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Review Article

Does health financing in Saudi Arabia need a national health accounts framework?

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ABSTRACT

National health account (NHA) is considered as an effective tool to support policymakers in capturing financial flows within the health system and providing information required to develop effective health policies. Global experiences on NHAs have demonstrated a significant impact on health policy development for better health care. Many countries in the Arab region have already made efforts to institutionalize the NHA in their health systems. Based on extensive review of different reports, documents, and empirical studies in the field of NHA, the paper gives the concept and evolution of NHA and discusses the Saudi health system perspectives and the way forward for institutionalizing a NHA system. The findings indicate the significance of implementing the NHA framework for evidence-based decision-making as well as an aid to the development of a robust and effective policy for the health sector to achieve Saudi Arabia's "Vision 2030." The paper also offers a plan of action to be followed to institutionalize a NHA system in the Ministry of Health.

Keywords: Health account, health expenditures, health finance, Saudi Arabia

Introduction

Health spending is considered as one of the key elements that affect health outcomes of countries. The achievement of health system goals necessitates adoption of an appropriate financing strategy that ensures provision of comprehensive health care to the population. To develop a suitable strategy, policymakers in the health sector need to evaluate performance of health system and prioritize resources allocation across various activities to achieve the optimal health outcomes.[1] National health account (NHA) is one of the effective tools that support the decision makers by not only capturing financial resource flows but also by providing the evidence required to develop effective health policies.[2-4] NHA tracks the money flows into and out of the health-care system of a country and gives information about the type of payers and services purchased.[5] NHA can be used to make comparisons of health sector among countries.

Apart from providing a detailed account of the current use of funds in the health system, it can also help in tracking trends in health spending and making a projection of future finance requirements for the health sector. Regular application of NHA demonstrates that it provides important data and merits sustained resources that facilitate a more sophisticated understanding of the factors influencing the performance of health sector implements the policy levers available to planners and evaluates health sector reforms.[6] NHA gives answers related to questions on: Who spends and how much do they spend for health? Who are the major players in financing and delivery of health-care services and their contributions to total health spending? How are these funds distributed among various services, activities, and interventions that the health sector produces? and Who benefits from health spending?[3]

The major aim of this paper is to highlight the significance of NHA framework in the Saudi health system perspectives and the way forward for institutionalizing NHA. The paper is divided into two sections. The first section gives the concept, evolution, and experiences of countries in developing a NHA framework in their health-care systems. The second section provides a brief account of health system financing and provision in Saudi Arabia and discusses the significance of developing a NHA framework in Saudi health system. The section also offers a plan of action to be followed to institutionalize a NHA system in the Ministry of Health (MOH).

Materials and Methods

A thorough literature search was performed to understand and identify experiences of countries in implementing the NHAs in their health systems. These include reports and documents of international organizations, ministries of health in different countries, and empirical studies conducted in different countries. The author used the observation to learn the ideas that these studies confirm and the conclusions they have reached.

The System of NHAs

Evolution of NHAs

The post-World War-II period experienced a rapid expansion in expenditures on health in the Organization for Economic Co-operation and Development (OECD) countries. There was a lack of information on the causes and extent of health spending. Only limited data were available for cross country comparison, and it was difficult to establish the reasons for differences in health spending across countries and across time. Recession in the early 1970s and the spiraling cost of oil across countries led to serious concern on public expenditures. Subsequently, there emerged an increasing need for reliable estimates of health spending at the national level.[7] Gradually, most European countries showed their interest in developing and applying the conceptual frameworks for estimation of the national health spending. In 1980s, both the European Community and the OECD made an effort to harmonize the framework based on a common accounting system.[8] After a series of revision, the OECD secretariat, in the year 2000, developed a system of health accounts (SHA) for establishing NHA. This was followed by the development of a revised version of SHA jointly by the WHO, the United States Agency for International Development, and the World Bank.[3] The revised version has taken into consideration the pluralistic structure of health-care systems in developing countries.[9] Most developing countries followed the revised version of SHA. Countries in the Arab region such as Egypt, Syria, Jordan, and Lebanon have already made efforts to institutionalize the NHA in their health systems. A few African countries have also institutionalized NHA to create data and evidence on financing public health, including its efficiency, equity, and sustainability.[10]

NHA framework

In general, NHA framework is similar to that of national income accounts, but the objectives are different. NHA takes into account all expenditure on health, whereas the national income accounts consider the productive activities of all the sectors in the country, including health.[3,4] The common framework of NHA is that it arranges and tabulates health expenditure data of a country in matrix format, where each matrix gives a detailed analysis of health spending.

In 2003, the WHO released a guide for producing NHA, providing a framework for tracking and measuring health spending and addressing questions such as: (i) How are resources for health system mobilized and managed? (ii) Who spends and how much is spent for each type of care? (iii) Who give health-care services, and how much do they use? (iv) How are funds for health system distributed across the services, activities, and interventions? and (v) Who get benefit from spending on health care.[3,11] Four dimensions are be pivotal for reliable estimation of total health expenditure, namely: Financing sources, financing agents, providers, and functions.[1] Financing sources are the entities from which funds are generated for providing health-care services. Health spending by sources can answer the question of "where do the funds come from for health care?' Financing agents are those organizations that utilize the funds to purchase or organize activities in health sector. This answers the question "who manages and organizes funds for health care?" Providers are the final receivers of funds for health care, which answers the question "To whom does the funds for health care go? Function refers to the services or activities that are delivered by providers. This component answers the question" what type of services or activities was delivered? It includes primary health care, secondary health care, and tertiary care. It also categories as curative versus preventive care, mother and child services, health-care administration, public health activities, health communication, medical education, and health research, among others.

Methodological challenges

There are many challenges in institutionalizing NHA in low-income countries due to various structural and technical constraints.[6] One of these challenges is the absence of appropriate conceptual frameworks and methodological instruments relevant to the poor country settings. Another challenge is the inadequate availability of expertise to collect reliable estimates on private health spending and to develop NHA in poor settings. However, a series of efforts have been undertaken by international organizations such as the WHO and World Bank to develop capabilities of these countries by providing technical and financial assistance. To facilitate the capacity development of professionals, a number of training manuals and guidelines have been developed.

Another methodological challenge in the establishment of NHA is related to the definition of the concept of health spending. A common definition of health spending is provided by the WHO as any spending, whose primary purpose is to improve health. However, many countries have adopted different approaches to define and measure health spending. As a result, any inference-based comparison of health spending across countries can be misleading. For instance, a systemic review of NHAs from 117 countries by Bui *et al.*[12] has shown that only 29% of countries included all types of health expenditure data in NHA reports, while the rest failed to do so. Almost 33% countries reported more than 20% value of expenditure as not-specified-by-kind. In resource-constrained settings, financial barriers may be one of the challenges for the establishment of NHA. Studies have shown that cost of developing NHA may not be a burden on the governments. For instance, Thailand, which is considered as one of the well-established NHA system, incurred only 0.0006% of health spending and Burkina Faso, one of the poor resource settings, incurred 0.02% of health spending.[13]

The task of developing NHA has been taken up by the Ministries of Health in many countries, but in a few, it has been entrusted to other departments or institutions. For example, in Australia, NHA was commissioned by the Australian Institute of Health and Welfare (Ingham *et al.*);[14] in Germany, by

Federal Statics Office (Zifonun);[15] in India, by the NHA cell established in the Union MOH Government of India;[16] in Srilanka, by Institute of Health and Institute of Policy Studies (Fernando *et al.*);[17] in Bangladesh, NHA is taken by the Health Economics Unit set up in the MOH Data International;[18] in Egypt, by the MOH and Population (Nakhimovsky *et al.,*),[19] and this responsibility falls under the MOH and Medical Education in Iran (Lankarani *et al.,*).[20]

NHA in Gulf Cooperation Countries (GCCs)

The GCC Health Ministers have adopted Al-Manama Declaration (9–10th January, 2013), on financing health systems as an international and regional declaration, which implicated thorough reviews of health systems, with its various components, including the current health financing systems to identify strengths, weaknesses, challenges, and opportunities. The objective was to achieve universal health coverage through internationally agreed review methods of these systems in general and health financing systems in particular. In addition to the above objective, it also aimed at implement NHA for characterizing the flow of funds in the health-care system, and for studying the level of health spending through development of NHA systems as well as institutionalizing such systems (MOH).[21] The declaration also included establishing or strengthening the MOH's Health Economics Unit and qualification of the specialized national competencies to be in charge of the regular analysis of the NHAs and conducting related surveys, utilizing the health services, health expenditure surveys, and NHAs.[21]

Among the countries in GCC region, Qatar developed its first NHA report (2009–2010) in June 2011, even before the above declaration. It developed its second report again in 2011 by utilizing the new classification system created by the OECD, Eurostat, and the WHO.[22] Qatar's NH report reveals that total health spending has increased by 27% and 84%, and this increase was contributed to the government. Almost 18% of health spending by the public sector was utilized for capital formation.[22] In comparison, Dubai developed its first NHA report in 2012.[23] An analysis on NHA data for Dubai, Qatar, and for OECD countries revealed that the health-care financing system in Dubai is a private-oriented system and differs from other countries in several aspects.[23] While the government sector constitutes the main source of funding for health care in Qatar (79%) and OECD countries (72%), respectively, in Dubai, the government's share constituted 33% of current health spending. Spending by households in Dubai constitutes about 22% of current health spending, as compared to 20% across the OECD countries. In Dubai, hospitals account for 48% of health spending as compared to 40% in Qatar and 36% in OECD countries.[23]

Health system financing and provision in Saudi Arabia

Health financing

The Kingdom of Saudi Arabia spent about 4.7% of gross domestic product on health in 2014.[24] The government budget allocated through the MOH forms, the major source of health spending in Saudi Arabia. The kingdom spends from 6 to 7.25% of government budget on health [Table 1]. The government provides a constant support to the MOH through developmental plans, in which the funds allocated to MOH have a rapid increase.[25] Government's share on health spending is higher than the regional average and is even more than the average for the countries with similar level of development.

Health spending by private sector as a percentage of total health spending in Saudi Arabia indicates an increasing trend. Table 2 shows that the share of health spending by private sector to total health spending was 27.9% in 2000, which increased to 39.8% in 2014.[26] This spending also includes out-of-pocket spending incurred by the Saudi nationals and expatriates working in the government sector. Expatriates employed in the private sector often visit government health facilities for free care, and private health providers are usually paid fee-for-services delivered based on contracts with them by the insurance company or employers. Out-of-pocket spending, as percentage of private spending on health, has shown a decreasing trend due to increasing dependence on health insurance or services directly provided through health facilities owned by companies or employers [Table 2]. The Cooperative Health Insurance in Saudi Arabia has played a key role in reducing out-of-pocket spending on health and increased share of private health insurance. The period between 2006 and 2008 showed a rapid increase in private health insurance as a share of private spending on health, and as a result, the out-of-pocket spending decreased.[27]

Table 1: Health Budget Saudi Arabia - various years (adapted from MOH, 2016)

Years	Budget in (million SR)	% of government budget
2011	39,860	6.87
2012	47,076	6.82
2013	54,350	6.63
2014	59,985	7.02
2015	62,342	7.25

MOH: Ministry of Health

Table 2: Health spending in Saudi Arabia - 2000 and 2014 (adapted from the World Health Statistics [2016])

Information	2000	2014
Total spending on health as % of GDP	4.2	4.7
Government spending on health as % of total spending on health	72.1	74.5
Private spending on health as % total spending on health	27.9	39.8
Government spending on health as % of total government spending	8.6	8.2
Out-of-pocket spending as % of private spending on health	66.1	56.2
Private insurance as % of private spending on health	10.6	22.3

GDP: Gross domestic product

Health-care providers

In Saudi Arabia, the MOH provides the major share of health services with 274 hospitals (41,297 beds) and 2282 primary health centers.[25] Aside from this, there are other ministries and agencies of the government involved in the delivery of health-care services in the Kingdom. These include the Ministry of Higher Education (teaching hospitals and school health units), the Ministry of Interior (MOI), the Ministry of Defense and Aviation (MODA), National Guard, and referral hospitals, namely, King Faisal Specialist Hospital and Research center, King Khalid Eye Specialist Hospital, hospitals owned by the Arabian American oil company, Royal Commission for Jubail and Yanbu health services and Red Cross Society, Water Desalination Corporation, Institute of Public Administration, and Riyadh and Sports medicine services in the General Authority for Youth Welfare.[25]All these government health-care providers operate with 11,449 beds.[25] The private health sector that is mostly present in large towns and cities delivers services through 145 hospitals with 16,648 hospital beds, 2670 dispensaries, and 77 clinics.[25]

The MOH in the Kingdom is honored to provide all the necessary health preventive and curative services to pilgrims in the Hajj season, irrespective of their nationality. There are special requirements for visitors to Hajj concerning vaccinations against selected diseases such as meningococcal meningitis, polio, and yellow fever. These services are provided by the MOH through 24 hospitals including 8 seasonal hospitals, with a total number of 5,535 hospital beds including 550 emergency beds. Along with this, there are 177 health centers functioning for the pilgrims.[25] Sufficient numbers of human resources are also recruited to work in these health facilities.

With regard to health services provision in Saudi Arabia, about 138.60 million outpatient visits were made to all health facilities in 2015, representing an average of 554,406 daily visits [Table 3]. The majority of outpatient visits were made to MOH hospitals (48%), followed by the private sector hospitals (36%) and the other governmental sector hospitals (16%). During this year, around 33.49 million inpatients were admitted to hospitals in government and private sectors. The majority of inpatients were admitted to MOH hospitals (51%), followed by the private sector hospitals (36%) and the other governmental sector hospitals (15%). In the same year, about 1.12 million surgeries were performed in the country. Surgeries performed in MOH hospitals constituted 45%, followed by private sector (37%) and other governmental sector hospitals (18%). In 2015, a total number of 247,085 deliveries were performed at the MOH hospitals across the Kingdom, of which 77% were normal deliveries and 23% abnormal deliveries. Abnormal deliveries mainly involve Caesarean sections (21% of total deliveries).[25]

Added to the above, the MOH provides various public health and preventive services to control infectious diseases, vaccine-preventable diseases, chest infections, bilharziasis, leishmaniasis, malaria, environmental health, and health education activities along with other activities and services including, ophthalmology, psychiatric and social services, dental services, blood banks, nutrition, forensic medicine, and home health-care programs.

Moreover, medical and health education is one of the main functions of the MOH. To meet the demand for trained human resources for health, a number of medical, nursing, and allied health schools have been established across the Kingdom. Currently, there are 24 college of medicines, 17 dentistry colleges, 20 pharmacy colleges, 20 applied science colleges, and 13 nursing colleges in the Kingdom, with the annual capacity of 18,728 students in medicine, 5,614 in dentistry, 9,366 in pharmacy, 21,369 in applied sciences, and 7,614 in nursing during the year 2014-2015.[25] The MOH continues to provide opportunities for human resources working in different specialities in the health sector to receive training locally and abroad.

Need for NHA framework

Demand for producing NHA in Saudi Arabia has long been stressed at different forums including the Al-Manama Declaration in 2013.[21] The major aim of developing NHA for Saudi Arabia is to provide a detailed estimate of national health spending, which include both government spending and private sector spending and activities. Estimating health spending involves reviewing financial data from budget documents of the government and data from non-governmental sectors including out-of-pocket spending by people, health insurance contributions, and money spent by individuals abroad for treatment.

Attempts to estimate national health spending without the NHA framework may lead to underestimation or overestimation of the resource flow in the system. Figure 1 presents a matrix of financing sources, financing agents, and providers in the health-care system of Saudi Arabia. Any realistic estimation of national health spending needs to take into consideration

Table 3: Health Services provision in Saudi Arabia (2016) (Adapted from MOH, 2016)

Health Services	MOH facilities (%)	Other government sectors (%)	Private sector (%)	Total (%)
Outpatient services	66,090,893 (48)	22,046,669 (16)	50,463,743 (36)	138,601,305 (100)
In-patient services	1,705,895 (51)	499,861 (15)	1,148,903 (34)	3,349,659 (100)
Surgeries	504,234 (45)	197,906 (18)	417,953 (37)	1,120,093 (100)

MOH: Ministry of Health

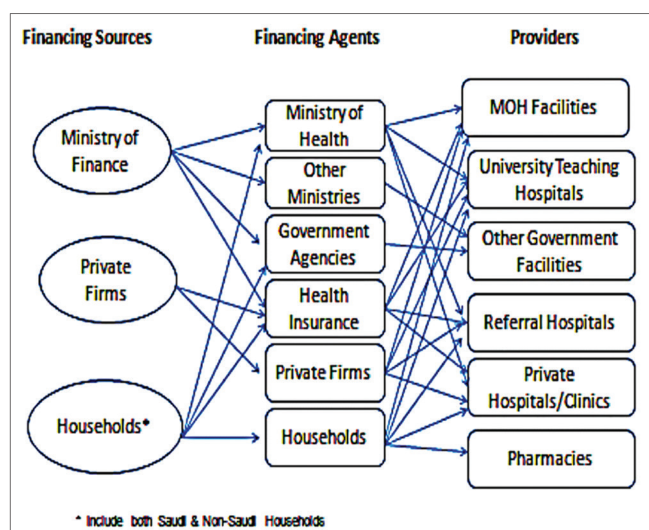

Figure 1: Matrix of flow of funds in health care in Saudi Arabia

all financial flows within this system, with the major financing sources in health sector being government, private sector enterprises, and households. Financing agents include MOH, other ministries and agencies of government, private sector, health insurance companies, families, and others. Providers are the entities, which deliver health services that include MOH facilities, university teaching hospitals, other government facilities, government referral hospitals, private hospitals, and private clinics and pharmacies.

Suggested plan of action

Producing a comprehensive and accurate data set for NHA estimation is a great challenge. This requires collecting detailed information on financial flows from the ministries, government agencies, public and private health facilities, private organizations, health insurance companies, and households. While data of the ministries and government agencies are available from the budget documents, data for private health-care providers' need to be collected and compiled from their reports and records. Policy and claim data from health insurance companies' also need to be compiled on a regular basis. Furthermore, information from households out-of-pocket spending needs to be obtained by commissioning household health surveys. NHA needs diverse expertise from fields such as economics, statistics, accounting, and health. Therefore, MOH, Health Economics Directorate, and Central Department of Statistics and Information are the suitable entities to take on the responsibility of developing NHA as a productive document for health policymaking in Saudi Arabia.

To take forward this task, as a first step, the government should establish a NHA team, preferably within the MOH. Second, a high level committee should be created to guide and facilitate the NHA team on all policy matters related to NHA. The committee will comprise of policymakers from ministries of health, finance, interior, economy and planning, and other government entities. Third, a detailed plan of action should be drawn up and approved by the high-level committee for institutionalizing NHA. The plan of action should identify various tasks to be completed, strategies, and actions for achieving each task, assigning responsibilities to team members and timeline for each action. Initial tasks include organizing workshops of decision makers and key stakeholders on the importance of NHA framework and its relevance to policy making, organizing series of training workshops for finalizing NHA methodology, classifications, boundaries, data sources, designing survey instruments, and data collection plan.

Conclusion

Globally, NHA, as an effective tool for decision-making in health sector, has long been recognized. Institutionalization of NHAs in many countries has contributed to a significant shift in health policies. In Saudi Arabia, development of NHA will help policymakers to capture a complete picture of financial flows in the health system, making projections for future finance requirements, and inter- and intra-country comparisons. To institutionalize NHA, it is necessary to develop a system in the MOH, which can collect and analyze health financing data from the government, private sector, health insurance companies, households, and among other sectors, on a regular basis. NHA will not only act as a guide to evidence-based policymaking but may also form part of an overarching plans for health sector to be set out to achieve Saudi Arabia's "Vision 2030."

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