprehensive PHC package. About one third of the population has no access to health facilities with wide disparities among and within states ranging from 53% to 68%. This is reflected by the overcrowding of some PHC facilities especially in Darfur. Exist of such services is important to ensure access to services especially PHC which represent the first health facility choice to population especially in rural areas; in 2008, 41% of total health visit took place in health centres, with variation on use of FHU dispensaries between 18% to 1% between rural and urban settings (SHHUES, 2008). Hospitals and urban health centres are better than other rural health facilities in terms of services provided.

Ministry of Health is the main provider of PHC services with 90% of PHC affiliated to it, the police and military sectors share by 0.8% while the private sector with 5%. This fact shows the minimum contribution of other health system partners in provision of PHC services. However, there is considerable amount of contribution of the community to health services construction but, most of the time it is not guided by health system planners' priorities; it is more or less directed to specialized service design. The last two decades showed nurture of the private sector however, it expanded in two states mainly (Khartoum & Gizeira) and to some extent around some other big cities (Sudan Primary health care survey, FMOH, 2010). Ensuring optimal access to PHC services is a challenge by the fact that the package of services provided is only limited to the minimum package components. Furthermore, the package

doesn't include the non communicable diseases as one of the major health problems requires service availability and access in the long run. Furthermore, the family and community component hasn't been realized enough in the way the services are organized or provided. Moreover, it is important to mention that the package is provided in non-integrated manner. This makes the service provision to be influenced by the vertical approach of the national control programs. Nevertheless, coordination of PHC services is crucial for population health, patient satisfaction, access, continuity, comprehensiveness, quality, and efficiency of services, cost and PHC strength (Kringos, *et al.*, 2010). Another striking finding of the PHC facility survey of 2010 was that the minimum package provision is clustered around the cities and urban setting that 67.7% of rural hospitals and 52.2% of urban centre provide the minimum package entirely compared to 3.8% of the rural centres and 21.9% of the family health units. This is not surprising if we notice that 39.8% of the PHC facilities are not functional because of human resources shortage and 34.7% because of the physical infrastructure condition such as buildings, safe water.

3. Health System Governance, Financing & Delivery Arrangement

Primary health care has four main characteristics that determine its performance and contribution to improvement of health outcomes. These components are first-contact care, person-focused care over time, comprehensive and coordinated care as well as family and community orientation. However, the provision of PHC services hasn't matured to guarantee provision of the services in this holistic and comprehensive manner. Within these parameters, policy characteristics are important such as pro poor policies, universal and near universal coverage and minimum co-payments by people. According to this analysis, lack of these supportive policies leads to low score of PHC services in the country. Ultimately, the low score of the country PHC out of the above mentioned characteristics is the reason behind the poor health system outcomes. The high ratio of PHC services to population is associated positively with various aspect of health of population in deprived settings. High number of PHC providers is associated with low post neonatal mortality and heart diseases and cancer mortalities. Furthermore PHC supply significantly reduces the effect of income on health inequality on self reported health status (Starfield, B., 2005).

The current health sector funding using data from several sources, especially the Sudan National Health Accounts 2008 (SNHA, 2008), the SHHS and other studies carried out by or at the request of the FMOH is reviewed within Sudan health sector expenses which represent 7.2 percent of the country's GDP and 9.0 percent of total government budget (far below the target of 15 percent set in the Abuja Declaration). Sudan spends far less per capita than Egypt, Tunisia, Morocco and Ghana but more than Yemen, Syria or Kenya. Sources of financing of health care services in Sudan are multiple. The FMOH provides 42 percent, SMOH 43.7 percent, external aid 13.2 percent and private funds 0.7 percent. However, 36% of the total health expenditure goes to the secondary and tertiary hospitals compared to 6% to

the PHC. Moreover, over 90% of the government health expenditure is directed to the secondary and tertiary hospitals. Nevertheless, 45 percent of federal and states ministries of health funding goes to hospital care with 30 percent allocated for general administration, 16 percent for public health and 2 percent for PHC centres. The system accords little or no priority to pro-poor services. Even the recent initiative to provide “free” health care for pregnant women and children under five as Sudan’s effort to accelerate actions to achieve MDG 4 and 5 targets have not been successful.

Indeed, direct financing of costs of health services by individual households is excessively high (64 percent of all health spending is by households with direct out-of-pocket payments amounting to 63 percent of all payments for health care). While, the public share from total health expenditure is 32.7% out of it 21% to the FMOH, 46% to the states, 12% to the Social Health Insurance Fund and 22% other sectors working on health. Nevertheless, it is important to note that the above mentioned health system actors work without coordination in planning or service provision leading to health system inefficiency and waste of resources.

It is important to note that this report exercise is not an isolated activity. It is closely linked to some ongoing activities that are expected to contribute to the PHC reform. The FMOH started a process of conducting PHC sub-account study to reveal how resources were allocated, managed and utilized to provide different PHC services. Coinciding with this, costing exercise for PHC started to take place to derive/extract unit cost for financial planning/budgeting to improve efficiency of future resource allocation and utilization. This exercise is not limited to the minimum package components; it addresses the comprehensive PHC package. Following the result of the above mentioned studies, marginal budgeting bottle necks exercise will take place to identify resource constraints and challenges ahead. The outcome of all these activities is to come up with outcome focused PHC budgeting to ensure that resource allocated based on outcomes and targets (FMOH, 2012). This report explores the relevant policy options that contribute to the reform of the service delivery in the country through analyzing PHC services context and challenges, and will contribute to more health system focus on providing effective, efficient and equitable health services through minimizing health disparities across the population. Ultimately, the country will reach better health at lower cost through scale up of PHC service provision (Starfield, 2008). It is important to mention that the supply of PHC is associated with lower cost of total health services. Areas of higher ratio of PHC services to population had much lower total health care costs than other areas possibly due to better preventive services and low hospitalization rate. Furthermore, international comparisons of PHC showed that those countries with weaker PHC had significant higher health care cost (Starfield, B., 2005).

Four policy options

Primary health care is defined as a multidimensional system. Its structure consists of three dimensions; primary care governance, economic conditions, and a primary care workforce development. While its process is determined by four dimensions; access, continuity of care, coordination of care, and comprehensiveness of care. The outcome of PHC is measured by quality of care, efficiency of care, and equity in health (Kringos D., et al, 2010). Therefore, addressing access and quality of PHC services dimensions entails modification and adaptation of other PHC system components to ensure implementation and sustainability of introduced change or procedures.

As has been mentioned above, access to good quality PHC services is one of the major health system challenges in Sudan. Nevertheless, there is a need for context relevant options that improve access to good quality PHC services in urban as well as rural setting. The four policy options that are introduced in this section focus on the two mentioned PHC dimensions. Option one and two deliberate on ensuring better financing mechanisms for PHC setting to improve access and quality of provided care by PHC facilities. Whilst, option three and four deal with the improvement of PHC facilities coverage and capacity to deliver the PHC package.

It is important to emphasise that quality is comprehensive and multifaceted concept. Experts mentioned several dimensions of quality however, its importance depend on the context on which quality improvement activities took place. These dimensions can be summarized as technical competence, access to service, effectiveness, interpersonal relations, efficiency, continuity, safety and amenities (Brown L., et al, 1990). From this prospective it is difficult to improve quality of PHC service without improving access to PHC and vice versa. Also, it is important to draw the attention to the point that each of the mentioned four options in this report is dealing with the issues of access and quality of PHC from different angles.

Policy option 1:

Expand Social Health Insurance System for Generating Revenues in Order to Improve Coverage, Access and Reduce Out-of-Pocket Expenditure

It is well recognized that income and risk cross-subsidies in health systems are crucial to achieve universal coverage. Yet this aspect appears to be ignored in many of the policy prescriptions directed at low- and middle-income countries, often resulting in high degrees of health system fragmentation (McIntyre et al, 2008). Introduction and expansion of prepayment systems like social health insurance (SHI) could be the way out (WHO, 2005). Furthermore, there is recent interest in developing countries in this particular health financing mechanism (Carrin2002).

It is almost 17 years since the introduction of the SHI in Sudan yet the population coverage by SHI is still unsatisfactory. It is at 37.7% of the total populations (NHIF, 2011. National Health Insurance Fund: Annual Statistics Report 2011) and is mostly restricted to the formal sector. Nevertheless, the incomplete coverage of the population by health insurance is one of the main risks that health insurance can create to health system, as it creates equity problems (Normand 1999). Many recently introduced social insurance schemes have proved to be relatively inequitable, because they typically start by covering the population employed in the formal sector thus excluding population in the informal sector (Lagarde and Palmer 2006). When only part of the population is covered by SHI, as evident from China and Zaire, disparities are likely, because the cost of health care use facing the uninsured as compared to the insured population is drastically different (Kutzin and Barnum 1992).

Moreover, partial insurance typically exacerbates the already existing equity problems because the insured also tend to have higher incomes than the uninsured. This is especially more pronounced if subsidies are provided to insured members only as reported from Thailand (Pannarunothai and Mills 1997). This will emphasize the possible regressiveness of social insurance contributions, as suggested by reports from some Southeast Asian countries (Wagstaff 2005). Thus this option proposes the expansion of SHI to cover the other sectors of the population to attain universal coverage.

No synthesized research evidence of good quality is available about the effect of SHI on different outcomes. What is presented here is a synthesis from single studies. Most studies of assessing SHI systems- even from developed countries) are in the form of descriptive case studies (Palme et al 2004). This may have been due to the fact that the compulsory nature of such schemes and their nation-wide aspirations make it difficult to experiment with them (Palme et al 2004; Lagarde and Palmer 2006). Descriptive case studies usually provided less robust estimates of effect, but could provide useful insights into the context and factors that contributed to successful or failed implementation of financing approaches (Palme et al 2004).

A summary of the key findings from this synthesized research evidence is provided

Benefits of Social Health Insurance

The health financing is costly and can be a major barrier to access to better health care. The objective of SHI is to share the health-risks between contributors. The expansion of social health insurance will secure a larger pool of contributors, which allows high costs to be spread out and individual contributions to remain relatively low (Palme et al 2004; Lagarde and Palmer 2006). Health facilities do not turn patients back for lack of insurance, because everyone is covered.

Experience on the transition to universal coverage in Austria, Belgium, Costa Rica, Germany, Israel, Japan, Republic of Korea and Luxembourg had shown that extension of the population coverage was associated with the development of the formal economy, together with high and steady growth rates (Lagarde and Palmer 2006). The same evidence had shown that health insurance in some of the high income countries that achieved universal coverage started when they were lower-middle income countries (Carrin 2004).

Improved access

According to Hoffman, 2008 the strong association between health insurance and access to primary and preventive health care is well documented. The fact that SHI is a powerful financing method has increased interest among many developing countries -including some low to middle income countries- in establishing the principle of universal coverage to health care via SHI (Carrin 2004).

Access to care has mostly been assessed by measuring utilization rates, evidence from countries implementing SHI suggested that health insurance may improve utilization of health services and influence reported illness (Pannarunothai and Mills 1997; Hargraves and Hadley 2004; Meera and Rosen 2004; Yengprugsawan et al 2010).

Reduction of Out-of-Pocket Expenditure

Over the past few decades, the notion of growing reliance on out-of-pocket payments and privately organized care has resulted in increased inequities in access to affordable health care and therefore disadvantaged lower-income socioeconomic groups in many African countries including the Sudan (Letourmy 2008). Introduction of Universal Health Insurance in these countries will for sure alleviate the suffering experienced by those target populations. This is clearly evidenced by the recent South-East Asian health reforms (Wagstaff 2005). Furthermore, it seems convincing that Community- Based Insurance schemes, which operate by sharing financial and health risks between the community members will significantly reduce the level of out-of-pocket payment for care (Ekman 2004).

Resource mobilization

Collecting taxes and insurance contributions more efficiently would effectively raise additional funds. Improving revenue collection is something that all countries might need to consider (world health report 2010)

It has been suggested that community-based health insurance schemes have a positive effect on resource mobilization in the operating areas. However, the actual amounts raised are limited (Ekman 2004). The expansion of such schemes may strengthen this effect. This includes maximising efforts to generate revenues to health, resource pooling in one place and regular monitoring of expenditure.

Quality of care

The effect of health insurance on quality of care varies according to the type of health insurance and the setting (Ekman 2004). Little evidence is available on community based health insurance (CBI) effects related to health service quality which can be attributed to many factors (Ekman 2004). However, it is becoming a fact that the insured are more likely to experience good primary care than the uninsured, particularly in terms of first contact, coordination, and comprehensiveness (Shi 2000).

Proper patterns of health care utilization

Evidence from Thailand showed a shift in health service use patterns to primary level facilities following the expansion of SHI. This reflected the gatekeeper function allotted to primary healthcare facilities, and suggested considerable success in channelling inappropriate demand away from secondary level public facilities (Yieng prugsawan et al 2010).

Adaptability to Sudan

The consideration of National Health Insurance as a potential health care financing mechanism is seen as closely linked to the overall (macro) health financing reform in the country and part of the strive for sustainable health financing.

A factor that was found to enhance the speed to achieving universal coverage via SHI is the level of solidarity within a society. A society with a higher level of solidarity is a society whose individuals are more willing to support other individuals. A system of full financial protection requires a significant amount of cross-subsidization, both from rich to poor and from low risks to high risks (Carrin 2004).

In Sudan a sufficient degree of inherent solidarity is available in the society and is expected to enhance the implementation and sustainability of the cross-subsidization intrinsic within SHI.

On the other hand, many challenges need to be addressed to insure the successful implementation and expansion of the NHI. First, the gaps in Legislation/regulation should be tackled to insure the compulsory enrolment of all citizens. Second; the existence of other

government policies that contradict the health insurance such as the free of charge policy should be addressed; Third, Enrolment of the informal sector, given that most of the population belongs to this group. Effective methods are needed to expand the coverage to this sector, Khartoum state experience of partnership with the Zakat fund is a potential example. However, it is important to highlight that the actuarial study for social health insurance in the context of Khartoum state conducted in 2010 and projected to 2013 revealed that there is deficit in the expenses of the coverage of the informal sector enrolment that the low contribution rates for semi-formal sector was SDG 21.2 million at the low case scenario, while the expenses for this sector is double this amount with 50% deficit. Similarly, the total contributions for the enrolees of the universal coverage project were SDG 18.7 million while their expenses amounted to SDG 30.3 with 40% deficit. Although these deficits are compensated by surplus generated from formal sector contributions which was SDG 29.5 million, continuation of the current enrolment practices for informal sectors with low premium rates will affect sustainability of social health insurance (Ferrara G, 2010). Necessary measures are urgently required for adjustment of premium rates to assure financial equilibrium and sustainability of the scheme.

Cost implications

When first initiated, health insurance may involve higher costs than tax-based financing system due to the need to pay for the separate or quasi-separate collection of contributions, claims handling and management of services (Normand 1999). In almost all countries with SHI from USA to China costs tend to rise faster than gross domestic product and salaries.

Cost of health insurance varies from one country to the other depending on:

- Category of population covered.
- Type of services provided.
- Items of services provided.
- Cost of service items.
- Cost of administration..

It is important to have mechanisms for estimating the cost of different packages of benefits in order to determine priorities and the level of entitlement (Normand and Weber 1994).

Now Sudanese SHI is already past this initiation phase and the proposal is to expand coverage. Evidence from USA suggested that increase in national health expenditures (NHE) that could be expected to result from universal coverage might be relatively small. Recent estimates of the costs of reaching near universal coverage suggested a net increase in national health expenditure of 2.1%-3.4 % (Merlis 2009).

Cost escalations can be controlled through selecting the appropriate method of reimbursement of health care providers, In Sudan the fee for service is the method adopted by the National Health Insurance Fund to reimburse the health care providers from both the

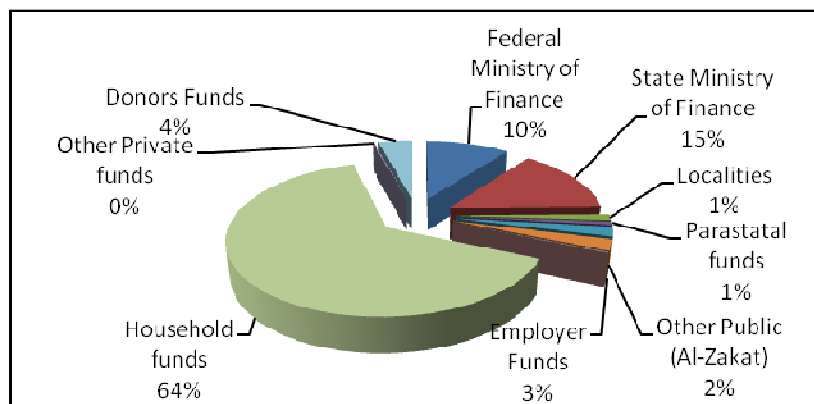
public and private sectors. Another method of reimbursement is retrospective case-based reimbursement, however, no evidence is available as to which of the two methods is more effective (Kutzin and Barnum 1992).

Policy option 2:

Increase the Share Expenditure on PHC in Sudan by improving the resource allocation formula

According to Sudan National Health Accounts (NHA 2008), the total expenditure on health care was SDG 7.1 billion (USD 3.3 billion). However, total government health expenditure as percentage of government is 8.7% which is low government spending compared to the 15% target committed by Abuja Declaration. The local health system act gave the responsibility of PHC components to localities while this was not combined by ensuring of exist of sufficient resources to this level of health system. For instance in 2008 the share of locality authority in health expenditure was 1.3% out of total health expenditure (see figure 1 below) and its share from the government budget was 0.6%. This is not surprising if we notice that the expenditure on PHC is 6% of the total health expenditure.

Figure (1): Sudan national health expenditure by financing agent in 2008



Source: NHA 2008

Under conditions of scarcity of resources in health care financing, four approaches for allocating resources in health care were identified: First approach, is to allocate resources based on the health insurance status of beneficiaries; second method, is to push more resources to primary health care by restricting high-technology services; third approach, is to rely on cost-effectiveness analysis technique for economic evaluation of resources under consideration; and finally, allocating resources based on community values (Green, 1995; Wiener, 1999). From another perspective, there is an increasing need for an outcome-based

planning by considering equity in resource allocation as well as promoting efficiency in spending scarce resources to maximise health gains (McDermott et al., 1997).

This option proposes allocating more resources for primary health care using an allocative formula that takes into consideration local health needs and other relevant variables (morbidity factors, age, gender, poverty, urban versus rural, transient populations and different population needs). This is expected to improve access to high quality health care and remove disparities in access to care.

Evidence that address the elements of this option is available in the form of systematic reviews as well as single studies. A summary of the key findings from this synthesized research evidence is provided

Benefits of allocating more resources to primary health care

1. Access to primary health care including equitable access

To analyse the effect of resource allocation on access to primary health care, the method of financing primary health services in place needs to be considered. Hence, a systematic review for findings from 17 studies mainly in primary care settings in low-and middle-income countries assessed the effect of introducing, removing, or changing user fees on access to essential primary health services (Lewin et al., 2008). The main conclusion from this systematic review is that the introduction or increase in user fees greatly reduces access to primary health care, while the removal of user fees improves access to primary health care immediately. However, removal of user fees by subsidising service as result of allocating more financial resources has the potential of increasing demand for unnecessary services (Lewin et al., 2008).

Evidence from Namibia demonstrated that the population-based allocation of resource has the potential of promoting equitable access to health care between and within regions and provinces in Namibia (Bell et al., 2002). In Australia, the resource distribution formula adopted in New South Wales has demonstrated an outstanding success in diminishing disparities in access to primary health care since areas with relatively high need receive new resources faster than other areas with less need of health services (NSW Department of Health, 2005).

Resource allocation formulas proved to be effective in improving equity in access to health in Chile and Colombia. This was through redistribution of resources from the rich to the poor using the horizontal equity fund, and Increasing investment in the municipalities and district facilities rather than redistribution from the wealthier quintile respectively (Briscombe et al., 2010).

The health system in Sudan is decentralised with different overlapping roles between the national level and state levels. Resource allocation formula for distributing health care budget is not available at both levels and PHC receives very little budgets. Currently, budgets

transferred to the states are not earmarked, there is no national budget or fund to PHC and funds are allocated depending on historical data and changing priorities of the local governments. For instance in 2010 it has been found that health facilities use only 27% of its allocated budget from the ministry of finance (public expenditure tracking survey 2010). This fact from the authors' knowledge, the staff capacity at different levels of the health system is not adequate to perform the budgeting process in an efficient way since budgets are processed in traditional practices including the release of funds and the capacity to absorb released budgets. Building staff capacity to perform budgeting process in scientific bases is a crucial part for implementing this option.

Advocacy among different levels including the ministry of finance, national assembly, state governments and ministries of health is required to convince policy makers in allocating more resources to PHC as cost-effectiveness approach in improving the health outcomes of the population.

2. Quality of health care

There is an increasing interest in allocating more financial incentives for physicians to improve quality in primary health care. However, a systematic review for seven studies revealed that there is insufficient evidence to support or un-support the use of financial rewards for improving quality at primary health care (Scott et al., 2011). Another review reported small and partial positive effect of financial incentives in improving quality of care at primary health care when rewards were directed to either individual physicians or provider groups (Lewin et al., 2008).

Quality of care may be improved by introducing an accreditation system for quality improvement in health care (see policy option 3).

3. Health system management

Experience of Ghana showed introduction of resource allocation formula which resulted in progress in deconcentration of health budgets; financial allocations go directly to the districts from central government, improving disbursement times, However, district budget approvals is still controlled by the centre. Planning and budgeting improved through decentralization (Briscombe et al., 2010).

Applicability in Sudan

The fact that this method of resources allocation has been implemented successfully in countries more or less similar to Sudan, such as Kenya and Namibia, is in favour for its applicability in Sudan.

Generally there is inequity in distribution of health resources all over Sudan, between states and within states. Tertiary health care facilities receives the majority of health budgets while very little is allocated for primary health care. Evidence revealed that scarce resources for

health managed effectively and efficiently by introducing resource allocation formula at both policy making and stewardship level of the health system as well as at the operational level (Diderichsen, 2004).

In addition to the above, health system financing is fragmented between different actors including the Ministry of Health, Social Health Insurance Fund, police and military medical services, and the private sector (SNHA, 2008). This fragmented structure is neither efficient, nor equitable, risking the sustainability of the health financing system. To promote equity and efficiency by implementing feasible resource allocation formula, the fragmented funds needs to be coordinated to strengthen the purchasing authority of the system (Diderichsen, 2004).

The existing system of allocating resources in Sudan is based on historical budgets which reinforce the current inequities (Diderichsen, 2004). However, measuring the actual need of populations requires a very well-functioning health information management system.

According to Diderichsen (2004), technically the resource allocation formula depends on broad issues; the size of the population to be served, the characteristics of the population; and the weight given to each of these factors when translated into monetary values.

For example, using the utilisation rates to weigh the need factor of the population can be technically calculated by the following regression model:

Utilisation/Cost = B1 + B2 + Constant

- B1=need factor, B2= Supply factor
- B1 represents a range of coefficients related to the socio-demographic characteristics of the population, and B2 represents coefficient for supply factors.

Cost Implications Risks and Harms

Investments are needed to build the managerial capacity at primary health care level in order to manage and use the additional resources efficiently. Furthermore, implementation of resource allocation formula is challenged by some issues. First, existence of updated, reliable, and valid data are often difficult to find across all regions and sub national level. However, data-based policy formulation can raise awareness of data gaps and motivate all those who are involved in producing more accurate and timely data. In addition to, manipulation of reported information is one of the experienced risks of adopting this financing method. For instance; in Kenya the districts reported exaggerated negative indicators to get more funding. Another significant challenge is that whenever a district report improvement in its indicators, this result in receiving less amount of budget in subsequent round. Finally, many resource allocation formulas fail to address equity in drugs and human resources issues due to the difficulty in its quantification in monetary terms (Briscombe et al., 2010)..

Policy option 3:

Strengthen the quality of PHC either by ensuring PHC is emphasized within the existing higher council for quality accreditation, or by establishing a separate PHC accreditation body.

Accreditation is the recognition of a health care facility or program that it has met a defined number of standards for quality and safety of their services and that it can be recognized for its meeting the standards for a limited period of time (Montagu, 2003).

Accreditation standards are typically developed by a consensus of health care experts, published, and reviewed and revised periodically in order to remain updated with the current state-of-the-art thinking about health care quality, advances in technology and treatments, and changes in health policy. Depending on the scope and philosophy of the individual accreditation program, accreditation standards may take a “systems” approach that is organized around key patient and organizational functions and processes, such as patient assessment, infection control, quality assurance, and information management. Alternatively, standards may be grouped by departments or services within a health care organization, such as nursing, pharmacy, and radiology services (Rooney 1999)

Quality care is the ultimate goal for the patient, the provider, the organizational leader and the policy maker. Thus today, accreditation is affirmed as a process designed to improve quality, efficiency and effectiveness of a health care organization including its structure process and outcomes (Pomey 2004).

Accreditation may be voluntary where health care facility might opt to acquire an accreditation, or compulsory, enforced through legislation, where all health facilities are standardized all under one accreditation scheme. (Rooney 1999; Pomey 2004)

Accreditation Benefits:

- Accreditation benefits all stakeholders. With patients being the biggest beneficiaries, they get services by credential medical staff, added to that accreditation results in high quality of care and patient safety. Another benefit for the patients is that their satisfaction is regularly evaluated and their rights are respected and protected.
- Accreditation of a hospital stimulates continuous improvement, and it enables hospitals to demonstrate commitment to quality care. Again as far as staff is concerned, it was found that staff in an accredited hospital are satisfied as it provides them with opportunities for continuous learning, good working environment, leadership and above all ownership of clinical processes. It also raises community confidence in the services provided by the accredited hospital.
- Accreditation also provides opportunity to healthcare units to benchmark with the best.

- Accreditation improves overall professional development of clinicians and paramedical staff and provides leadership for quality improvement within medicine and nursing.
- Accreditation provides an objective system of empanelment by insurance and other third parties (EL-Jardali 2005)
- Accreditation provides access to reliable and certified information on facilities, infrastructure and level of care (Liu 2008)

In addition, accreditation can maximize quality of care and patient safety, it ensures effective and efficient use of resources. It is both a regulatory tool for the State to guarantee quality care to the population and a process that organizations use to evaluate and improve the quality of their health services (Shortell 1995). Despite all that still the literature presents a complex picture of the benefits. Professionals generally have a positive attitude towards accreditation of health facilities because they believe it provides better organizational performance, and enables collegial decision-making. Nevertheless, some believe the program is bureaucratic and time consuming for the organization to use. There is evidence that the activity of undergoing accreditation promotes change and professional development in health organizations. However, limited evidence was found on the organizational or financial impact of this process (Greenfield 2008).

Accreditation process entails on site assessment of whether specific standards are met by a health facility. In this context, health services are encouraged to implement quality improvement frameworks. The literature describes quality improvement associated with accreditation, from the perspective of Lebanese nurses. In this experience, there is evidence that accreditation can significantly improve quality of services in small and medium size hospitals. Another observation on this study is that linking accreditation to private services contracting encourages private hospitals to implement the accreditation standards (Greenfield 2008).

However, analysis of accreditation implementation barriers identified that difficulty in changing the organization culture towards adopting quality related measures and standards is a major concern. Development of independent accreditation body is important to ensure sustainability of accreditation system. Evidence shows that different sources of financing national accreditation body (i.e. public sector, providers, professional associations, and buyers) will assure its political independence and sustainability (Montagu 2003). In order to promote the sustainability of a permanent accreditation process at the national level, literature recommends the establishment of a national commission on hospital accreditation (Montagu 2003). Combination of quality improvement objective of accreditation with financial incentives might shift the facilities' objective towards attaining accreditation rather than adopting quality improvements standards. International experiences showed that accreditation creates complex incentives that need strong government regulatory capacity to evaluate outputs and outcomes rather than inputs. Finally, adoption of the system approach in development of accreditation criteria and process is important to ensure its effectiveness.

As far as Sudan is concerned, accreditation is highly applicable and necessary to the current setting as there is ongoing process to promote the quality and standards of PHC setting. Recently the FMOH developed the national standards for all health services including PHC services. The FMOH also revised during this year the PHC package to move forward towards improving its coverage. The first benefit of accreditation in this context is that through accreditation the FMOH can oblige the states to invest in PHC package coverage by putting certain standards as minimum requirements for the PHC service to operate. Furthermore, performance of PHC services in meeting national targets can also be a prerequisite for accreditation. In addition, quality data about services performance can be an objective tool to direct the resources or even create centres of excellence. Accreditation is better granted from an independent body, to avoid conflict of interest, and have a level of autonomy to enforce it. It is recommended to enforce a compulsory accreditation scheme to PHC, with an analyzer approach for its implementation.

Sudan has moved some steps forward towards adopting accreditation of health care facilities. Federal Ministry of Health implemented accreditation project in 10 hospitals this was piloting project to oversee the best way to do the accreditation of hospitals, this project took place in March 2010 and the result of its implementation was promising (Quality Depart., FMOH, 2010, National Accreditation Piloting Project Report, 2007). Furthermore, the FMOH took steps to arrange for development of independent national accreditation body. This body can take the responsibility of PHC facilities accreditation (Quality Dept., FMOH 2010 Annual Plan Report).

Applicability to Sudan

Sudan could also benefit from other countries in the region. Moving towards efficiency and cost containment of health care systems, some countries in the East Mediterranean Region (EMR) are entering a new era in quality care improvement and patient safety. Qatar and Lebanon are now in process of conducting accreditation of PHC services in collaboration with Accreditation Canada International. Furthermore, India has quite a valid experience in PHC accreditation in term of health and outcomes; it has established a separate entity for that. (<http://nabh.co/international/index.asp>) it is also important to mention that there is also regional movement lead by the Arab League to foster the health services accreditation to improve health service provision, that a meeting of a Committee of national experts took place in 2010 for discussion of the statute and internal regulations of the Arab Organization for the adoption of health institutions, in the capital Beirut Republic of Lebanon. Participants of the meeting were representatives of the following countries: Jordan, Bahrain, Algeria, Saudi Arabia, Sudan, Syria, Oman, Iraq, Qatar, Kuwait, Lebanon, Libya, Egypt and Yemen

In conclusion we would safely say that there is great opportunities for implementing this option in Sudan , especially that all over the Arab World accreditation is now been taken very seriously.

Policy option 4:

Build the capacity of the primary health care settings to enable them to deliver the integrated health package.

Currently in Sudan, nearly 15% of PHC facilities are not functioning, a minimum of those functioning actually provide the full package of PHC (PHC survey, FMOH 2010). PHC units are not in a capacity to provide even the minimum PHC service package; Expanded Program for Immunization, Anti natal Care, Nutrition and Integrated Management of Childhood Illnesses (IMCI), currently having coverage of 76%, 20%, 17% and 22% respectively greatly due to health facilities lacking the maintenance and rehabilitation, health manpower becoming demoralized due to lack of supervision, incentives and other running cost requirements. There is a widening gap between urban and rural distributions of the PHC units. Until this gap is met, there is a demand to upgrade existing units to increase utilization and acceptability by the community and to meet, at the least, the minimum PHC package requirements. This option advocates increasing the capacity of the existing PHC facilities to provide quality minimum service package.

Approaches or Requirements for Adoption of the Essential Package

(A) Design and Improvement of the Package

Data is needed to design PHC package; however, countries can start by provisional PHC package while subjecting it to assessment and improvement after development of analytical databases. Development of local health managers' capacity for decentralized health system is important to inform priority- setting for community- oriented care. Furthermore, to enforce the adoption of the package, the national level requires states and localities to provide at least these services to be qualified for national funding (Bobadilla 1994). Physical infra-structure is important, such as basic infrastructure or supply chain especially in underserved areas. Lack of infrastructure hinders the ability of the country to scale up (Jhones 2005).

The experience of defining the PHC package was not successful globally. Most of the time, it is done in a hurry, without the participation of the concerned stakeholders (mainly community) and is full of value judgment. Moreover, there is a lack of attention to chronic diseases, non-communicable problems and population demand and need, which made it

focus on women and child health problems only (Tarimo, 1997), in this regard Sudan is not an exception.

(B) Development of Effective Public Policies for Health

Strong policies are needed to reorient the health system towards PHC values. “Hospital centrism” approach represents the major challenge that needs strong policies to make health system PHC oriented to increase its efficiency, that the disproportionate focus on specialty care provides poor value to money and carries opportunity cost. In Sudan the ministry of health developed document of description of health facilities. On top of this a mapping survey exercise took place to identify states’ needs in term of health services. However, there is a need for enforcement of construction of services in states according to the agreed upon plans as there is always political and community interfere in this process.

Policies to scale up PHC service are also needed such as policies to enforce gate keeping or coordination role of PHC to transform the relation between PHC and other institution from top down hierarchy to networking and coordination approach. Policies and procedures are needed to foster continuity of care including completeness and continuity of information and good referral system

Furthermore, the move towards sectoral and cross sectoral policies is important to better influence the health of the population however, it needs intensive intersectoral communication and collaboration (World Health Report 2008).

(C) Scaling up the Package Coverage by Contracting out Private Sector

Evidences found that contracting out private providers increases geographical access, improves patients outcomes and reduces household expenditure in low and middle income countries. Public sector can benefit from already existing specialists clinics or outreach services, to improve access, health outcome and service use (Gruen 2009). However implementation of this approach needs to be accompanied by strong regularity measures to protect the public interest. (Kumaranayake, 1997, Brugha, *et al.*, 1998).

(D) Integration of PHC Programs

Limited evidence exists to support integrated versus vertical approaches for delivering PHC services. Systematic reviews around the integration of chronic condition management showed positive impact on service utilization, quality of life, functional health and patient satisfaction. This review supported the Wagner theory which identified 6 components for good chronic care; community support and policy, health care organization, self management support, delivery system design, decision support, and clinical information system. This review also, recommended that integration of program should include at least a combination of interventions that target professionals, organizations and patients (Ouwens 2005).

Moreover, there is evidence that 'adding on' services (or linkages) may improve the utilization and outputs of healthcare delivery, greater public access, including more equitable access for people from different communities and socio-economic backgrounds, a more convenient and satisfying service, and better overall health. Integration should also make the service more economically efficient. However, integration could have unwanted effects if it results in overloaded or deskilled staff or reduces ability to deliver specific technical services (Lewin 2008).

(E) Community-targeted Strategies

Communities need to be more aware and encouraged to access PHC as gateway for treatment management. They also need to be persuaded that services provided at PHC will gain their satisfaction. Several community targeted interventions have proved beneficial:

- The use of local opinion leaders and mass media to shift usage of healthcare towards PHC utilization as the first gate way for treatment management (Grilli 2002). Evidence has shown that mass media information on health-related issues may induce changes in health services utilization. Careful planning is needed to ensure that the message reach the needy population (Grilli 2008).
- Using existing community lay health workers (CHW) to advocate PHC to increase uptake and acceptability by the community. Studies have shown that using trained community members on advocacy has proven effective in some PHC health care services (Lewin 2010).

(F) Human Resources Management Strategies

Motivation of existing health workers in PHC and improving working and living conditions may be more effective than increasing wages to increase retention and reduce migration flows (Willis-Shattuck 2008). There is existing evidence on the need for both financial and nonfinancial incentives for motivation and retention. Non financial incentive that were found to be significantly beneficial in motivating and retaining health workers were; recognition and motivation, training and education opportunities and clear career developmental pathways. Adequate supplies and appropriate infrastructure are also factors that can significantly improve morale (Willis-Shattuck 2010). There is an important role for leadership on employee job satisfaction, job well-being, sickness and absence. PHC managers should receive training on role of leadership on employee satisfaction (Kuoppala 2008). There is also strong evidence relating to selection of medical students from rural area as a main factor for retaining doctors in rural areas.

Evidence has shown that continual medical education to health professionals had positive effects on improving professional practice and the achievement of treatment goals by patients (Lam 2005). Trained people visiting clinicians where they practice and provide them with information to change how they practice have been proven effective in improving overall providers' practice (O'Brien 2007). Although this may prove costly, cost-effectiveness is

better achieved by planning this type of visitors as well as Educational outreach visits (EOV) targeted at certain professional behaviors instead of EOV that are general and nonspecific (O'Brien 2007). Other interventions that have shown to improve practice of PHC professionals is emergency care training especially care provided to seriously ill newborns or children (Opiyo 2010). Audit and feedback have also been found to be effective in improving professional practice, significantly so when baseline adherence to recommended practice is low and when feedback is delivered more intensively (Jamtvedt 2006).

Compared to other specialists, general practitioners in primary health care can manage many diseases with the same quality and often at considerably lower cost (Baker 2010). Increasing the number of PHC general practitioners have proved to increase over all accessibility to PHC and it had long term effects on lowering total costs on health care systems as well as on maximizing better health for populations at developed countries this was not true for availability of other specialities (Baker 2010). Evidence has shown that populations having a PHC physician as their primary source of care had less hospital in-patient care than populations identifying hospitals as their primary source of care. This has shown to reduce burden on tertiary facilities and, consequently, reduce overall cost on health care system (Engstrom 2001). Also, maintaining PHC doctors will guarantee personal continuity of care and thus will increase patient satisfaction and compliance with therapeutic regimens, reduced hospital admissions, and save time and laboratory tests in primary care (Baker 2010).

(G) Health System Management Strategies:

Establishing specialized clinics (specialists outreach clinics) in existing PHC settings have proved to increase accessibility. Coupling these specialists clinics with other interventions, involving PHC collaborations and education, have proven to improve patients' outcomes with more efficient and guideline-consistent care (Gruen 2003). Further evidence has shown that relocating specialists to primary care, and joint working between primary and acute care, improved access without jeopardizing quality and reducing demand on acute hospitals (Sibbald 2007).

Evidence has shown that significant effects on patient outcomes happen if interactive communication between primary care physicians and specialists in chronic illnesses is used. Interventions to improve the quality of information exchange increases effectiveness of the different modalities (Foy 2010).

Very strong evidence has shown that improving referral at the PHC level is very much influenced by involvement of health care professionals (consultants) in teaching about referring. Simply distributing guidelines and providing health care professionals with feedback about how they are referring may not improve the process (Akbari 2008).

(H) Strategies to Strengthen HIS

The potential for health information exchange to reduce costs and improve the quality of health care in primary care practices is well recognized (Fontaine 2010):

Establishing quality reporting programs that can include different types of PHC personnel with training on gathering and reporting data on quality care indicators proved to be significant. Mandatory reporting of quality data by primary care practices and payment based on quality indicators are developing rapidly as policy initiatives in many developed countries. Some evidence showed that it may be costly if multiple reporting programs are simultaneously run but other evidence showed that participation in one reporting program led to easier implementation of another program resulting in overall reduction of cost (e.g. reporting used by laboratories were used by another service within PHC) (Halladay 2009).

The implementation of this option has cost implication on the health system in general or PHC services financing in term of cost of supervision and monitoring of scaling plans especially when coverage extend to remote areas where there is limited staff capacity that require frequent visits and training activities. Cost implication of training and retaining of skilled personnel has to be considered when planning scaling up.

Barriers to options implementation

Different potential implementation barriers to the options have been identified. These barriers have been summarised and presented below in table no 2.

Table no 2 Potential Barriers to Implementing the Options

	Option 1	Option 2	Option 3	Option 4
Patients	Enrollment of some community groups in SHI especially those of low income rate	Utilization of PHC is low compared with secondary and tertiary services	N/A	Community prefer hospital care compared to PHC services
	current SHI package doesn't cover preventive services			
Professionals	Moral Hazard	Resistance from professionals in secondary and tertiary levels	Resistance from professional towards regulation	Qualified professionals refuse working in PHCs
	Compliance with post implementation guidelines		Resistance to change the existing culture, attitude,	
Organizations	Weak Referral system	High turnover of staff at remote areas and at locality management level	Low health facility management capacities and gaps in leadership skills	Poor infrastructure
	Collection of premiums from informal sector	Risk to depriving hospitals of existing resources Capacity of PHC units to utilize the new resources Agreement on distribution formula.		High turnover Shortage of human resource number and capacity
Health system	Fragmentation of health financing system	Political and public orientation towards hospital care	Costs	Costs
	Hard to research population	Inadequate data to use the formula		
	Increased cost due to expansion			

Table no 3: Summary of Barriers and Implementation Strategies

Level	Option 1		Option 2		Option 3		Option 4	
	Barriers	Strategies	Barriers	Strategies	Barriers	Strategies	Barriers	Strategies
Patients	Enrollment of some community groups in SHI especially those of low income rate	Emphasis on community health insurance Subsidies to some groups Mobilize charity fund	Utilization of PHC is low compared with secondary and tertiary services	Policies and interventions to promote quality of care at PHC. Regulations to encourage community to use PHC services Improving referral system (gate keeping) Incentives for household to use the services	N/A		Community prefer hospital care compared to PHC services	Advocacy for awareness raising Involvement of community in service planning
	current SHI package doesn't cover preventive services	Revision/extension of the current package						
Professionals	Moral Hazard	Setting protocols/guidelines/ training	Resistance from professionals in secondary and tertiary levels	Involve /engage them early on in planning	Resistance from professionals towards regulation	Involve /engage them early on in planning	Human recourse gap is seen as a critical barrier to expand PHC coverage	Introduction of multipurpose staff and integrated training to the existing cadre
	Compliance with post	Involving			Resistance to	Advocacy, ,		

	implementation guidelines	professionals in development of protocols			change the existing culture, attitude	motivation, supervision, training and incentives	particularly to rural areas. Qualified professionals refuse working in PHCs	Contracts Retention & deployment policies
Organizations	Weak Referral system	Improve referral system: a- Guidelines b- Legislation c- Triage system d- Health system gate keeping	High turnover of staff at remote areas and at locality management level	Retention strategies a- Financial and non financial incentives b- Improve work conditions c- Develop a career pathway	Low health facility management capacities and gaps in leadership skills	Guidelines Training Legislation Good M & E Adult and feedback	Poor infrastructure High turnover Shortage of human resource number and capacity Context of conflict, instable areas, displacement and urban migration	Generate revenues and rehabilitate Retention strategy: refer everywhere Task shifting
	Collection of premiums from informal sector . There is gap in the information to guide this process	Explore institutes that may contribute to expansion in the informal sector, such as: private sector including NGOs, unions, and charity. In this regard it is important to benefit from the experience	Risk to depriving hospitals of existing resources Capacity of PHC units to utilize the new resources Agreement on distribution formula.	Definition of levels of care and application of the referral system Training to improve hospital management for better efficiency Develop need-based formula				

		of Khartoum state. Proper evaluation to draw lessons from this experience is recommended.						
Health system	Increased cost due to expansion	Mobilisation of resources from vertical programmes and free of charge care eg mother and U5 care Taxation – allocation of ear-marked and sin tax revenues to PHC	Political and public orientation towards hospital care	Lobbying and advocacy among politicians and the public Application of need certificate policy for new facility construction	Costs	Generate revenues through a- mobilisation of local funds b- external funds	Costs	Generate revenues as before Contract out private sector to reduce cost of staff payment and construction of facilities Integrate service at delivery level to increase efficiency in resource use
	Hard to reach population	Outreach services Liaising with community based organisations to collect premiums	Inadequate data to use the formula	Improve health information system: - Standards - Guidelines - Training - Legislation - Supervision				

	Existence of conflicting national policies that fragment government funds and create overlap with NHI (e.g. free for charge policy, funds to armed forces)	Development of the national health financing policy as part of the overall macro reform of the sector	In clarity of roles between national, state and locality level. PHC is regarded as a state level business, while no money is transferred to the states to meet this responsibility	The constitutional amendment is under process and it will be useful to make use of this opportunity to address constitution gaps				
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Implementation Considerations for Options

Summary:

- Interventions addressing PHC since Alma-Ata have been evaluated in many systematic reviews and overviews. There are no rigorous evaluations to assess the value of a number of important interventions such as integration of services, referral systems in low-income and mid-income countries and the community health insurance. On the other hand, extensive evidence is available to evaluate other interventions such as task shifting.
- Enablers for successful PHC interventions include:
 - Adopting innovative participatory approaches where policy makers, providers and beneficiaries are closely involved in developing and implementing the programs
 - Models have to be evidence-based to avoid collapse of the intervention
 - Tailor-made approaches where the interventions are built on context-specific analysis to identify and address bottlenecks
 - Adopting the “Easy Entry-Gracious Exit model” especially in rural areas
 - Rigorous system of monitoring and evaluation of these interventions.
- Implementation strategies to address the barriers for promoting quality access to PHC services may include:
 - Optimizing the use of existing resource through task shifting, leadership and management capacity building, introduction of quality systems and strategies to improve prescription practices. Integration of services and referral systems can be attempted through a monitored process to learn from the experiences.
 - Generate resources and improve access and utilization to PHC services through introduction of community health insurance, counseling the communities for better use of their welfare benefits, mass media advocacy, alert and feedback systems and incentives to households to use the services.
 - Expanding the services to cover hard to reach populations through contracting out of services, incentives for services.
 - Improve professional practices through training, incentives, regulation and audit systems.

Promotion of access to good quality Primary Health Care Services entails different interventions to increase access to services, whether financially or geographically. Further, it needs investing in improving quality of services provided at this level of service delivery. However, improving access to good quality PHC services requires action at different health system levels. This piece of work presents an opportunity to visualize how PHC interacts with and is influenced by other health system components. Implementation strategies capitalize on enablers for implementation of each discussed option while addressing barriers that encounter their implementation.

Enablers for implementation of the four options chosen to promote access to good quality PHC services are:

- Process already undergoing to improve financing PHC services. FMOH is now doing PHC costing study to oversee the financial resources that are needed to finance PHC. Part of this process is a rapid review of the PHC package which took place at the national level.
- Currently the health insurance fund is focusing on improving service purchasing and coverage of the population. Khartoum state made good progress on that. This experience is an asset for overseeing how to cover the informal sector.
- FMOH has developed a national department to work on localities management improvement, enhance PHC coverage and capacity to provide PHC package.
- Moreover, FMOH developed a separate general directorate for quality of care enhancement. Up to now, there is a national body for accreditation of hospitals and there is quite good experience on hospitals quality assessment.
- The National Continuous Professional Development Centrewas developed at the national and state levels to foster service capacity building. These bodies are active and have successful projects.
- Finally, efforts have been made to recruit family practitioners to work in PHC setting. Gezira state and Gabel Awlia Locality in Khartoum state have promising ongoing projects working on contracting family practitioners to work on Primary Health Care Centres, but it hasn't been evaluated yet.

Evidence regarding barriers and strategies to promote access to good quality PHC is presented on table 3.

1-Key barriers to promoting access to high quality primary health care services in Sudan.

Inability of Existing System to Cope with Service Expansion:

The network of primary health care facilities does not extend to cover all parts of the country. Services tend to concentrate more in urban areas. There is extensive need for infrastructure rehabilitation and provision of equipments. Human resources are inadequate in terms of numbers and quality. Sudden expansion may impact the coping capacity of the system. The resource needs might be huge and pose a challenge to be availed. Hard to reach populations are of special concern.

Implementation strategies	Evidence
Integration of services at facility level	<p>The bulk of evidence for PHC effectiveness is focused on infant and child health, but there is also evidence of the positive role of PHC on population health over time. The integration of services at health facilities was well studied with contradicting outcomes. Although previous studies and reviews documented the scarcity of evidence to support the contention that an integrated approach to primary care can improve health (Dudley L et al, 2006, Lewin et al, 2008), recent studies and WHO report have supported this contention proved by the increase in utilization of health services and improvement of the health status (WHO report, 2008,Macinko, et al, 2009).</p> <p>,</p>
Task shifting	<p>Randomized controlled trial assessed the effects of community or lay health workers interventions in primary health care: “Lay health workers show promising benefits- compared to usual care- in increasing uptake of childhood immunization, promoting breastfeeding, reducing child mortality, reducing morbidity from childhood illnesses and improving outcomes from tuberculosis treatment”.</p> <p>A review of 34 studies that examined the substitution of doctors working in primary care by nurse practitioners found evidence of low to moderate quality that “patient outcomes and care processes were similar for nurses and doctors and that patients were more satisfied with care from nurses than from doctors” (Lewin et al, 2008).</p> <p>Some practice nurses perceive academic requirements and challenges, and difficulties finding locum cover for study leave</p>

Implementation strategies	Evidence
	<p>as barriers to becoming a nurse practitioner (Carr et al., 2005) and nurses at PMS pilot sites perceived a range of inhibiting factors including resistance and hostility from family doctors locally, regulatory limitations including authority to prescribe, liability status and inadequate training opportunities as barriers to taking on a leadership role (Walsh et al.,2003; Roe et al., 2001). Similarly, a recent questionnaire survey identified occupational stress, lack of clarity of roles, little consensus on core competencies, need for further training and constraints on time and resources are the most common frustrations associated with undertaking APCN roles and some nurses have expressed uncertainty about the ability to progress in their career (Ball, 2005). However, interestingly, only 1% of respondents intended to return to generalist practice (Ball, 2005)</p>
Contracting out	<p>A review of studies looking at contracting out primary and secondary health care services in low income and middle income countries found evidence that “the use of nongovernmental organizations to deliver care can increase access to and use of services, improve patient outcomes and reduce household health expenditure” (Lewin et al, 2008).</p>
Strengthening leadership and management skills and systems	<p>Organizational leadership training is crucial since evidence indicates that senior leader’s actions are associated with successful and unsuccessful improvement programs and with quality and safety performance of the health care organizations they lead (Ovretveit, 2005)</p> <p>It is uncertain whether supervision has a substantive, positive effect on the quality of PHC in low- and middle-income countries. The long term effectiveness of supervision is unknown (Bosch-Capblanch,2011). A small positive effect on provider practice was found in two out of three studies which compared supervision versus no supervision (Kafle 1995; Stanback 2007); whilst only one of these studies (Stanback 2007) demonstrated a small positive effect on provider knowledge. Of the five studies examining various methods of enhancing supervision, only two of the studies demonstrated small positive effects on worker performance. These included</p>

Implementation strategies	Evidence
	when supervision was more frequent and supportive (Ayele 1993)
Introduce quality improvement systems at PHC level	Quality improvement strategies, including those tailored to address identified barriers, can have important, although modest, effects on primary health-care quality (Lewin et al, 2008). Improvement of quality of health services encourages utilization of health services even if it is combined with charges (Palmer, <i>et al.</i> , 2004).
Regulations to encourage community to use PHC services (gate keeping)	Gatekeeping function enables better health care cost control by limiting use of unnecessary specialty care to improve quality by protecting patients from potentially harmful technology. Gate keeping also holds the promise of improved continuity and coordination of health care, two of the cornerstones of primary care, by requiring a single provider to deliver or integrate all services a patient receives (Forrest, <i>et al.</i> , 1999 & Brekke K, 2003), however it can be opposed by specialists and difficult to be implemented in settings where patients are free to choose the providers (Rico A., 2003)

High Turnover, Attitude, Culture and Resistance to Change by Health Professionals

Implementation strategies	Evidence
Retention & deployment policies	Despite lack of reliable evidence, selection of students with a rural background, the establishment of university departments and/or teaching clinics in rural areas, rural and scarce skills allowances and enhanced professional and personal support are good retention strategies. However, the country's ability to recruit and retain health care professionals in underserved areas depends on provision of a stable, rewarding and fulfilling personal and professional environment (Grobler L, 2009). Therefore, (Uta Lehmann, 2008) argue that interventions with regard to this matter needs multi-sectorial collaboration and support of actors beyond MOH
Pay for performance	"A number of studies reported partial or positive effects of

Implementation strategies	Evidence
	<p>incentives directed at providers groups on quality measures.” Financial incentives can be used to influence provider and patient behaviours, but can also have undesirable effects. Simon (Lewin <i>et al</i>, 2008).</p> <p>A review of 7 studies found that there is insufficient evidence to support or not support the use of financial incentives to improve the quality of primary health care. The study concluded that implementation should proceed with caution and incentive schemes should be more carefully designed before implementation. (Scott A <i>et al</i>, 2011)</p> <p>As mentioned by (Godson <i>et al.</i>, 2000), it is widely believed that the method of payment of physicians may affect their clinical behaviour. Although payment systems may be used to achieve policy objectives (e.g. cost containment or improved quality of care), little is known about the effects of different payment systems in achieving these objectives.</p> <p>A systematic review found that “Financial-incentive programs for return of service are one of the few health policy interventions intended to improve the distribution of human resources for health on which substantial evidence exists. However, the majority of studies are from the US, and only one study reports findings from a developing country, limiting generalizability. The existing studies show that financial-incentive programs have placed substantial numbers of health workers in underserved areas and that program participants are more likely than non-participants to work in underserved areas in the long run, even though they are less likely to remain at the site of original placement.” (Bärnighausen, 2009)</p>
Training, educational meeting, interventions to change professional practice	<p>It is evident that certain strategies such as targeted recruitment and training as well as incentives and compulsion are frequently reported (Lehmann <i>et al</i>, 2008).</p> <p>A review to assess the effects of educational meetings on professional practice and healthcare outcomes concluded that “Educational meetings alone or combined with other interventions, can improve professional practice and healthcare outcomes for the patients. The effect is most likely to be small and similar to other types of continuing medical education, such as audit and feedback, and educational outreach visits.</p>

Implementation strategies	Evidence
	<p>Strategies to increase attendance at educational meetings, using mixed interactive and didactic formats, and focusing on outcomes that are likely to be perceived as serious may increase the effectiveness of educational meetings. Educational meetings alone are not likely to be effective for changing complex behaviors (Forsetlund <i>et al.</i>, 2009).</p> <p>Baker (2010) argued that face to face training of pharmacy attendants which targets deficits in knowledge and specific problem behaviours can result in significant short-term improvements in product sales and communication with customers.</p> <p>Targeted interventions to identified barriers improve or change professional practice than no intervention or dissemination of guidelines (Baker, <i>et al.</i>, 2010)</p>
Prompting physicians	<p>“Dependable performance improvement in preventive care can be accomplished through prompting physicians. Health care organizations could effectively use prompts, alerts, or reminders to provide information to clinicians when patient care decisions are made.” This was a conclusion of a series of meta-analyses on triggering clinical actions. The statistical analyses included 33 eligible studies, which involved 1547 clinicians and 54 693 patients. (Balas, <i>et al.</i>, 2000)</p>
Involve providers in policy and evidence development	<p>A paper aims to take a reflective stance on the relationship between policy/evidence and practice argued that “health care practitioners’ (managers’) active involvement, skills and creativity became essential for utilising either policy directives or research evidence”.(Gkeredakis, <i>et al.</i>, 2011)</p>

Attitude of Consumers Towards Primary Health Care

Many people are reluctant to use primary health care preferring secondary care institutes. This attitude is a reflection of people’s perception that care in hospitals is of better quality. There is no referral system and it is possible for patients to by pass the first contact level. Politicians – in line with public option- tend to interfere in health decisions, favouring secondary care.

Implementation strategies	Evidence
Involvement of the community in planning and implementation of health interventions	<p>The potential benefits of consumer involvement in health care are improved implementation of research, better care and better health. The WHO Declaration of Alma Ata states, “the people have the right and duty to participate individually and collectively in the planning and implementation of their healthcare (WHO, 1978). The feasibility of six randomized control trials of consumer involvement is reported (Nilsen, et al, 2010)</p> <p>A review to assess the effectiveness of the use of local opinion leaders in improving professional practice and patient outcomes concluded that “opinion leaders alone or in combination with other interventions may successfully promote evidence-based practice, but effectiveness varies both within and between studies” (Flodgren G, 2007)</p>
Media advocacy	<p>Media advocacy has become an established health promotion strategy, partly due to the influence of the World Health Organisation’s 1986 Ottawa Charter for Health Promotion. It has become common to seek a ‘partnership’ or ‘shared agenda’ (Atkin 1990) with the mass media in communicating health information to the public, particularly in the area of prevention, risk reduction, and drug information (Razak 1992). Proponents of ‘media advocacy’ lobby for health message exposure, accuracy and media responsibility in order to set the media agenda (framing for access), shape the media debate (framing for content), and advance healthy public policies (Wallack 1993). It should be remembered, however, that in the USA, the mass media have been a source of both hope and frustration in promoting social good for over 150 years (Paisley 1990).</p> <p>The current emphasis on consumerism in the delivery of healthcare highlights the potentially important role of mass media in increasing the public awareness of research findings and promoting the utilisation of effective and</p>

Implementation strategies	Evidence
	<p>efficient health services. The mass media frequently cover health-related topics and are targeted by those who aim to influence the behaviour of health professionals and patients (Freemantle 1994). However, while a systematic review of the impact of printed educational materials (which includes publication of research findings in scientific journals) has already been undertaken (Freemantle 1997), there has been no systematic review of the impact of mass media campaigns that examines effects upon health professional or general public behaviour</p>
<p>Incentives to encourage households to use PHC services</p>	<p>“A review of conditional cash transfers made directly to households, particularly to women, in low income and middle income countries found that these interventions were effective in increasing the use of preventive services. Overall, evidence on this regard is of low to moderate quality and is confined in certain regions in the world. One review showed that vouchers, compared to usual practice, can be effective in increasing uptake of goods and services such as insecticide-treated bed nets, particularly in the poorest populations” (Simon Lewin et al, 2008).</p> <p>In a systematic search of the peer review and grey literature, all evaluations reported some positive findings, indicating that Reproductive Health voucher programs increased utilization of RH services, improved quality of care, and improved population health outcomes (Nicole,<i>etal.</i>, 2011)</p>
<p>Patient/ parent or provider reminder systems</p>	<p>A systematic review including 43 studies concluded that “Recall systems such as letter and telephone calls can increase immunization (Lewin et al, 2008). Using computers to improve medication use is worthwhile, but care is needed in choosing the most appropriate means of delivering messages.. Reminders are more effective than feedback in modifying physician behaviour related to medication management. Patient-directed reminders can</p>

Implementation strategies	Evidence
	improve medication adherence.(Bennett and Paul, 2003)
Outreach and other services to primary health care facilities to improve their quality	<p>Educational outreach visits (EOVs) have been identified as an intervention that has the potential to change health professional practice, particularly prescribing by physicians (Soumerai, 1989 &1990). The term educational outreach is used to describe a personal visit by a trained person to health professionals in their own settings. This type of 'face-to-face' visit has been referred to as university-based educational detailing, public interest detailing and academic detailing. EOVs, with or without additional interventions, can be effective in improving health professional practice. The effects are, for the most part, small to moderate, but potentially important. The effects on prescribing are small and consistent, whereas the effect on other professional behaviours is more variable (O'Brien et al, 2008).</p> <p>A review explored specialist outreach clinics and found that they had promoting effects on access to care, quality of care, health outcomes and patient satisfaction, although the quality of evidence was poor (Simon Lewin et al, 2008)</p> <p>In introducing the general practitioner services to PHC facilities a paper reported that “to compare the effectiveness of primary care and specialist care is a complex task and there are limitations in all studies. However, evidence was found showing that increased accessibility to physicians working in primary care contributes to better health and lower total costs in the health care system” (Engstrom, 2001)</p>
Application of a referral system	<p>A study by Akbari (2008) stated that despite the important role referral systems play in many health care systems, surprisingly few interventions have been rigorously evaluated. The majority of studies were conducted in the UK and the generalizability of these findings to other settings especially countries without a formal referral system is uncertain. As a result there is a limited evidence base to support policy decisions. Nevertheless it is possible to draw a number of preliminary conclusions. Passive dissemination of referral guidelines appears unlikely to lead to</p>

Implementation strategies	Evidence
	improvements in referral behaviour. This has implications for local or national referral guidelines; local dissemination and implementation activities appear necessary. The likely success of such local dissemination and implementation strategies appears to be increased if local secondary care providers are involved in educational activities.

Inadequate Prescription Practices may Lead to Irrational Use of Drugs and other Services and Moral Hazard. This risk is increased when the beneficiaries receive the services free of charge at the point of delivery

Implementation strategies	Evidence
Implementation of regulations, audit and accreditation systems for pharmacies	<p>A review showed some evidence that regulation could improve the quality of pharmacy services. The review also showed that the accreditation of pharmacy outlets might have weak positive effect on the use of unregistered drugs, compared to non accredited facilities (Simon Lewin et al. 2008)</p> <p>Improving decision-making about drug prescribing by clinicians could lead to significant improvements in patient outcome and effective use of health care expenditure.</p> <p>Audit and feedback, together with educational outreach visits , were the focus with the majority high quality research into prescribing intervention (Ostini, et al 2009).</p>
Adopt co-payment policies	<p>Simon Lewin et al. stated that “Cap and co-payment policies can reduce drug use and expenditure. However drug use is found for both life sustaining drugs and drugs that are important for treating chronic conditions, so appropriate exemption mechanisms must be in place. Removal of user fees could result in increased demands for unnecessary services, create demands that can not be met and demoralize public sector providers who rely on it to supplement their meager salaries. However, introducing user fees substantially reduce service use(Simon Lewin <i>et al</i>, 2008).</p>

Ability to Pay and Willingness to Pay for Expansion of the Social Health Insurance

The national health insurance covers 14.4% of the total populations (SHHS, 2008). The program has limited coverage in the in-formal work sector and finding effective mechanisms to collect premiums from this sector is a challenge.

Implementation strategies	Evidence
Introduction of community health insurance programs	“Overall, the evidence base is limited in scope and questionable in quality. A systematic review found strong evidence that community-based health insurance provides some financial protection by reducing out-of-pocket spending. There is evidence of moderate strength that such schemes improve cost-recovery. The main policy implication of the review is that these types of community financing arrangements are, at best, complementary to other more effective systems of health financing” (Ekman, 2004)
Subsidies to some groups	Government subsidies derived from general revenues for people who cannot pay further increases financial risk protection and access to services (World Health Report 2010) Experience of health equity fund in Cambodia showed health system can mobilize and manage funds directed to poor population (Meessen, <i>et al.</i> , 2006) Subsidized insurance programs greatly increased medical care utilization among the country’s poor and uninsured in Colombia (Trujillo, <i>et al.</i> , 2005).
Mobilize charity fund	Diversify health financing resources like combining SHI with taxes collection, proof to be good in raising more sreources to health (World Health report 2010) One of the potential sources of funding is Zakat fund currently it contributes by 2.1% of the total health expenditure which is 4.91 per capita.
Communication of welfare and insurance information to beneficiaries	Evident findings suggested that intensive case management, providing insurance information, application assistance and communicating with the insurer to assist enrolment probably help increase insurance coverage of children in the US (Meng et al 2010). There is also evidence that welfare rights advice delivered in health care settings to enlighten people about their benefits leads to worthwhile financial benefits (Jean adams et al, 2006)
Mobilisation of resources	Increase government spending through negotiation with

Implementation strategies	Evidence
<p>from vertical programmes and free of charge care eg mother and U5 care</p> <p>Taxation – allocation of ear-marked and sin tax revenues to PHC</p>	<p>politicians, Ministry of Finance (the share of SHI is 3.8% of total health expenditure)</p> <p>Fragmentation of health financing reduces size of the pool leading to inefficient health financing (this applies to disease control programs or national other sectors funds directed to health)</p> <p>Increase or diversify domestic sources of funding like taxes on unhealthy food or tobacco.</p> <p>Countries make faster progress in universal coverage by introducing prepayment and pooling , combine taxes and social health insurance, while ensuring compulsory enrolment (World Health Report 2010).</p>
Generate revenues through mobilisation of local or external funds	<p>Combining abolishing user fees with increasing rural health facilities' budget remarkably increases utilization of health services in Uganda and Zambia (World Health Report 2010).</p> <p>Current public share from THE is 32.7% (out of it 21% to the FMOH, 46% to the states, 12% to the SHI and 22% others)while the private is 65.5% including direct out of pocket payment</p>

Next steps

The objective behind development of this policy brief is to update the policy makers and stakeholders with most recent, relevant and strong policy evidence that can inform a process to improve access to good quality Primacy Health Care services in the country. The intension is not to provide readymade options or advocate to an option against another or close off discussion. Actions are expected to follow the deliberation that the policy brief is intended to inform, these course of actions might include:

- Reflection and feedback from the policy makers and stakeholder about the option/options presented in this policy brief.
- Improving, refining or adjusting of the preferred option or options by the policy makers and stakeholders. This might include incorporation of some options components, remove or modification in some option/options.
- The policy makers and stakeholders might go into further practical steps to implement the agreed upon option/options. For the sake of that, a national coordinator with authority and accountability assigned to lead development and implementation of such project. The team who will work with the coordinator in the development and implementation of this project will be decided upon during the deliberation meeting and the time frame for this process also is supposed to agree upon by the policy makers and stakeholders.

Appendix

How this policy brief was prepared

The methods used to prepare this policy brief are briefly described in the preface. The team started by detail discussion and analysis of the problem the policy brief addressing. After clarifying the problem, national research studies and reports that clarify the size of problem and its underlying factors has been searched and gathered.

Strategies used to identify potential options to address the problem included considering interventions described in systematic reviews and other relevant documents, considering ways in which other countries have addressed the problem, and brainstorming including input from national resources persons.

Following that, the authors identified the possible barriers to the implementation of each of the proposed options. Implementation strategies to compact the barriers have been identified and supported by national and international evidence. The policy brief finally was subjected to review by one policy maker and one researcher.

We searched international electronic databases of systematic reviews and other sources such as WHO East Mediterranean Office library, MEDLINE, the Cochrane Database of Systematic Reviews (CDSR) and McMaster Health Forum database; “Health Systems Evidence” database of systematic reviews of delivery, financial and governance arrangements, and implementation strategies.

We used the SURE (Supporting the Use of Research Evidence) and EVIPNet’s template for policy briefs.

List of abbreviations

APCN:	Asia-Pacific Cable Network
CBI:	Community Based Health Insurance
CHW:	Community lay Health Workers
EMR:	East Mediterranean Region
EOV:	Educational Outreach Visits
FHC:	Family Health Centres
FHU:	Family Health Unit
FMOH:	Federal Ministry of Health
GDP:	Gross Domestic Product
HIV/AIDS:	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
IMCI:	Integrated Management of Childhood Illnesses
M&E:	Monitoring and Evaluation
MDG:	Millennium Development Goal
MOH:	Ministry of Health
N/A:	Not Applicable
NHE:	National Health Expenditure
NSW:	New South Wales
PHC:	Primary Health Care
PMS:	Personal Medical Service
SGH:	State General Hospitals
SHI:	Social Health Insurance
SHIF:	Social Health Insurance Fund
SMOH:	State Ministry of Health
SNHA:	Sudan National Health Accounts
WB:	World Bank
WHO:	World Health Organization

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