HEALTH ACCOUNTS TO FORMULATE HEALTH FINANCING POLICY FOR THE POOR

Middle East and North Africa

&

East Asia and Pacific

Thesis submitted to fulfill the requirements for the degree

Doctor of Philosophy in Economics program

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Declaration Page

This material can be adapted to deliver an overview of Health Accounts and major health financing contribution to policymakers, low and middle income countries' Ministries of Health and Planning, international researchers and other audiences who would benefit from understanding and advancing Health Accounts tools and methodologies toward formulating health policies and plan for the poor.

I state that this work has not been submitted for a higher degree to any other university or institution.

Acknowledgement

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Abstract

The way a health system is financed is a key determinant of population health and well-being. This is particularly true in the poorest countries where the level of spending is still insufficient to ensure equitable access to needed health services and interventions. In many countries the price of health care services still pushes many people into poverty. Governments in the richer countries also constantly struggle with the question of how to raise sufficient funds to meet the ever increasing demands of their populations for quality health services.

All countries must make decisions about how best to raise sufficient funds for health, how to pool them together to spread the financial risks of ill health, and how to ensure they are used effectively, efficiently, and equitably. Countries make different decisions in each of these areas, so the resulting financing systems vary in areas such as the mix between taxes and insurance, out of pocket contributions, and between public and private funding and provision. Health accounts system could be the tool for measurement.

While World Health Organization member countries embraced the concept of universal coverage as early as 2005, few low and middle income countries have yet achieved the objective as well as the international health-related Millennium Development Goals. This is mainly due to numerous barriers that hamper access to needed health services. This PHD research provides an overview of the various Health Accounts methodologies and policies implemented and in low and middle income countries that tackle the dimensions of access to health care; and outlines existing interventions designed to overcome barriers. It will highlight, as an example, variance in financing practices the Middle East and North Africa (MENA) and East Asia and Pacific (EAP) countries. This will be explored using an analytical framework to illustrate the use of Health Accounts and help enhance its usefulness as a policy tool. This will help place benchmarks in the assessment and monitoring of health systems, and the analysis of the importance of health expenditures from a consumption perspective in the economy as a whole.

Thus, choosing reliable health financing option to cover the poor and vulnerable group is a major issue which is not an easy process and several assessments have taken here leading to universal free essential health care, along with proposed reimbursement of health care providers for

services rendered to the poor. The novelty resulted and addressed here: First, creating an enabling environment supporting: governance, policy development and sensitization to vulnerability in low income countries; Second, proposing direct and indirect strategies which needed to better understand the factors that delay care seeking by vulnerable group.

The findings suggest that using Health Account tools is required to tackle specific access barriers and link it to provide monitoring and evaluation of strategic and operational objectives of health planning and policy making in low and middle income countries.

Background:

A world that is greatly out of balance in matters of income poverty and health is neither stable nor secure. Ill health and poverty are closely interrelated and causation runs in two directions. **Measuring poverty** is often differentiated from **measuring cost of health care**. Where we live defines in many ways how we live. When it comes to health services, for example, the situation may be very different in affluent and less affluent areas, urban and rural settings, or in the capital city versus the rest of the country.

To improve the long-term sustainability of health care financing, Governments have tried to improve cost recovery and collection of fees. User fees for outpatients and hospital services have been historically increased according to "sliding-fee schedule" and upfront payments for cost sharing for medical treatments have been required. This step has increased poverty in most of the low and middle-income countries around the world. However, these measures seem to have affected utilization patterns, with some patients forgoing medical care because of large out-of-pocket costs for healthcare services. Although informal community social safety nets exist in the form of large family networks, required upfront payments are reportedly driving families of some patients into poverty. As per the Global Health observatory data repository of the World Health Organization (World Health Statistics, 2010), only a small percentage (15%) of citizens in low and middle income countries were currently covered by private medical insurance; the premium rates for private insurance are generally regarded as too expensive for private individuals in those countries, who rely on the public health system instead. Therefore, health sectors need to be systematically reviewed to identify more appropriate revenue-raising mechanisms, particularly prepayment and risk-pooling (insurance), with a view to ensuring coverage, equity, and affordable access to health services for residents in both urban and rural areas, including the poor and informal employees. On the other hand, increasing cost pressures on health care from aging population and the trend toward a higher prevalence of non-communicable diseases will increase the need to explore options for cost control and more efficient allocation of resources within the sector. A systematic review must be supported by

good data that reflect a comprehensive picture of total health spending and resources at national levels (e.g., a system of health account).

Moving toward universal coverage was a solution for the World Health Organization, as per its World Health Report 2010, to ensure coverage, equity and access (WHO, 2010). Three fundamental, interrelated problems restrict countries from moving closer to universal coverage. (1) The first is the availability of resources. No country, no matter how rich, has been able to ensure that everyone has immediate access to every technology and intervention that may improve their health or prolong their lives. At the other end of the scale, in the poorest countries, few services are available to all.(2) The second barrier to universal coverage is an overreliance on direct payments at the time people need care. These include over-the-counter payments for medicines and fees for consultations and procedures. Even if people have some form of health insurance, they may need to contribute in the form of co-payments, co-insurance or deductibles. The obligation to pay directly for services at the moment of need – whether that payment is made on a formal or informal (under the table) basis – prevents millions of people receiving health care when they need it. For those who do seek treatment, it can result in severe financial hardship, even impoverishment. (3) The third impediment to a more rapid movement towards universal coverage is the inefficient and inequitable use of resources. At a conservative estimate, 20–40% of health resources are being wasted. Reducing this waste would greatly improve the ability of health systems to provide quality services and improve health. Improved efficiency often makes it easier for the ministries of health to make a case for obtaining additional funding from the ministries of finance.

Many low- and middle-income countries have shown over the past decade that moving closer to universal coverage is not the prerogative of high-income countries. For example, Brazil, Chile, China, Mexico, Rwanda and Thailand have recently made great strides in addressing all three problems described above. Gabon has introduced innovative ways to raise funds for health, including a levy on mobile phone use (Stenberg et al., 2010); Cambodia has introduced a health equity fund that covers the health costs of the poor (Bigdeli & Annear, 2009) and Lebanon has improved the efficiency and quality of its primary care network.

Meanwhile, it is clear that every country can do more in at least one of the three key areas. Even high-income countries now realize they must continually reassess how they move forward in the face of rising costs and expectations. Germany, for example, has recognized its ageing population means wage and salary earners have declined as a proportion of the total population, making it more difficult to fund its social health insurance system from the traditional sources of wage-based insurance contributions. As a result, the government has injected additional funds from general revenues into the system.

While all countries, rich or poor could do more to increase health funding or diversify their funding sources, only eight of the 49 low-income countries in the Middle East and North Africa (MENA) and East Asia and Pacific (EAP) regions have any chance of generating funds from domestic sources alone the funds required to achieve the Millennium Development Goals (MDGs) by 2015. Unity around the MDG objectives has an enormous positive impact on improving health and health systems in developing countries. In addition, Low income countries need to make steady progress in aligning health programs with international partners and donors. Central to these efforts is directed to the role played by donors and high income countries to mobilize funds to low income countries' health systems with the support of the governments and private sector. In other world, global solidarity is required. The funding shortfall faced by these low-income countries highlights the need for high-income countries to honor their commitments on Official Development Assistance (ODA), and to back it up with greater effort to improve aid effectiveness.

Since the early 1990s the interest regarding health accounts and the production of health accounts have grown. Its usefulness in health sector reform work has also become evident, which has encouraged large international organizations, such as the World Health Organization (WHO), the World Bank (WB) and several donor agencies, to become more involved in the area of health accounting and health expenditure tracking. However gaps still existed in the system of Health Accounts and unclear focus on poverty, vulnerability and needed care existed. The methodology suggests covering those gaps and providing relevant information for health policy analysis in evaluating health systems performance to provide adequate input, together with the

suggested statistical resources, for the analysis of the policy formulation to achieve sustainability of financing, macro-level efficiency and equity of utilization of resources.

It is important to understand that while tables provide a systematic way to report health accounts data, policy makers will often request that the information be succinct and immediately meaningful in terms of policy issues reflecting the ethnic and health status of the population as well as modernization of the health system. Policy process is often presented as a process moving from formulation to implementation. The distinction between formulation and implementation is rarely clear-cut; intentions and action are often hard to distinguish. Addressing poverty will require policy actions to be implemented immediately. The research addressed this call and showed that the analysis undertaken, as well as the revised research papers on the theoretical and methodological suggestions for health accounts studies, analysis and policy engagement, throw up questions as to the selection of appropriate theoretical frameworks and corresponding causal relationships they describe. A further conceptual and methodological challenge is proposed to highlight the importance of the health sector within the national economy and the contribution of health care to economic development and most importantly addressing the poor.

Furthermore, there is unevenness, across both MENA and EAP regions, in terms of having national policy on population health need based on a clear accounts analysis. This thesis covers those gaps in proposing way in which health policy processes addressing health needs may be better described, understood and explained, thus help policy makers understand and intervene better, despite significant obstacles and ethical judgments. Over the years, various initiatives have been aimed at improving the regional networks performance at country level to provide better support to measure the Health Accounts of the member states in each of the Middle East and North Africa (MENA) and East Asia and Pacific (EAP) Regions. It could also be used as a platform to discuss the Global Strategic Action Plan of the World Bank (GSAP) on institutionalization plan of Health Accounts to achieve the MDGs by the year 2015. The GSAP is a World Bank initiative addressing countries at all stages of Health Accounts institutionalization from those which have never produced NHA to those which have already have adequate resources in place and are almost there. Significant progress has indeed been made; however, huge efforts are still required to match the networks present at countries level to the needs of each country.

Significance, Relevance and Gaps:

There was a limitation from a good number of countries, so the study relied on whatever was available as long as it was within five years. A common research protocol to study and guide the aspects of health accounts and ethical judgment will be developed and will then be adapted to fit the context, and policy and information needs of a few countries of the MENA region (namely, Lebanon, Morocco, Jordan, Iran and Egypt) and of the EAP region (China, Republic of Korea, Lao PDR, Philippines and Vietnam). This protocol combines baseline and follow-up review of policy decisions and its impact on health system at national and sub-national levels. The conceptual framework developed suggests that the policy decision in each country may have intended and unintended effects on country-level health care systems and impact on poverty. These effects are broken into four primary thematic areas of interest, namely: effects on the policy environment, effects on health service provision and public/private mix, effects on strategic management, and effects on community and household. The novelty in our research is to use existing methods to align the potential factors facilitating the changes in policy and addressing solutions based on key issues like, equity, sustainability, affordability, and governance. Thus the behavioral aspect of health accounts and ethical judgment and methodology are based on a critical review of prior literature and international guidelines already applied to countries.

As per definition, NHA (National Health Accounts) is a useful instrument that international donors and governments require low-income countries to have for policy changes through program implementation, financial reporting, and program monitoring and evaluation. Since the early 1990s the interest regarding health accounts and the production of health accounts has grown. Its usefulness in health sector reform work has also become evident, which has encouraged large international organizations, such as the WHO, World Bank (WB) and several donor agencies, to become more involved in the area of health accounting and health expenditure tracking. Collecting data on national health expenditures is useful for several purposes, e.g. those countries that have received increased levels and diversity of health funding to combat a disease are required by donors and governments to show accountability for those funds. Health accounts can provide that information. They reveal trends in health expenditure over time and are a valuable element in health system monitoring and evaluation. In light of this, this thesis shows

that it is relevant to investigate what is needed for monitoring and evaluating health services and activities in the selected countries of our research. Monitoring and evaluation of the use of government funds as well as Donors funds need not to be seen as isolated exercises. On the contrary, they could be undertaken with the aim of reaching several benefits. In order to come up with regional initiatives for both MENA and EAP, we propose specific ways to enhance the accuracy, timeliness, comprehensiveness and accessibility of information on public and private financial flows for health in developing countries of both MENA and EAP regions.

Moreover this research relates to the complex area of tracking the progress and effectiveness of international programs and efforts to fight major health problems such as Non Communicable Diseases (NCD), and HIV/AIDS. It does not necessarily only provide an overview of how the money has been spent, it can also provide an evaluation of what is working and what is not in those countries. This helps in tracking finances from sources to users in the health system as a whole as well as within disease- or intervention-specific sectors (i.e., NCD, HIV/AIDS, reproductive health) and producing data to compute key financial indicators. There are great possibilities for using our methodology as an instrument for increasing transparency of use of funds for special initiatives. The methodology will empirically examine cultural and behavioral influences of MENA and EAP accountants related to preparing consolidated health accounts.

Two statements by both the international producers tell us what is known about National Health Accounts, namely:

(1) The World Bank (WB), WHO, USAID traditionally suggested that it was difficult to collect a comprehensive international set of meaningful data from countries (WHO, 2003). Estimates of country health expenditures by international organizations and publications have been inconsistent. This is largely because the institution relied on estimates derived from various methodologies of data collection and reporting. This lack of standardization in what, when and how data were collected contributed to poor quality data and irregular reporting of information. Lack of regular updates and international institutions often use of out-of-date data to estimate current spending patterns.

(2) The System of Health Accounts SHA (2000-2010) developed by OECD Countries (OECD, Eurostat, & WHO, 2011) suggests that: The revision of the SHA has as one of its aims the development of a global standard for the compilation of health accounts. Health

accounting experts have been encountering growing expectations from policy-analysts, policy-makers and the general public alike: reliable, timely, and comparable health expenditure data – both across countries and over time - are indispensable for analyzing trends in health expenditure and underlying factors of growth, as well as for making projections for future spending.

However gaps still exist in the SHA system. This research provides relevant information for health policy analysis in evaluating health systems performance, and provides adequate input (together with other statistical resources) for the analysis of the sustainability of financing, macro-level efficiency and equity of utilization of resources. We aim to raise awareness of the ways in which health policy processes addressing health needs may be better described, understood and explained, thus helping policy makers understand and intervene better, despite significant obstacles and ethical judgments. A further conceptual and methodological challenge is to produce information on the importance of the health sector within the national economy and the contribution of health care to economic development. However, such a conceptual framework is challenged with the supply of current and reliable data. This study was hampered by shortage of recent data which was available for some in the preparation phase of the study while for others it was only available for years prior to that. During the course of the study, it was noticed that data published do not necessarily correspond to the published year but rather to the actual surveillance year. This was a limitation from a good number of countries, so the study relied on whatever was available as long as it was within five years. Despite that, the models presented can be easily adopted once accurate and reliable data are made available for comparative and benchmarking purposes.

References

Bigdeli, M., & Annear, P. L. (2009). Barriers to access and the purchasing function of health equity funds: Lessons from Cambodia. *Bulletin of the World Health Organization, 87*(7), 560-564.

OECD, Eurostat, & WHO. (2011). *A system of health accounts* OECD Publishing. doi:10.1787/9789264116016-en

Stenberg, K., Elovainio, R., Chisholm, D., Fuhr, D., Perucic, A., Rekve, D., & Yurekli, A. (2010). Responding to the challenge of resource mobilization-mechanisms for raising additional domestic resources for health. *World Health Report,*

WHO. (2003). *Guide to producing national health accounts: With special applications for low-income and middle-income countries.* (No. 9241546077).Geneva: World Health Organization. Retrieved from http://www.who.int/iris/handle/10665/42711

WHO. (2010). *Health systems financing: The path to universal coverage. World health report.* Geneva: World Health Organization. Retrieved from http://www.who.int/whr/2010/en/index.html

World Health Statistics. (2010). Retrieved on 31-December 2012 from http://apps.who.int/ghodata

CHAPTER II
LITERATURE REVIEW

Health financing, as described in the World Health Report 2005, is raising funds for health in a way that allows access to needed services with the risk of a financial catastrophe. It refers to the function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively in the health system. Thus the purpose of health financing is to make funding available, as well as to set the right financial incentives to providers, to ensure that all individuals have access to effective public health and personal health care.

Since the 1940s the world has experienced a considerable **improvement in health outcomes**. In 1950 the global life expectancy at birth was 46 years (K. Sen & Bonita, 2000) and by 2004 the figure stood at 64.5years (Beaglehole & Bonita, 2008). In 2010, the World Health Organization reported a global life expectancy of 66 years (52 years in Africa, 73 in Americas, 64 in Eastern Mediterranean, 71 in Europe, 64 in South East Asia and 72 in western pacific regions) (World Health Statistics, 2010). The number of global child deaths decreased from 13.5 million in1980 to an estimated 9.7 million in 2005, despite an increase in the absolute number of global population (World Health Statistics, 2010). These improvements in health outcomes are ascribed to the discovery of relatively low-cost new and effective methods of disease treatment and prevention (Jamison, 2006). Whereas pre-1940s gains in health are thought to result mainly from economic growth, associated increase in disposable income and better living conditions, progress thereafter is believed to be due to the advance medical technology (Medlin, Chowdhury, Jamison, & Measham, 2006).

Ravallion, Datt and Van de Walle (1991), in research for the 1990 World Development Report (World Bank, 1990), compiled data on national poverty lines across 33 countries and proposed a poverty line of $1 per day (Ravallion, Datt, Van De Walle, & Chan, 1991) at 1985 Purchasing Power Parity (PPP) as being typical of low-income countries. They estimated that one third of the population of the developing world in 1985 lived below this line. The estimates done for the 2000/01 World Development Report (World Bank, 2000) used an international poverty line of $1.08 a day, at 1993 PPP, based on the original set of national poverty lines (Chen & Ravallion,

2001). In 2004, about one in five people in the developing world—slightly less than one billion people—were deemed to be poor by this standard.

A world that is greatly out of balance in matters of **poverty and health** is neither stable nor secure. It has been often argued that poverty and ill health often coincide (Falkingham & Namazie, 2002). In assessing the extent of poverty in a given country one naturally uses a poverty line that is considered appropriate for that country. However, the purchasing power of national poverty lines varies across countries, with richer countries tending to adopt higher lines. For the purposes of measuring poverty in the world as a whole, the World Bank's "$1 a day" measures have aimed to apply a common standard, such that any two people with the same purchasing power over commodities are treated the same way—both are either poor or not poor, even if they live indifferent countries. The World Bank uses a deliberately conservative standard, anchored to what "poverty" means in the world's poorest countries. By focusing on how poverty is defined in the poorest countries, the $1 a day line gives the global poverty measure a salience in focusing on the world's poorest, though higher lines also need to be considered to obtain a complete picture of the distribution of living standards.

In theory, there are two main approaches to define a poverty line using either the absolute or the relative definition. The absolute definition refers to the minimum physiological requirements of individuals, irrespectively of country. A common indicator is the US$1.08 per capacity per day consumption (US$1.25 adjusted in 2008 dollars for purchasing power per country). From our point of view, relative poverty is more important and goes beyond basic needs. It is related to a generally accepted standard of living in a specific society at a specific time. Nevertheless, a commonly used poverty line is that of households living on less than 50% of the median income in a country (Falkingham & Namazie, 2002).

Because poor people tend to have limited cash on hand they are often forced to sell productive assets –on which they depend for their livelihood- to access health services. Mostly the poor reside in geographically deprived areas where health providers are reluctant to reside due to limited economic opportunities, constraining access to health services. The poor also tend to be the least likely to benefit from formal and informal safety networks, and public services especially. It is believed that issues of poverty and social exclusion are closely related since the former status often precludes participation in activities that prevail in society (A. Sen, 2000),

including employment and enjoying the attributes of welfare states (Saith & House, 2001) such as access to labor market, credit marker, health care and schooling (A. Sen, 2000).

In fact, a disagreement exists as to whether the poor are less likely to be healthy merely because they have reduced access to medical treatment. Conversely, *the problem could be not poverty leading to poor health, but poor health causing poverty* (Falkingham & Namazie, 2002). However, people suffer financial hardship or are deterred from using services because they have to pay for health services and on the spot. When this happened, the sick bear all of the financial risks associated with paying for care. They must decide if they can afford to receive care, and often this means choosing between paying for health services and paying for other essentials, such as food or children's education. Removing the financial barriers implicit in direct-payment systems will help poorer people obtain care, but it will not guarantee it. Recent studies on why people do not complete treatment for chronic diseases show that transport costs and lost income can be even more prohibitive than the charges imposed for the service (WHO, 2010). Moreover, if services are not available at all or not available close by, people cannot use them even if they are free of charge.

This raises a question of horizontal and vertical equity. Equity in health requires that resource allocation and access to care are determined by the populace health needs (Isaac, 2012). As such inequity is the extent to which unequal households pay unequal share; or disparities in health between social groups who have different levels of underlying social advantage or disadvantage. In that respect, horizontal equity is summarized as equal treatment for equal need, while vertical is coined as more resources for greater need (Abatemarco, A., Beraldo, S., & Stroffolini, F. 2016). Inequities in health systematically put groups of people who are already socially disadvantaged such as by virtue of being poor, female, and/or members of a disenfranchised racial, ethnic, or religious group at further disadvantage with respect to their health. With equity increasingly becoming a key objective of health systems and poverty is a main key policy issue for low and middle countries governments, there is greater need to **track health expenditure**, to provide a picture of its distribution by geographical unit. Such tracking of health account and sub national health expenditures assumes more importance in countries where fiscal or managerial responsibilities have been devolved to lower administrative units. Being able to measure expenditure in the different sub national units of a country allows national and sub national decision-makers to formulate equitable health care policies. For example, regional health

accounts have been used in some countries, like Vietnam, to draw attention to inequitable distribution of funds among regions, highlighting poverty issues and leading to a rethinking of the national health financing systems. It has been reported that up to 11% of the global population suffer a severe financial hardship each year (WHO, 2010), and up to 5% are forced into poverty. Globally, about 150 million people suffer financial catastrophe annually while 100 million are pushed below the poverty line (WHO, 2010). Government allocation of resources needs to be consistent with identified national priorities, such as geographical areas most affected by a given disease, those areas with a larger proportion of the population living in poverty, those with poorer health outcomes, or those with less access to health care or with fewer health care providers per person.

Efforts to describe *financial flows* associated with (the consumption of) health care can be traced as far back as the 1920s (Fetter, 2006). Several studies discuss the development of Health Accounts in the sixties (Abel-Smith, 1967). Findings from his research show that developing countries need to systematize the health expenditures in term of sources and uses of expenditures as well as the financial flow related to health care

Beginning in the 1970s (and in some country cases, the 1960s), countries belonging to the OECD were regularly estimating health expenditures, combined with relatively aggregated information on private and public expenditures (Maxwell, 1981; Poullier, Hernandez, Kawabata, & Savedoff, 2002; Van Mosseveld, 2003; Orosz, 2005). Of these initial efforts, perhaps the most comprehensive exercise was undertaken by the United States that provided detailed information on the sources of health financing, along with associated expenditure data.

After the year 2000, there have been two major efforts to systematize the collection of information on financial flows related to health care. These include the publication of ―A System of Health Accounts (SHA) version 1.0 by the OECD in 2000 including an associated set of classifications of financial flows known as the International Classification of Health Accounts (ICHA); and the combined efforts of the WHO, World Bank, and USAID that led to the development of the ―Guide to producing national health accounts, otherwise referred to as NHA Producers Guide (PG), in 2003. These were the first standards to receive wider acceptance and use in producing health expenditure data globally. These led to the compilation of internationally comparable data sets by the OECD, Eurostat, and WHO, with each manual contributing to a

considerable number of studies in higher income countries (SHA) and in low- and middle-income countries (WHO, 2003). Some other guidelines have been produced targeting a regional coverage and with various approaches (OECD, Eurostat, & WHO, 2011) and many adjustments have been produced to guide national as well as sub-national estimations, for example, in the cases of Philippines, Palestine, Vietnam, Malaysia and Egypt.

In the World Health Report 2000, the concept of health system performance was expanded to include explicit goals such as protection of the population from financial risk and equity in health and financing (WHO, 2000). Information on financing of the health system is an essential input for strengthening policies to improve health financing functions and its components; collection, pooling, and purchasing. The best sources of collecting data on health expenditures is from NHA, which combines expenditures data from all sources and through all types of financial agents which is developed in recent years (WHO, 2003).

Furthermore, prior researches largely examined the influence of Health Account on formulating Health Financing policy, extensively relying on the dimensions treated in OECD System of Health Account (SHA). A paper by SIDA (Glenngård & Hjalte, 2005) and reports on developing countries (Powell-Jackson & Mills, 2007) discuss the influence of NHA in advancing health financing policy agenda in low and middle income countries. These studies show networks playing a critical role in bringing together country NHA teams and offer opportunities for training and cross-country sharing of NHA experiences and lessons learned, creation of new informal contacts, transferring of knowledge, comparison of results, capacity building and improved donor coordination. Other positive effects identified were: the data collection methods have improved together with the quality and the timeliness of data produced; and led to enhancement of the technical and analytical capacities. The Global Health Resource Tracking Group (Levine, Blumer, & Gerritsen, 2007) identified international organizations and regional networks can have a strong role in supporting capacity and systems strengthening, and scaling up donor support in line with the Paris/Accra principles of aid effectiveness. The major known regional networks in existence that are working on NHA related activities are: 1) Middle East and North Africa (MENA), 2) East, Central, and Southern Africa (ECSA), 3) Latin America and Caribbean (LAC), and 4) the Asia-Pacific Health Economics Network (APHEN) and its sub component Asia, Pacific National Health Accounts Network (APNHAN), network of

Commonwealth of Independent States (CIS) recently renamed as Euro-Asia network, Europe and Central Asia (ECA) network and the Francophone Africa NHA network.

The network presence in both the MENA and EAP countries in the last decade was the platform for effective engagement among the countries for advancing the Health Account regional agenda as well as contributing to national strategies and priorities, and bringing country realities and perspectives into the global policies and priorities. The main impact focused on promoting consistent production and use of health accounts in all countries including low and middle income countries as well as coordinating the work throughout the regions. Importantly, it lacks accounting standards for specific health services transactions and reporting and require the application of professional judgment. In the absence of standards, most of the low income countries requested technical expert for the production specifically at the level of data analysis and policy use of health accounts information.

Over the years, various initiatives have been aimed at improving the regional networks performance at country level to provide better support to measure health accounting of the countries in each of the Middle East and North Africa (MENA) and East Asia and Pacific (EAP) regions. Significant progress has indeed been made; however, huge efforts are still required to match the networks presence at countries level to the needs of each country. The behavioral aspect of health accounts and ethical judgment and methodology will be discussed and presented later based on a critical analysis of policies and guidelines already applied to several countries. Choosing both regions is to stimulate and support further work, testing and develop of indicators for the low income countries and compare it to middle income countries. It was interesting that both regions are a mix of both low and middle-income countries with particular country-specific similar socio economic backgrounds and health priorities conditions. It is our hope that the countries of both regions will take advantage of the useful information, analysis and practical experience represented by this thesis to further advance the work on health policy and sustainable development by adding their own unique perspectives to what already has been learned. Putting this in order would provide support on using health indicators to inform thinking and practice in developing countries. The ultimate aim is to find the appropriate and efficient use of these Accounts in measuring development with a special reference to achieving the Development Goals.

Millennium Development Goals (MDGs):

The Millennium Development Goals (MDGs) were established following the Summit of the United Nations in 2000 to mobilize public and political support for development action on a range of global issues including malnutrition, poverty, maternal and child health, and water, sanitation and hygiene. As a result, eight international development goals were adopted: 1) eradicating extreme poverty and hunger, 2) achieving universal primary education, 3) promoting gender equality and empowering women, 4) reducing child mortality, 5) improving maternal health, 6) combatting HIV/AIDS, malaria and other diseases, 7) ensuring environmental sustainability, 8) developing a global partnership for development. At the time, all 189 United Nations member states and at least 23 international organizations made a commitment to help achieve these goals by 2015. Of the 189 United Nations member states, countries from the Arab region, including Lebanon made a commitment to working towards achieving the MDGs.

MENA and MDG Attainment

1) Eradicate Extreme Poverty and Hunger

The MENA region has made significant progress towards achieving the MDGs. However, as can be expected given the political social and economic evolutions, achievements are largely uneven. Extreme poverty in the MENA region, as measured by the proportion of people whose income is less than $1.25 US a day, remains low, however, even though the region is doing well in this area, starting 2010, there has been a rise in extreme poverty. With regards to hunger, the region lags far behind on meeting the MDG target of halving undernourishment. In fact, the proportion of undernourished people increased from 13.9 percent in 1991 to 15.3 percent in 2011. The proportion of underweight children under the age of five increased from approximately 14.4% in the 1990s to around 15.3% in 2010. Lastly, even though women's participation in the workforce has increased over the past twenty years, it remained as low as 26% in 2010, the lowest rate between all regions.

With regards to Lebanon specifically, a survey conducted in 2004-2005 found that out of the 29.7% of households with unsatisfied basic needs (30.9% of population), 4.4% lived in extreme deprivation or very low satisfaction of basic needs (3.9% of the population). However one study found that between 1995 and 2004/05 the percentage of households deprived of basic needs declined by 6.3%. Furthermore, based on data collected in 2004-2005, there is significant

inequality in patterns of consumption, with the richest 20% consuming 43% of total consumption and the poorest 20% consuming only 7%. In addition, the influx of refugees further deepens poverty as well as increases inequalities and geographical disparities. With regards to hunger, Lebanon does not have a hunger problem and the MDG target for hunger has been met, however, disparities exist between urban and rural areas in the level of child malnutrition, and vulnerability to food-related shocks remains a major concern for poor Lebanese. With regards to employment, data shows that employment rates increased by 5 % between 2004 and 2009, from 41% to 45%, but remain below the typical range of 50-75%. Indicators reveal that women and youth are most significantly affected by the country's high unemployment rate. In 2010, unemployment by gender was at 18% for women, double the rate for men (World Health Statistics, 2010).

2) Achieve Universal Primary Education

With regards to achieving universal primary education, significant progress has been made in the MENA region, with 85% of children of primary school age attending school in 1999, 92% in 2011 and 7 million additional students enrolled in 2012 compared to 1999. Several countries such as Algeria, Bahrain, Egypt, Kuwait, Morocco, Oman, Qatar, Tunisia, and the UAE are close to achieving universal enrolment, with a net enrolment rate of above 95%. In addition, literacy rates have improved greatly, to 89%, across the region. However, quality of education in the MENA region remains below international averages and indicated benchmarks.

With regards to Lebanon specifically, primary school education is compulsory and free of charge in public schools, therefore the country enjoys high enrolment and a high literacy rate among male and female youths, and has fulfilled the second MDG goal of universal primary education. However dropouts and repetition rates remain an issue, especially prior transition into the intermediate and secondary cycle. In addition, wide disparities exist in quality of education, particularly when comparing private and public schools and compared to other countries in the same level of development as Lebanon.

3) Promote Gender Equality and Empowering Women

With regards to gender equality and women empowerment, progress has been made towards gender parity in education in the MENA region, which is an important step in creating equal opportunities for women and men. GPI for primary school education reached 0.93 in 2011 which

remains below the parity level set at 1. In addition, despite the rise in women's political participation, the MENA region remains behind the rest of the world in this department, with violence against women and girls preventing them from fully participating in all aspects of society.

In Lebanon, gender parity is achieved at all educational levels. However, even though women are increasingly becoming economically active, the successful narrowing of gender gaps in education has yet to be fully reflected in labor force participation as well as in political participation. Therefore, much works still need to be done to fully achieve the targets of this MDG.

4) Reduce Child Mortality

Child mortality has fallen by approximately one third in the MENA region. However, the target of reducing child mortality by two thirds by 2015 is unlikely to have been met. Between 1990 and 2011, under-five mortality rates declined by 36%, infant mortality rates by 34% while neonatal mortality rates showed the least improvement with a decline of 27% in the MENA region.

With regards to Lebanon specifically, the MDG goal of reducing child mortality has been achieved and Lebanon has reached mortality rates comparable to developed countries. However, more can be done to ensure quality services and fairness in access. Furthermore, under-5 mortality rates have declined to a third of their level, as compared to where they were in 1996, with a vaccination coverage increase to almost full coverage. According to the MOH, the main causes of under-5 mortality in Lebanon are neonatal cases (65%), injuries (11%), pneumonia (1%) and diarrhea (1%).

5) Improve Maternal Health

With regards to maternal health, achievements have been uneven in the MENA region, with GCC countries' halving their ratio of maternal deaths to 15 per 1000 live births between 1990 and 2010, while in the Mashreq and Maghreb sub regions showed a decline of more than 60%, which is close to the MDG target of a three quarters reduction (World Health Statistics, 2010). However, in least developed countries (LDCs), access to reproductive healthcare for mothers

remains close to zero, whereas Mashreq countries can claim noteworthy achievements in this area, with more than two thirds of births attended by skilled health personnel.

With regards to Lebanon specifically, the maternal mortality ratio has decreased by more than two thirds compared to the 1990s and reached a ratio of 25 per 100,000 live births in 2010, thus reaching the MDG targets for reducing maternal mortality and placing Lebanon at a higher level than other countries in the region.

6) Combat HIV/AIDS, Malaria and other diseases

With regards to the sixth goal of combatting HIV/AIDS, malaria and other diseases, the number of people living with HIV in the MENA region increased from 166,000 to 226,000 between 2001 and 2011, and while more people have access to treatment, the progress in this area remains insufficient. In addition, reversing the incidence of malaria and other major diseases remains an important challenge in Arab LDCs.

With regards to Lebanon specifically, the cases of HIV/AIDS remain relatively low, however the disease is increasing in prevalence, with 109 new cases reported in November of 2011, for which the MOH has been offering free-of-charge treatment. With regards to malaria, Lebanon is considered free of indigenous cases of the disease, whereas tuberculosis was estimated at around 15 per 100,000 in 2012. Therefore, work still needs to be done on this MDG.

7) Ensure Environmental Sustainability

With regards to ensuring environmental sustainability in the MENA region, even though carbon dioxide emissions are increasing, they are doing so at a slower pace than in the early 2000s. However, in 2009, emissions in the region were more than double the amount of 1991, as well as doubled in Mashreq countries. Furthermore, the Arab region is expected to suffer greatly from water scarcity, desertification, inundation of fertile lands and costal infrastructure, and the loss of biodiversity.

8) Develop a Global Partnership for Development

Finally, with regards to the eighth MDG of developing a global partnership for development, a number of regional and international agreements have led towards greater liberalization and regional and global economic integration, however, the MENA region remains unable to fully

realize the benefits of favorable trade conditions due to overvalued exchange rates, supply constraints and a weakness in non-oil export promotion strategies.

Similarly, Lebanon has also pursued trade liberalization reforms, tariff rate reductions and a number of free trade agreements. However the economic and social impact of this global integration, especially on decent job creation and poverty reduction, might vary from sector to sector and requires further investigation.

EAP and MDG Attainment

1) Eradicate Extreme Poverty and Hunger

With regards to eradicating extreme hunger and poverty, even though Asia and the Pacific has achieved the target of halving the proportion of people living below $1.25 per day, the region remains home to over 750 million people living in extreme poverty, representing two-thirds of the world's poor. This number doubles if the poverty line is raised to $2. By comparison even though poverty levels in MENA and Lebanon are on the rise due to a number of factors including the influx of Syrian refugees in Lebanon, the region does not suffer from the same degree of widespread poverty as does Asia-Pacific.

On average, Asia-Pacific countries have low unemployment; however as in the MENA region and Lebanon, underemployment is of particular concern for women and youth. Furthermore, similar to MENA and Lebanon, a large number of women are not employed in any paid work and a significant gender gap exists against women with regards to access to decent jobs. However, with 60% of the world's hungry and undernourished living in Asia-Pacific, particularly South Asian, the region is doing much worse than the MENA and particularly Lebanon in reducing hunger and improving nutritional status.

2) Achieve Universal Primary Education

With regards to primary education, the Asia-Pacific region is likely to meet its target of universal primary enrolment; however, the region still suffers from an extremely high number of primary aged out-of-school children, recorded at 12 million in 2011. Therefore, Asia-Pacific lags behind the MENA region in terms of student enrolment, and does not compare to Lebanon where literacy rates are high and where primary school enrolment is near 100% (World Health

Statistics, 2010). However, in all regions, MENA, Asia-Pacific and Lebanon, quality of education, particularly in public school remains an issue of concern.

3) Promote Gender Equality and Empower Women

With regards to gender equality and women empowerment, on average, Asia-Pacific has achieved gender parity across all levels of education. In fact, in East-Asia and South-East Asia, more women than men are enrolled in tertiary education. Therefore, in this area, Asia-Pacific is faring better than the MENA region as gender parity has been achieved in EAP, whereas even though progress was made in the MENA region, the target goal was not achieved. However, the EAP region is faring similarly to Lebanon on this MDG as gender parity has been achieved at all educational levels in both regions. However, unlike the MENA region, which has seen a rise in women's political participation, Asia-Pacific has the second-lowest percentage of women parliamentarians in the world. Therefore, in this area, Asia-Pacific is faring worse than Lebanon, although Lebanon's indicators could be improved. However women's agricultural employment in EAP is significantly higher than that of Lebanon, where only 5.7% of women work in agriculture.

4) Reduce Child Mortality

Similar to the MENA region, the overall number of under-five mortality rates declined in the Asia-Pacific region, however, both regions are unlikely to have met their goals of reducing child mortality rates by two-thirds by 2015. By comparison, Lebanon has achieved this goal and is now comparable to developed countries in this area.

5) Improve Maternal Health

Improvement of maternal health has been slow in the Asia-Pacific region, with only five countries achieving the target of reducing maternal mortality rate by three quarters between 1990 and 2015, and five other countries likely to meet the targets. This is similar to the situation in the MENA region, where some countries have achieved the target while others remain far-off, and starkly different to the situation in Lebanon where this MDG has been achieved.

6) Combat HIV/AIDS, Malaria and other diseases

With regards to HIV/AIDS, malaria and other diseases, on the whole Asia-Pacific has reduced the incidence of HIV, tuberculosis and other communicable diseases. However, an in-depth look

at country specific measures shows mixed and slower performance. By comparison, HIV/AIDS is less prevalent in the MENA region, particularly in Lebanon; however, the number of people living with HIV is on the rise rather in MENA and Lebanon rather than on the decline.

7) Ensure Environmental Sustainability

With regards to environmental sustainability, the Asia-Pacific region has done well on several target indicators, with all countries registering an increase in the proportion of terrestrial and marine areas under protection and increasing the proportion of land area covered by forest. However, though still relatively small, Asian countries are increasing contributing to carbon dioxide and global greenhouse gases emissions. Similar to the MENA region and Lebanon, much work needs to be done to achieve all the target development goals.

8) Develop a Global Partnership for Development

Finally, with regards to developing global partnerships, duty free admitted goods had reached 82% by 2010 for the Asia-Pacific region as a whole, but only 69% for Asia and the Pacific LDCs. Furthermore, LDCs in general suffer from restricted access to markets due to non-tariff barriers being selectively applied. Therefore in this department, the MENA region and Lebanon have fared better in global economic integration as a number of trade liberalization reforms and tariff reductions have been introduced.

National Health Accounts:

National health accounts (NHA) is a framework for the annual and timely collection of health expenditure data for a given year. Using a two-dimensional table format, NHA provide an integrated and harmonized platform between institutions by tracking the annual flow of funds through the health system from their *financing sources*, such as the ministry of finance and donors, to the principal manager of health funds, *the financing agents*, which include the Ministry of Health, and nongovernment organizations, to providers such as hospitals, clinics, pharmacies, to *end-users of the services or products* including curative, preventive and rehabilitative care, and administration. This provides countries with the ability to capture total health expenditure for a given year.

Generally, NHAs look to answer the following questions:

(i)   How are resources mobilized and managed for the health system?

(ii)   Who pays and how much is paid for health care?

(iii)   Who provides goods and services, and what resources do they use?

(iv)   How are health care funds distributed across the different services, interventions and activities that the health system produces?

(v)   Who benefits from health care expenditure?

With the support of international organizations including the World Health Organization (WHO), the World Bank and the United States Agency for International Development (USAID), National Health Accounts were developed in response to the growing need, particularly for low-and-middle income countries, for health expenditure information that would assist in evidence-based policymaking. Seventy developing countries have implemented NHA as part of routine data collection system. As NHA is an internationally accepted tool for tracking resource flows, the data collected can be compared across countries.

MDGs and National Health Accounts:

In addition to providing a framework for tracking total health expenditure within a country, NHA, also allows sub-analyses through the stratification of funding flows by disease-specific areas such as HIV/AIDs, malaria and so forth, as well as intervention clusters such as child healthcare, reproductive health and so forth. Therefore, like the general NHA, the NHA sub-analysis captures information on health expenditure in a table format from financing sources, to financing agents, to providers, to end-uses, however only for the specific sub-analyses area in question. This allows for the estimation and placement of expenditure for each target MDG, which can assist in addressing key policy questions, such as how much is spent on each target MDG, reliance on donors for each target MDGs, and what proportion of financing comes from private sources such as household for each target MDG. This information can then be use dot guide policy decision-making.

Finally, NHA can assist countries in reaching universal health coverage by providing a framework to raise funds for health, reduce financial barriers to access through prepayment and pooling of funds and allocating funds in a way that promotes efficiency and equity.

Purpose and Aims

Proposing health strategies and reform actions needs to be elaborated under comprehensive national policy on health care financing based on the health account. It intends to formulate

solutions for inadequate funding, improves efficiency and effectiveness of resource use and ascertains financial sustainability. National health accounts have been championed as policy a tool used to collect and report information on resources used in the health sector or earmarking health programs and target groups at districts and regional levels, considered to be priorities, for example, expenditures on the health of the poor. Those accounts are generated following the general health accounts methodology but instead of covering the consumption by the whole health system, they measure a selected part of it. They may refer to specific accounts for a health program, a factor of production, a disease management or a population group, which we call Regional Health Accounts (RHA) or sub health accounts.

This thesis sets a priority objective to link health determinants and health indicators with health expenditure patterns among the 22 countries in MENA and the 37 countries in EAP region, which somehow show similarity in the socio economic and financial background. It highlights the use of health account to formulate health-financing policy and plan at the level of the three income groups' countries. The diversity of income countries level in both MENA and EAP regions makes the comparison homogeneous. We will attempt to provide a comprehensive picture of health spending and how it is financed in these countries. Comparisons within and across both regions, paying special attention to the sources of financing, the role of insurance, households and donors in financing health expenditures, and expenditures on pharmaceuticals and out of pocket payments affecting poverty.

This thesis will analyze the growing burden existed in both regions while providing and financing health services. It will examine the countries' performance and the responsible factors affecting poverty and critical key policy issues to contain cost while maintaining steady improvements in access and quality; and to reduce or maybe improving health among the poor by reducing Out of Pocket (OOP) on health services. It will examine ethical judgments as well as behavioral aspect and principles such as —strategic vision, participation and consensus orientation, transparency, responsiveness, equity and inclusiveness, effectiveness and efficiency, accountability, intelligence and information, and ethics. Moreover, even though some previous research examined technical issues and accounting principles related to Health Accounting, it largely relied on experiences in OECD countries that don't include policy criteria to fit with low and middle income countries context.

Based on the above, this thesis will propose measures to be adopted in the countries of MENA and EAP in order to improve the health care systems and strategies according to the government and non-government allocation. It will take into consideration the central role of governments of both regions in health development. As such, this study will recommend approaches to develop appropriate health policies and strategic plans that would aid in preventing market forces from dominating health system priorities and agenda for health sector reform. It will also explore alternatives for partnering with the non-public sector organizations and in promoting greater accountability and transparency in moving toward universal coverage to essential health services. For that, this thesis will focus on needed sets of data that would assist in such decision making.

More specifically, this thesis will attempt to develop an analytical framework on interventions to overcome access barriers to health services for the poor; and examine the experience of both "MENA members' and "EAP members" countries in developing health accounts at the national and regional levels and formulating related Health financing policies. Furthermore, it will examine the cultural and behavioral contexts of the MENA and EAP regions related to preparing consolidated health accounts that influence the population well-being. Specifically, it will study the influence of relevant health financing policy variables, namely policies based on macro-economic indicators and regulatory focus theory.

References

Abatemarco, A., Beraldo, S., & Stroffolini, F. (2016). *A Resource-Sensitive Framework for Defining and Measuring Equality of Opportunity in Health* (No. 437). Centre for Studies in Economics and Finance (CSEF), University of Naples, Italy.

Abel-Smith, B. (1967). An international study of health expenditure and its relevance for health planning.

Beaglehole, R., & Bonita, R. (2008). Global public health: A scorecard. *The Lancet, 372*(9654), 1988-1996.

Chen, S., & Ravallion, M. (2001). How did the world's poorest fare in the 1990s? *Review of Income and Wealth, 47*(3), 283-300. doi:10.1111/1475-4991.00018

Falkingham, J., & Namazie, C. (2002). Measuring health and poverty: A review of approaches to identifying the poor. *London: DFID Health Systems Resource Centre.*

Fetter, B. (2006). Origins and elaboration of the national health accounts, 1926-2006. *Health Care Financing Review, 28*(1), 53-67.

Glenngård, A. H., & Hjalte, F. (2005). *Findings from a study of regional NHA networks* Health Division, Department for Democracy and Social Development, Sida.

Isaac, L. A. (2012). Defining health and health care disparities and examining disparities across the life span. *Race, Ethnicity, and Health: a Public Health Reader. San Francisco, CA: Jossey-Bass, Inc*, 11.

Jamison, D. T. (2006). Investing in health. In D. T. Jamison, J. G. Breman, A. R. Measham, G. Alleyne, M. Claeson, D. B. Evans, . . . P. Musgrove (Eds.). *Disease control priorities in developing countries* (pp. 3-34). Washington, DC: World Bank Publications.

Levine, R., Blumer, K., & Gerritsen, J. (2007). *Following the money: Towards better tracking of global health resources.* (Global Health Resource Tracking Working Group). Washington, DC: Center for Global Development.

Maxwell, R. J. (1981). *Health and wealth: An international study of health-care spending*. United States: Lexington Books.

Medlin, C. A., Chowdhury, M., Jamison, D. T., & Measham, A. R. (2006). Improving the health of populations: Lessons of experience. In D. T. Jamison, J. G. Breman, A. R. Measham, G. Alleyne, M. Claeson, D. B. Evans, . . . P. Musgrove (Eds.), *Disease control priorities in developing countries* (pp. 165-180). Washington, DC: World Bank Publications.

OECD, Eurostat, & WHO. (2011). *A system of health accounts.* OECD Publishing. doi:10.1787/9789264116016-en

Orosz, E. (2005). The OECD system of health accounts and the US national health account: Improving connections through shared experiences. Paper presented at the *Draft Paper Prepared for the Conference on Adapting National Health Expenditure Accounting to a Changing Health Care Environment. Centers for Medicare & Medicaid Services,* 21-22. Retrieved from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/downloads/confpaperorosz.pdf

Poullier, J., Hernandez, P., Kawabata, K., & Savedoff, W. D. (2002). *Patterns of global health expenditures: Results for 191 countries. Discussion paper no. 51.* ().World Health Organization. Retrieved from http://www.who.int/healthinfo/paper51.pdf

Powell-Jackson, T., & Mills, A. (2007). A review of health resource tracking in developing countries. *Health Policy and Planning, 22*(6), 353-362. doi:czm024 [pii]

Ravallion, M., Datt, G., Van De Walle, D., & Chan, E. (1991). *Quantifying the magnitude and severity of absolute poverty in the developing world in the mid-1980s: Background paper for the 1990 world development report.* (). United States: Retrieved from http://213.154.74.164/invenio/record/16034/files/gaurav.pdf

Saith, R., & House, Q. E. (2001). *Social exclusion: The concept and application to developing countries* Citeseer.

Sen, A. (2000). Social exclusion: Concept, application, and scrutiny.

Sen, K., & Bonita, R. (2000). Global health status: Two steps forward, one step back. *The Lancet, 356*(9229), 577-582.

Van Mosseveld, V. (2003). *International comparison of health care expenditure: Existing frameworks, innovations and data use*. Netherland: Statistics Netherland.

WHO. (2000). *The world health report 2000: Health systems: Improving performance*. World Health Organization. Retrieved from http://www.who.int/whr/2000/en/whr00_en.pdf?ua=1

WHO. (2003). *Guide to producing national health accounts: With special applications for low-income and middle-income countries.* (No. 9241546077).Geneva: World Health Organization. Retrieved from http://www.who.int/iris/handle/10665/42711

WHO. (2010). *Health systems financing: The path to universal coverage. World health report*. Geneva: World Health Organization. Retrieved from http://www.who.int/whr/2010/en/index.html

World Bank. (1990). *World development report 1990: Poverty*. New York: Oxford University Press. Retrieved from http://hdl.handle.net/10986/5973

World Bank. (2000). *World development report 1999/2000: Entering the 21st century*. New York: Oxford University Press. Retrieved from http://hdl.handle.net/10986/5982

World Health Statistics. (2010). Retrieved on 31-December 2012 from http://apps.who.int/ghodata

CHAPTER III
METHODS

The aim of this study was to analyze the financing and non-financing factors which contribute to a country's income-level status (high or low income) and influence the country's health sector during a given time period. The study also aimed to determine the relative contribution of each source of funding, how these funds are used by different health service providers (public and private) and beneficiaries (socio-economic groups and geographical regions and demographic groups), and whether the dominant source of financing was from the formal or non-formal sector. Financing Statements made regularly can help understand country's own performance over a period of time thereby improving the capacity of planners to make informed policy decisions in the area of health sector reforms. Therefore, the proposition of a uniform tool across different countries can help in producing data for inter-country comparisons and in drawing lessons from other countries.

The study will rely on describing, analyzing and discussing the situation analysis in the two regions (MENA and EAP) and the governments' calls for policies and strategic directions to improve health care financing and expedite the move towards fighting poverty. It will also be coupled with an analysis of the key indicators from these countries and try to build a theoretical model that can predict memberships into the two regional groups.

The main approach was to focus on interventions in low and middle income countries (LMIC) that can reduce poverty by focusing on major element in improving access to care and that by reducing OOP on health services. Important interventions that can bear results in the short and medium term and can be implemented at this income country level: **(1)**finding alternative source of funds to cover necessary services supporting health sector reform and management for both poor and rich, **(2)** strengthening the level of provision and clinical health services -quality and quantity of services delivery- in order to contain cost by reducing the unnecessary services and provide an equitable health care, and **(3)** controlling providers payment mechanism and lead to decreasing OOP payment to decrease poverty and at the same time decreasing the burdens on the government contribution to health services.

Three indicators were used to assist low income countries and illustrate a proposed health sector reforms: quality, sustainability, and equity in the health sector. By addressing the above three key indicators, Governments of LMIC will strengthen its dual role as a regulator and main health service provider. As the cost of healthcare spending continues to grow as compared aggregate population income, interventions for cost containment are important to ensure equitable access to quality healthcare services. The unstable political and economic environment and dependency on donor aid to cover increasing costs in most LMIC have contributed the disproportionate increase in healthcare spending. This has created a need for cost containment within the health sector, particularly the Ministry of Health as the largest provider of health services in such countries level. With budget constraints on health providers and limited affordability by patients, health financing and financial management have been identified by most countries in this paper as a priority issue in its institutional development plan.

It relied on a retrospective cohort that took place during August - December 2012 with the aim of proposing criteria and exemption measures for the poor on paying out of pocket payments and comparing relatively the effectiveness of health system in Low income pilot countries of the EAP and MENA regions with passive identification of equity, efficiency, effectiveness and appropriateness of the provision / financing policy for the poor / non poor.

More importantly, the thesis will further focus on a subset of these countries and analyze the policy approach to poverty reduction and improving access to the poor. It will also include a review of relevant documents related to key policy issues of each country was conducted considering the awareness of producing national policy, political commitments, innovation in health system, innovation on health insurance and policy impact on poverty. Dominant themes will then be identified and discussed based on the four areas of interest, i.e., effects on the policy environment, effects on health service provision and public/private mix, effects on strategic management, and effects on community and household.

Examining policy process:

Policy process is often presented as a process moving from formulation to implementation. For example, politicians identify a priority and a broad outline of a solution; policy makers design a policy to put into action, assembling the right collection of tools e.g. legislation, directions, models and systems of collection and funding; implementation is handed over to group of professionals and government agencies; than goals are achieved and a change in policy is declared by policy makers. Graham argues that no model offers policy makers a clear direction for policy development (Graham, 2004). Dahlgren and Whitehead see that all directions are invisibles (Dahlgren & Whitehead, 2006). The distinction between formulation and implementation is rarely clear-cut; intentions and action are often hard to distinguish. Considering Exworthy et al. (2006) concerns that routine data are not always available, are of poor quality or have been collected over insufficient periods to aid policy making, the examination of the policy decisions is taken from different secondary sources over three different years, and sometimes from unpublished materials, considering that (1) policy decisions rarely take place at a single point in time and can be protracted over months and years; (2) policy making rarely occurs in public but rather behind "closed doors" despite attempts to make it transparent; (3) much of the published documents on policies originates from high income countries; there is a question whether such valid documents existed in low and middle income countries (Exworthy, Bindman, Davies, & Washington, 2006). The World Health Report suggested that the comparison overtime and cross-country of health expenditure data is limited by the lack of health-specific policy variables, indexes and output measurement (WHO, 2000) . The current categories of health care financing do not enable an adequate reflection of the complex and changing systems of health financing. Insurance and financing schemes are heterogeneous and have evolved significantly as a result of recent reforms and policy initiatives. In order to more adequately answer the question of "Who gets what, where, and how" (that is, the key questions of health policy related to efficiency and equity), the incorporation of further dimensions of health expenditure, such as disease categories and socio-economic, age and gender characteristics of beneficiary/recipient into the International Classifications for Health Accounts (ICHA) is discussed.

Cross-sectional secondary sources

Three cross sectional collection of secondary sources were studied and analyzed in August 2011, August 2012 and August 2013. The study was guided by several questions: To what extent did the policy change reflect learning from international producers guide? How did health accounts affect health financing policy for the poor? What factors were important in shaping the role of policy? We looked at four major factors, or sets of factors, which we hypothesized, were important in shaping the role of health account to formulate the policy or change of the policy. These were the environment, the availability of relevant data, the demand for HA study by decision-makers, and linkage strategies, or the ways in which researchers and policy makers convert HA study into policy and programs. The reason of repeating the collection is to update our database and collect as much information on health accounts during three consecutive years, as well as evaluate the changes in countries' policies, and thus include as much affected variables within each health sector of the studied countries. Also the available data for low income countries can rarely be found at a single point of time and the process could take months and years. We chose countries of the MENA region network with similar socio economic background. The results of our analysis intended to be used is to indicate a trend in different health sectors over time and as a verification of the changes occurred. Meeting the requirements entails considerable effort and time. The focus resulted areas were: (1) Health accounts were not used properly, (2) Less attention to how to do policy, (3) Less attention to poverty affected by out-of-pocket payment for health services, (4) Reliance on budget to improve provision of health services for the poor is problematic. In the following only a few of the most important methodological issues are presented. Comparability of health expenditure data is limited by several factors. Although the Health Accounts systems should provide a consistent functional approach in defining the boundaries of the health system (WHO, 2003), several specific issues have not yet been adequately resolved (e.g., estimating private expenditures, boundaries of public health and prevention, treatment of informal care, etc.). An estimation of private expenditure seems at the moment one of the weak points of health accounting, mainly due to uncertainties with respect to the amount of out-of-pocket payments to health care providers. It is

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therefore can be one of the major sources of estimation error in total expenditure on health care, in particular lower and middle income countries (Maxwell, 1981; Orosz, 2005; Poullier, Hernandez, Kawabata, & Savedoff, 2002; Van Mosseveld, 2003).

Another key methodological issue is aiming to create awareness and having a strong impact on the behavior determinants. The discussion and presentation in the section preceding has identified the various components of the general framework by which we can propose policies and action plans to ensure that they are country responsive. Producing and examining health accounts will ease this process and provide evidence-based information for policy formulation as well as enhance cross-country comparability of health expenditure and financing data, and link it to the economic, behavioral, health and social services, personal factors and social environment determinants. As determinants, the questions are what is working and what is not?

As such, when changes to the healthcare system are introduced, countries are more adversely affected with the possibilities that they would change system or switch to different language in accounting, which they would have to work longer hours to convert the system of accounts adapted by the government accounting system to health account classification. This will raise five major determinants:

- Awareness of producing national policy: Most countries in all regions are still in the stage of developing a more formal national health account system. In most countries, accounts are still regarded as government requirement, in which official policy has yet to intrude.
- Behavioral determinants: new systems of health accounts have a strong impact on the behavior determinants. Health accountants who use to account health spending by government system of account line items, hardly accept changes and have no intention to change the way they use to use, and are all going to have a strong impact on fighting the changes, especially towards spending more time and efforts of their duties.
- Economic determinants: Of all the determinants, economic determinants is the most critical and are pre-determined by the following factors: work load (which means their income still the same and the work load is higher); level of income (very much tied up with their work); inheritance practices in their job or cultural practices attached to their term of references
- Personal determinants: Determinants related to personal differences specifically between new health accountants' staff and experienced one are almost similar for both. There is only a slight difference in terms of the experienced accountants that may know the accounts better.

- Social environment determinants: Older accountants' experience is partly determined by social factors that puts them in a more responsible position than freshly appointed staff. These include the following: social status and exclusion; discrimination based on practices that disempowering new accountants; social support, education and accounts literacy.

The theoretical underpinnings of policy analysis are diffused and problematic when applied in the complexity of the real world. Despite attempts by some social scientists to apply the positivist paradigm of the natural scientists to increase knowledge concerning health accounts and policies, the link will remain a challenge in the policy field. In the natural sciences, causality refers to an account that explains an outcome through a measurable variable that exists independently of any participant/observer's understanding. Yet, in the policy sciences, the search for explanation is intimately bound up in perceptions held both by the participant and the observer of the variable (which may or may not even account for the occurrence).

The case for undertaking changes in policy analysis has been made by a number of scholars and practitioners described as follow. Walt describes the useful way of understanding policy changes are in term of context, content, process and power (Walt, 1994). Deaton argued that policy cannot be intelligently conducted without an understanding of mechanisms, correlations are not enough (Deaton, 2002). However, there has been much less attention given to how to do policy analysis, what research designs, theories or methods best inform policy analysis. The issue of new theoretical and methodological suggestions and ethical judgment in accounting to apply it in countries like low income countries in the MENA and EAP pause some limitations and is problematic specifically when implementing it. The changes in the system create problems as well to labour and accountants which they switch to different language in accounting and would have to work longer hours to convert the system of accounts adapted by the government accounting system to health account classification.

Linking health commitments to health policies is another area of research revised in this paper for both MENA and EAP regions in term of consistency, comprehensiveness and completeness. We discussed the health commitments taken from both MENA and EAP regions and reflected the idea that some indicators that are feasible in one country/region may not be feasible in another. However, in all countries where Health Account has been established, health

expenditures estimates classified according to only one key would generally be available, especially expenditures classified by function, provider and financing scheme and policy will be based upon. The indicators that a country decides to adopt do not have to be limited to the proposed list of any system of health accounts. Many more can be created and these are usually to be determined by national or even local demands.

Data Source

Data for this study was extracted from health funds between and within EAP and MENA countries, the data flow between various government and private health agencies, the healthcare providers, and the general population from different socio-economic classes. In addition, indicators related to health outcomes measurement and health system performance and assessments were used.

Public sector data was extracted from the audited statements of various ministries from the EAP and MENA countries as provided in the budget documents of fiscal years 2005-2009. The data was compiled from these budget documents as most health-related data is available in the official budget documents.

There are two major classifications under which government budgeting is done: public sources-revenue and private sources- people's contributions (out-of-pocket). Other sub-categories under each of these classifications include i) Medical and Public health services ii) Providers of health services iii) Urban / Rural -allopathic; iv) Human Resources for Health (HRH) and v) General. These are further explained in the variables descriptions below.

For the present study we used the data from fiscal years 2005-2009. Public expenditure data for the same years was triangulated with the data available from the last household surveys (2009) for each country. The household surveys which were utilized in this study were extracted from

the official site of the World Health Organization (NHA, 2010) and were carried out by the National Official Statistical Departments of each country and provided to WHO for dissemination. The private data set covered each country's states, provinces and districts data including utilization of health services by providers, and the breakdown of expenditure for treated episodes in health facilities. Health outcomes indicators were Life Expectancy, Infant Mortality, and Maternal Mortality.

Data and Limitations

The study is based on the official household surveys, Censuses and statistical yearbook of low income countries. Indicators were identified from the household surveys and censuses using a structured template/ questionnaire. Questions related to socioeconomic status, health care-seeking behavior, OOP, ability to pay and illnesses cost were formatted and assessed with available documents and researches before and during the period of the study. Proxy indicators were used to define the proposed indicators discussed in this research study.

Data on the out-of-pocket payments and financial catastrophe were derived from the World Health organization website (World Health Statistics, 2010) and well defined in the introduction part of this research.

Since most household surveys have different grouping, the age groups considered were children aged <16 years, adults aged ≥16 and elderly over 60 years. To inform on findings from the templates and worksheets incurred as a result, validation of data were conducted with available studies and researches defined as a data source for this study. Validation studies were selected because they had a considerable amount of relevant accurate data and officially used by the piloted countries. Countries household surveys were selected because they had substantial outstanding information on household income and expenditures and considered the only official documents to inform out-of-pocket and private health related expenditures.

The gamut of good sources of data varies from country to country. Nevertheless, the following sources were used in most countries:

1. Records from national, regional, and local level health authorities.

In a few cases (where mentioned in our analysis), we updated the WHO data with records which were available from other reliable and accurate sources. However, some were not up-to-date as government accounts require a lengthy auditing process. Auditing may create another problem, as it tends to generate two or sometimes three versions of total spending – un-audited and audited, which may or may not be identical. Such variations in total spending required verification as to which are the most accurate figures in each analysis.

2. Insurer records (social and private).

We included Insurer records (when available from local sources) that include premiums paid by households and companies to the insurer, and the insurer's medical and administrative costs. In some cases private insurance companies may be reluctant to share some of their information, particularly their loss ratios and profits. Also, insurance records may exclude an important component of data, such as payments made by households directly to the provider (co-payments and deductibles).

3. Provider records.

In a couple of cases as mentioned in our analysis, these data were collected from the providers themselves or the regulatory and financial agencies, such as tax authorities or licensing agencies. Often an industry association also collects routine data for its own purposes. As with private insurance companies, private providers are often reluctant to reveal their financial information for tax and other reasons, and a legal decree may be needed to mandate them to do so.

4. Household survey.

Household surveys are undoubtedly the most important source of information on out-of-pocket expenditures. Household data are also crucial for equity analysis, as they are linked to socio-economic and demographic characteristics. Household surveys specifically addressing health issues are conducted infrequently because they are expensive. It is possible to use household survey data from one year to estimate other years, but this extrapolation can be problematic. Broader household surveys are held more routinely, but do not necessarily include all the questions necessary to capture health care expenditures and variables needed for our research

Furthermore, the following are ways used in our research to avoid or surmount the common data problems discussed above.

- Identify sources of independent data that can be used for validation/verification.

- Obtain the same estimate from at least two sources.

- When estimates differ, we determined what a "large" difference is and use the data from the more reliable source and document the discrepancy.

- When discrepancies in estimates appear to be large, we examined the estimates more carefully: Was the same item measured? Were the "boundaries" the same? Was the time period the same?

Conceptional regression framework:

This study intended to assess the association between country characteristics, including Demographic, Quality of Life, vulnerability and financing characteristics, and intermediary factors such as the ability to pay and the availability of Resources for Health. In turn, this effect was examined to see its separate or cumulative impact on the country's Health Outcomes.

Subsequently, the variability in these dependent variables was examined at a regional perspective to differentiate regional determinants between MENA and EAP.

Several indicators can be used to assess the health system performance and the health of a population. Three main indicators were chosen to measure Health Outcomes; Life Expectancy, Infant Mortality, and Maternal Mortality.

The factors were divided into a two-step approach, preliminary examination of a matrix of 4 independent categories then a set of 2 intermediary factors leading ultimately to the health outcomes. The Model was constructed based on the understanding that several determinants of health play a multivariate role in impacting market policies on the supply of health professionals and the provision of health services including the financing of such services. Our model is built on one of the adaptations of the Anderson's model of "Individual determinants of utilization." This behavioral model was updated four times since its development in 1960s to provide a more

comprehensive framework explaining the conditions that either facilitate or impede utilization of heath care services.

The Model postulates that an individual's access to and use of health services is a function of three factors: predisposing, enabling, and need (Andersen & Newman, 1973). Similar to the Anderson, we postulated that communities and its population have variance in their health outcomes based on predisposing and enabling factors. Predisposing factors include the sociocultural and demographic characteristics of the population. Enabling factors are the logistical aspects of obtaining care. At the national level, these are represented by available health personnel and facilities, the means to access and pay for health care, and the biomedical make-up and vulnerability of the population to illness and disease.

The Model was further constructed on the premise that a general measure of population health is useful for comparing health systems performance and its impact on population health, and thus can assist policymaker in identifying populations in need for advanced services and programs (Verschuuren, Achterberg, Kramers, & Van Oers, 2014).

Mortality rates and life expectancy are such indicators that have been regarded as proxy measures of population health despite their limitations (Reidpath & Allotey, 2003). This reflects the seeming association between such outcomes and other determinants that are likely to influence the health status of whole populations such as economic development, general living conditions, social wellbeing, rates of illness, and the quality of the environment (Thacker et al., 2006). Furthermore, as communities are growing in population size and are seeing a rise in aging and chronic diseases, the demand for health services is increasing. In that respect, policymakers and analysts have debated whether health care providers will be able to meet the growing demand or will blame shortcomings on systems' inefficiencies (Cunningham, 2013), while others have argued that the disease burden has already surpassed the supply (Widdifield et al., 2013).

Independent Variables:

1. Demographic Characteristics:

Variables selected to assess demographic factors were the age and gender distribution of the population and its education level. Education was grouped into 3 categories which are high

(university), middle (intermediate, high school, and technical), and low (illiterate, read and write, and elementary).

2. Quality of Life Characteristics

Four variables were selected to assess the Quality of Life factors. These included Genetic abnormality, Accidents, Blindness/ hearing and speech deficit, and long term chronic illness:

Genetic abnormality: A genetic abnormality or disorder is a genetic problem caused by one or more abnormalities in the genome, especially a condition that is present from birth (congenital). Most genetic disorders are quite rare and affect one person in every several thousands or millions.

Accidents: We defined accidents in a standardized tool to measure different aspects of injured persons of a country. We performed calculations pertaining to the analysis of accidents affecting health status and cost of health care in a country. We selected appropriate values for a number of parameters.

Blindness/ hearing: Based on available data, the two most commonly encountered sensory impairments are blindness and deafness. We measured it separately or in combination.

Speech deficit: The overall speech function of the affected population was classified into categories of severity. This was based on predominant voice impairment as the latter is likely to reflect the global progressive deterioration of speech. To explore speech deficit and impairment in greater detail, the data were plotted in three dimensions to reveal further quantitative information on the degree of impairment (note that Level 1 lowest level of performance), of voice, fluency and articulation within the categories of overall speech severity

Long term chronic illnesses have traditionally been considered 'diseases of affluence' that affect only the elderly and wealthy. While the observed patterns defy over-simplified conclusions, the methodology strongly suggest that chronic diseases and related risk factors impose a significant burden on both the poor – across countries and within countries–and those of working age. To the extent that the traditional view has prevailed among economists, it may be partly responsible for the lack of research into the economic implications and public-policy relevance of chronic disease.

3. Financing

Financing factors were related to Income Level of the country (Low or High income), Main Type of Service Provision (Public or Private), and whether the dominant source of financing is the formal or non-formal sector.

4. Vulnerability

The last set of independent variables is a blend of several factors including a descriptive characteristic of the community in terms of its rural and urban dwellings, the presence of internal migration in the country, especially in regions with natural disasters or civil unrest, and the general health status of the population.

Intermediary Variables

1. Ability to Pay

This category focused on the ability of the nation to pay for health services including the national availability of cash to pay for all direct costs incurred by health care, Out of Pocket, Government Expenditures, and Total Health Expenditures.

2. Human Resources Indicators

This category examined the supply of human resources and facilities available for the provision of health services including the supply of Physicians and Nurses in the country as well as the number of Primary Health Care Facilities.

Statistical Analysis

Descriptive statistics including frequencies, means, and standard deviations were reported for the explanatory and outcome variables. T-test was conducted to test the associations between the set of independent variables and their Regional membership. Furthermore, discriminant function analysis (DFA) was used to provide some insight into which of the dependent variables mostly

accounted for the difference (Streiner & Norman, 2003). When running the discriminant analysis, the dichotomous variable, Region (MENA vs EAP), was treated as a dependent variable. Discriminant analysis was used as the multivariate analysis test to determine the factors that differentiate those who belong to MENA from those who are in EAP. This technique weighs the independent variables in an equation called the Discriminant Function:

$D=D_0+D_1X_1+D_2X_2+ \ldots +D_nX_n$

where D is the discriminant score ,

X_1 , X_2, ... , X_n are the independent variables

D_1 , D_2, ... , D_n are the weights ,

and D_0 is a constant

The weights are chosen so that the discriminant function maximizes the difference between the two groups. A statistic called Wilks' Lambda summarizes this difference. It is the proportion of the variance between the two groups that has not been explained by the Discriminant Function.

The discriminant function is evaluated for each observation. The observation's score is used to predict the group to which it belongs. Some of the variables may make such a small contribution to the Discriminant Function that their inclusion in the equation is not justified. The hard rule was used to justify the retention of the independent variables in the equation. The criteria for the hard rule are:

1. Each variable must reduce the unexplained variance (Wilks' Lambda) by at least 2%.

2. The p-value of the change in Wilks' Lambda when the variable is added must be no greater than .05.

Multiple Linear Regression was conducted to identify variables to be included in the multivariable model. This analysis was used to check for the combined contribution of Demographics, Quality of Life, vulnerability and financing, *as independent variables,* to the variability in Health Outcomes, the dependent variable. This technique weighs the Independent

variables in a regression function. The effectiveness of the regression function is measured by R^2; the proportion of the variance in the dependent variable that is explained by the weighted sum of the independent variables. However, some variables will be excluded from the regression equation if they do not satisfy the following conditions:

1.   Each variable must add at least 2% to the explained variance of the dependent variable.

2.   The p- value of the change in the variance when the variable is added must be no greater than .05.

Variables analyzed in the univariate analyses were included in the multivariate analysis if they had p-value <0.20.

Analysis was performed using Statistical Package for Social Sciences (SPSS) 21.0 for Windows (IBM Corp. Armonk, NY)

References

Andersen, R., & Newman, J. F. (1973). Societal and individual determinants of medical care
utilization in the united states. *Milbank Memorial Fund Quarterly/Health and Society,
51*(1), 95-124.

Cunningham, R. (2013). Health workforce needs: Projections complicated by practice and
technology changes. *Issue Brief (George Washington University.National Health Policy
Forum),* (851), 1-13. Retrieved from http://europepmc.org/abstract/med/24312986

Dahlgren, G., & Whitehead, M. (2006). *Levelling up (part 2) : A discussion paper on European
strategies for tackling social inequities in health.* (Technical documents No.
EUR/06/5062295).Copenhagen : WHO Regional Office for Europe. Retrieved from
http://www.who.int/iris/handle/10665/107791

Deaton, A. (2002). Policy implications of the gradient of health and wealth. *Health Affairs (Project
Hope), 21*(2), 13-30. doi:10.1377/hlthaff.21.2.13

Exworthy, M., Bindman, A., Davies, H., & Washington, A. E. (2006). Evidence into policy and
practice? measuring the progress of U.S. and U.K. policies to tackle disparities and
inequalities in U.S. and U.K. health and health care. *The Milbank Quarterly, 84*(1), 75-109.
doi:10.1111/j.1468-0009.2006.00439.x

Graham, H. (2004). Social determinants and their unequal distribution: Clarifying policy
understandings. *The Milbank Quarterly, 82*(1), 101-124. doi:10.1111/j.0887-
378X.2004.00303.x

Maxwell, R. J. (1981). *Health and wealth : An international study of health-care spending*. United

States: Lexington Books.

NHA. (2010). Retrieved on 31-December-2015 from http://www.who.int/nha

Orosz, E. (2005). The OECD system of health accounts and the US national health account:

Improving connections through shared experiences. Paper presented at the *Draft Paper*

Prepared for the Conference on Adapting National Health Expenditure Accounting to a

Changing Health Care Environment. Centers for Medicare & Medicaid Services, 21-22.

Retrieved from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-

Trends-and-Reports/NationalHealthExpendData/downloads/confpaperorosz.pdf

Poullier, J., Hernandez, P., Kawabata, K., & Savedoff, W. D. (2002). *Patterns of global health*

expenditures: Results for 191 countries. Discussion paper no. 51. World Health

Organization. Retrieved from http://www.who.int/healthinfo/paper51.pdf

Reidpath, D. D., & Allotey, P. (2003). Infant mortality rate as an indicator of population health.

Journal of Epidemiology and Community Health, 57(5), 344-346.

doi::10.1136/jech.57.5.344

Streiner, D. L., & Norman, G. R. (2003). *PDQ statistics (3rd edition)*. Canada: PMPH USA, Ltd.

Thacker, S. B., Stroup, D. F., Carande-Kulis, V., Marks, J. S., Roy, K., & Gerberding, J. L. (2006).

Measuring the public's health. *Public Health Reports (1974-), 121*(1), 14-22. Retrieved from

http://www.jstor.org/stable/20056910

Van Mosseveld, V. (2003). *International comparison of health care expenditure: Existing frameworks, innovations and data use*. Netherland: Statistics Netherland.

Verschuuren, M., Achterberg, P. W., Kramers, P., & Van Oers, H. (2014). Monitoring the health of the population. In B. Rechel & M. Mckee (Eds.), *Facets of public health in Europe* (pp. 23-41). UK: McGraw-Hill Education.

Walt, G. (1994). *Health policy: An introduction to process and power*. Johannesburg: Witwatersrand University Press.

WHO. (2000). *The world health report 2000: Health systems: Improving performance*. Geneva: World Health Organization. Retrieved from http://www.who.int/whr/2000/en/whr00_en.pdf?ua=1

WHO. (2003). *Guide to producing national health accounts : With special applications for low-income and middle-income countries.* (No. 9241546077).Geneva : World Health Organization. Retrieved from http://www.who.int/iris/handle/10665/42711

Widdifield, J., Tomlinson, G., Bombardier, C., Paterson, J., Bernatsky, S., Tu, K., . . . Jaakkimainen, R. (2013). The rising burden of rheumatoid arthritis surpasses rheumatology supply in Ontario. *Canadian Journal of Public Health, 104*(7), E450-455. Retrieved from http://journal.cpha.ca/index.php/cjph/article/view/4115/2870

World Health Statistics. (2010). Retrieved on 31-December-2015 from http://apps.who.int/ghodata

Improving the well-being of poor and vulnerable people relies on solving systemic problems. The perceived severity of these problems and the success of potential solutions are often measured by information bundled into key indicators. The process of using health sector indicators including economic and political characteristic health issues in both MENA and EAP regions can be an effective intervention that is particularly useful in addressing and marshaling a response to distressing problems—complex, interdependent, ever-changing global issues that require the application of iterative solutions in order to be managed successfully. It is valuable to compare indicators with other potential interventions in the international and regional development system and, in their most compelling and powerful form, use them to trigger actions that move us one step closer to addressing challenges affecting the lives and health of poor and vulnerable populations on a daily basis.

The MENA region indicators

MENA Social and Health Indicators

The Middle East and North Africa Region is a very diverse region, comprising high-income, middle-income and low-income countries, with their associated characteristic range of health indicators. These indicators reflect a dynamic situation, in which high-income countries and many middle-income countries have already adopted and used a set of health related indicators captured from health accounts studies. Those health accounts studies also illustrate the extent to which nearly all countries in the region, whether low-, middle- or high-income, are experiencing an increase in chronic diseases related to lifestyle change (such as those associated with obesity, smoking, alcohol addiction and unhealthy diet) and longer life expectancies and in deaths and injuries from road crashes and political crisis.

Until recently, it is assumed that the least favorable indicators of health and well-being in the region were to be found in rural areas. However, the rapid growth of urban and peri-urban areas, through a combination of migration and natural increase, has resulted in the expansion of

"slums" and "informal settlements" characterized by poor living and health conditions. These differences within urban areas have not been as well documented as those between urban areas.

The overall health situation in the region has improved since 1980 as can be seen in the improvement in health outcomes, increased capacity of the health systems to deliver health services and through positive changes in the upstream health determinants (e.g. Health promotion to avoid obesity, showing the bad effects of diabetes, need for blood sugar control, new law and regulation to control alcohol etc…). However, these changes have not been uniform across the region and in certain instances there have been deterioration in health conditions, particularly in countries in chronic conflicts and complex emergencies. This section briefly presents the trend in selected indicators of social health status, health system and health determinants using official figures from WHO derived from the data repository of the World Health Organization (World Health Statistics, 2010).

Demographic Changes

The world's population has increased by over two billion over the past 30 years and is likely to increase by another two billion over the next 30 years. In the Middle East and North Africa Region, the increase in numbers has been accompanied by a change in the demographic structure with a growing cohort of young people raising families and a growing number of elderly. Health care services will have to be organized to meet the changing health needs of a growing population. The urban population is now more than 50% of the world's total population, which should not overshadow the fact that the majority of the population in many low-income countries is still rural (Table 1) and the proportion over 60 years old is 6 to 20%

Table 1- Global population indicators

	Total Population (in thousands)	Population living in urban areas (%)	Population living in rural areas (%)	Population median age (years)	Population proportion over 60 (%)	Population proportion under 15 (%)
Africa	836,970	38	62	19	5	42
Americas	929,077	80	20	31	13	25
South East Asia	1,807,594	32	68	26	8	30
Europe	896,480	70	30	38	20	17
Eastern Mediterranean	592,708	48	52	23	6	34
Western Pacific	1,797,489	49	51	34	13	20
Global	**6,860,318**	**50**	**50**	**29**	**11**	**27**

Source: WHO Global Health observatory (http://appswho.int/gho/data/?vid=1901#) last access 31 Dec 2012

Nevertheless, the growth of poor urban populations poses further challenges for a primary health care system which originated in a rural setting in most developing countries. The refugees and internally displaced persons resulting from conflicts and crises are special and vulnerable population group that requires health care services and creates additional burden on the governments of the MENA region, namely Iraq after the crisis of 2004, Libya after 2010 and currently Syria.

Health Outcomes

Life expectancy in the region increased in most countries during the period 1980–2009. Life expectancy in Egypt, Libya, Oman and Yemen has increased by more than 15 years. Countries that recorded the least increase during this period are those that have been or continue to be involved in prolonged conflicts. Life expectancy in Iraq actually decreased by 3.5 years during the same period.

Infant and child mortality has declined significantly in the region since 1980. In the 1960s, child mortality rates in the region were similar to those in sub-Saharan Africa as a whole; they are now only half of the African rates (World Health Statistics, 2010). With the exception of Iraq, all countries have registered a reduction in infant mortality irrespective of their income status (Table 2).

Despite this reduction, the infant mortality rate in all low-income countries remains unacceptably high compared to other countries levels. Evidence has shown that a major contributor to the high infant mortality is neonatal mortality, or deaths occurring in the first four weeks after birth (Bhutta et al., 2004).

Table 2- Health Outcomes Changes, MENA 1980-2009

Health Outcome Changes	Countries	Life Expectancy		Infant Mortality Infant deaths per 1,000 live births		Maternal Mortality Maternal deaths per 100,000 live births	
1980 - 2009		1980	2009	1980	2009	1980	2009
Low Income countries	Sudan	49	59	140	60	650	600
	Yemen	45	65	130	75	1000	400
	Afghanistan	40	48	180	130	1700	1600
	Somalia	50	51	170	120	NA	NA
	Pakistan	55	63	120	80	450	350
	Djibouti	45	60	120	100	550	750

Middle Income countries	**Iran**	57	73	100	20	100	30
	Libya	59	72	90	25	40	30
	Tunisia	58	75	80	20	50	30
	Morocco	59	73	90	40	500	220
	Egypt	57	71	67	20	190	50
	Jordan	67	71	65	22	50	30
	Syria	64	74	58	18	180	40
	Lebanon	65	74	46	20	180	100
	Iraq	58	66	105	85	300	150
	Palestine	60	75	40	25	50	10
High Income countries (GCC)	**Oman**	50	74	110	15	90	0
	Saudi Arabia	56	72	85	19	30	10
	Qatar	72	78	30	15	NA	NA
	UAE	68	78	20	15	10	NA
	Kuwait	68	78	21	14	11	NA
	Bahrain	67	74	20	14	20	NA

Despite the reduction in maternal mortality in many low-income and middle-income countries, maternal mortality in the region remains unacceptably high compared to other regions. The regional estimate for maternal mortality is still over 350 maternal deaths per 100 000 live births. Maternal mortality in Somalia and Afghanistan continues to be among the highest in the world. The maternal mortality ratio in all low-income and some middle-income countries of the region, particularly Morocco, is still unacceptably high compared to other countries in the region, while in Iraq it has increased during the past two decades (Table 2).

It is difficult to provide long-term trends in mortality from non-communicable diseases and injuries and accidents. The World Health Organization estimates show that the most responsible morbidities in the region are non-communicable diseases, cardiovascular diseases, obesity, diabetes, unhealthy diet, alcohol, smoking and injuries (World Health Statistics, 2010). Table 3 provides the current estimate of the age-standardized mortality for non-communicable diseases, cardiovascular diseases and injuries for the 22 countries of the region.

Table 3- Morbidity rate in MENA 2009

	Countries	Non-communicable Diseases		Cardio-vascular Diseases		Injuries
1980 – 2009		**Male**	**Female**	**Male**	**Female**	
Low Income countries	**Sudan**	920	860	550	546	NA
	Yemen	887	721	542	446	102
	Afghanistan	1285	953	765	578	134
	Somalia	997	933	571	573	235
	Pakistan	747	638	455	388	99
	Djibouti	878	749	526	453	92
Middle Income countries	**Iran**	661	507	421	348	133
	Libya	744	526	459	330	55
	Tunisia	505	404	268	245	NA
	Morocco	665	524	392	319	NA
	Egypt	830	660	427	384	35
	Jordan	818	568	550	380	NA
	Syria	730	504	472	326	NA
	Lebanon	717	465	404	263	98
	Iraq	780	593	471	376	141
	Palestine					
High Income countries (GCC)	**Oman**	758	494	546	333	41
	Saudi Arabia	753	510	541	348	72
	Qatar	367	434	180	239	40
	UAE	448	340	309	204	72
	Kuwait	395	394	282	263	34
	Bahrain	642	552	357	311	NA

Source: World health statistic 2010 (http://apps.who.int/ghodata). Last accessed 26 February 2012

Health Systems

Regional Trends in Human Resources and Facilities

There has been an overall increase in the density of physicians in almost all countries of the Region with the exception of Somalia (Table 4). This increase is not uniform and is much greater in the Gulf Cooperation Council (GCC) and middle-income countries of the Region. These numbers do not account for the urban–rural misdistribution or the external migration of the health workforce.

The situation of nurses and midwives continues to be grim. It is not possible to disaggregate the currently available data on nurses and midwives in the region. The overall trend is not uniform, as some countries have shown increase, others have remained the same and in some there has been a reduction in the numbers irrespective of the income status of the countries. There has been little if any change in the numbers of nurses and midwives in the low-income countries; in some the numbers have actually fallen. In some countries, such as Lebanon and Morocco, the numbers have fallen due to the external migration of nurses to other countries. The numbers in most Gulf countries (GCC) are adequate but there is a high degree of dependence on expatriate nurses, except in the case of Bahrain.

Table 4- MENA Regional trends in Physicians, Nurses& PHC 1990-2009

MENA trends in Density	Countries	Physicians Number per 10,000 population		Nurses Number per 10,000 population		Primary Health care Number per 10,000 population	
1980 – 2009		1980	2009	1980	2009	1980	2009
Low Income countries	Sudan	1.5	3	8	10	2.2	1.5
	Yemen	2	4	2.5	3	1.9	1.8
	Afghanistan	1	2	0	5	0.6	1
	Somalia	1	1	9	6	0.8	0.2
	Pakistan	4	8	1	2	1.8	2.9
	Djibouti	0	0	10	9	0	0
Middle Income countries	Iran	4.5	8	20	15	3.3	3.4
	Libya	14	12	39	49	2.3	2.2
	Tunisia	4	9	20	31	2.1	2.5
	Morocco	5	9	1	2	2	3.2
	Egypt	13	24	16	32	2.1	3.2
	Jordan	12	23	9	30	2.5	2.6
	Syria	4	15	10	20	1	1.2
	Lebanon	16	26	16	12	1.2	0.8
	Iraq	5.5	6	7	12	1.2	0.5
	Palestine	1	11	1	15	2.1	1.8
High Income countries (GCC)	Oman	5	16	11	39	3.8	6.2
	Saudi Arabia	4	20	9	34	1	0.9
	Qatar	11	27	35	68	2.6	4.2
	UAE	13	16	33	29	4	7.2
	Kuwait	16	18	54	38	0.5	0.6
	Bahrain	9	27	30	55	2.1	0.4

Source: World health statistic 2010 (http://apps.who.int/ghodata). Last accessed 26 February 2012

The trends and the change in the density of primary health care facilities per 10 000 population is less clear. This could be due to several reasons: the definition of a primary health care centre may be different between countries or may have changed over the past three decades, many primary healthcare centres may have become non-functional (especially in countries in conflicts) or upgraded to higher level over time; and the population may have increased at a more rapid pace than the increase in number of primary health care centres. Several countries, from all income groups, have shown a reduction in the number of primary health care facilities per 10,000 populations over the past three decades (Table 4).

MENA Regional trends in Health Expenditures

Data were available from 1995–2008 for monitoring trends in the financing of health care in the Region. There has been a slight increase in the median total health expenditure, almost no change in the median government health expenditure and a slight decrease in the median out-of-pocket expenditure on health (Table 5) during this period. Of particular concern is the exceedingly low government health expenditure in low-income countries and high out-of-pocket expenditure in the low-income and middle-income countries. The latter has increased in seven low-income, middle-income and GCC countries of the Region during the past decade.

Table5- MENA Regional trends in Health Expenditures per Capita, US$ 1995-2008

MENA trends in Health Expenditures	Countries	Total Health Expenditures USD per Capita		Government Expenditures USD per Capita		Out-of-pocket Expenditure USD per Capita	
1995 – 2008		1995	2008	1995	2008	1995	2008
Low Income countries	Sudan	10	49	8	25	62	90
	Yemen	2	57	1	22	58	80
	Afghanistan	NA	50	NA	10	78	99
	Somalia	NA	9	NA	6	57	62
	Pakistan	NA	25	NA	16	80	72
	Djibouti	23	25	18	20	25	32
Middle Income countries	Iran	70	300	50	180	41	50
	Libya	150	400	90	200	24	59
	Tunisia	90	230	70	100	46	47
	Morocco	60	144	10	70	47	54
	Egypt	62	124	10	70	59	51
	Jordan	80	277	140	180	40	30
	Syria	60	80	30	55	45	70
	Lebanon	320	599	100	250	45	74

	Iraq	NA	95	NA	60	25	71
	Palestine	NA	NA	NA	NA	NA	NA
High Income countries (GCC)	**Oman**	350	475	200	280	9	15
	Saudi Arabia	260	700	160	400	9	21
	Qatar	580	2900	400	1800	20	35
	UAE	600	1700	570	800	22	21
	Kuwait	520	1050	460	650	21	19
	Bahrain	470	1000	290	510	22	26

Source: World health statistic 2010 (http://apps.who.int/ghodata). Last accessed 26 February 2012

The ten middle income countries in the MENA region that were the founding members of the Health accounts network in the region were pioneers in conducting National Health Accounts (NHA) in the middle-income countries around the globe. The first round of NHA reports and its recognition brought to the value and utility of such information for policy purposes and led to the spread, adoption and institutionalization of NHA by other countries. The production of the MENA National Health Accounts reports led to compare countries health financing system within the region. To date, no attempt has been made to synthesize the findings from all countries. This chapter fills this gap and highlights a snapshot on both regions.

The East Asia and Pacific indicators

Social and Health Indicators

Demographic Characteristics
The East Asia and Pacific Region is home to approximately 1.8 billion people, nearly one-third of the world's population. It stretches over a wide area, from China in the north and west, to New Zealand in the south, and French Polynesia in the east. One of the most diverse of the donors and international organizations partners, the East Asia and Pacific constitutes some of the world's least developed countries as well as the most rapidly emerging economies. It includes highly developed countries such as Japan, the Republic of Korea and Singapore; and fast growing economies such as China and Viet Nam.

Living Standard

The East Asia and Pacific Region comprises 37 countries and areas. Among the regions of the world, it is distinct in its heterogeneity and rapid development in terms of economic levels, political structures, cultures, religions and health systems and health status. It is a culturally diverse region with more than 1,500 languages. A large gap in terms of per capita income is seen among the countries in this region. New Caledonia, French Polynesia, Brunei, Guam, Japan and the Asian Tigers (Hong Kong, the Republic of Korea and Singapore) represent the industrialised economies of high income countries, where Gross Domestic Product (GDP) per Capita is more than 25 Thousand USD (USD 30 thousand in Singapore and USD 25 thousand in Republic of Korea) (World Health Statistics, 2010). The rest are developing countries in East Asia and the Pacific Region. Malaysia, American Samoa, Northern Mariana Islands and Palau belong to the upper middle-income category, while China, the Philippines and the Pacific Islands of Fiji, Kiribati, Marshall Islands, Micronesia, Samoa, Tonga and Vanuatu are classified as lower middle-income countries (where the average GDP per capita) (World Health Statistics, 2010). Low-income countries include Cambodia, Lao PDR, Mongolia, Papua New Guinea, Solomon Islands and Vietnam.

Health Outcomes

Regional statistics for a health-related MDG are listed here for illustrative purposes and are referred to WHO site (World Health Statistics, 2010). Table 6 shows the life expectancy in the region during the period 1980-2009. There are remarkable disparities in the region, with Brunei having the highest between low income countries, China and Malaysia in the Middle income countries and Japan in the highest income countries. Cambodia shows the lowest life expectancy in the region below 53 years of age.

Table 6- EAP Life Expectancy changes 1980-2009

Health Outcome Changes	Countries	Life Expectancy		Infant Mortality Infant deaths per 1,000 live births		Maternal Mortality Maternal deaths per 100,000 live births	
1980 - 2009		1980	2009	1980	2009	1980	2009
Low Income countries	Brunei Darussalam	74	77	9	8		
	Cambodia	48	54	80	92	890	290
	Cook Islands	62	72	21	7		
	Lao PDR	56	59	130	80	1200	580
	Mongolia	60	65	52	20	130	65
	Nauru	58	61	20	19		
	Niue	65	71	18	31		

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	PNG	51	60	93	60	340	250
	Solomon Island	60	68	90	56	130	100
	Tuvalu	59	61	51	20		
	Vietnam	60	71	45	23	170	56
Middle Income countries	**China**	68	72	50	31	110	38
	Fiji	64	69	20	19	40	26
	Kiribati	60	65	65	40		
	Malaysia	64	72	15	12	56	31
	Marshall Islands	58	62	59	40		
	FSM	61	70	20	23		
	Palau	63	68	27	19		
	Philippines	65	68	60	34	180	94
	Samoa	60	68	30	20		
	Tonga	62	71	25	24		
	Vanuatu	62	68	40	30		
High Income countries	**Australia**	79	81	5	4		
	Japan	78	82	4	2	12	4
	New Zealand	78	80	6	3		
	Republic of Korea	75	77	6	4	20	7
	Singapore	77	80	3	1	15	5

Source: World health statistic 2010 (http://apps.who.int/ghodata). Last accessed 26 February 2012

In terms of Infant mortality, Table 7 shows a similar trend of marked disparities among countries. The highest child mortality rates are in Lao PDR, Solomon Islands and Papua New Guinea, while the lowest Infant mortality rates are found in Brunei and Cook islands within the low income countries and Malaysia within the middle income countries. Most of the high income countries show a low rate of infant mortality (World Health Statistics, 2010).

Despite the reduction in maternal mortality in many low-income and middle-income countries, maternal mortality in the region remains unacceptably high for some countries like Cambodia, Lao PDR and PNG. The regional estimate for maternal mortality is still over 300 maternal deaths per 100 000 live births (compared to 350 in the MENA region).

Maternal mortality in Cambodia and Lao PDR continues to be among the highest in the world. The maternal mortality ratio in all low-income and some middle-income countries of the region, particularly Philippines, is still unacceptably high, while in Lao PDR it has decreased enormously during the past two decades from 1200 in 1980 to almost half in 2009 (Table 6).

EAP Health Systems

Trends in Human Resources and Facilities

Just before the new Millennium, the World Bank and Word Health Organization began to address the issue of human resources for health by including measures of real health care resources alongside expenditure data in its regular data updates. Initially, the data were quite limited: number of inpatient beds, physicians, and pharmacists per 1000 inhabitants (Anderson & Poullier, 1999).Over time, the data have been expanded to include magnetic resonance imaging (MRI) units, computed tomography (CT) scanners, and hospital employees per bed. While these measures are admittedly crude, they go a long way towards documenting international differences in the stock of real resources available to health care.

There has been an overall increase in the density of physicians in almost all countries of the Region (Table 7). This increase is not uniform and is much greater in the High Income countries and middle-income countries of the region. These numbers do not account for the urban–rural misdistribution or the external migration of the health workforce.

The situation of nurses and midwives is similar to those of physicians in the region. The overall trend is not uniform; as some countries have shown increase and others have remained the same. There has been a migration of nurses and physicians from some countries of the region, such as Philippines mainly to Gulf countries.

However, the trend and the change in the density of primary health care facilities per 10 000 population has shown a slightly increase in the last two decades mainly in the low and middle income countries.

Table 7- EAP Regional trends in Physicians, Nurses and PHC 1990-2009

EAP Trends in Density	Countries	Physicians Number per 10,000 population		Nurses Number per 10,000 population		Primary Health Care Number per 10,000 population	
1990- 2009		1990	2009	1990	2009	1990	2009
Low Income Countries	Brunei Darussalam	1.3	1.4	4	4.8	0.04	0.07
	Cambodia	0.1	0.23	0.6	0.8	0.02	0.03
	Cook Islands	1	1.2	4	4.7		
	Lao PDR	0.1	0.27	0.5	1		
	Mongolia	2.7	2.8	3	3.5	0.01	0.02
	Naru						
	Niue	3.5	4	10	15		
	PNG	0.04	0.05	0.2	0.5	0.4	0.6
	Solomon Island	0.1	0.2	1	1.5		
	Tuvalu	0.4	0.6	5	5.8	0.5	0.9
	Vietnam	1	1.2	0.8	1		
Middle Income countries	China	1	1.4	1	1.4	0.5	0.8
	Fiji	0.3	0.5	1	2		
	Kiribati	0.2	0.3	2	3		
	Malaysia	0.8	0.9	2	2.7		
	Marshall Islands	0.5	0.6	2	2.5		
	FSM						
	Palau	1	1.3	5	5.9		
	Philippines	1	1.2	5	6	1	1.2
	Samoa	0.1	0.3	0.5	0.9		
	Tonga	0.1	0.3	2	2.9		
	Vanuatu	0.1	0.1	1	1.7	0.2	0.3
High Income Countries	Australia	2	3	9	9.6	4	4.6
	Japan	1.9	2	4	4.1	2.1	2.2
	New Zealand	2	2.4	10	10.8	4	4.5
	Republic of Korea	1.9	2	5	5.3	3	3.4
	Singapore	1.5	1.8	5.5	5.9		

Source: World health statistic 2010 (http://apps.who.int/ghodata). Last accessed 26 February 2012

EAP Regional trends in Health Expenditures

Data were available from 1990–2009 for monitoring trends in the financing of health care in the region. Most countries in the region rely on a mixture of government budget, health insurance; external funding and private sources including non-governmental arrangements and out of pocket payments.

Despite the variety of financing sources, the level of health spending in the region is relatively low. Many countries spend less than 5% of their Gross Domestic Product (GDP) (Savedoff, 2003) on health and per capita health spending is much lower than $35 per person per year (Sachs, 2001).

In a number of countries the share of government spending on health has been decreasing in the last 10-20 years (World Health Statistics, 2010) not necessarily due to budget cuts but due to out-of-pocket spending increasing at a much faster pace. The regional trends in total health

expenditures shows that low income countries spent less than $70 with the exception of Niue that spend almost as the higher income countries in the region, Middle income countries varies from as low as $66 in the Philippines to $867 in Palau.

The issue of out of pocket in EAP is a great concern for governments of the region and remains to be examined is how does the progressivity of OOP compare with inequality in living standard across different population groups and across different countries. Table 8 illustrates the regional trends in out-of-pocket payments.

Table 8- Regional trends in Health Expenditures per Capita, US$ 1990-2009

EAP Health Expenditures Trend	Countries	Total Health Expenditures USD per Capita		Government Expenditures USD per Capita		Out-of-pocket Expenditures USD per Capita	
1990 - 2009		1990	2009	1990	2009	1990	2009
Low Income Countries	Brunei Darussalam	541	767	468	673	73.0	94.0
	Cambodia	17	43	4	9	13	34
	Cook Islands	178	509	161	478	17	31
	Lao PDR	10	36	3	7	6	27
	Mongolia	22	75	18	64	3	11
	Naru	-		-	-	-	-
	Niue	322	322	315	315	5	19
	PNG	26	42	21	29	3	23
	Solomon Island	42	74	39	68	2	6
	Tuvalu	160	290	159	289	1.0	1.0
	Vietnam	22	80	6	31	14	49
			-	-	-	-	-
Middle Income countries	China	44	169	17	85	26	64
	Fiji	85	128	67	94	11	34
	Kiribati	65	159	61	134	1	24
	Malaysia	128	337	67	151	46	144
	Marshall Islands	418	414	409	401	9	10
	FSM	170	336	160	305	10	29
	Palau	660	867	529	662	131	87
	Philippines	33	66	16	23	13	43
	Samoa	73	291	52	179	17	52
	Tonga	88	162	63	127	21	35
	Vanuatu	48	89	35	77	9	12
			-	-	-	-	-
High Income Countries	Australia	1,728	3,867	1,155	2,711	342	749
	Japan	2,827	3,321	2,298	2,657	476	463
	New Zealand	1,055	2,629	823	2,113	162	410
	Republic of Korea	543	1,108	247	600	246	436
	Singapore	648	1,491	291	618	342	872

Source: World health statistic 2010 (http://apps.who.int/ghodata). Last accessed 26 February 2012

Policy Implications

While the World Health Organization member states endorsed a concept of universal health coverage in 2005 (Carrin et al, 2008), a large burden persisted in most low income countries while providing and financing health services. Moreover, policy makers are being asked to improve health care performance by containing cost while maintaining steady improvements in

access and quality. International differences among health care systems may provide valuable lessons in meeting these difficult objectives, since structural differences in the provision of health care, such as the mix of different resources, can in principle be linked to differences in performance (Baily et al., 1997). Most reviews of health expenditures in low and middle income countries have been based on the national health care expenditures of OECD member countries, measured either as a fraction of gross domestic product (GDP) or on a per capita basis (Schieber et al., 1991) . This type of comparison is often used to support arguments that either too few or too many resources are allocated to health care. For example, some observers of the US health care system argue that the high expenditures, combined with similar or worse population health measures than in many European countries, indicate poor performance (Baily et al., 1997). Similarly, Jones and Charlesworth argued that the National Health Service in the United Kingdom is consistently underfunded (Jones & Charlesworth, 2013). However, such simple comparisons can reveal only how much a country spent on health care relative to other countries; they are poorly suited for inferring the optimal level of resources to devote to health care. This was examined in this thesis to the MENA and EAP region countries.

The world spent $5.8 trillion on health in 2008 (WHO, 2010). However, there is wide variation in per capita health expenditure and health care utilization between and within different countries of the world and those of MENA and EAP regions. The share of out-of-pocket health expenditure remains unacceptably very high, up to eighty percent in some countries. Subsequently, over one hundred and fifty million households in the world face financial catastrophe as a consequence of ill health every year and almost half of them are pushed into poverty as a direct result of having to pay out-of-pocket for health care. In addition, many households are forced to use their savings, borrow money, or sell their livelihood to pay for needed health care. Moreover, some households forgo seeking needed care, at the appropriate time, and live with the consequences of ill health because of financial barriers.

The following presentation of the Results will tackle four main areas of concern. The first controlling factor in this study is the population health status of the region. While the countries health characteristics that may influence health care costs are also acknowledged, the impact of health care cost on poverty is highlighted in this study. Another controlling factor is health care expenditure patterns and health care resources trends are reviewed. In the following section, the presentation will focus on health services provision and utilizations then we present government

policies and strategic directions to improve health care financing and expedite the move towards fighting poverty.

I - MENA and EAP Health status

The health of population is a share responsibility between the private and public sector all around the world. The Private sector plays an increasingly important role in healthcare in most of the countries in the world; it remains a new area of study and innovation. As ministries of health have their limitation in providing widespread access to care, and traditional charity-focused NGOs offer limited or temporary solutions, the private sector presents an opportunity for sustainable scale-up of healthcare services alongside social and economic development. Included in the scope of private sector agencies are both for-profit private providers.

There remains a considerable shortage of people with the required technical and professional skills in this region based on a quick comparative analysis of the WHO data on Health Expenditures and Resources reported in the Global Health Observatory Data Repository (World Health Statistics, 2010). This limited administrative capacity, coupled with poor enforcement of legislation, and leakage, results in public revenues that make up only 30% of total Health Expenditures and 1.7% over gross domestic product.

Data from the Repository showed that 17% and 20% of the MENA and EAP population respectively lived below the World Bank poverty line in comparison with 25% reported almost a decade earlier by WHO (1997).

In an attempt to better understand the magnitude of the private sector as a first step to improve public private partnership, the author assessed the private sector in the MENA and EAP countries. Eight MENA countries with private sector involvement and 11 EAP countries were used for the comparison.

II - Health Expenditures Pattern

The pattern of total health expenditures in the MENA countries reached almost USD100 billion in 2009, which represents 1.6 percent of world health care spending for 8 percent of the global population. Here too, while high income countries in the region accounted for 6.6 percent of the

population, they have consumed over 35% of regional total health expenditure in 2009. At the same time, low income countries of MENA, which accounted for 36 percent of the population were responsible for less than 6% of regional total health expenditure (NHA, 2010; World Health Statistics, 2010)

As reported earlier in Table 5, the per capita health expenditure in the Middle East and North Africa Region ranged from less than USD25 (in Pakistan) to over USD2900 (in Qatar). In comparison, the pattern of total health expenditures in the EAP countries reached almost one third of world health care spending. The total spending is affected by the population size of China and the average spending of USD169 per capita (Table 8). Low income countries in EAP spent in a range of USD36 in Lao PDR to as high as $1,348 in Niue. At the same time, middle income countries spent more than USD100 per Capita on Health with the exception of Philippines and Vanuatu (NHA, 2010)

Bivariate Analysis

It is observed that in both regions, life expectancy is little more than half of that observed in many developed high income countries. This poses the question whether relative income levels are correlated with health outcomes. The most important social impact on health and life expectancy appears to be from socioeconomic inequity and class. As one moves up the socioeconomic scale, there is a consistent increase in life expectancy. It is not just where one stands in the socioeconomic hierarchy that affects health, but also the degree of socioeconomic inequality in the society. For that, this study wished to examine the differences that separate the two regions. The collection of variables and indicators reported in the earlier tables on demographic, expenditures, and provider supply data, were analyzed to compare the two regions. A select of these variables were significant and worth presenting.

Table 9 shows that, on average, the over 60 years of the population represented almost 8% of the general population. And this varied significantly between the two regions where MENA showed a lower percentage 5.7% (s=2.35), whereas the EAP over 60 was 9.4% (s= 5.5). Similarly the total health expenditures (THE) as a percent of GDP was lower for MENA (5.4%, 2.06) when compared (7.9%, 4.4). On the other hand, out of pocket health expenditure as a proportion of total health expenditure was higher in MENA (39.3%, 21.4) when compared to that in EAP (21.7%, 18.9). Parallel to that was the Out-of-pocket expenditure as % of private expenditure on

health, where it was higher in MENA (85%, 15.2) than EAP (71%, 24.4). The supply of pharmacists also varied significantly between the two regions, where the supply in MENA averaged 7.6 (s=10.9) while in EAP it was around 3 per 1000 population. Despite tremendous difference between MENA and EAP in general government expenditure (GGE) on health, as a percentage of total expenditure on health (Table 9), the intra-regional variance yielded no significant difference between the regions. Governments in MENA tend to spend less on health than its EAP counterparts (53 vs 92).

Table 9: Regional comparisons on key indicators

Region	MENA		EAP		Total		ANOVA	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	F	Sig.
Over 60 population	5.74	2.35	9.39	5.52	7.88	4.81	7.31	0.01
Under 5 population	31.61	8.64	29.61	7.77	30.44	8.11	0.67	0.42
Life expectancy at Birth	68.15	7.58	68.81	6.79	68.53	7.07	0.10	0.75
THE%GDP	5.41	2.07	7.89	4.41	6.84	3.78	5.44	0.02
OOP as % of THE	39.30	21.39	21.70	18.93	29.19	21.66	8.89	0.00
OOP as % of Priv Exp	84.95	15.22	71.40	24.39	77.17	21.85	4.78	0.03
Pharmacist /1000 popl'n	7.61	10.87	3.02	4.08	5.03	8.05	4.10	0.05
GGE09	53.09	20.07	92.41	97.03	75.21	75.95	3.32	0.07

When the collection of independent variables was used to discriminate between the two regional groups, MENA and EAP, Discriminant Function Analysis was used (Table 10). Stepwise Discriminant Analysis which showed that membership into any of the two Regions (MENA or EAP) can be predicted by:

- Out-of-pocket expenditure as % of private expenditure on health,
- Over 60 population,
- Total Health Expenditure as a percent of GDP,
- Life expectancy at Birth

The application of the selection criteria stated in the Methods Section (Chapter III) lead to a discriminant function. Using the unstandardized weights from the DFA, the function can be written as:

D= -9.099 - .358 X_1 + .080 X_2 + .556X_3 + .049X_4

Where D is the Discriminant Score,

X_1 is the size of the population over 60 years,

X_2 is Life expectancy at Birth,

X_3 is Total Health Expenditure as %GDP, and

X_4 is Out-of-pocket expenditure as % of private expenditure on health

Table 10: Stepwise Discriminant Analysis of Countries into their Geographical Regions

Step	Independent Variable	Std. Weight	Wilks' Lambda	Change in WL	P-value of Change
1	Out-of-pocket expenditure as % of private expenditure on health	.688	0.8043	0.1957	.006
2	Over 60 population	-1.752	0.6410	0.1633	.001
3	Tot Health Exp as %GDP	1.364	0.3644	0.2766	.000
4	Life expectancy at Birth	.570	0.3162	0.0482	.000

A linear combination of these four independent variables is found to explain the difference between countries in MENA and those in EAP (Table 10). They were able to explain 68.4% of the variance in the discriminant scores (Sum of Change in Wilks' Lambda). The corresponding p-value is less than 0.001 and therefore the null hypothesis of no difference is rejected. The mean Discriminant Scores for the Regional prediction was:

Group	Mean Score
MENA	1.392
EAP	-1.469

Larger values of the independent variables with positive weights are associated with the group with the larger mean score, i.e., the MENA Group. Smaller values of the independent variables with negative weights also are associated with MENA. The values which characterize countries in the MENA Region are:

- Higher Total Health Expenditures as a percentage of GDP
- Higher Out-of-pocket expenditure as % of private expenditure on health
- Less population over 60 years
- Higher Life expectancy at Birth

On the other hand, countries in the EAP region are characterized by:

- Lower Total Health Expenditures as a percentage of GDP
- Lower Out-of-pocket expenditure as % of private expenditure on health

- Higher population over 60 years
- Lower Life expectancy at Birth

The Discriminant Function was evaluated for each observation and the observation\s score used to predict its regional membership (Table 11).

Table 11. Results of Classification of Observations

	Test Sample			Validation Sample		
	Predicted Group			Predicted Group		
Actual Group	MENA	EAP	Total	MENA	EAP	Total
MENA	18	1	19	16	3	19
	94.7%	5.3%	100%	84.2%	15.8%	100%
EAP	1	17	18	2	16	18
	5.6%	94.4%	100%	11.1%	88.9	100%
Total Correct	**35**			**32**		
% Correct	**94.6%**			**86.5%**		

In the test sample, 94.6% of the countries were classified into the correct region; 94.7% of those in MENA and 94.4% in EAP. The validation sample offers a more accurate estimate of the probability of correct classification. In the validation sample, 86.5% of the countries were classified correctly; 84.2% of those in MENA but more so 88.9% in EAP.

In conclusion, Discriminant Analysis shows that the MENA region tend to spend more on health as a percent of its GDP when compared to the EAP region by a factor of 0.556. Along these lines, MENA countries tend to spend more Out-of-pocket expenditure as % of private expenditure on health than their EAP counterparts. This is despite the fact that countries in the MENA tend to have lesser population over 60 years of age than the EAP countries.

One intriguing result in the Discriminant function was the importance of the Life Expectancy at Birth as an independent variable within and across the Regions. MENA countries showed higher expectancy than their EAP countries. Accordingly, multiple linear regression was performed to explain the variability in life expectancy as a function of the independent variables. The analysis

showed that a list of independent variables (Table 12) when combined would explain 63.2% of the variance in Life Expectancy.

Table 12. Stepwise Multiple Linear Regression of Life Expectancy

Step	Independent Variable	Standardized Weight	Simple R	R^2	Adjusted R^2	P-value Change
1	Over 60 population	.503	.538	.289	.289	.001
2	OOP%THE	-.429	.672	.451	.162	.003
3	THE%GDP	-.368	.731	.534	.083	.021
4	Pharmacist/10K	.351	.795	.632	.098	.006

The application of the selection criteria stated in the Methods Section (Chapter III) lead to the following regression function, using the unstandardized coefficients from the regression analysis::

$E(Y) = 73.624 + .672 X_1 - .149 X_2 - 1.280 X_3 + .546 X_4$

Where $E(Y)$ is the expected Life Expectancy at Birth,

X_1 is the size of the population over 60 years,

X_2 is Out-of-pocket expenditure as % of Total Health Expenditure (OOP%THE),

X_3 is Total Health Expenditure as %GDP (THE%GDP), and

X_4 is the supply of Pharmacists per 10,000 of the population.

The sign of the independent variable's weight can be interpreted as the direction of its relationship to the dependent variable. Two of the four variables in Table 7 have negative weights which indicate that both financial indicators are inversely related to Life Expectancy. The weight for THE%GDP of -1.28 indicates that a 1%increase in the Total Health Expenditure as a % of GDP is associated with lower Life expectancy by almost 1.3 years. This indicates a high degree of inefficiency in money spent on health that needs careful consideration from Program implementation and Policy perspective. Similarly, out of pocket expenditures (OOP%THE) increase by 1% is associated with a decrease of 15% of a year of Life Expectancy. This could mean that individuals are prioritizing their spending power and utilizing their financial resources on health as a priority while risking other living support which is indirectly putting them at other hidden risks and thus affecting their life span.

Criteria and Variance among the Regions

In this section, the analysis took a stock of the variability among the two regions in terms of the appropriateness of Out-Of-Pocket and exemption criteria of age (the young and old) and disability. Governments of LMIC always searching any considerable issues regarding what criteria should be used to be exempted from paying user charges at public facilities. Most countries consider couple of criteria succinctly: age (the young, under 16, and the elderly, 60 and above), the disabled by disease or injury, and socio-economic status, i.e., the impoverished.

The first criteria regarding age delineation is clearly defined by the non-productive ages- under 16 and over 60. However, it is unclear whether these age groups are widely recognized by civil society as the appropriate age groups meriting an exemption. Most young people of those low income countries are under the legal jurisdiction of parents until the age of 16 and few persons below that age are considered adults as they have not completed school, have their own source of income, or live in a separate household. Similarly, as many people in most of the countries of both regions currently can retire from public service at 65 years, there is a concern about the upper age criterion as well. If one retires at 65 and does not have access to either land or another occupation, there is a long period where an individual can be left uncovered. Thus, it is vital to more fully inform the public of the criteria used to define both the lower and upper age limit.

The second criterion which has been discussed is related to disability status and that the person using health facilities. However, a number of other possibilities can arise, where one may become disabled via: a) genetic abnormalities/birth defects, b) auto and other form of accident, including injuries occurring on the athletic field or on the job, c) blindness and/or hearing and speech deficits, and d) the long term evolution of chronic diseases such as cancer, diabetes, hypertension or other similar conditions. Currently these possibilities are not considered meritorious for exemption status, but they could be and in many other countries they are, either on economic grounds as the disease leads to a large annual recurrent cost to households and individuals to maintain health status, or since they may have negative health and economic externalities that could place at greater risk the health of the entire population if not addressed.

As for the third criterion which is poverty, currently there are difficulties in LMIC defining exemption according to socio-economic status. However, there is concern that if no allowance for socio-economic status is provided, then the "poor' will not be able to access health services

provided via public hospitals if fees are increased, because they lack income. If impoverishment is to become a criterion for an exemption from user fees, it will require clear guidelines regarding the disbursement of exemptions. All of the following questions require clear attention: a) how will income be measured and verified; b) will household (HH) size be incorporated into the guideline criteria, as HHs with more persons have less to spend on any given member; c) are exemptions based on individual or HH income; d) will remittances from abroad be counted as a part of income, and if in-kind, how will they be valued; e) how will exemption status change as individual and/or HH income or employment status change? A question might be raised: "How to handle these questions?" We consider two issues of particular importance arise from the user fees. The first is equity, which is most commonly taken to mean that the fee structure should not impose undue hardship on those with the least capacity to pay for health services. This raises the questions as to whether certain individuals or groups should be exempt from paying user fees. The second issue is catastrophic health expenditures. Individuals may find that their cumulative out-of-pocket expenses over time become a substantial proportion of their income, which in turn raise another question as to whether safety net provisions should be considered.

The rationale for exempting individuals from paying user fees for health services needs careful consideration. Commonly the rationale is framed in terms of protecting the poor. User fees tend to be regressive in their impact – the economic position of lower income groups will be more adversely affected than that of middle and higher income groups. In considering the translation of this argument into policy, other considerations arise – family size, age of parents and dependents, and health status of the individual or family. The rationale for exemptions is directly relevant to the specification of the criteria for determining those who are to exempt. Ideally, the criteria adopted for determining exempt individuals or households should reflect the rationale for allowing exemptions from user fees. If protection of the poor (however defined) is the primary rationale, it stands to reason that the poor should be those who are exempt. If those who are most ill are to be exempt, then criteria that reflect that rationale should be adopted (e.g. number of chronic conditions). In addition, it must be decided whether the exemption is from paying any fees at all, or whether partial exemptions from fees are to be granted as well as full exemptions. Safety net thresholds are a form of partial exemption from user fees considering patients under the age of 12, patients over the age of 65, and patients with chronic diseases.

In terms of poverty, there are currently 2 definitions being monitored and accepted by the UN called "absolute poverty" and equal to about US$1/person/day, where regular food consumption is at risk. A second and less severe poverty level is US$ 2/person/day, which does not provide for all basic needs, including food. A deliberately conservative standard has been used by the World Bank, anchored to what "poverty" means in the world's poorest countries. By focusing on how poverty is defined in the poorest countries, the $1 a day line gives the global poverty measure a salience in focusing on the world's poorest, though it is recognized that higher lines also need to be considered to obtain a complete picture of the distribution of living standards. Following this approach, Ravallion, Datt, Van De Walle and Chan (1991), in research for the 1990 World Development Report (World Bank, 1990), compiled data on national poverty lines across 33 countries and proposed a poverty line of $1 per day at 1985 Purchasing Power Parity (PPP) as being typical of low-income countries. They estimated that one third of the population of the developing world in 1985 lived below this line. The estimates done for the 2000/01 World Development Report (World Bank, 2000) used an international poverty line of $1.08 a day, at 1993 PPP, based on the original set of national poverty lines (Chen & Ravallion, 2001). In 2004, about one in five people in the developing world—slightly less than one billion people—were deemed to be poor by this standard (Chen & Ravallion, 2007).

Vulnerability. The concept of vulnerability is concerned with the capacity of individuals, households and communities to maintain well-being in the face of a changing environment. The changing environment, in the current context, is as a result of health sector reforms. This needs to take into account social, economic, political and environmental contexts in which people are placed at risk of ill health and disease because access to health services is at risk (Holland, Fisher, James, & Walford, 2000).

    i.   Factors contributing to vulnerability. Factors that can be associated with vulnerability, and are therefore potential indicators of vulnerability, can be grouped according to a number of dimensions as follows:

    ii.   Socio/cultural factors: social exclusion; attitudes, of society, families, health care providers; changes in kinship and social support structures, gender relations, inheritance rights;

iii. Economic/political factors: urbanization, globalization, employment structures, exclusion from employment-based health insurance schemes;

iv. Communications and information: reduced access to health information and education;

v. Socio-demographic factors: age, gender, marital status, disability, employment status, income, level of education, family size;

vi. Access to health facilities: membership of Women's Committees, remote rural, urban periphery, distance from health facility, transport;

vii. Household characteristics: without water piped in for exclusive household use, wood as main cooking fuel, spirit or kerosene lighting, pit latrine;

Such factors were identified in the literature that contribute to poverty or vulnerability (Hulme, Moore, & Shepherd, 2001). Analytical frameworks such as this focus on specific sets of these factors and examine the ways in which they interact to explain the incidence and nature of chronic poverty. Chronic poverty has been coined as a phenomenon whereby an individual or group is in a state of poverty over extended period of time (Hulme et al., 2001). These frameworks can range from the simple that focus on environmental determinism, which argues that poverty is the result of too many people living on poor lands that are unhealthy for humans. Then it ranges to the highly complex that spans the theories of globalization that attempt to weave all of these factors, and more, into an analysis that goes from the micro to the macro level.

Vulnerable groups: In this thesis, the author considered the following identified groups in LMICs as potentially "vulnerable" to the risk of reduced access to health services (Xu et al., 2007):

- Cash Poor Individuals and families
- Rural-Urban Migrants
- People living in remote locations
- People with disabilities (or special needs)
- People with mental health problems
- Children, youth, elderly
- People with poor health status
- Single parent (adult) households

Belonging to one of these categories does not necessarily mean that access to health services is reduced. Rather, it highlights that people in these groups are at greater risk of their access to health services being jeopardized, in addition to risk of raising poverty affecting their life. There is consequently a need to identify community members who identify with these groups, to ensure they are not being disadvantaged by changes in the health sector and the way in which health services are provided.

Out-of-pocket: On the other hand examining the Out-of-pocket (OOP) in both regions raises severe problems that the author used to get into a fair result and adjust the triple theories- financing, delivery and paying. Large variation in per capita health expenditure and out-of-pocket expenditure is observed in Figure 1 within different socioeconomic groups of countries of both MENA and EAP countries. Differences in households' income explain most of the variations observed in household health expenditure. For example, households in the high income countries on average spend much more on health (in some countries, over 20 times more) than households in the lowest income. The difference is much more pronounced in countries where the provision of health services by the public sector continues to be weak. As observed in Figure 1, , the share of out-of-pocket expenditure in both MENA and EAP countries is over 50% – and close to 80% in a couple of countries in MENA and 4 countries in the EAP. This share of out-of-pocket remains unacceptably very high, up to eighty per cent in some countries. Subsequently, in most of the lower income countries more than 5% of households face financial catastrophe as a consequence of ill health every year (NHA, 2010) (WHO, 2012) and almost half of them are pushed into poverty as a direct result of having to pay out-of-pocket for health care, forced to use their savings, borrow money, or sell their livelihood to pay for needed health care. As observed by Lawrence, the fastest road to poverty in China today is a visit to the doctor, especially in the country side (Lawrence, 2002).

Moreover, some households forgo seeking needed care, at the appropriate time, and live with the consequences of ill health because of financial barriers.

Figure 1 – Share of out-of-pocket and per capita total health expenditure, EAP – 2010
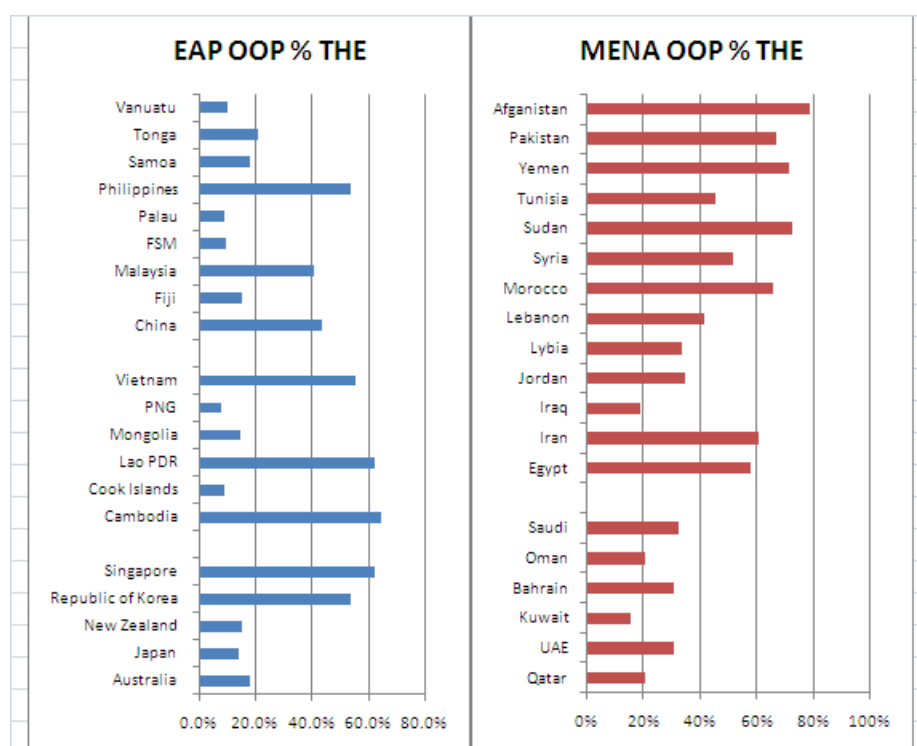
Source: http://www.who.int/nha Last accessed was in December 2012

Globally, the share of out-of-pocket health expenditure is one of the most important indicators that points to the lack of social health protection in low and middle countries. Figure 2 shows the percentage of households facing financial catastrophe and are impoverished due to out-of-pocket health spending and the link between the incidence of financial catastrophe and impoverishment. Careful examination of these figures indicates that the incidence of financial catastrophe and impoverishment does not substantially fall as long as the share of out-of-pocket spending is above 20%; a situation that generally exists in countries that have not achieved social health insurance and Universal Coverage.

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Figure 2 – Percentage of households facing financial catastrophe and impoverished due to OOP
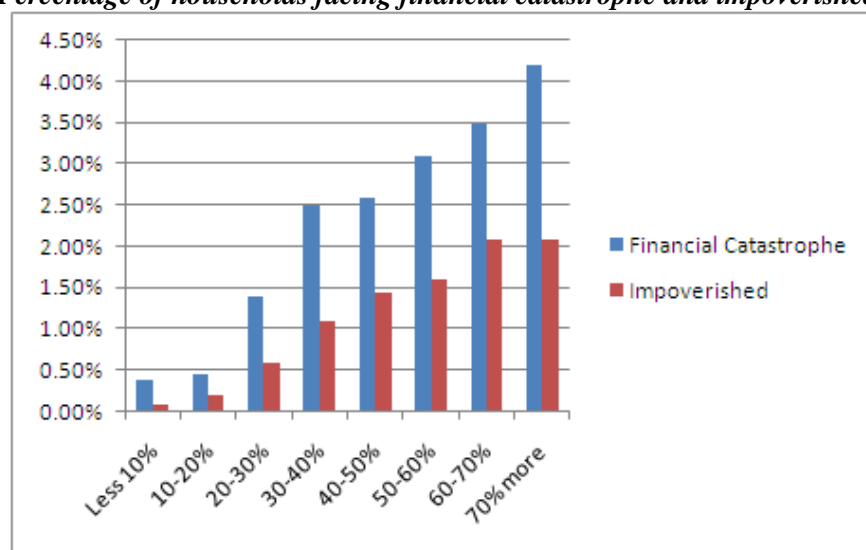
Source: http://www.who.int. FPB Data base access date: June 2012

III- Health Services Provision and financing

The third element in our analysis focuses Health related challenges and opportunities in any country can be by capturing the health status of the population including trends, utilization and equity. The root causes of the key issues and problems for which action may lie within and outside the health system, is the socio-economic, environmental and behavioral determinants of health affecting the utilization of health services. Any policy should document and analyse those information.

Almost every health care system of the world uses a combination of public and private provision. At the risk of excessive simplification, we identify three similar broad types of health care system among both EAP and MENA countries, differentiated according to whether financing and delivery of health care are predominantly public or private. Among the systems that use public financing, the main cleavage is between those which do and do not also use public delivery. We look among the different systems for discernible trends in the 2000s. Private supply, coupled with public finance, seems to be a system to which many countries are converging, although it is too early to say how far this will go. We collected secondary data sources from 16 EAP and MENA Countries (Table 13) and observed the various models for financing health care (e.g., government revenue funded, social health insurance, etc.) and for

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delivering health services (e.g., family practice based on primary health care). Table 13 shows that health financing and service delivery models are interlinked. This interface between these two components of health system is crucial for the successful move towards Universal Coverage. The institutional split between health financing and service provision is possible. For example, the health system could be financed by public sector in order to allow for solidarity and broader risk pooling; while health services could be provided by public and private sectors and NGOs, in order to allow for competition among providers and offer choices to consumers. However, the institutional split between health financing and service provision, when exists, does not mean the health financing functions and the health service delivery are independent.

Table 13- Financing and delivery Public / Private Mix for 16 EAP and MENA Countries

EAP countries	Financing	Delivery		MENA countries	Financing	Delivery
Lao PDR	Mix	Public		**Sudan**	Mix	Public
Tuvalu	Mix	Public		**Yemen**	Mix	Public
Vietnam	Mix	Public		**Libya**	Public	Public
Fiji	Mix	Public		**Egypt**	Mix	Mix
Palau	Mix	Public		**Iran**	Mix	Mix
Samoa	Mix	Mix		**Lebanon**	Mix	Mix
Tonga	Mix	Public		**Jordan**	Mix	Mix
Vanuatu	Mix	Public		**Saudi Arabia**	Public	Public

The bullet points below classify health care systems by the legal nature of the delivery institutions, either public or private. As one quickly recognizes, public delivery and public financing are often attached, though there are exceptions: in Lebanon and Jordan secondary and tertiary care system and doctors often work simultaneously in public hospitals and in private practice. These doctors have the privilege of admitting their private patients to private hospitals or semiprivate rooms in public hospitals. Tonga and Samoa is another example of Doctors using public facilities for private practice (what we call Moon lighting) It is a matter of debate in these countries whether such a law will be allowed to continue. Exceptions aside, this suggests four basic types of health care system:

- Type I: Private financing and delivery;
- Type II: Public financing and (substantial) private delivery;
- Type III: Public financing and delivery; and
- Type IV: Public private mix of financing and delivery

As is always the case for such classifications, one would be hard-pressed to find examples of these pure types in the real world, but most countries' systems do have a 'dominant' component that is recognizable from such a classification. In this regard, most countries in the MENA have a core system of type IV. Iran is a good example of a country where the core of the system is type IV, with mostly financed by the government and delivered by large public and private facilities. Health care services in Iran are provided by public, quasi-public and philanthropic organizations and a large network of private providers. The Ministry of Health and Medical Education (MOHME) is responsible for managing the public sector health organizations. Lebanon and Jordan are other good examples of type IV in the region. The first round of Lebanon national health account analysis carried out in 1998 has shown that Lebanon was allocating 12.4 % of GDP on health, the highest in MENA, with a high proportion of out of pocket spending (60 %) affecting mainly lower income groups and medicines represented the main item for household health expenditure. Since the issue of the first national health account report, a series of reforms were implemented by ministry of health in order to contain health care costs and to improve equity and overall health system efficiency. The focus of the policy reforms implemented by the ministry of health was and is on primary health care as being cost effective and more equitable arrangement for service provision in a country dominated by private delivery at various levels of health system. With the exception of the Gulf countries1 (GCC) no matter what is the type of a MENA country lie under, one result always dominated: "The high costs of healthcare and the out of pocket payments are forcing more of the poor and destitute into selling assets such as land to pay for health services, thus pushing them closer to landlessness and into poverty."

IV - Health system and policies

The fourth area of analysis is on governmental policies and its impact on poverty reduction and access to services. Any serious efforts aimed at improving the health of the most vulnerable people and reduce health inequities must tackle the key determinants of health related to social exclusion and exposure to risks: food and water, education, ethnicity, gender, income, living

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[1] Gulf Cooperation Council is a political and economic alliance of six Middle Eastern countries – Saudi Arabia, Kuwait, UAE, Qatar, Bahrain and Oman. The GCC was established in May 1981. The purpose of the GCC is to achieve unity among its members based on their common objectives and their similar political and cultural identities.

conditions, peace, security and work environment. Environmental and personal interventions aimed at reducing risk factors such as unsafe sex, tobacco, indoor air pollution and others are well defined by Graham (Graham, 2004).

Based on a broad public health vision, we consider couple of key determinants of health and health equity and to adopt an integrated approach to improving health outcomes and services. Health systems with special emphasis on universal coverage provide a platform for such an approach.

A main key determinant is focusing on social health protection which is a basic human right (Sen, 2008). Policy makers in all countries need to enhance access to needed health care by dismantling all existing barriers. These barriers are in many cases financial, associated with having to pay out-of-pocket for needed health care, resulting in higher risks of financial catastrophe and impoverishment. Therefore, instituting universal coverage will provide the necessary social health protection for all. Achieving universal coverage in turn requires reorganizing the health care system to focus on financing and how the system is managed and health services are delivered. Countries need to develop strategies and plans for reorganizing their health care systems in order to expedite the move towards universal coverage.

Innovations in primary health care in countries of the MENA Region

The Alma-Ata Declaration of 1978 is an important milestone for health and a landmark in the history of public health and for the World Health Organization (WHO, 1978). The policy behind the declaration is to focus on primary health care as a global strategy to provide equitable health care for all. It responded to increased awareness of inequality in health status among high income and low income populations and of the needs of disadvantaged populations throughout the world who had limited or no access to the benefits of modern knowledge of diseases prevention and treatment. The declaration expresses that universal access and health as a human right, are relevant for everyone, regardless of country of residence, gender, social status and cultural identity. On the other hand, the Millennium Development Goals, declared in the year 2000, represent a commitment to reduce poverty and hunger, achieve gender equality and improve child and maternal health by the year 2015 (United Nations, 2000). Thus, the development of health systems based on primary health care was the principal strategy for most of the international organizations.

Policies in MENA countries focused on affordable health services access to the poor. Most countries of the MENA region have over the years shown commitment to the values of health care to the poor and specifically in the rural areas with remarkable results demonstrated by some. In the late 1970s, **Oman** had only a handful of health professionals. People had to travel up to four days just to reach a hospital, where hundreds would be waiting in line to see one of the few expatriate doctors. All this changed in less than a generation (Smith, 1988). Smith (1988) invested consistently in its wilayat health system; a national health service oriented by principles of primary health care and sustained the investment over time. There is now a dense network of 180 local, district and regional health facilities staffed by over 5000 health professionals providing almost universal access to health care for the now over 2.2 million inhabitants (WHO, 2008)(Over 98% of births are attended by trained personnel and over 98%of infants are fully immunized. Life expectancy, which was less than 60 years towards the end of 1970s, is now over 74. Child mortality has dropped by a staggering 94% (WHO, 2008).

The **Islamic Republic of Iran** has been a pioneer in primary health care in the Region. Among the many achievements are: the establishment in the 1980s of the shabakehbehdashti, the equivalent of the district health system, which relied on the recruitment and training of almost 25,000 male and female community health workers called behvarz; the development of a vital horoscope for recording vital statistics, demographic and health information; the intense monitoring and supervision of the program and the highest level of sustained political commitment successfully transformed the health status of rural populations. In 1983, and as a result of the advocacy of WHO and the World Federation for Medical Education, a decision was made to integrate medical education with health services in the country (Marandi, 1996). Among the great benefits were the development of a curriculum that was rooted in the health needs of the population, provision of a field area for the learning and education of health professionals, promotion of health systems research that was relevant to population needs, and unification of the workforce production and the service delivery arms of the health system.

The national program for primary health care and family planning in **Pakistan**, popularly known as the lady health workers program, was launched in 1993. This federally funded program has recruited 100,000 government paid, female community health workers meant to provide basic health care to the rural population of the country. Despite many challenges, the program has been able to sustain itself over 15 years and the last independent evaluation showed improvement in

coverage for immunization, antenatal and family planning services in the rural areas of Pakistan (Lady Health Worker Programme, 2002). The program's success has encouraged other countries to launch similar programs, especially in Africa.

The family health program in **Egypt** started in 1999 to enable the health system to deliver quality primary care promotive, preventive, and curative services, as well as allow for functional integration of vertical programs into the family health model. The model is based on applying national planning standards and guidelines to provide services through health facilities with reformed infrastructures, staffed according to a pre-defined health team staffing pattern and training programme, providing an essential package of health services, which is supported by an essential medicine list, clinical guidelines for common ailments, functioning referral system, information system, quality and accreditation systems and incorporating elements of community participation. The family health model was initially launched in five of the 28 governorates and since 2006 is being rolled out in phases to cover all the governorates. The model has proved valid, viable, affordable and popular, and is now charted by the Government of Egypt as the accepted norm for primary health care in Egypt.

Similar experience on family practice as a model to promote service delivery is now accumulating from several countries of the Region including Bahrain, Oman, Saudi Arabia and Tunisia. The experience of the contracting out of primary health care services in Afghanistan emerged from the disruption caused by the war that led many international and national non-governmental organizations to assume responsibility for the delivery of health services through contracts with donor agencies. In 2002, the new Government of Afghanistan pursued the policy of contracting for a basic package of health services supported by funds from the donors. The policy of contracting out has shown improvement in service coverage and selected health status indicators. With the gradual strengthening of the Ministry of Public Health, options for the future include pursuing the contracting option or increasing public provision of health services (Sabri, Siddiqi, Ahmed, Kakar, & Perrot, 2007)

Production of National Policy and Innovations in Health Insurance in EAP countries

The importance of health accounts in the EAP region and all over the world was well recognized. Currently, over hundred countries have established comprehensive health accounts systems that meet the international standards and classifications. However, current methods can address the

production of a Health Accounts for countries with different socio economic background but not addressing the poverty and vulnerability and the root cause of inequality. These countries systematically produce health accounts reports for policy discussions and assessment of their health financing arrangements. Extending the methodology to cover policy methodology for the poor and global equity issues will require new tools to address macroeconomic policies, historical root of inequality in distributing funds and balance access to basic health services and needs. Such tool start with identifying the major health financing concerns in countries such as increasing out of pocket payments in total health financing and develop country specific strategies to reduce and monitor excessive financial burden on low households and reducing financial risks. Because of its relation to financial risk, the crucial distinction in health spending is between prepayment / health insurance and payment out of pocket at time of service. Small out of pocket costs are harmless for all but the poorest users of health services. This was the responsible cause of countries to start some kind of health insurance scheme. These include rural cooperative medical services (China case), health care funds for the poor (Viet Nam) and indigenous health insurance program (Philippines). In the EAP, Samoa, Tonga, Fiji, Vanuatu and Tuvalu have established and use the system of Health Accounts to decide on specific health financing policy. Other countries like the Federated States of Micronesia and Kiribati have expressed interest in developing NHA.

The distinctive situation found in EAP countries pointed to the need for and motivated the assembly of a general guiding framework for NHA development and institutionalization for those countries. An important workshop on Health Account for Pacific Island Countries was convened by WHO in collaboration with Macquarie University on 26 to 29 November 2007 in Sydney, Australia. It was attended by 20 participants from 10 Pacific countries and by the author (as a WHO health financing expert). Observers from the Asian Development Bank, Australian Government Department of Health and Ageing, the Joint OECD/Korean Regional Center for Health and Social Policy, the Secretariat of the South Pacific, and the Government of Tonga had also participated and contributed to the workshop discussions. As a result, Key development of health accounts and arisen key policy issues were discussed and highlighted and how these were addressed.

We found that there are many ways to promote and sustain health. External factors, like education, housing, food and employment all impact on health. Redressing inequalities in these

will reduce inequalities in health. But timely access to health services is more critical. This cannot be achieved, except for a small minority of the population without well-functioning health financing policy; from one side, it determines whether people can afford to use health services when they need them; from the other it determines if the services exist. As per the World Health Organization 2005, countries should commit to develop their health financing systems so that all people have access and do not suffer financial hardship paying for them (WHO, 2005), thus the need for universal health coverage, and a strategy for financing it, has never been greater. The innovation in policy decisions in EAP Countries responded and followed the priorities that policy makers have. These include moving toward social and national health insurance in most of the EAP countries. On this count, EAP countries are still a long way from universal coverage. Table 14 addresses both equity and poverty concerns based on the policy makers priorities in developing Health insurance.

Table 14. Assessing Health insurances and policy makers' priorities

Country / Decisions on insurance Scheme	Inclusion	Policy Makers Priorities	Observation / Impact on poverty
China			
Compulsory Urban Basic Insurance (2000)	Limited to urban workers only, mainly in public sector	Prioritize urban workers	Equity concern. Decision still lack balance (neglecting rural and poor)
Voluntary RCMS (2003)	Individual coverage in rural and urban schemes	Priorities for both rural and urban population	Addressing equity
Indonesia Compulsory health insurance (1992)	Families are covered (dependents limited to 2 children)	Limited resources push for limiting the dependents	Equity concern regarding 2 dependents.
Voluntary Community based insurance (1992)	Individual covered based on contribution	Finding more funds for health. Sharing responsibility with community	Poverty concern. Poor are still at risk
Republic of Korea			
Compulsory National Insurance scheme (1977)	Gradual extension to different occupational sector	Universal health insurance and family coverage	Addressing equity and universal coverage.
Lao PDR			
Compulsory social security	Family coverage. Limited to	Limited resources prioritize	Equity concern. Unbalanced

SSO (2001)	capital city	capital cities	decision, Poor are still at risk
Voluntary Community based insurance (2004)	Extended to rural areas. Still limited.	Finding more funds for health. Limited resources used	Sharing responsibilities. Shifting responsibility of covering the poor to community.
Philippines			
Compulsory insurance (Phil Heath and voluntary CBHI 1995)	National Health insurance. 55% of population covered	Universal insurance and family coverage	Addressing equity and universal coverage. Lack in Implementation
Vietnam			
Vietnam Social Security (VSS 1992)	Formal and informal sectors. Dependents not covered	Sharing responsibility with formal and informal workers	Sharing responsibilities. Poverty and dependents concern
Health Care for the Poor (2003)	Subsidize HI for the low income populations including family members	Global equity and government commitment to the poor.	Addressing equity and responsibility for the poor. Global equity.

References

Anderson, G. F., & Poullier, J. P. (1999). Health spending, access, and outcomes: Trends in industrialized countries. *Health Affairs, 18*(3), 178-192. doi:10.1377/hlthaff.18.3.178

Baily, M. N., Garber, A. M., Berndt, E. R., & Cutler, D. M. (1997). Health care productivity. *Brookings Papers on Economic Activity. Microeconomics, 1997*, 143-215. doi:10.2307/2534756

Bhutta, Z. A., Gupta, I., de'Silva, H., Manandhar, D., Awasthi, S., Hossain, S. M. M., & Salam, M. A. (2004). Maternal and child health: Is south Asia ready for change? *BMJ: British Medical Journal, 328*(7443), 816-819. doi:10.1136/bmj.328.7443.816

Carrin, G., Mathauer, I., Xu, K., & Evans, D. (2008). Universal coverage of health services: Tailoring its implementation. *Bulletin of the World Health Organization, 86*(11), 857-863. doi:10.2471/BLT.07.049387

Chen, S., & Ravallion, M. (2001). How did the world's poorest fare in the 1990s? *Review of Income and Wealth, 47*(3), 283-300. doi:10.1111/1475-4991.00018

Chen, S., & Ravallion, M. (2007). Absolute poverty measures for the developing world, 1981-2004. *Proceedings of the National Academy of Sciences of the United States of America, 104*(43), 16757-16762. doi:0702930104 [pii]

Graham, H. (2004). Social determinants and their unequal distribution: Clarifying policy understandings. *The Milbank Quarterly, 82*(1), 101-124. doi:10.1111/j.0887-378X.2004.00303.x

Holland, J., Fisher, E., James, S., & Walford, V. (2000). *Becoming poverty-focused: Implications for health actors*. Department for International Development Health Systems Resource Centre. Retrieved from http://www.heart-resources.org/wp-content/uploads/2012/10/Becoming-poverty-focused.pdf

Hulme, D., Moore, K., & Shepherd, A. (2001). Chronic poverty: Meanings and analytical frameworks. *Chronic Poverty Research Centre Working Paper,* (2) Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1754546

Jones, N., & Charlesworth, A. (2013). *The anatomy of health spending 2011/12*. London: Nuffield Trust. Retrieved from http://www.nuffieldtrust.org.uk/sites/files/nuffield/publication/130305_anatomy-health-spending.pdf

Lady Health Worker Programme. (2002). *External evaluation of the national programme for family planning and primary health care*. Oxford: Oxford Policy Management. Retrieved from http://www.opml.co.uk/sites/default/files/LHW%20Training%20%20Review_0.pdf

Lawrence, S. V. (2002). The sickness trap. *Far Eastern Economic Review, 165*(23), 30-33. Retrieved from http://search.proquest.com.ezproxy.aub.edu.lb/docview/208263438/fulltextPDF?accountid=8555

Marandi, A. (1996). Integrating medical education and health services: The Iranian experience. *Medical Education, 30*(1), 4-8. doi:10.1111/j.1365-2923.1996.tb00709.x

NHA. (2010). Retrieved on 31-December-2012 from http://www.who.int/nha

Ravallion, M., Datt, G., Van De Walle, D., & Chan, E. (1991). *Quantifying the magnitude and severity of absolute poverty in the developing world in the mid-1980s: Background paper for the 1990 world development report.* United States: Retrieved from http://213.154.74.164/invenio/record/16034/files/gaurav.pdf

Sabri, B., Siddiqi, S., Ahmed, A., Kakar, F., & Perrot, J. (2007). Towards sustainable delivery of health services in Afghanistan: Options for the future. *Bulletin of the World Health Organization, 85*(9), 712-718. doi:10.2471/BLT.06.036939

Sachs, J. (2001). *Macroeconomics and health: Investing in health for economic development.* Geneva: World Health Organization. Retrieved from http://apps.who.int/iris/bitstream/10665/42435/1/924154550X.pdf

Savedoff, W. (2003). *How much should countries spend on health?* Geneva: World Health Organization. Retrieved from http://apps.who.int/iris/bitstream/10665/69025/1/EIP_FER_DP_03.2.pdf?ua=1

Schieber, G. J., Poullier, J. P., & Greenwald, L. M. (1991). Health care systems in twenty-four countries. *Health Affairs (Project Hope), 10*(3), 22-38. doi:10.1377/hlthaff.10.3.22

Sen, A. (2008). Why and how is health a human right? *The Lancet, 372*(9655), 2010-2010. doi:10.1016/S0140-6736(08)61784-5

Smith, R. (1988). Oman: Leaping across the centuries. *BMJ: British Medical Journal, 297*(6647), 540-544. doi:http://dx.doi.org/10.1136/bmj.297.6647.540

United Nations. (2000). Millennium Development Goals. Retrieved from http://www.un.org/millenniumgoals/

WHO. (1978). *Declaration of Alma-Ata.* Retrieved from http://www.who.int/publications/almaata_declaration_en.pdf

WHO. (2005). *WHA58.33. Sustainable health financing, universal coverage and social health insurance. WHA resolution; fifty-eighth world health assembly*. Retrieved from http://apps.who.int/medicinedocs/documents/s21475en/s21475en.pdf

WHO. (2008). *The world health report 2008: Primary health care (now more than ever)*. Geneva: World Health Organization.

WHO. (2010). *Health systems financing: The path to universal coverage. World health report*. Geneva: World Health Organization. Retrieved from http://www.who.int/whr/2010/en/index.html

World Bank. (1990). *World development report 1990: Poverty*. New York: Oxford University Press. Retrieved from http://hdl.handle.net/10986/5973

World Bank. (2000). *World development report 1999/2000: Entering the 21st century*. New York: Oxford University Press. Retrieved from http://hdl.handle.net/10986/5982

World Health Statistics. (2010). Retrieved on 31-December-2012 from http://apps.who.int/ghodata

Xu, K., Evans, D. B., Carrin, G., Aguilar-Rivera, A. M., Musgrove, P., & Evans, T. (2007). Protecting households from catastrophic health spending. *Health Affairs, 26*(4), 972-983. doi:10.1377/hlthaff.26.4.972

CHAPTER V
DISCUSSION

The studies presented in this thesis were accomplished in a relatively unique environment; that is, they were conducted as part of ongoing management of health financing/health economics projects implemented by international organization. This thesis presented data from two Eastern Regions, EAP and MENA. It aimed at analyzing available data on financing health systems in two regions, MENA and EAP. Another characteristic of the core studies is that they assessed the relative contribution of funding sources, its expenditure on providers and the benefit to the targeted population. The intent was to shed some light on the health sector policies and regulations that would help countries in these regions to improve access and appropriate utilization of health care services by the poor and underprivileged. The end result is to present options to decision makers in formulating informed policies that would help alleviate poverty in the studied countries and in improving access to care and services for the poor and the underprivileged. In doing so, the study relied on analyzing policies and comparing alternative approaches and success stories within and across the two regions.

The primary focus was on the social and health indicators. These are indicators that claim to capture health accounts information to formulate health financing policy. These indicators were preliminary analyzed for the two regions. Results showed that the MENA Region is a very diverse region, comprising high-income, middle-income and low-income countries, with their associated characteristic range of health indicators. The data illustrated the extent to which nearly all countries in the region, whether low-, middle- or high-income, are experiencing an increase in chronic diseases, longer life expectancies and mortalities and injuries from road accidents and civil unrest. Demographically, the MENA region is increasing in population size characterized also by an increase in the elderly population which explains the increase in chronic diseases. Health care services, hence, will have to be organized to meet the changing health needs of a growing population. With a great proportion of the poor dwelling in the rural areas, and proportion over 60 years on the rise, this poses further challenges for a primary health care system which originated in a rural setting in most developing countries. The refugees and internally displaced populations resulting from conflicts and crises are special and vulnerable population groups that require health care services and thus creating additional burden on the

governments of the MENA region, namely Iraq after the crisis of 2004, Libya after 2010 and currently Syria.

Comparatively, the disparities among countries in EAP are also prevalent in terms of low health outcomes compared to the spending and the supply of providers. Lack of financial resources for health is only half of the problem. The significant proportion of the limited and inadequate funding for health is often spent on illness rather than health. Currently, many countries are struggling to enhance and maintain the role of their government in funding and providing services with public health significance. As indicated The EAP regional trend per capita shows that the low income countries government spent from as low as $7 in Lao PDR to over a thousand dollars in Niue. On the other hand, the governments in their middle income countries show similarity in the region with an average of $100 to $300, except for Palau government spending of over $600.

As shown in Table 9 in the Results section, life expectancy in MENA is relatively the same as that in EAP. Nevertheless, it has increased in most countries during the period 1980–2009. Life expectancy in Egypt, Libya, Oman and Yemen has increased by more than 15 years. Yet when it comes to health expenditures, MENA shows significantly lower government spending on health, lower health expenditures relative to its GDP and more Out of Pocket (OOP) when compared to EAP countries. The issue of out of pocket (OOP) in MENA is a great concern for governments of the region and remains to be examined. It is a reflection of the progressivity of OOP compared with inequality in living standard across different population groups and across different countries.

One of the important reasons of variations in OOPs across the countries in both regions was the government policies that weren't based on evidence-based data. However, level of government spending, literacy, and political economy of countries members of MENA and EAP also could cause variations in levels of total health financing in general and OOP in particular.

Apart from these, level of utilization of health care services by different groups of population across different regions has been one of the most important reasons of variations in OOP. This is believed that high OOP share to total health financing in developing countries results in increased poverty and higher proportion of households facing catastrophic expenditures[4]. Similarly, it notes that a substantial fraction of total household resources going for health care

can constrain households from making expenditure on other necessities or even affect their future source of income leading to a welfare loss. In general, the pattern of health care financing influences the ability of a household to maintain its living standards when one of its members needs health care. Narayan et al revealed that, after illiteracy and unemployment, spending on health care was the greatest precursor to poverty among poor households and the greatest impediment to continued household solvency (Narayan, Patel, Schafft, Rademacher, & Koch-Schulte, 2000).

The use of health expenditures consistent with the concepts of health accounting was taken as a prerequisite for undertaking policy analysis and changes in each of the studied countries in the above mentioned areas. Then accordingly, careful examination of health accounts, social indicators and ethical judgment in accounting as well as studying poverty and its cost for health care will follow.

From a medical perspective differences in health outcomes between the poor and better-off tend to be ascribed to lack of access to and utilization of a set of proven effective and inexpensive preventive and curative medical interventions (Bhutta, Chopra, & Axelson, 2010; Jones & Charlesworth, 2013; Wagstaff, Claeson, Hecht, Gottret, & Fang, 2006; Whitworth, Sewankambo, & Snewin, 2010),whereby the poor are least able to benefit from them. It is to be achieved by advocating the central role of health in overall socioeconomic development in countries members of both regions; raising the importance of health on the national policy agenda; emphasizing the role of other sectors in addressing health determinants; and underscoring the importance of intersectoral action for health. Research over several decades has identified social inequalities in health, both between and within countries. For that it is crucial that countries of both regions pursue appropriate strategies aiming reducing socioeconomic inequalities in health. It has been observed that some initiatives have not been without controversy in both regions and in later discussion will highlight the relative contributions of health determinants and how to weigh and direct public policies that affect health.

Main Findings

The research provides an overview of the various Health Accounts methodologies and outlines existing interventions designed to overcome barriers. The variance in financing practices was explored using an analytical framework to illustrate the use of Health Accounts in Chapter II and help enhance its usefulness as a policy tool. Choosing reliable health financing policy to cover the poor and vulnerable group was a major issue and several assessments have taken in Chapter III leading to universal free essential health care, along with proposed reimbursement of health care providers for services rendered to the poor.

The main approach in the methodology was to focus on interventions in low and middle income countries (LMIC) that can reduce poverty by focusing on major element in improving access to care and that by reducing OOP on health services. Important interventions that can bear results in the short and medium term and can be implemented at this income country level: **(1)** Addressing health system policy; **(2)** addressing criteria for Health reform; **(3)** modeling policy making; **(4)** finding alternative source of funds to cover necessary services supporting health sector reform and management for both poor and rich, **(5)** strengthening the level of provision and clinical health services -quality and quantity of services delivery- in order to contain cost by reducing the unnecessary services and provide an equitable health care, and **(6)** controlling providers payment mechanism and lead to decreasing OOP payment to decrease poverty and at the same time decreasing the burdens on the government contribution to health services.

Addressing health system policy

Most policies have wider impacts beyond their intended outcomes, and may also impact differentially on different groups in the population and judgments about whether to base a conclusion on a subset of observations, are better informed if the overall observations are known (Guyatt & Oxman, 2002). Addressing proposed initiatives at three policy levels and testing it in the low and middle income countries resulted to reduce OOP, therefore decreasing poverty and at the same time decreasing the burdens on the government contribution to health services. While the intentions behind any policy may be to impact on the poor positively, it will seldom have the

same effect on everyone. People are different and policies affect people in different ways. Most importantly is to ensure that public bodies are meeting the health sector equality duty and shed light onto which processes and policies toward ensuring efficient, equitable and sustainable policy addressing health care to the poor. This intervention is intended to support those involved in carrying out a health inequalities policy in countries of both MENA and EAP regions. Finally, and critically, the steps proposed here are compared to more traditional ways of addressing equity efficiency and political history has yet to be investigated. Given the financial constraints of most LMIC countries, providing health services to the poor may be a more effective allocation of taxation to services delivery. Conditional steps in financing the poor appear to show promise as means to achieve efficient health services in low income countries; they may also contribute to reducing financial barriers to services, where service availability and quality could be better. The steps involved in the process, provide guidance on three main levels – financing –delivery and payment.

Addressing equity. Data on existing policies to fight poverty when triangulated with data from a scoping review of the international literature and data collected from household surveys in both EAP and MENA regions, revealed that equity is not addressed adequately for a variety of reasons. These included inadequate guidance, absence of definitions, poor data and evidence, perceived lack of methods and tools and practitioner unwillingness or inability to address values like fairness and social justice when applying a new health sector reform. In order to do this, revising and redefining the existing funding methodologies in a best bet to include a consideration of health equity impacts which is not being addressed adequately if you don't define equity, poverty and vulnerability. In line with all governments' strategies to fight poverty, our review found that even when LMIC countries were described as having a specific focus on equity, they did not generally move beyond identifying vulnerable population groups and differential impacts. Disappointingly, there is still no consistency in the definitions of equity/inequity/inequality used (in almost all countries of both regions), if these terms are defined at all.

Addressing deficiencies in current practice. While our findings clearly demonstrate that standardizing health equity and poverty definitions is a prerequisite exempting poor or decreasing OOP in real practice, it is less clear how this can be achieved. We believe that key international bodies like the World Health Organization and International community should

discuss and agree on a common set of health equity concepts and definitions. As the OOP indicators above has shown that OOP induce poverty, governments of LMIC countries would similarly benefit from such an approach—though its shorter and more contested history make this less likely. We believe nonetheless that key bodies like the WHO and the International community could usefully agree minimum criteria for designating studies that how health fund efficiency is addressed should feature in such criteria.

<u>Addressing political history in current practice.</u> The systemic problems experienced in low and middle income countries are associated with the environment in which each of their health sectors is operating. The political history of any country and the governance systems will have significant influence on the way in which health systems have evolved. Welfare of individuals and communities relies very much on how political and bureaucratic leaders are able to address the basic needs through resource allocation and development of policies that are conducive to equitable resource allocation and accessibility of basic services to everyone in the community. Understanding the evolving governance system in any country will enable decision makers and development partners to tailor program designs which would be in alignment with governance systems. A more systematic approach needs to be taken by governments of both country members of both MENA and EAP region to relate financing to provision of services. It is important that countries political climate be clearly understood and that policymakers understand the roles of the different levels of government and their commitments to providing basic services to everyone in the country. All the legislative and policy frameworks need to be developed to improve efficiency of services to the majority of the population. Such reviews would allow for the clearer definition of the roles of the institutions responsible for health services delivery such as Ministries of Health, roles of training institutions, the role of national hospitals, roles of all the other facilities responsible for provision of health services and the role of financer in each country. Harmonization of health activities and financers at all levels of the health system working together can make a significant difference in service delivery and impact on health outcomes.

Criteria and Health Reform

The Policy analysis presented in the Results section showed that several dimensions have to be taken into account with regard to the feasibility and impact of any changes in the current financing-mix for LMIC health care in both MENA and EAP regions. The special context of the LMIC is characterized by an underdeveloped fiscal and managerial systems, extreme reliance on international aids in planning and financing, and protracted history of vulnerability and poverty. All these factors have created conditions for an absence of coherent policy, and an accumulation of ad hoc operational plans driven by historical inertia with concentration on emergency agenda something that might attest being irrational at many instances. This should indicate the difficulties to be encountered if a change in the prevailing financing-mix even a positive one is attempted. In spite of their limitations, the results presented in this paper should however help shape the policy toward building an equitable health care financing system for LMIC. Given the high share of households income absorbed by out-of-pocket payments in both region (check paragraph "focus area" above), and hence, the pronounced adverse effect of such financing modality on the already unbalanced income distribution in most low income countries, a need is there to identify innovative financing mechanisms capable to reduce the financial burden of health care and to limit existing regressivity. Although proven to be promising, the current WHO strategy (WHO, 2013) toward achieving universal coverage by the LMIC Governmental Health Insurance scheme needs to be reconsidered to further enhance its positive intrinsic capacities.

Given that the government financing policy appears to be significantly progressive for only the highest income deciles, a reconsideration of the following criteria need to be addressed.

I. Criterion one. Earmarked taxation to cover a well-defined segment of population in Low income countries

Our findings show that most countries in both EAP and MENA regions have a core system of type IV (Public private mix of financing and delivery). Direct out of pocket payment is typically the second-largest source of health care financing, as well as the largest cause of poverty in Low income countries. The different approaches of taxation by governments of high income countries may be used in low and middle income countries. Nevertheless, there is an increasing need for better and more standardized methods of financing health care for the poor, as well as finding

additional funds replacing OOP which has no direct effect on poverty. This criterion is to replace OOP with earmarked taxation in Low income countries. According to this criterion, public schemes are those mainly financed through the tax system, including general taxation and mandatory payroll levies, and through income-related contributions to population coverage. Additional fund replacing OOP in low income countries is earmarked taxation i.e. taxing tobacco, liquors and alcohol to the benefit of public health programs and medical and surgical health services related to the taxed items. It would have a double effect; from one side it is a preventive public health policy and on the other side would generate more fund to cover the health of the poor. The earmarked taxation collected then classifies into mandatory distinguishing to cover the health of vulnerable people and poor as a priority and then the rest of the population. Defining poverty is another problematic area, while our finding clearly demonstrate that health equity and poverty definitions is a prerequisite exempting poor or decreasing OOP in real practice, it is less clear how this can be achieved. It is than recommended that a National Health Authority (NHA) be established in each of the LMIC country to manage certain aspects of the health sector including this criterion. The exact function of the Authority would need careful research and negotiation between government and providers across the health sector. Thus defining the poor and the true costs of the health service delivery to the poor must be accurately calculated as well, in order to ensure that the earmarked tax can cover such services for the fee contracted with the providers. Another concern in LMIC is the public health sector efficiency. Public sector inefficiencies will need to be addressed first in order to bring public and private sector fees closer together and assume the rate of tax needed to cover both sectors providers.

II.   Criterion two. Strengthening and developing of Quality Programs for the sector

Reliable and accurate definition of a quality health program is a major challenge, particularly in low income countries with developing and transitional economies. Major differences in the way different countries control health care quality result in significant deficiencies in the reported health care provision, and make it difficult to provide necessary health care for the poor in order to contain cost. Current approaches to estimation can be significantly improved by drawing on emerging international best practices. In particular, LMIC countries need to be aware of the

dangers of relying on providers to provide quality services. Many decades of experience have demonstrated that LMIC providers in both regions are usually subject to significant problems ensuring quality care for the poor. There are a number of typically government programs that are principally aimed at ensuring quality within the health system, which are required irrespective of the particular delivery model. These include following a well prepared national clinical guidelines, and ensuring that payment systems for providers are supportive of quality outcomes, rather than inadvertently undermining quality. The negotiation, definition and trialing of national performance indicators and the introduction of feedback programs and clinical audits are also quality initiatives that should take place irrespective of the model chosen.

III.   Criterion three. Paying providers for services delivered to the poor

Who pays for health care to the poor under the new criterion? A key question that needs to be addressed when evaluating the services delivered to poor is what would be the share of expenditures incurred by government. This is very important because the "true extent of cost recovery" should be compared against the administrative complexity of managing the new national authority. In estimating the future expenditure to the government it is assumed that regardless of the contract of public or private providers, the co-payment still adopted; the government will continue to be the financier of public health program but the way paying providers will be addressed. The substance of, findings and recommendations with respect to paying providers is to review of Providers payment system design and implementation lessons learned from other countries most relevant to each of the country to apply.

Modeling for Policy Making

In applying an integrative approach to finance and provide health care for the poor, governments of Low income countries should invest time and resources where they are most cost-effective while reducing the negative causal effect of poverty. Given that out of pocket level for those countries will often be a reason of pushing into poverty, it is not wise to follow system that are not based on the above proposed criterion without little policy significance. For example, trying to apply Type IV payment /provision model with no other consideration would be problematic in LMIC; in one hand could induce more poverty in the country and in the other hand could provide

unnecessary services, where both public and private providers are not well controlled. Similarly, governments should first seek to improve services for the poor that are of policy importance and for which consequences are plentiful. In many instances, more attention will need to be given to model a system built to be applied in Low income countries. Nevertheless, such system will remain a challenge, and poverty will continue to be a major subject for consideration. It is important, therefore, that adjusting the model continue to be developed and improved even after implementation. We assess choosing provider's type for poor and non-poor against four criteria: Their administrative burden; their incentives for cost containment; their incentives for efficiency; and their incentives for quality. Treating poor at public providers is the preferred option with high incentives for cost containment efficiency and quality. This is a simplification and the precise implementation of the mechanisms in particular settings will affect this assessment. Nevertheless, it is a useful comparison for understanding the key features of alternative provision type by poverty classification (Table 1).

Table 1: Assessing Public Private Providers & Poverty

Methods	Admin Burden	Incentives for Cost Containment	Incentives for Efficiency	Incentives for Quality
Treating the poor at Public Providers	High	High	High	Low/Medium
Treating the poor at Private Providers	High	Low /Medium	High	High
Treating the non-poor at Public Providers	High	N/A	Low	Low
Treating the non-poor at Private Providers	Low	N/A	High	High

This comparison highlights a number of features. First, it is important to recognize that cost containment and efficiency are different concepts (minimizing cost is not the same as minimizing efficiency). It is also the case that incentives for cost containment for efficiency and quality and for minimizing the administrative burden of mechanisms will often conflict with one another. It is important for policymakers to be clear about their priorities when deciding on appropriate reimbursement mechanisms.

Health service finance for the poor/non-poor

User fees for non-poor can provide an avenue whereby the quality of service provision can be improved, and can enhance the population's appreciation of the value of the health service. Increased reliance on user fees for non-poor will also improve the financial sustainability of

health service provision in Low income countries. The main issues are then whether user fees for non-poor are to be introduced in countries where no fee is currently charged, and whether existing fees should be increased. Concentrating on this, broadly there are two main options:

- Introduce a poor/non-poor patient classification for LIC subjects and charge user fees for non-poor patients only. A 'non-poor patient' in this context is one that is referred from a private clinic/doctor to the public health service either for further tests and treatment as an outpatient or for admission as an inpatient to be treated by the referring doctor (i.e. the patient has choice of doctor).

- Do not introduce a poor/non-poor patient classification and charge the same user fees for all patients.

The introduction of a poor/non-poor distinction would require that this distinction be clearly defined and embedded in the health information systems used to support the health service. Revenue collection systems need to be robust, and administrative processes and accountability need to be of sufficient integrity to support the strict implementation of the fee schedule for non-poor patients. A disadvantage of this approach is that the revenue raised from fees is likely to be much less than under an 'all users pay' policy - user charges would be collected from a much smaller number of users. Offsetting this to some degree would be the prospect of setting fees at a much higher level than under an 'all users pay' policy.

The 'non-poor users pay' policy also has the advantage (Table 2) that poor patients would continue to pay zero user fees for most services, offering some kind of poverty protection, and in particular those engaged in the informal sector. While in principle the poor could be exempt from paying fees under an 'all users pay' policy, there would need to be some practical means of identifying those who were exempt. It is suggested issuing 'health cards' to the poor which, upon presentation to the health service, result in the user fee being waived. This obviates any need on the part of the government to implement any fee exemption arrangements with their associated administrative complexities.

In setting fees under a 'non-poor users pay' policy, it must be recognized that the higher the fee levels, the more likely it is that patients previously utilizing the services of private clinics will switch to public patient status, resulting in an increase in demand for the services of public health facilities. This consideration may restrain the level at which fees can be set for non-poor patients.

Table 2: Advantages and disadvantages of 'non-poor pay' vs 'all users pay' policies

	Advantages	Disadvantages
Introduce poor / non-poor patient distinction; only non-poor patients pay	• Equity – maintains a free service for the poor so that user fees do not become a deterrent to the poor to seek treatment. • Builds upon practice of 'private' patients pay in low income countries.	• Requires improvements in health information systems to support a distinction in patient payment status. • Revenue base is restricted to non-poor patients, so has less potential to raise revenue than an 'all users pay' policy (or alternatively will require higher user charges to raise the same amount of revenue as an 'all users pay' policy). • If fees are substantial then demand may switch back from the private to the public providers putting greater strain on public resources.
Do not introduce poor/non-poor patient distinction; all users pay	• Administratively simpler (although an exemption mechanism for the poor could complicate the system). • Extends the revenue base to all patients so has greater potential to raise revenue.	• Inequity – unless an exemption mechanism is developed for the poor, they will be discouraged from seeking treatment by the user charges. • May give rise to widespread dissatisfaction because all Low income countries citizens would be affected.

Payment Mechanisms

Once financing health services for poor has been defined, providers will need to be paid for the delivery of services. There are a variety of methods used for paying providers around the world. This section begins by describing those methods and then considers the issues that allow the selection of the method that is most appropriate for use in Low Income countries.

Approaches to provider payment

There are four principal methods that are used to pay providers of healthcare around the world. These methods are used in a variety of ways across both the public and private sector providers. They are also used by Government funders and private payers for health care (health insurers). There is no one correct approach and many payment models involve some hybrid of the four methods: (1) Inputs based payment which is the first and historically the most common approach, This method essentially relies on estimating the operating costs of a health services program and providing a quantum of funding to meet these costs. The method is now generally used with an expenditure cap (i.e. services are provided up until the point where the estimated operating costs (or budget) is exhausted). In practice, demand is managed so that expenditure is contained within budget for a given period. (2) Outputs based payment is the second method and the one that has come to prominence most recently in many countries around the world. An output based approach sets a price for the provision of a unit of service (an output) and funds each service generated at the set price. Outputs based resource allocation requires a system of classification of outputs and a schedule of prices. (3) Population based payment normally starts with a measure of the needs of the population for services. Funds are then typically allocated on a per capita basis using the needs measure. The method is generally used to distribute funds equitably to a regional health services purchaser (and/or provider). (4) Outcomes based payment is a payment based on the generation of specific outcomes. An outcomes based approach provides funding for the achievement of specific outcomes for a group of patients. Although attractive in theory, outcomes based approaches are extremely complex to implement in practice.

Evaluating provider payment methods

Most resource provider payment methods are based on some hybrid of the four approaches described above. Typically it is necessary to develop a method that balances the production efficiency incentives of an outputs-based approach, the allocative efficiency of a population-based approach with the practical effectiveness of an inputs-based approach. We propose a number of characteristics (evaluation criterion) that are desirable in a payment model to be used by LIC countries, which include:

- use a well-researched classification system that includes all elements of patient care
- base payments on external benchmarks of costs wherever possible
- promote efficiency and innovation in the delivery of care

- bundle charges to a high degree to simplify claims and processing
- base claims on submission of complete and accurate clinical data that supports the chosen classification system
- minimize the administrative costs associated with implementation and operation of the system
- enable contracts to be relatively brief and simple in structure
- be progressive in the sense that it can be continually refined as the available data and/or tools and technologies improve.

These criteria provide a basis for choosing amongst the available payment system options within each low income country context. In so doing it has been assumed that the payments will be made to public and private providers for the treatment of patients whether they are poor or non-poor. Table 3 evaluates four alternative options against the criteria that have been defined. The assessment is made at the overall level as it is our view that the payment system to be used should be conceptually the same for all services.

Review of the evaluation matrix clearly indicates that the outputs based approach to payment is preferred for countries of low income. It creates far better incentives for efficiency, quality and equity and political buy-in than the inputs based approaches and it is not as difficult to implement as either the population based or outcomes based approaches.

Without evidence-based action, international health-related Millennium Development Goals as well as those of individual countries are unlikely to be achieved. Health policies are influenced by a variety of factors – values and beliefs, stakeholder power, institutional constraints, and donor funding flows, among others – and research evidence needs to be one of the critical factors taken into account. Unlike experiences in other regions, the introduction of health accounts in both MENA and EAP is lacking for a number of policy questions for example one of its impact increased the number of patients seeking care at such facilities (James et al., 2006). This phenomenon has been ascribed to improved quality of care and reduced informal payments. As such, the introduction of user fees led to a considerable rise in attendance by patients. We stated in our research that reducing payments or exemption rate enabled the poor access to health facilities. Thus user fees combined with a minimal exemption rate, well below the poverty prevalence, will not improve access for the poor to health care.

Table 3: Provider payment methods evaluation matrix

Evaluation criterion	Inputs based	Outputs based	Population based	Outcomes based
Well researched classification system that includes all elements of care	Classification systems not well developed or researched	Significant relevant international work available	Data to develop the required population needs adjustment variables not available	No suitable classifications available
Base payments on external benchmarks of costs	Costing studies need to be completed	Costing studies need to be completed	Costing studies need to be completed	Costing studies need to be completed
Promote efficiency and innovation in delivery of care	Little incentive for efficiency or quality	Strong incentives for efficiency, some quality incentives	Some efficiency and quality incentives	Strong efficiency and quality incentives
Supports simple claims and processing	Patient bills complex	Supports simple claims	Capitation fee supports simple claims, but providers need to be paid	Outcome payment supports simple claims
Base claims on submission of complete & accurate clinical data	Little clinical data used in claims process	Strong incentive for clinical data collection to support accurate classification of outputs	Need accurate data for population needs adjustment variables	Need to agree on data to support outcome measures, complex
Minimize administrative costs associated with implementation & operation of system	Any system already in place, implementation costs low	Requires systems implementation in some areas, but other benefits	Requires systems implementation although not as much as for outputs based	Significant cost to implement as detailed clinical data would be required
Enable contracts to be relatively brief and simple	Supports simple contracts	Supports simple contracts, as only one schedule of prices required for outputs	Supports simple contracts on a capitation basis	Contracts complex due to need to define outcomes
Be progressive - can be continually refined as the available data and/or tools and technologies improve	Not progressive, little refinement possible	Very progressive as much new research taking place to improve outputs classification	Progressive in that population needs adjustment variables can be improved	Progress much slower as outcomes definition for payment purposes is very difficult

In contexts where resources are most scarce, it is arguably even more important that research evidence informs policy-making in order to ensure the wise use of limited resources.

Unfortunately, evidence-based action is rare. Research evidence is lacking for a number of policy questions and impact evaluations still need to be a more integral part of policy implementation. Where research evidence exists for policy questions, it is not always in a form that it is easy for policy-makers and stakeholders to acquire assess or use. Earlier presentation highlighted the issue that imposing user fees is forcing more of the poor and destitute into selling assets such as land to pay for health services, thus pushing them closer to landlessness and into poverty. Evidence-based information may be scattered across numerous reports and articles, or difficult to assess in terms of its quality. It may also have been conducted in contexts which may not be similar to other country contexts and local conditions. Or it may have addressed only specific questions (such as the effects of different policy options) rather than other, perhaps more urgent ones, such as how to implement preferred options for rates and exemptions and how to use policy tools, like health accounts, to formulate health financing policy for the poor in each country, no matter how large is its size. We found that there are no pre-cooked answers, either to the primary question about how to support evidence-based action or to the secondary questions concerning what constitutes evidence-base action in the three policy domains that low, middle and high income countries prioritize for deliberation (financing, human resources for health, and so many other subjects discussed in the preceding papers).

The result of our research and analysis used a graded-entry format (i.e. a list of key messages and possible solutions for health policy problems) to present policy relevant research evidence about the effects of different policy options that could be used to address country-level health challenges and improve the health of the poor. The challenges and opportunities in using health accounts and research evidence to inform policy-making was highlighted throughout the dissertation. It does not aim to provide a comprehensive overview of all of the research evidence relevant to policy-making in the area. In focusing on evidence about effects (both benefits and harms) and hence on studies that use research designs that are best suited to examining effects, it excludes other types of research evidence. This, for example, excludes global research evidence related to how and why interventions work, as well as local research evidence about the views and experiences of stakeholders, both of which can be addressed using qualitative studies. Moreover, one important outcome of our research will be ideas on how to improve health financing policy and steps to be followed. Still one may question on how useful are health accounts and on the value of emerging evidence for policy-making at low and middle income

countries in both MENA and EAP regions and how could it be made more useful? What type of health accounts and derived indicators is typically used at the country level to inform policy-making, and how does it compare to the other tools? What kinds of health financing policy should global institutions like WHO be developing and how can briefs such as this one is made more useful? What are the key information gaps? The systematic reviews and evaluations used for this dissertation should be considered by policy makers of those countries in formulating new policies. This will lead us to conclude the way heath accounts can inform policy to overcome the challenges in the poor and vulnerable areas and be combined effectively with local evidence and input.

Putting Matters in Perspective

The characteristic of the core studies is that health accounts assessed complex health financing policy interventions which contain multiple interacting components" that influence each other's' outcome (Craig et al. 2008) and require a thorough understanding of the intermediate steps or components between start and outcome (Webster et al. 2010). Deciphering cause and effect in any complex system is challenging, if at all possible. Operational Research need to be considered as forwarded by Zachariah et al. (2009), namely "the search for knowledge on interventions, strategies, or tools that can enhance the quality, effectiveness, or coverage of programs in which the research is being done". However, the definition of Operational Research resembles those of Implementation Research and Evaluation Research (Sanders & Haines, 2006; Schackman, 2010). It is therefore clear that health accounts tool, implementation and evaluation research form a subset of health systems research but there are different opinions about the definitions for each type of research (Allotey, Reidpath, Ghalib, Pagnoni, & Skelly, 2008; Mills, Gilson, Hanson, Palmer, & Lagarde, 2008; Remme et al., 2010). Amidst this confusion, we suggest definitions of operational and implementation of health accounts according to the kind of research questions addressed and the ability to adopt this to other contexts or locations, specifically to low income countries who suffered from poverty. Earlier the factors and characteristics of health accounts by each kind of health policy type were presented. The primary responsibility of the health accounts proposed to improve the functioning of the health system first, rather than to embark on a complex restructuring agenda in the absence of a clear policy and reform road map, with all the inherent liabilities to disruption that such approach might cause. The rationale for the implementation of health account for vulnerable area and earmarking health financing policy

change within the healthcare system is that it would enable enhanced resource utilization, shift funds nearer to the place of health service provision for the poor whilst allowing for the adoption of international and regional best practices in accounting. What is clear, however, is that there is absence of MENA and EAP countries' clear and unified National Health Policies that deals both with delivery of services for the poor and reforms the system to fit such situation. Setting new policies in place, and recasting the health accounts model and decision-making process need not be disruptive, but it is urgent. Furthermore, in any country, strengthening private sector participation will be vital to implement an effect health account reform rather than the public alone. Our proposed classification and labeling of the various policy types is certainly not definite but aids in categorizing the core studies of this thesis. According to this classification these studies can be classified as implementation research (Overcoming access barriers to health services for the poor; Countries' Health Provision and Financing. Countries constraints were discussed and accordingly potential factors facilitating the change process were proposed for each kind of characteristics studied in our research, particularly within Low income countries.

It is worth reiterating that when an intervention is ongoing and decision makers want to know whether to continue or scale up the initiative, health accounts provide an adequacy statement suffices since it answers the question whether an expected change took place. The associated assessments do not require a control. When policymakers want to know whether the observed changes are due to the intervention and not to external or confounding factors, then assessing facilitating factors is considered appropriate. Case studies were employed to assess the impact of user fees on care seeking for the poor and out-of-pocket expenditure; to ascertain and describe the process of overcoming access barriers to health services for the poor while maintaining a high degree of health service delivery. All these case studies –or adequacy assessments- employed various research instruments and methods and had multiple sources of information that were triangulated to answer the respective research questions. Clear assessments were used to elicit whether behaviors such as care seeking, out-of-pocket expenditure and coping mechanisms could be attributed to equity in health or identification method and presenting the evidence that vulnerable and less advantaged groups have lower health status and access health services differently to those better off. The levels of constraint and potential facilitating factors described above are meant to classify types of policy to be designed for the core studies in LIC and the instruments are simply the health accounts tools that considered the golden standard method for

health since they have high internal validity for Health sector policy and strategic management level. Internal validity refers to the fact that the system measures what it intends to measure and therefore limits chance and has minimal selection and information bias (Grimes & Schulz, 2002). We argued that other governments accounting systems (or what we call System of National Accounts (SNA)) used for all countries industries do not allow for assessing health care expenditures and measure health interventions that target the health of the population including vulnerable and poor since SNA tend to measure the general and average effects of any ministry' budget and not specifically the Ministry of Health or the distribution of the effects amongst the population and health services. We also argued that health accounts is used to measure changes at national level but not the changes occurred at rural areas and what policies affecting the poor in such areas.

Health policy formulation is the main emerging topic from our research. Funding the health of the poor in LIC has fueled the debate about how health care policy should be formulated. Certain criteria were identified for evaluating the systems and methods used. A number of countries have started to implement health policies for the poor. A good example is Vietnam where the government implemented Health Trust Funds for the poor. However, it encountered serious problems during implementation. First, the initial funds were generously supported by donors that could not be sustained since the funds may stop in the coming years. Second, there has often been slow development of financial management systems and monitoring, such that various non-transparent financial arrangements have emerged leading to significant resource leakages. Other countries in the MENA and African regions which have started in this manner, include but not limited to Yemen, Tunisia, Morocco and Algeria, Kenya, and Uganda, With political pledges to quickly cover the entire vulnerable population, but they got bogged down and did not realize the issue of needed resources for the future and has enabled them to sustain the financial requirements implied by their political commitments. Given the limited resources available for health in almost all low income countries, it is essential to raise and use resources as efficiently as possible. Tools should be based on the overall objectives of health planners and policy makers and should take stock of the following:

I. Assessing and improving the methods of resource estimation

Reliable and accurate calculation and estimation of total health expenditures needed is a major challenge, particularly in developing and transitional economies. Major differences in the way different countries estimate public and private expenditure result in significant differences in the reported levels, and make it difficult to compare provincial and district estimates of health spending and health expenditures for the poor. Household out-of-pocket spending accounts for the largest part of private expenditure in most countries, and often presents the most problems for health accountants. Current approaches to estimation can be significantly improved by drawing on emerging international best practices and focusing on the poor and vulnerable people. In particular, health accountants need to be aware of the dangers of relying on household survey data to evaluate health spending for the poor. Many decades of experience with both national accounts and health accounts have demonstrated that surveys are usually subject to significant error in sampling and accuracy. Over the years health accountants adopt an integrative strategy to estimate all expenditure flows in a health account but not sub-accounts for the poor. Similarly, the health accountant first seek to improve estimates for the major items of household spending that are of policy importance and for which data are plentiful. Nevertheless, estimation of vulnerable household spending will remain a challenge, and estimates will continue to be subject to considerable error. It is important therefore that estimation methods continue to be developed and improved. In addition, some methods lack the capacity to estimate any specific expenditure flow, either its level and trend, or its distribution. These tend to vary in their reliability and appropriateness. Given the choice, it can be difficult to know which methods are to be used, and also where efforts are best invested to improve or change methods in order to achieve the largest improvement in the final estimates. To provide guidance on this issue, we attempt to propose and indicate the relative merits of different methods by ranking them into three different classifications. Our proposed method is treated as a combination and or mix of data sources and an analytic process that translates the data sources into final estimates of an expenditure item for the most urgent category of household living in rural areas and classified as poor. We propose classifying the methods into three groups according to their presumed reliability and effectiveness in estimating a particular major item such as estimating funds for the poor, and implicitly the size of the estimation error in the final estimate of this item. This means that the grading of a method will depend on what the intended final item of estimation is, and a method

that is considered good for the whole population of a specific country, may be ranked differently when applied to estimation of poor and vulnerable people. The three groups are: i) methods that are reliable and ideal, and are most appropriate; ii) methods that are less reliable, but are acceptable if "i" method cannot be used; and iii) methods that are not acceptable, except as a last resort. This classification is intended to encourage improvement in current practices, greater harmonization of methods, and achievement of greater comparability in Health Accounts estimates of (1) private / public expenditures and (2) poor / non-poor spending on health. It is only intended to provide guidance, and the classification of a method can be subjective and dependent on the specific circumstances. In many instances, "i" or even "ii" methods may not be feasible, if requisite data sources are lacking or missing, so these two methods are not always feasible or necessarily the best that can be achieved. This ranking is intended to provide guidance on the relative strengths of each method, but it must be kept in mind that given the paucity of methodological evaluation research in this area, this guidance is indicative and not intended to be definitive or comprehensive in applicability to the poverty situations or contexts. We argued this and raised concern that the current international classification might be seen as a means of grading the quality of the health accounts estimates. However, it is important to note that the presented classification is intended only to provide guidance to health accounts experts as they seek to assess and improve the methods used nationally in a particular country, but not differentiating poor status to non-poor status and considering of its spending.

II.   Loss of potential factors and economic growth

Inadequate spending causes loss of potential economic growth. To analyze the adequacy of spending, and the distribution of financial burden among sources of finance and households, countries could use simple comparisons and analyses. Most of the analyses considered in all the countries in both MENA and EAP regions are not enough to cover the poverty subject and cover a wide range of incomes. The analyses used were conducted on a regional basis, the results of which are sometimes reported, but not shown in detail. The principal source of the data used is the set of national health estimates collected nationally. Because of subsequent revisions, the numbers do not always match those that have been published previously. The estimates refer to 2010, although they may be based on data for earlier years as well. The quality of the information varies considerably among countries, so that initial 2010 estimates, reported in this study lacked information on poverty and vulnerability and we ranked them into three

classifications: (1) "complete data with high reliability", (2) "incomplete data with high-to-medium reliability", or (3) "incomplete data with low reliability". Originally, Most of the countries of both MENA and EAP are classified in the last category. The classification has not been modified to identify health for the poor as improved data have been obtained, so the data for a country are at least as good as the categorization shown here. We expect that our proposed results will significantly modify the patterns found. International estimates, as per the International Monetary Fund (IMF) classifies countries according to WHO regions and per capita income level, distinguished as follows: very low income (<US$ 1000), low (US$ 1000–2200), middle (US$ 2200– 7000), and high income (>US$ 7000). Although regions are further divided into strata according to estimated adult and child mortality levels, we did not propose the analysis of data according to the strata because sometimes there were very few countries in a region /mortality cell. The proposed result is to begin the analyses with *total health spending for the poor relative to gross domestic product* (GDP), as a function of GDP per capita of the poor. To visualize relations to income, we consider *spending on poverty of all money amounts*. Most statistical analyses refer to percentage shares, relative to total health expenditure, government revenues, or total public or central government expenditure. Comparisons to the need for health spending on the poor, however, require amounts in US$, so per capita levels of total health expenditure, out-of-pocket spending, and total public spending are compared to per capita income.

What do countries spend on health for the poor is always a question to be raised by politicians. THE over GDP rises from 2% to 9% as income increases. Our analysis shows that health spending is (slightly) a luxury good for the set of countries of both MENA and EAP with high-quality national expenditure data. The complete statistics for all country groups according to data quality and for all countries of both regions together were discussed. In this, so far it is considered that the value of a good quality is greater for the high-quality data, but the difference between the estimated value for all countries and for the high-reliability group is never significant.

In summary, the inclusion of lower quality data on the poor and vulnerable groups introduces additional ''noise'', but does not appreciably change the slope of any relation. Many countries in both regions are so poor that spending even 4% of total income on health is equivalent to a high share of non-subsistence income, comparable to that in richer countries. The share of heath

spending in total income varies greatly at all income levels: The health share of GDP ranges from <3% to 6% among MENA countries at incomes under US$ 2500. This is as high as the 5–10% spread among the high income countries of the MENA (GCC countries) at incomes of US$ 10000–20000. This counter-intuitive result — that relative differences are largest in poor countries, as high as 5:1 at incomes under US$ 5000, but are about 2:1 among most countries at incomes of US$ 10 000–20 000. There are no marked regional differences in the shape or slope of the expenditure/income relation. This proves the bigger differences in how health is financed, but these do not systematically affect the total. In most countries, total health spending is low (less than US$ 45 per person per year in countries with incomes below US$ 1000) and below US$ 110 in other countries at incomes under US$ 2200. Some countries spend less than the cost of a basic package of services needed to cover the essential services of a household, estimated in 2010 to be US$ 12 per capita in very poor countries and US$ 22 in middle-income countries. This is not enough to assure availability of even a few highly justified services to the whole population, whether the justification is based on cost-effectiveness, protection from catastrophic expense, or other criteria. Inadequate spending in this sense is distinct from low health expenditure causing loss of potential economic growth.

III.   Reducing risk and avoiding impoverishment.

Because of its relation to financial risk, the crucial distinction in health spending is between prepayment in all forms and payment out-of-pocket at time of service. Small out-of-pocket costs are harmless for all but the poorest users. High cost spending, however, should be covered via prepayment to avoid the risk of impoverishment, or of doing without needed care. Since the poorer a person is, the lower is the threshold for catastrophic expenses, the out-of-pocket share ought to be lower in poorer countries. However, exactly the opposite occurs: at low incomes, the average out-of-pocket share is high and extremely variable (up to 80% of all health spending). With increasing income, the range also narrows: Except for four or five countries with highly reliable data, there is a sharp frontier of maximal out-of-pocket spending in the total. This frontier also shows up separately in EAP and the MENA, but not in other regions like Europe, where the out-of-pocket share is nearly always below 40%. The declining share of out-of-pocket spending does not offset the rise in total spending on health, so the dollar amount spent out of pocket climbs rapidly but not quite proportionately as income and total spending increase. A given overall share of out-of-pocket financing represents little financial risk to households when

it is low and distributed in proportion to capacity to pay. Everyone then buys those, and only those, health goods and services that are individually affordable. In other cases, important financial risk is indicated by the percentage of households whose estimated health costs exceeded 50% of their income net of food expenditures 2), a measure of catastrophic spending. In the household surveys of both countries regions, this proportion is usually below 5% of all households, but in a few cases the share exceeds 10%. There is no relation between this share and the level of income. There is no clear connection between the level of out-of-pocket spending and the fraction of households with very high levels of such spending.

Preliminary results seem to show this effect: the share of households with catastrophic spending, and the share of catastrophic spending in the total, both fall somewhat with rising income. Household survey data usually do not indicate how families financed such catastrophic expenditures, but in poorer countries health needs often push families into selling assets or borrowing cash, even in the upper-income quintiles. Less than one-half of all families can afford a medical emergency out of current income or savings, and the loss of savings leaves them exposed to other risks. This evidence comes from the surveys run by the author supported by both WHO and the World Bank between the year 2007 and 2010 in MENA and EAP countries. Reducing risk of impoverishment is the chief benefit from extending prepayment and confining out-of-pocket payment to easily affordable services. This implies that providing fee for health care for the poor only is an insufficient strategy to prevent the economic hardship associated with health care seeking. Instead, new criterion should be addressed beforehand: (1) replacing OOP with earmarked taxation, (2) ensuring quality within the health system, (3) earmarking payment for health care delivered to the poor.

IV.   Prepayment and Finance

Some mechanisms are not widely used and contribute little to total health spending, such as ''health cards for the poor'' bought in advance of need and which entitle purchasers to a restricted amount of care. This was the case in couple of countries in both regions (Vietnam and Sudan). Aside from schemes like these, there are three basic ways to finance prepayment: private insurance (voluntary or employment-related), social health insurance contributions, and taxes (general revenue). All publicly financed health is prepaid; private spending is divided between insurance and out-of- pocket payments. When private insurance is negligible, which is the case

in most countries and virtually all poor countries (Sudan, Yemen in MENA and Cambodia, Lao and Vietnam in EAP, the prepayment/out-of-pocket distinction coincides with that between public and private expenditure. Public spending is then the complement of out-of-pocket spending. Relative to total health spending, public spending shows a similar frontier, for the minimum rather than the maximum share. The share of public health expenditure as a percentage of total health expenditure (PHE%THE) rises with income, with 44% for all countries in MENA together and 30% for countries with the most reliable data. GCC in the MENA is the only sub-region where the public share is always above 40% and nearly always above 60%, with little relation to income. Finally, the relative variation in public spending shrinks: the standard deviation decreases from 20% in the low-income group to 60% at high incomes. This illustrates the same phenomenon as the reduced variation in the out-of- pocket share in total health spending. Public spending includes both social health insurance contributions and general revenues or ''tax-funded'' expenditure. The latter is the predominant, often the only, mode in most countries. Countries where social security is the principal mode of public spending are concentrated in GCC. In high- income countries, either model can achieve essentially universal financial protection and account for a large share of total health expenditure. In low-income countries neither mode accounts for even half of total spending. The social security/general revenue distinction shows no convergence as income rises. High-income countries rely chiefly on one model or the other, whereas at lower incomes part of the population is covered by social health insurance and another part is protected by Ministry of Health financing, chiefly from general revenue. Particularly in the MENA region, there is a great variety of institutional arrangements, and the population nominally covered under one scheme often also uses services financed by a different mode. The lack of convergence and the variety of financing combinations arise for historical reasons, unrelated to income. There is considerable debate whether social health insurance or general taxation is better, but nothing can be concluded from financing data alone, especially when public expenditure of both kinds together is only a small share of the total. The third main mode of prepayment, private insurance, is virtually non-existent in the majority of low income countries of both regions. In most MENA and EAP, countries do not account for 5% of private health expenditure, and that may mean a share of total spending as low as 1–2. Private insurance is even more of a luxury than public spending, being important at high incomes, mostly in a few countries of the GCC. This is not surprising, since so many countries

are poor and many people cannot afford a meaningful degree of financial protection of this form. Unless they are protected by publicly-financed health care, including the possibility of public subsidies for private insurance, many people rely on out-of-pocket financing and face the risk of catastrophic costs. Even where it is affordable by a larger part of the population, private insurance is not widespread in most countries because of the efficiency problems inherent in the distribution of medical risk among people, and uncertainty both on their part and on that of insurers. The shares of insurance in total health spending vary considerably, from a significant form of prepayment (Middle income countries in the MENA), to a complement of publicly funded services (GCC countries). The importance of private insurance also depends on whether the well-off must purchase it and leave the public system (as in Lebanon and the Netherlands), or may direct their social security contributions to private insurers (in Chile). Employers purchasing for their employees account for a large share of insurance in most GCC countries, and for much of health financing in the formal sector in many other countries. Given that most policies of the governments of both MENA and EAP regions appear to be significantly progressive for only formal employees and the highest income deciles, and as discussed earlier 3 main criteria emerge: (1) Earmarked taxation to cover a well-defined segment of population in Low income countries; (2) . Strengthening and developing of Quality Programs for the health sector and (3) Paying providers for services delivered to the poor

V.   Providing Public Goods and Services

Public expenditure on health can be low because of low total public expenditure, or because a low share of public expenditure is devoted to health, or both. The ratio of public spending on health to total general government expenditure (PHE%TGE) seldom exceeds 20% and is below 10% for most countries, including almost all of the MENA and EAP regions. The share increases as income rises, approximately from 5% to 15%, with an average of 8.4% for all countries together and 12 to 15% for countries with more reliable data (Lebanon and Jordan). Variation around the mean share stays fairly constant across the three income groups, the standard deviation rates varying from 3% (in Iraq) to 15% (in Jordan). IMF estimates of this relationship calculate total central government expenditure relative to GDP, and the shares for health, education, defense and interest payments. These estimates do not match the published WHO national health account numbers estimated for 2010 (World Health Statistics, 2010) when expenditure passes through sub national governments, as in Sudan and Vietnam and China. The

average share of GDP spent by central governments increases only slightly (from 24% to 29%) from very low- to middle-income countries, with a further increase to 32% among high-income countries. Within the lower income groups, and often within each mortality stratum, there is variation of as much as 3:1. Failure to capture much of a country's income for public use does not generally explain low health spending in poor countries, but it helps account for the low shares that central governments spend for health in countries such as China in EAP, and the United Arab Emirates in GCC,MENA. Chinese spending is much higher when general rather than central government is included. At high incomes and low mortality, the shares converge somewhat for total spending, but less so for health expenditure. The relation between the two fractions of GDP fans out as central government accounts for more of the economy. This is consistent with the widening variation in the share of GDP spent on health.

The analysis of national health accounts estimates does not lead to striking or unexpected conclusions, so far as shares are concerned. Analysis of absolute dollar amounts shows that out-of-pocket spending, total health expenditure and total public spending all rise with income. The respective double-logarithmic elasticity mean that the share of out- of-pocket spending in GDP falls modestly as countries become richer, and that such spending takes a decreasing share of non- subsistence income and becomes less of a burden on average. In contrast, both total health expenditure and total public expenditure of all kinds rise with income. The relationships between different heath expenditure concepts fall into two groups: some do not converge toward a common pattern as income rises, whereas others clearly do. The former group includes the share of GDP spent on health; the share of public spending financed by general revenue rather than by social security; and the share of health in total government spending. Countries show little or no regularity in these shares. As income rises there is a convergence in the average level of the shares of health spending represented by public expenditure (increasing) and by out-of-pocket spending (decreasing). There is an even more marked common pattern for the variation in those shares at a given income level. As income level increases, the relative variation in health spending among countries narrows; the public share becomes more uniformly high; and that of out-of-pocket spending becomes more uniformly low. Increased prepayment, most of which is public, is what allows the out-of-pocket share to fall markedly. This reduces catastrophic financial risk for households, while avoiding the market failure that makes competitive, private

health insurance inefficient, because those who need it most can least afford it, if insurers charge according to risks. Several conclusions emerge, as outlined below:

In many poor countries (1) total health spending is very low, even compared to the cost of a package of highly justified interventions. (2) Out-of-pocket spending is already catastrophic for most households. Even if consumers were willing to pay more for better quality services, the poor could not pay much more and would require preferential treatment. (3) Prepayment via health insurance is limited to the wealthy and those with formal employment. The poor could afford meaningful insurance coverage only with public subsidy. These conclusions, and the need to provide public goods and services with large externalities (which private markets will not deliver adequately), make public expenditure on health particularly important in poor countries. However, these are the countries with the lowest relative public spending in health. What actually happens appears to be at odds with what is needed.

VI.   Spending: Needed versus Actual

As noted earlier, there are no clear indicators on how much a country should spend on health. There is no consensus as to what services need to be financed for its citizens, not to mention that different packages of health services have different costs. It is particularly difficult to specify appropriate voluntary private spending on health, since people differ not only in needs, but in their tastes and their degree of risk aversion. Nonetheless, a given package of services corresponds to a relatively well-defined minimum cost, if it is provided for the whole population. If a country is to deliver that package, it should spend at least the corresponding minimum amount. It might spend considerably more for the same package, because the way health is financed can greatly affect costs. The cost for a health package will depend on several characteristics of the country, including its income. The package of health services might cost more to provide in high-income countries than in low-income ones, because inputs are more expensive. But in poorer populated countries, it may instead be costlier to reach everyone because the population is widely dispersed. The low level of schooling and worse health status may also require more intensive intervention. Thus, the need for spending on the services in the package may be constant, or declining with per capita income, at least at low incomes. It is noted that irrespective of the relationship between income and total need relative to the package, the need for public expenditure on those services, as a share of the total need, almost surely declines

with income. This can happen either by declining absolutely, or by rising more slowly the richer a country becomes. People can spend more privately, because out-of- pocket expenses are less onerous, or they can afford wider private insurance coverage. More public spending would simply crowd out some of that private expenditure. The relation between actual total spending and actual public spending is just the opposite of that for needs: the difference between them narrows as income rises. Any gap between needs and actual expenditure is greater for the public component than for the total. For a country with low GDP per capita, spending is not enough to provide the package to everyone and there is a gap, the public gap is much larger. Even if the total gap were closed, there might still be a shortfall of public spending. Part of the population would not benefit from the services, and the additional expenditure would buy other interventions and be distributed less equitably. These findings indicate that the challenge for poorer countries is not merely to spend more on health, but to spend more equitably by increasing prepayment, especially for potentially catastrophic expenses, and by public resources. Rich countries have not converged on a single health financing model or institutional arrangement, but they have converged on a high degree of protection from financial risk through prepayment.

VII.   Thinking Health Finance and Policy

Robust health systems are indispensable to ensure equitable access to health services and in their absence, concurrent implementation of different interventions is required to overcome access barriers. Because the ability to successfully address access barriers by combined interventions is influenced to a considerable degree by their context, there is a need to better understand the contextual factors that influence the effectiveness and efficiency of individual and combined interventions. At the same time, interventions focusing on access barriers, especially those directed to a specific condition, may actually undermine health system strengthening (Coulibaly, Cavalli, Van Dormael, Polman, & Kegels, 2008; Gyapong et al., 2010) . There is thus a need to carefully balance such interventions" ability to overcome specific dimensions and aspects of access barriers with their potential negative impact on health system strengthening. Power to reformulate health system is a concept at the heart of the policy process. It is surprisingly rarely explicitly considered in the health policy implementation literature for low and middle income countries. Health financing implementation or health policies and systems studies such as those described in this thesis greatly contributed to finding the right balance and combination of

interventions to enable the poor access to preventive and curative services with due consideration of contextual factors and with no negative influences on health system strengthening. This is exemplified by proposing the key factors of a health financing policy and social/pension assistance system for Low and middle income countries of the MENA and EAP regions:

All the terms proposed in our thesis refer to programs that finance results of some kind rather than paying for inputs and hoping that those will produce good outputs with desirable outcomes for patients or beneficiaries. Any such payment system must be connected to outputs or outcomes, either or both of which can be called results. As Table 4 proposes, while inputs are usually paid by salaries for people and by various purchasing arrangements for non-human inputs, outputs are commonly paid for by Fee for Service (FFS) payments for specific tasks or procedures such as a patient consultation, an immunization or a surgical procedure. Outputs can be defined without regard to quality, but the outcome for the patient generally depends on quality. This leads to efforts to build into the method of payment an incentive for good quality. The last stage shown in Table 4 is impact, which refers to the effect on the health of a population and is the number of patients who experience an output times their average outcome. Because impact may mean people living longer and with better quality of life, that effect can only be roughly estimated when outcomes occur and fully known long afterward, so there is no customary way to pay providers for impact.

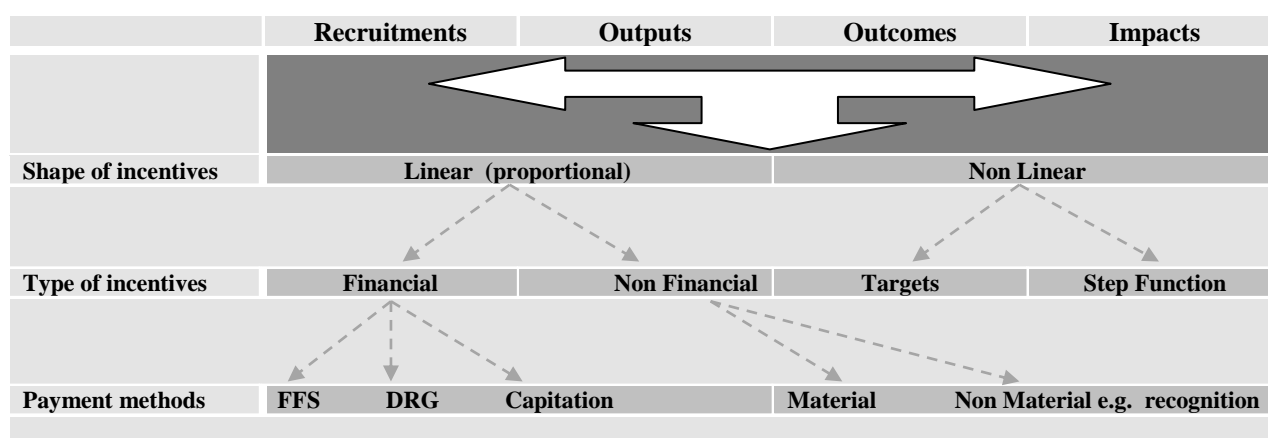*Table 4- Connection among possible meaning of health financing*

Concepts	Inputs	Outputs	Outcomes	Impacts
		--------------*Any of these can be called Results*------------		
Locus	Providers or	Facility	Individual Patients	Populations
Examples	People Drugs Equipment Buildings	Services Interventions Procedures Tests	Survivals Birth weight Reduced pain Better life quality	Life years
Financing	Salary Purchase Leasing	FFS DRGs Case Mix	Incentive payments for Coverage Targets Units of Impacts	
	Capitation		Protocols / Compliance	

However, this is primarily a problem of the time horizon and the uncertainty about long-run impact. If a program includes an incentive payment for each newborn, who survives for a year, or for five years, the impact can be measured within the typical accounting period of an incentive

payments (or resource based financing (RBF)) program of three to five years. To tie the payment more closely to results attributable to the program, such a reward for helping infants and children survive could be based on only those newborns at high risk of early death as judged by criteria defined in the program.

Table 5 emphasizes the choices about incentives and payment methods and classifies incentive programs accordingly. The simplest path from the type of result desired to the reward for delivering it runs through purely financial incentives that are proportional to the number of beneficiaries recruited or served or the volume of outputs or outcomes. Non- financial rewards can be proportional to results if all program beneficiaries receive the same food basket or other material payment for participation. Because programs sometimes reward the enrollment of eligible beneficiaries apart from whatever services are provided for them, the figure distinguishes recruitment as one type of result as well as outputs, outcomes and impacts. It may be relatively simple to characterize a specific incentive but harder to describe a whole program because the latter may include several types of rewards or punishments and different mechanisms for delivering or withholding them.

Table 5- Relations among choices and terms for financing

	Recruitments	Outputs	Outcomes	Impacts
Shape of incentives	Linear (proportional)		Non Linear	
Type of incentives	Financial	Non Financial	Targets	Step Function
Payment methods	FFS DRG Capitation		Material Non Material e.g. recognition	

Building health financing policy to cover the poor and vulnerable group is a major issue. Such policy aims to find the best way to satisfy the ever increasing demand for health care given the limited resources. It also seeks to identify problem areas in a health care system and proposes solutions for pressing issues by evaluating all possible causes and solutions.

VIII. Analytical Initiatives

Based on the Results and the related analysis, selecting health financing policies and grouping model for the poor should take into consideration the following three key factors:

Firstly, there is a strong need to support strong initiatives already underway to address the health outcomes crisis by alleviating constraints to health systems performance in low income countries. We provided significant comparative advantage in the analysis of health systems performance and constraints, informed by global knowledge and experience.

Secondly, many of the issues affecting health systems performance in low income countries are macro-level and require closer engagement between: (a) Ministries of Health and core-economic agencies; and (b) other national ministries and government agencies. Such coordination will help link both sectoral and macro-level issues to address constraints and opportunities for improving government management and financial relationships.

Thirdly, low income countries governments have always a strong need for greater evidence-based planning and budgeting in the health sector. Doing this requires expertise in costing of services, expenditure analysis, assessment of fiscal space and analysis of the strategic expenditure framework, more generally. All of these are areas in which one has significant comparative advantage in, not only to carry out the required analytical and advisory work, but also to invest in longer-term capacity in countries to carry out such analyses.

In term of indicators, a range of possible indicators (Table 1) is suggested and proposed as a menu of options. In general, total expenditures on health should be increasing both in absolute terms and as a proportion of GDP in Low income countries, while the proportion of households

facing financial catastrophe as a result of out-of-pocket payments should be decreasing. Financial indicators could be used to answer the questions listed below:

- Are the total expenditures on health per capita enough to allow universal coverage of key health interventions?

- Is the percentage of the national budget for health reasonable given the national situation? Does it reflect a strong government commitment to health?

- What proportion of total expenditures on health is dependent on external funds for health?

- Does a high total expenditure on health get reflected in health outcomes? If not, the efficiency and quality of service, and possibly transparency and corruption issues need to be reviewed.

- What policies or implementation practices are needed to decrease catastrophic expenditures?

- What does the assessment of out-of-pocket catastrophic expenditures show in terms of health finance mechanisms that contribute to, or hurt, equity in financing health? What other options are available to improve equity?

- Are the existing health finance policies being implemented in a transparent manner (e.g. are the households receiving exemptions or subsidized services and medicines if they are eligible?)

- Are there regional disparities that need to be addressed separately?

Table 1.Recommended indicators on health system financing for low income countries

Objectives & actions	Possible output indicators	Data sources	Associated outcome indicators
Raising sufficient funds for health to cover poor and non-poor	1- Data on THE routinely collected and reported	1-National Health Account 2-Regional Health account and sub Account	**Core indicator 1.** Total Health Expenditures (THE) **Core indicator 2.**General government health expenditures (GGHE) as a proportion of general government expenditures **Core indicator 3.**THE as % of GDP
Improving financial risk protection and coverage for vulnerable groups.	1- Patient/ Household out-of-pocket expenditures of accessing or obtaining services collected intermittently 2- In countries health insurance: Number of people covered by health insurance, by population group and specifically for poor/vulnerable groups	1- Household expenditure and utilization surveys 2- Health insurance enrolment records	**Core indicator 4.** the ratio of household out-of-pocket payments for health to total expenditure on health **Core indicator 5.** percentage of households impoverished annually by out-of-pocket payments, by expenditure quintile
Improving efficiency of resource utilization	1- Information on government expenditures on wages and salaries readily available. 2- Availability of data on government expenditures on priority problems, by level of government	1- Government expenditures accounts	**Core indicator 6.** Government expenditures on wages and salaries as % of GGHE
Improving financial transparency and management at operational levels.	1- Number and % of facilities meeting established national financial management criteria	1-Audit Office	

IX.   Financing Policy Analysis and Modeling

The discussion and presentation in the thesis has identified the various components of the general framework by which MENA and EAP governments should develop their policies and action plans to ensure that they are evidence based. Policy and policy change is always contested. Contestation around some policies occurs within the public arena (e.g. abortion), and in some countries, the failure to take policy action may generate fierce public opposition. In other instances, opposition even within the more closed bureaucratic arena can prevent policies from being implemented, as even apparently uncontroversial policies are resisted by implementing actors. Policy actors are not just those officially tasked with policy development; they also include all those with concern for particular policy issues or likely to be affected by policy developments, including commercial interests, civil society organizations and beneficiaries. Furthermore, policy decisions (or non-decisions) often result in unintended and unwanted consequences. Policy is socially constructed, wrapped up in and influenced by the meanings different actors attribute to policy content or goals (Fischer, 2003) .As a result, bringing about effective policy change does not simply require good technical design or using evidence to generate policy. We conclude that it must always involve clear attention to the processes by which change is brought about, including concern for the values and interests of the actors with potential to block or subvert policy development and implementation, and for the discourses surrounding policy change processes. However, health policy analysis in Low and Middle Income Countries (LMIC) clearly remains in its infancy. The relatively coherent body of work on agenda setting and policy formulation is quite small in size, whilst the slightly larger body of implementation work is disparate and scattered, perhaps more strongly rooted in micro than macro level analysis. Examining the policy changes in low and middle income countries shows five main weaknesses. The first is an analytical weakness. The depth of data presented, and perhaps even collected, is often limited, as shown by the weak contextualization of experience in many policy papers. The official policy papers lack and when existed, it excludes any assessment of the always important historical influences over experience. At the same time, It often does not provide clarity about their analytical approaches, provide little commentary on how they add to the existing empirical evidence base or offer reflections on the interpretations made (such as their basis, or alternative possibilities). The main question asked in those countries, is often 'what

happened' and not 'what explains what happened'. Most importantly one should focus on explaining why a policy succeeded or failed. However, the vast majority of implementation theory available to policy analysts is largely ignored in LMIC literature.

A particularly surprising thinness in the overall LMIC body of work, moreover, relates to power, a central element of policy analysis theory and policy change experience. From an implementation perspective, there is also very little explicit consideration of the institutions, understood as the rules, laws, norms and customs that clearly shape actor behavior, such as organizational culture, networks or the 'assumptive world' (Hudson & Lowe, 2009). The vast majority of analyses in LMIC can be categorized as analyses "of" policy rather than "for" policy. In other words, although most seek to assist future policy-making, only a handful were undertaken as a direct input into policy-making or as part of an implementation evaluation. Policy analysis calls for the more active engagement of analysts in the policy process, rather than examining it from the outside. By providing participants (citizens, analysts, decision-makers) with access to and explanation of relevant data by using health accounts, analysts could, for example, contribute to public policy discussion and so to public learning and political empowerment. The results show that Health Account is not limited to tracking health expenditures. It also tracks non-health expenditures such as social mitigation, education, labor, justice and the expenditure of other sectors related to health (multi sectoral response). We suggest that health account framework calls for the embodiment and resource tracking of activities in the education, social development, welfare and other non-health care delivery branches that are intimately related to the policy perception of the problem by heads of countries, governments, and national and international authorities. The framework consolidates a harmonization of several classifications of health activities, interventions and programmatic areas. Its overall design satisfies, at the margin the statistical producers' search for excellence at all costs, placing the emphasis on policy relevance/sensitivity, on timely information of orders of magnitude more than on an accurate historical representation, on comprehensiveness and consistency more than on standardization and precise comparability, on links with budgetary processes more than on fine carving of a functional niche in a strict national accounting meaning.

As a methodology, health account combines bottom-up and top-down estimation procedures. Bottom-up estimation involves building up estimates from local unit data, whereas top-down estimation involves breaking down estimates from larger aggregates. This mix reflects the ability

of many low-per-capita income countries to deliver – for their own policy needs as well as for those of the community of nations – appropriate information about the resource flows, the costs and the price of services and goods delivered for hundreds of activities contributing to the social process under analysis. It is important to acknowledge the valuable steps that have been taken to strengthen the National Health Accounts and build upon health financing policies for low and middle income countries but it is not enough for building health financing policies focusing specifically on the poor and vulnerable areas.

The consultative approach in building our theory emphasizes the role of health accounts to provide the opportunity to review the health standards and policies to ensure they remain sustainable and able to evaluate longitudinal change in health outcomes. Accordingly, the following is recommended:

1. **Targeting health services**

We consider this as an approach to maximize the likelihood of vulnerable groups effectively accessing health services. We find several elements of targeting: selecting services, selecting the populations to receive them; and selecting the way in which these populations are to demand and receive these services. An important, although not the only, part of this process is the financing of health services described in the result below.

To protect the poor from the effects of user charges, protection mechanisms need to be in place. These can take various forms and use a variety of terminology: means testing, direct targeting, characteristic targeting, waivers, and exemptions. These mechanisms are designed to ensure that cost recovery efforts do not create serious financial barriers for the poor, or other groups such as those with certain illnesses, which would unduly reduce their access to care. Internationally, we argue the various targeting mechanisms that protect the access of poor or vulnerable groups to health care or other social services when user fees are introduced. The primary mechanisms are *direct targeting and characteristic targeting*. The former is meant to protect the poor while the latter is aimed at ensuring that a specific group, whether or not they are poor, receive certain services. There are potential problems if these protection mechanisms do not work perfectly. The commonly occurring problems are *under coverage and leakage*. Under coverage occurs where the poor do not receive the intended benefits because they are either erroneously

categorized as non-poor or they must still pay the fee despite their waiver. Leakage is where the non-poor receive benefits intended for the poor.

Selecting services to be targeted or provided includes services which (i) address a high burden of disease, especially diseases found in poor or minority groups; (ii) are cost-effective to provide, according to local norms and standards; (iii) are low cost; and (iv) are easy to provide at decentralized levels.

Selecting populations (characteristic targeting) involves deciding which populations are deserving of receiving heavily subsidized and more available services. The author find that targeting can occur using a number of criteria, including (i) individual, based on poverty of a household or status of the person (e.g. pregnant woman); (ii) geographic; (iii) age, such as children; (iv) by disease, such as those diseases that affect the poor; and (v) quality, where lower standards of service are only accepted by the poor while the better off prefer to pay more for better services. Several *modes of delivery* of targeted services are possible, including (1) *Exemptions:* all people receive selected services e.g. infant immunization, antenatal clinic, HIV testing. This approach is usually administratively simple, as these people are readily identifiable; (2) *Waivers:* all people meeting certain criteria are given free or reduced-price services. Providing waivers can be done at the point of service, or before the patient gets to the point of service. The problem with this approach is that some type of means test or identification is required, which has many imperfections; (3) *Vouchers:* these can operate as an exemption or a waiver, but so far are a little-tested approach. Vouchers for specific services or with a monetary value are given to target groups based on various criteria – e.g. the poor, female headed households, households without someone in paid employment, households with children, etc. Depending on how they are administered, one of the disadvantages is that vouchers could be traded or sold, although the eventual benefit may still be that it improves the situation of the disadvantaged.

2. Reliable health financing options

Internationally, health care financing continues to be a key topic of debate that straddles both supply and demand sides. Even while health sectors throughout the developing world are receiving considerable external support, health care spending is still generally insufficient to

provide an essential health package to the entire population. This leads to describe below some key implications of various financing mechanisms found in developing countries.

User fees for health care are applied variously throughout the developing world, and have been justified on the grounds of improving efficiency, quality, and even equity. Many cost recovery systems have been designed with the sole or primary objective of generating revenues to replace or supplement government funds. We argued that little consideration is given to the unintended negative effect of reducing the access to and utilization of health services for the poor and other vulnerable groups. Our assessment in Table 1 proves that developing country examples show that their application has generally been regressive in nature, having a negative impact on the poor more than the non-poor. In addition, the quality of care in public facilities has not necessarily improved even with the additional funds generated from user fees, an expectation of clients when user fees are introduced. To be pro-poor, pricing schedules need to be structured to favor the use of priority services, applying cross-subsidization, or through targeting subsidies to specific services.

Community health insurance as a financing mechanism is being scaled up in many developing countries. It has the potential to reduce catastrophic expenditures, if hospital services are included. But in the absence of a subsidy for the poor, these schemes risk excluding the poor who are usually not in a position to insure themselves. Other insurance approaches, such as private or social, are even less appropriate in low-income settings.

There may be *other community sources* that can be tapped to help the poor, especially in rural areas if these sources are pre-existing. Examples are agricultural cooperatives or women's associations that can provide a point at which people save money for future health expenses, operating much like a medical savings account. However, as expenditure is fungible, priority may be given to non-health items. In some settings, rural credit schemes are a source of health care financing.

Exemption mechanisms are provided either through group exemptions, fee waiver or through providing vouchers to targeted groups (described above). However, in the case of the EAP's low and middle income countries (Samoa, Tonga, Fiji, PNG), there is a mixed evidence of success, highlighting problems of: (i) difficulties in identification of the poor, (ii) corrupt practices of health care staff, and (iii) poor administrative mechanisms. It is also important to note that

exempting direct charges of a service does not remove other associated financial barriers to health care, such as paying for drugs, transport, etc.

Universal free essential health care has also been made a policy reality in some countries, with abolition of user fees where net revenue collected was minimal and the means testing for exempting poor groups from user fees was not working effectively.

Choosing reliable health financing option to cover the poor and vulnerable people is not an easy process and several assessments have been undertaken to propose our options. Changes in health care involve different approaches. Table 2 provides the assessment of our proposed financing options examining the advantages and inconvenient as well as the impact of each of the options proposed from the perspective of the demand side of health care (poor and vulnerable) and supply side (health facilities). It is clear from our assessment that each approach involves a number of complex variables and criterion. Each criterion addresses fundamental different issues and each need to be considered separately. Weighting of each criterion was considered as a mean to produce an aggregate score but was ultimately considered as added value to our research. In addition one needs to keep in mind issues of equity, administrative feasibility, cultural acceptability and its overall effects on the health system.

Table 2. Assessment and analysis of the impact of these policies on vulnerable groups

CRITERIA	Description	Explanations	User Fees	Community Health Insurance	*Exemption mechanism*	*Universal free essential health care*
Equity	Affordability and access for all groups including the poor	Equitable. Ability to pay and health need	-- Not very equitable because of user fees.	++ Equitable.	+++ Very Equitable.	+++ Very Equitable
Quality of care	The approach supports quality of care including specific mechanisms in place to promote quality	Expectation of the population for improved quality of care	++ Improved slightly because of user fees. Good quality if payment and incentives for providers is flexible and controlled.	++ Quality may improve because of increased expectation of the public for improved quality of care covered by an insurance scheme.	-- Quality might be questionable for exempted people.	+++ Good quality if payment and incentives for providers is flexible and controlled
Choice	The degree of choice that the consumer has, for example in choice of provider and services	Very limited choice if the poor have access only to government services. More choice depending on the preference of the client/patient (either in public or private)	--- Very limited choice since the poor have to pay so they will only be using govt facilities	-- Limited choice since those covered under CHI will have access only to defined providers.	++ More choice depending on the defined providers by the government	++ More choice depending on the defined providers by the government
Overall cost to government	The overall net cost to the government	Governments will be concerned about potential cost escalation in the case of Community insurance.	++ control costs because the government is not paying	-- Insurance will increase costs because prices will go up and demand will go up as well.	-- hard to control costs because the government is both the financer and provider of health services	--- Very hard to control costs because the government is both the financer and provider of health services

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Value for money for government	The cost benefit to the government	More efficient because of negotiations between govt. and insurance program Govt. will still pay part of the costs.	+/- Patient will pay	++ Insurance scheme will provide value product	-- Not very valuable because the government is the financer	-- Not very valuable because the government is the financer
Social Impact	The impact the approach is likely to have in terms of the current social framework	Poor and vulnerable are covered	-- Not socially acceptable	++ Concept of insurance for health issocially appropriate	+++ Concept of exemption is a highly regarded as a social value.	+++ Concept of solidarity for health is a highly regarded socially
Cultural Appropriateness	The cultural appropriateness of the approach	Risk pooling and community responsibility for health is a highly regarded community value. Risk pooling is culturally appropriate. Universal coverage makes it more culturally appropriate.	-- Not culturally acceptable	++ Concept of insurance for health is culturally appropriate	+++ Concept of exemption is a highly regarded community value.	+++ Concept of solidarity for health is a highly regarded community value. This option of universal access regardless of ability to pay is culturally appropriate
Sustainability	The ability to continue the program over time	Sustainable because the funds are earmarked on an annual basis for health and is not subject to changes in government funds and priorities	++	-- Sustainability depends on available resources and priority	-- Sustainability depends on government resources and priority	--- Sustainability depends on government resources and priority
Cost Containment	The capacity of the approach to limit the financial exposure of the government	Insurance will increase costs because prices will go up and demand will go up as well	++ Decrease Cost as it will somehow eliminate unnecessary services	--- Insurance will increase costs because prices will go up and demand will go up as well	-- will increase costs because demand will go up	-- will increase costs because demand will go up
Administrati	The ease in which	Not as easy to	+++	--	--	++

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| ve ease | to establish and manage the program | administer for community insurance and exemptions– require very good billing and information systems

May be difficult to administer if the provision is provided in both private and public sectors, also billing will be complex as there will be multiple providers | Relatively easy to administer | Not easy to administer – require very good billing and information systems
New administrative systems to manage the insurance scheme will be required. | Not easy to administer – require very information systems | Easy to administer Existed Health Information System will be used |

+   Potential positive impacts

-       Potential negative impacts

3. Creating an enabling environment

Vulnerability models emphasize the need for context-specific understanding of poverty and disadvantage. Behavior is embedded within specific social, political and cultural contexts, which determine and constrain systems and behavior change. It is therefore a critical part of any program design that an enabling environment is created that supports changes in service provision, and supports the vulnerable to benefit from changes implemented. In the context of any health sector reforms and proposed interventions in the health sector that have the potential to impact on vulnerable groups in society, the following are suggested as strategies that can create an environment that supports mitigation efforts.

Table 3. Suggested strategies creating enabling environment

Strategy	Objectives	Explanations
Government leadership	Ensure the presence of government agencies as championing this agenda.	Champions within government in key leadership positions enhance the likelihood of initiatives, particularly mitigation strategies, being actioned, and progression beyond dialogue and consultation.
Policy development	Develop impact on vulnerable groups of numerous policies in low income countries. (An analysis of the impact of these policies on vulnerable groups is described in table 1)	It is not enough to just engage in discussion about the implications of policy for vulnerable people. All policies need to have documented in them how vulnerable groups could be affected by the given policy, and mitigation strategies identified to address potential negative impacts.
Developing formal inter-government partnerships	Two objectives: 1. Progress the understanding of the magnitude of vulnerability in health sectors. 2. Support to vulnerable groups that can be provided by other sectors	1. Understand the access of the poor and vulnerable group to social and health services. Some formative work needs to be undertaken, and monitoring of impacts needs to be ongoing. In the immediate term, ministries of health of those governments may benefit from assistance with aspects of evaluation (e.g. identification of vulnerable families) from other ministries (e.g. Ministry of Women, Community and Social Development), particularly ministries that have resources and personnel with the particular skills to progress this work. 2. Education, transport. Mitigation efforts may require stronger linkages with other ministries and in some instances; whole-of-government initiatives may be beneficial, if not essential. Currently Lebanon and Jordan in the MENA have implemented this after the year 2000
Strengthening government-NGO partnerships	Supporting appropriate initiatives in assisting with monitoring and giving more voice to vulnerable groups.	there may be some advantage to strengthening Government relationships with NGOs who advocate and represent the needs of specific groups with the potential to be disadvantaged by some aspects of health reforms process and examine how NGO capacity to be accountable can be strengthened
Enhancing social capital and community-based traditions	Supporting their less advantaged members considered as a strong tradition of communities.	Social protection can be afforded through policy development, where traditional systems of protection are weakened, or no longer exist. An example is protection of pregnant and lactating women, where traditionally they were cared for by the extended family. For many who are income earners traditional care and protection mechanisms no longer exist, so there is a greater role for workplace or childcare policies to provide that support.

Sensitization to vulnerability in low income countries societies	Need for greater awareness of vulnerability. Increased awareness in the population, among key groups and among health care providers, that there are some members of those countries society not faring as well as others, may create a more sympathetic attitude that is supportive of these groups	Many people are potentially at risk if they do not have well developed coping strategies, or strong support networks.

4. Mitigating negative impacts

It is useful to distinguish between mitigation strategies that are direct and those that are indirect. Direct strategies can include: more clearly articulating exemptions from payment of fees; sound public health and prevention programs; improving communications and dissemination of information; strengthening monitoring; education of providers in the informal sector.

Proposed direct strategies

Proposed direct strategies to support vulnerable group	Description	Mitigating negative impacts and Proposing solutions
Exemptions from payment of fees	Support potentially vulnerable families to access health services.	*Option 1:* community based support where it occurs or informal exemptions at the point of service. Communities such family, church and others in the community take care of transport cost, payment of fees at point of sale. Risks to this are: 1-Increasing development and breakdown of traditional values, the community/family support to its poorer members may not continue; 2-The system is open to abuse resulting in leakage. *Option 2:* Introduce a system of formal exemptions. Risks are: (i) It will erode the current tradition of communities supporting its members; (ii) It will be too expensive for the government to implement and maintain; (iii) It will stigmatize groups in the community; and (iv) It will create a dependency by individuals that inhibits attempts to move out of poverty/vulnerable status. The first option is likely to be the preferred option in low income countries.
Services that should be free as a public good	These include services that are provided free for	Services proposed to be provided free like Antenatal services, Immunization

	characteristic targeting. Most of the MENA and EAP low income countries has already instituted some direct strategies that constitute "characteristic targeting".	program, Services to children under 5 years of age and the elderly and Services for people with chronic conditions e.g. diabetes, mental disorders.
Strengthen training to Traditional Healers and Traditional Birth Attendants (TBA)	Informal providers such as traditional healers are considered more easily afforded when payment can be made "in kind".	Training of traditional healers and TBA, particularly so that they recognize signs of serious illness and the limits of their own services, can assist people to seek the best care. This is already being addressed in most of the EAP low income countries to some degree, but this initiative needs to be strengthened in MENA
Strengthen monitoring	Monitoring the provision of services to vulnerable populations, both public health programs and the various elements of primary health care	Particular services to be monitored are outreach programs. Vulnerable group identification is a must in those countries. While this should be pursued, and will "capture" those who are vulnerable who attend local health services, it cannot be the only method of identification.
Strong public health programs	Strong public health programs are essential in a health service strategy that is pro-poor.	There is a greater imperative to contribute to a population free of chronic, lifestyle and preventive illness, in order to avoid the dependence on high cost interventions, particularly in later life.
Expand and support the Integrated Community Health Service (ICHS)	The ICHS provides primary health care services, outreach services, health promotion and prevention, and clinical services.	Full implementation of these services must be explored to ensure that by those most vulnerable to jeopardized access to appropriate basic health services have full utilization of all its services.
Government support to NGO programs	These include programs that target people who may not seek care or support when it is needed, e.g. troubled youth, young disabled women, etc.	Low income countries Governments need to recognize programs that fill gaps that cannot be addressed within government programs, and continue to support these.

Proposed indirect strategies

Proposed indirect strategies to support vulnerable group	Description	Mitigating negative impacts and Proposing solution
Increased support to income generation opportunities	An increase in support to income generating opportunities in low income countries includes addressing the issue of export markets.	With national development, more migration is occurring to urban areas in pursuit of economic opportunities. A whole-of-government approach is needed to examine how further income generating opportunities can be provided.
Education	A stronger government commitment to school retention programs,	access to education opportunities for specific groups e.g. the disabled, youth, cash poor families, is needed
Improve physical access	In low income countries, areas where physical access by road and availability of adequate transport is problematic for health care service provision.	Improve physical access by road and availability of adequate transport for health care service provision.
Support for Social Protection	Social protection for some disadvantaged groups e.g. for people with disabilities, through strengthening of organizations that advocate on behalf of their members, needs further examination.	Prioritize programs that enable these groups to speak for themselves and which, in turn strengthen human rights. For people with disabilities social support can include housing, health care, rehabilitation services and access devices. This ensures people's basic needs are addressed if the community or family support system breaks down. It does this through development and strengthening of NGOs. Greater support to advocacy programs can assist this commitment.

Conclusion

As a concluding remark, while traditional systems and interventions to overcome barriers to health services for the poor are important to the well-being of many low income countries, hardship and vulnerability are still major challenges. Evidence here suggests that there are aspects of health reforms that can have unintended negative effects on key stakeholders, particularly household vulnerable groups. In addition, cultural and social pressures seem to require greater generosity than many households feel they can truly afford. While user fees are intended to spread the costs of health care among all stakeholders in any country, earmarked planned users fees for the poor and disadvantaged groups can be a disincentive to using health services. On the other hand, addressing social health insurance is intended to increase the efficiency of the health care system, lower costs and reduced access barriers for the poor. Poor is defined as households in the lowest wealth quintiles. They are at higher risk of Catastrophic Health Expenditure. It is rampart in low income countries despite the take-off of any insurance scheme. We observed that households in low income countries were not protected and universal health coverage should be fast-tracked to give the expected financial risk protection and decreased incidence of catastrophic health insurance. However, user fee exemption schemes need to be underpinned by a range of interventions that will enable the poor to seek health care in a timely fashion and in a way which will minimize the likelihood of increasing the economic vulnerability. Serious consideration is proposed to target health services in a way to provide selected health services to selected vulnerable groups. Thus, choosing reliable health financing option to cover the poor and vulnerable group is a major issue which is not an easy process and several assessments have taken here leading to universal free essential health care, along with proposed reimbursement of health care providers for services rendered to the poor. The novelty resulted and addressed here: First, creating an enabling environment supporting: governance, policy development and sensitization to vulnerability in low income countries; Second, proposing direct and indirect strategies which needed to better understand the factors that delay care seeking by vulnerable group.

References

Allotey, P., Reidpath, D., Ghalib, H., Pagnoni, F., & Skelly, W. (2008). Efficacious, effective, and embedded interventions: Implementation research in infectious disease control. *BMC Public Health, 8*(1), 343-343. doi:10.1186/1471-2458-8-343

Bhutta, Z., Chopra, M., & Axelson, H. (2010). Countdown to 2015 decade report (2000-10): Taking stock of maternal, newborn, and child survival. *Lancet, 375*(9730), 2032-2044. doi:http://dx.doi.org/10.1016/S0140-6736(10)60678-2

Coulibaly, Y., Cavalli, A., Van Dormael, M., Polman, K., & Kegels, G. (2008). Programme activities: A major burden for district health systems? *Tropical Medicine & International Health, 13*(12), 1430-1432. doi:10.1111/j.1365-3156.2008.02174.x

Fischer, F. (2003). *Reframing public policy: Discursive politics and deliberative practices*. GB: Oxford University Press. doi:10.1093/019924264X.001.0001

Grimes, D. A., & Schulz, K. F. (2002). Bias and causal associations in observational research. *The Lancet, 359*(9302), 248-252. doi:10.1016/S0140-6736(02)07451-2

Guyatt, G., & Oxman, A. (2002). When to believe a subgroup analysis. In G. Guyatt, & D. Rennie (Eds.), *Users' guides to the medical literature: A manual for evidence-based clinical practice* (pp. 553-565). Chicago, IL: AMA Press.

Gyapong, J., Gyapong, M., Yellu, N., Anakwah, K., Amofah, G., Bockarie, M., & Adjei, S. (2010). Neglected tropical diseases 2: Integration of control of neglected tropical diseases into health-care systems: Challenges and opportunities. *Lancet, 375*(9709), 160-165. Retrieved

from

http://search.proquest.com.ezproxy.aub.edu.lb/docview/199056353/fulltext?accountid=8555

Hudson, J., & Lowe, S. (2009). *Understanding the policy process: Analysing welfare policy and practice* (2nd ed.). Bristol: Policy Press.

James, C. D., Hanson, K., McPake, B., Balabanova, D., Gwatkin, D., Hopwood, I., . . . Morris, S. S. (2006). To retain or remove user fees? *Applied Health Economics and Health Policy, 5*(3), 137-153. doi:10.2165/00148365-200605030-00001

Jones, N., & Charlesworth, A. (2013). *The anatomy of health spending 2011/12*. London: Nuffield Trust. Retrieved from http://www.nuffieldtrust.org.uk/sites/files/nuffield/publication/130305_anatomy-health-spending.pdf

Mills, A., Gilson, L., Hanson, K., Palmer, N., & Lagarde, M. (2008). What do we mean by rigorous health-systems research? *The Lancet, 372*(9649), 1527-1529. doi:10.1016/S0140-6736(08)61633-5

Narayan, D., Patel, R., Schafft, K., Rademacher, A., & Koch-Schulte, S. (2000). *Can anyone hear us? Voices of the poor*. Washington, DC: World Bank Group. doi:10.1596/0-1952-1601-6

Remme, J., Mbewu, A., Mbizvo, M., Mirza, Z., Pang, T., Ridley, R., . . . Kengeya, J. (2010). Defining research to improve health systems. *Plos Medicine, 7*(11), e1001000. doi:10.1371/journal.pmed.1001000

Sanders, D., & Haines, A. (2006). Implementation research is needed to achieve international health

    goals. *Plos Medicine, 3*(6), 719-722. doi:10.1371/journal.pmed.0030186

Schackman, B. R. (2010). Implementation science for the prevention and treatment of HIV/AIDS.

    JAIDS Journal of Acquired Immune Deficiency Syndromes, 55 Suppl 1, Prevention and

    Treatment of HIV/AIDS Among Drug-Using Populations: A Global Perspective (Suppl 1),

    S27-S31. doi:10.1097/QAI.0b013e3181f9c1da

Wagstaff, A., Claeson, M., Hecht, R. M., Gottret, P., & Fang, Q. (2006). Millennium development

    goals for health: What will it take to accelerate progress? In D. T. Jamison, J. G. Breman, A.

    R. Measham, G. Alleyne, M. Claeson, D. B. Evans, . . . P. Musgrove (Eds.), *Disease control*

    priorities in developing countries (2nd ed., pp. 181-194). Washington (DC): The

    International Bank for Reconstruction and Development/The World Bank Group.

    doi:NBK11716 [bookaccession]

Whitworth, J., Sewankambo, N., & Snewin, V. (2010). Improving implementation: Building

    research capacity in maternal, neonatal, and child health in Africa. *Plos Medicine, 7*(7),

    e1000299. doi:10.1371/journal.pmed.1000299

WHO. (2013). *Research for universal health coverage: World health report 2013*. Geneva: World

    Health Organization. Retrieved from http://who.int/whr/2013/report/en/

World Health Statistics. (2010). Retrieved on 31-December-2012 from http://apps.who.int/ghodata

Zachariah, R. (2009). Operational research in low-income countries: What, why, and how? *The*

    Lancet Infectious Diseases, 9(11), 711-717. doi:10.1016/S1473-3099(09)70229-4

References List

Abatemarco, A., Beraldo, S., & Stroffolini, F. (2016). *A Resource-Sensitive Framework for Defining and Measuring Equality of Opportunity in Health* (No. 437). Centre for Studies in Economics and Finance (CSEF), University of Naples, Italy.

Abel-Smith, B. (1967). An international study of health expenditure and its relevance for health planning.

Allotey, P., Reidpath, D., Ghalib, H., Pagnoni, F., & Skelly, W. (2008). Efficacious, effective, and embedded interventions: Implementation research in infectious disease control. *BMC Public Health, 8*(1), 343-343. doi:10.1186/1471-2458-8-343

Andersen, R., & Newman, J. F. (1973). Societal and individual determinants of medical care utilization in the United States. *Milbank Memorial Fund Quarterly/Health and Society, 51*(1), 95-124.

Anderson, G. F., & Poullier, J. P. (1999). Health spending, access, and outcomes: Trends in industrialized countries. *Health Affairs, 18*(3), 178-192. doi:10.1377/hlthaff.18.3.178

Baily, M. N., Garber, A. M., Berndt, E. R., & Cutler, D. M. (1997). Health care productivity. *Brookings Papers on Economic Activity. Microeconomics, 1997*, 143-215. doi:10.2307/2534756

Beaglehole, R., & Bonita, R. (2008). Global public health: A scorecard. *The Lancet, 372*(9654), 1988-1996.

Bhutta, Z., Chopra, M., & Axelson, H. (2010). Countdown to 2015 decade report (2000-10): Taking stock of maternal, newborn, and child survival. *Lancet, 375*(9730), 2032-2044. doi:http://dx.doi.org/10.1016/S0140-6736(10)60678-2

Bhutta, Z. A., Gupta, I., de'Silva, H., Manandhar, D., Awasthi, S., Hossain, S. M. M., & Salam, M. A. (2004). Maternal and child health: Is south Asia ready for change? *BMJ: British Medical Journal, 328*(7443), 816-819. doi:10.1136/bmj.328.7443.816

Bigdeli, M., & Annear, P. L. (2009). Barriers to access and the purchasing function of health equity funds: Lessons from Cambodia. *Bulletin of the World Health Organization, 87*(7), 560-564.

Carrin, G., Mathauer, I., Xu, K., & Evans, D. (2008). Universal coverage of health services: Tailoring its implementation. *Bulletin of the World Health Organization, 86*(11), 857-863. doi:10.2471/BLT.07.049387

Chen, S., & Ravallion, M. (2001). How did the world's poorest fare in the 1990s? *Review of Income and Wealth, 47*(3), 283-300. doi:10.1111/1475-4991.00018

Chen, S., & Ravallion, M. (2007). Absolute poverty measures for the developing world, 1981-2004. *Proceedings of the National Academy of Sciences of the United States of America, 104*(43), 16757-16762. doi:0702930104 [pii]

Coulibaly, Y., Cavalli, A., Van Dormael, M., Polman, K., & Kegels, G. (2008). Programme activities: A major burden for district health systems? *Tropical Medicine & International Health, 13*(12), 1430-1432. doi:10.1111/j.1365-3156.2008.02174.x

Cunningham, R. (2013). Health workforce needs: Projections complicated by practice and technology changes. *Issue Brief (George Washington University. National Health Policy Forum), *(851), 1-13. Retrieved from http://europepmc.org/abstract/med/24312986

Dahlgren, G., & Whitehead, M. (2006). *Levelling up (part 2): A discussion paper on European strategies for tackling social inequities in health.* (Technical documents No. EUR/06/5062295).Copenhagen: WHO Regional Office for Europe. Retrieved from http://www.who.int/iris/handle/10665/107791

Deaton, A. (2002). Policy implications of the gradient of health and wealth. *Health Affairs (Project Hope), 21*(2), 13-30. doi:10.1377/hlthaff.21.2.13

Exworthy, M., Bindman, A., Davies, H., & Washington, A. E. (2006). Evidence into policy and practice? measuring the progress of U.S. and U.K. policies to tackle disparities and inequalities in U.S. and U.K. health and health care. *The Milbank Quarterly, 84*(1), 75-109. doi:10.1111/j.1468-0009.2006.00439.x

Falkingham, J., & Namazie, C. (2002). Measuring health and poverty: A review of approaches to identifying the poor. *London: DFID Health Systems Resource Centre*

Fetter, B. (2006). Origins and elaboration of the national health accounts, 1926-2006. *Health Care Financing Review, 28*(1), 53-67.

Fischer, F. (2003). *Reframing public policy: Discursive politics and deliberative practices*. GB: Oxford University Press. doi:10.1093/019924264X.001.0001

Glenngård, A. H., & Hjalte, F. (2005). *Findings from a study of regional NHA networks* Health Division, Department for Democracy and Social Development, Sida.

Graham, H. (2004). Social determinants and their unequal distribution: Clarifying policy understandings. *The Milbank Quarterly, 82*(1), 101-124. doi:10.1111/j.0887-378X.2004.00303.x

Grimes, D. A., & Schulz, K. F. (2002). Bias and causal associations in observational research. *The Lancet, 359*(9302), 248-252. doi:10.1016/S0140-6736(02)07451-2

Guyatt, G., & Oxman, A. (2002). When to believe a subgroup analysis. In G. Guyatt, & D. Rennie (Eds.), *Users' guides to the medical literature: A manual for evidence-based clinical practice* (pp. 553-565). Chicago, IL: AMA Press.

Gyapong, J., Gyapong, M., Yellu, N., Anakwah, K., Amofah, G., Bockarie, M., & Adjei, S. (2010). Neglected tropical diseases 2: Integration of control of neglected tropical diseases into health-care systems: Challenges and opportunities. *Lancet, 375*(9709), 160-165. Retrieved from http://search.proquest.com.ezproxy.aub.edu.lb/docview/199056353/fulltext?accountid=8555

Holland, J., Fisher, E., James, S., & Walford, V. (2000). *Becoming poverty-focused: Implications for health actors*. Department for International Development Health Systems Resource Centre. Retrieved from http://www.heart-resources.org/wp-content/uploads/2012/10/Becoming-poverty-focused.pdf

Hudson, J., & Lowe, S. (2009). *Understanding the policy process: Analysing welfare policy and practice* (2nd ed.). Bristol: Policy Press.

Hulme, D., Moore, K., & Shepherd, A. (2001). Chronic poverty: Meanings and analytical frameworks. *Chronic Poverty Research Centre Working Paper,* (2) Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1754546

Isaac, L. A. (2012). Defining health and health care disparities and examining disparities across the life span. *Race, Ethnicity, and Health: a Public Health Reader. San Francisco, CA: Jossey-Bass, Inc*, 11.

James, C. D., Hanson, K., McPake, B., Balabanova, D., Gwatkin, D., Hopwood, I., . . . Morris, S. S. (2006). To retain or remove user fees? *Applied Health Economics and Health Policy, 5*(3), 137-153. doi:10.2165/00148365-200605030-00001

Jamison, D. T. (2006). Investing in health. In D. T. Jamison, J. G. Breman, A. R. Measham, G. Alleyne, M. Claeson, D. B. Evans, . . . P. Musgrove (Eds.), *Disease control priorities in developing countries* (pp. 3-34). Washington, DC: World Bank Publications.

Jones, N., & Charlesworth, A. (2013). *The anatomy of health spending 2011/12*. London: Nuffield Trust. Retrieved from http://www.nuffieldtrust.org.uk/sites/files/nuffield/publication/130305_anatomy-health-spending.pdf

Lady Health Worker Programme. (2002). *External evaluation of the national programme for family planning and primary health care*. Oxford: Oxford Policy Management. Retrieved from http://www.opml.co.uk/sites/default/files/LHW%20Training%20%20Review_0.pdf

Lawrence, S. V. (2002). The sickness trap. *Far Eastern Economic Review, 165*(23), 30-33. Retrieved from http://search.proquest.com.ezproxy.aub.edu.lb/docview/208263438/fulltextPDF?accountid=8555

Levine, R., Blumer, K., & Gerritsen, J. (2007). *Following the money: Towards better tracking of global health resources.* (Global Health Resource Tracking Working Group). Washington, DC: Center for Global Development.

Marandi, A. (1996). Integrating medical education and health services: The Iranian experience. *Medical Education, 30*(1), 4-8. doi:10.1111/j.1365-2923.1996.tb00709.x

Maxwell, R. J. (1981). *Health and wealth: An international study of health-care spending*. United States: Lexington Books.

Medlin, C. A., Chowdhury, M., Jamison, D. T., & Measham, A. R. (2006). Improving the health of populations: Lessons of experience. In D. T. Jamison, J. G. Breman, A. R. Measham, G. Alleyne, M. Claeson, D. B. Evans, . . . P. Musgrove (Eds.), *Disease control priorities in developing countries* (pp. 165-180). Washington, DC: World Bank Publications.

Mills, A., Gilson, L., Hanson, K., Palmer, N., & Lagarde, M. (2008). What do we mean by rigorous health-systems research? *The Lancet, 372*(9649), 1527-1529. doi:10.1016/S0140-6736(08)61633-5

Narayan, D., Patel, R., Schafft, K., Rademacher, A., & Koch-Schulte, S. (2000). *Can anyone hear us? Voices of the poor*. Washington, DC: World Bank Group. doi:10.1596/0-1952-1601-6

NHA. (2010). Retrieved on 31-December-2012 from http://www.who.int/nha

OECD, Eurostat, & WHO. (2011). *A system of health accounts.* OECD Publishing. doi:10.1787/9789264116016-en

Orosz, E. (2005). The OECD system of health accounts and the US national health account: Improving connections through shared experiences. Paper presented at the *Draft Paper Prepared for the Conference on Adapting National Health Expenditure Accounting to a Changing Health Care Environment. Centers for Medicare & Medicaid Services,* 21-22. Retrieved from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/downloads/confpaperorosz.pdf

Poullier, J., Hernandez, P., Kawabata, K., & Savedoff, W. D. (2002). *Patterns of global health expenditures: Results for 191 countries. Discussion paper no. 51*. World Health Organization. Retrieved from http://www.who.int/healthinfo/paper51.pdf

Powell-Jackson, T., & Mills, A. (2007). A review of health resource tracking in developing countries. *Health Policy and Planning, 22*(6), 353-362. doi:czm024 [pii]

Ravallion, M., Datt, G., Van De Walle, D., & Chan, E. (1991). *Quantifying the magnitude and severity of absolute poverty in the developing world in the mid-1980s: Background paper for the 1990 world development report.* United States: Retrieved from http://213.154.74.164/invenio/record/16034/files/gaurav.pdf

Reidpath, D. D., & Allotey, P. (2003). Infant mortality rate as an indicator of population health. *Journal of Epidemiology and Community Health, 57*(5), 344-346. doi::10.1136/jech.57.5.344

Remme, J., Mbewu, A., Mbizvo, M., Mirza, Z., Pang, T., Ridley, R., . . . Kengeya, J. (2010). Defining research to improve health systems. *Plos Medicine, 7*(11), e1001000. doi:10.1371/journal.pmed.1001000

Sabri, B., Siddiqi, S., Ahmed, A., Kakar, F., & Perrot, J. (2007). Towards sustainable delivery of health services in Afghanistan: Options for the future. *Bulletin of the World Health Organization, 85*(9), 712-718. doi:10.2471/BLT.06.036939

Sachs, J. (2001). *Macroeconomics and health: Investing in health for economic development.* Geneva: World Health Organization. Retrieved from http://apps.who.int/iris/bitstream/10665/42435/1/924154550X.pdf

Saith, R., & House, Q. E. (2001). *Social exclusion: The concept and application to developing countries* Citeseer.

Sanders, D., & Haines, A. (2006). Implementation research is needed to achieve international health goals. *Plos Medicine, 3*(6), 719-722. doi:10.1371/journal.pmed.0030186

Savedoff, W. (2003). *How much should countries spend on health?* Geneva: World Health
    Organization. Retrieved from
    http://apps.who.int/iris/bitstream/10665/69025/1/EIP_FER_DP_03.2.pdf?ua=1

Schackman, B. R. (2010). Implementation science for the prevention and treatment of HIV/AIDS.
    *JAIDS Journal of Acquired Immune Deficiency Syndromes, 55 Suppl 1, Prevention and
    Treatment of HIV/AIDS Among Drug-Using Populations: A Global Perspective* (Suppl 1),
    S27-S31. doi:10.1097/QAI.0b013e3181f9c1da

Schieber, G. J., Poullier, J. P., & Greenwald, L. M. (1991). Health care systems in twenty-four
    countries. *Health Affairs (Project Hope), 10*(3), 22-38. doi:10.1377/hlthaff.10.3.22

Sen, A. (2000). Social exclusion: Concept, application, and scrutiny.

Sen, A. (2008). Why and how is health a human right? *The Lancet, 372*(9655), 2010-2010.
    doi:10.1016/S0140-6736(08)61784-5

Sen, K., & Bonita, R. (2000). Global health status: Two steps forward, one step back. *The Lancet,
    356*(9229), 577-582.

Smith, R. (1988). Oman: Leaping across the centuries. *BMJ: British Medical Journal, 297*(6647),
    540-544. doi:http://dx.doi.org/10.1136/bmj.297.6647.540

Stenberg, K., Elovainio, R., Chisholm, D., Fuhr, D., Perucic, A., Rekve, D., & Yurekli, A. (2010).
    Responding to the challenge of resource mobilization-mechanisms for raising additional
    domestic resources for health. *World Health Report*

Streiner, D. L., & Norman, G. R. (2003). *PDQ statistics (3rd edition)*. Canada: PMPH USA, Ltd.

Thacker, S. B., Stroup, D. F., Carande-Kulis, V., Marks, J. S., Roy, K., & Gerberding, J. L. (2006).
    Measuring the public's health. *Public Health Reports (1974-), 121*(1), 14-22. Retrieved from
    http://www.jstor.org/stable/20056910

United Nations. (2000). Millennium Development Goals. Retrieved from
http://www.un.org/millenniumgoals/

Van Mosseveld, V. (2003). *International comparison of health care expenditure: Existing frameworks, innovations and data use*. Netherland: Statistics Netherland.

Verschuuren, M., Achterberg, P. W., Kramers, P., & Van Oers, H. (2014). Monitoring the health of the population. In B. Rechel & M. Mckee (Eds.), *Facets of public health in Europe* (pp. 23-41). UK: McGraw-Hill Education.

Wagstaff, A., Claeson, M., Hecht, R. M., Gottret, P., & Fang, Q. (2006). Millennium development goals for health: What will it take to accelerate progress? In D. T. Jamison, J. G. Breman, A. R. Measham, G. Alleyne, M. Claeson, D. B. Evans, . . . P. Musgrove (Eds.), *Disease control priorities in developing countries* (2nd ed., pp. 181-194). Washington (DC): The International Bank for Reconstruction and Development/The World Bank Group. doi:NBK11716 [bookaccession]

Walt, G. (1994). *Health policy: An introduction to process and power*. Johannesburg: Witwatersrand University Press.

Whitworth, J., Sewankambo, N., & Snewin, V. (2010). Improving implementation: Building research capacity in maternal, neonatal, and child health in Africa. *Plos Medicine, 7*(7), e1000299. doi:10.1371/journal.pmed.1000299

WHO. (1978). *Declaration of Alma-Ata.* Retrieved from
http://www.who.int/publications/almaata_declaration_en.pdf

WHO. (2000). *The world health report 2000: Health systems: Improving performance*. Geneva: World Health Organization. Retrieved from
http://www.who.int/whr/2000/en/whr00_en.pdf?ua=1

WHO. (2003). *Guide to producing national health accounts: With special applications for low-income and middle-income countries.* (No. 9241546077).Geneva: World Health Organization. Retrieved from http://www.who.int/iris/handle/10665/42711

WHO. (2005). *WHA58.33. Sustainable health financing, universal coverage and social health insurance. WHA resolution; fifty-eighth world health assembly*. Retrieved from http://apps.who.int/medicinedocs/documents/s21475en/s21475en.pdf

WHO. (2008). *The world health report 2008: Primary health care (now more than ever)*. Geneva: World Health Organization.

WHO. (2010). *Health systems financing: The path to universal coverage. World health report*. Geneva: World Health Organization. Retrieved from http://www.who.int/whr/2010/en/index.html

WHO. (2013). *Research for universal health coverage: World health report 2013*. Geneva: World Health Organization. Retrieved from http://who.int/whr/2013/report/en/

Widdifield, J., Tomlinson, G., Bombardier, C., Paterson, J., Bernatsky, S., Tu, K., . . . Jaakkimainen, R. (2013). The rising burden of rheumatoid arthritis surpasses rheumatology supply in Ontario. *Canadian Journal of Public Health, 104*(7), E450-455. Retrieved from http://journal.cpha.ca/index.php/cjph/article/view/4115/2870

World Bank. (1990). *World development report 1990: Poverty*. New York: Oxford University Press. Retrieved from http://hdl.handle.net/10986/5973

World Bank. (2000). *World development report 1999/2000: Entering the 21st century*. New York: Oxford University Press. Retrieved from http://hdl.handle.net/10986/5982

World Health Statistics. (2010). Retrieved on 31-December-2012 from http://apps.who.int/ghodata

Xu, K., Evans, D. B., Carrin, G., Aguilar-Rivera, A. M., Musgrove, P., & Evans, T. (2007). Protecting households from catastrophic health spending. *Health Affairs, 26*(4), 972-983. doi:10.1377/hlthaff.26.4.972

Zachariah, R. (2009). Operational research in low-income countries: What, why, and how? *The Lancet Infectious Diseases, 9*(11), 711-717. doi:10.1016/S1473-3099(09)70229-4