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1. Preface

In the name of God the most Merciful, the most Gracious

It is my pleasure to present the national strategy of health sector for 2016- 2020 at a time when the Kingdom is facing significant challenges as a result of the unstable security conditions in neighboring countries resulting in consecutive influxes of refugees hosted by Jordan in addition to the steady population growth, typical transformation of the disease and the high proportion of elderly people and young people. All of that coincided with a quantum leap in all fields, especially in health, where Jordan has witnessed over the previous years, great achievements in the field of health, which contributed to the improvement of most health indicators and where Jordan assumed a prime position on the world health map. Maintain this position requires directing all programs and projects to address and overcome the challenges facing health sector in Jordan and pursue utilizing the demographic opportunity.

Since the HHC is the responsible entity for drawing up and setting strategy to implement the Jordanian health policy, in addition to other roles assigned to it, of which the most important is to regulate the health sector and thoughtfully plan for health services to ensure equal access and premium service for all citizens; and in order to encounter the challenges in health sector, the Council has been assigned to develop the general framework of the National Strategy for health sector with holistic direction, taking into account all the dimensions required to achieve, monitor and evaluation it.

One of the main strengths of this strategy is that it is based on the directives of Hashemite leadership to upgrade the health sector in a holistic manner and its adoption of the national goals of the 'national agenda', 'the document of all Jordan' and 'integrated framework for economic and social policies in Jordan 2025' as basic references. The active participation of all concerned sectors has a significant impact on the completion of this document through the various committees that have been formed for the preparation and review of this document as well as the use of local expertise of those who have extensive experience in the health field. All this created a common perception for the advancement of the health sector in a positive way starting from the identification of the vision, mission and ending with this strategy in its final form.

In the end, it must be noted that our ambition in the coming years is that this strategy would contribute to strengthening the partnership between the health sectors, and would lead to the adoption of decentralization in decision-making because we believe that planning is a dynamic and constant process without any stops at any time. This requires us to make continuous revision and updating the strategy to be in line with the latest developments and to face the challenges of change through the application of interventions included in the strategy to achieve the Royal vision for the health sector.

God bless

Minister of Health / Chairman of the HHC

Dr. Ali Hiyasat

In the Name of God the most Merciful, the most Gracious

I am pleased and honored to present the national strategy of health sector at a time when the Kingdom is in need for reconsidering its strategic plans due to the consequences facing the region including the increasing influx of refugees; the latest of which was the Syrian refugees to Jordan. It comes to regulate the health sector in all its components, and mitigate the negative implications of the crisis on the various aspects of the life of the Jordanian citizens.

The health sector is one of the most important sectors affected by the influx of refugees. It witnessed a high demand on various health services, an increased pressure on health limited resources, a reemergence of diseases that have disappeared from Jordan in previous years, a negative effect on the quality of the delivered health services and increase in service cost. All of this requires concerted efforts of all parties and institutions in the public and private sectors to achieve the directives of the Hashemite wise leadership to ensure adequate health care for Jordanians and non-Jordanians alike, and ensure financial protection, promotion of good governance and increase the productivity of the Jordanian citizen to encounter these challenges.

The national strategy of health sector is a real example for the commitment of health sector in all its components to cooperate and coordinate to give a bright and distinctive image of Jordan. The strategy in its interventions focused on ensuring the provision of safe, effective and efficient, equitable and affordable health services, and on the future needs of citizens of all age groups.

This strategy represents the general framework for developing and strengthening the capacity of the health system to face the challenges and raise Jordan's leading position in the provision of health care. We are confident of the unique capabilities of the health sector in all its components to implement all interventions contained in this strategy, and we are keen to provide all forms of support and encouragement to all partners to ensure the success and excellence in achieving the vision of the health system in Jordan.

The strategy dealt in an in-depth analysis with the current health situation based on the core structure adopted by WHO for the health system. This analysis came out with priority issues that require intervention to improve the quality and facilitate access to health care services by all segments of society based on the logical model in the strategic planning in order to respond to the opportunities and face specific challenges.

I would like to seize this opportunity to express my sincere thanks to all members of the steering committee, the technical, follow-up and evaluation committees, as well as the participants in the completion of this strategy from the public, private and international institutions particularly WHO for their technical and financial support.

Hoping to work together as one team through our health institutions and with the participation of Jordanian society to overcome all challenges and achieve our goals, while remaining committed to the policy and the course of this strategy to ensure the achievement of its vision.

May God grants you success,

Secretary General of the High Health Council

Dr. Hani Ameen Brosk Kurdi

1. Vision, Mission and Values

Vision:

Effective health system with humanitarian economic dimension that ensures accessibility to quality lifelong health care to the entire population and puts the Kingdom at a cutting edge position.

Mission:

Developing health integrated policies with the participation of all health sectors operating in the Kingdom to ensure the provision of comprehensive and sustainable high quality health services for the entire population according to health economic standards that enhances the Jordan's leading position in the field of health care.

Values:

Partnership and integration: strengthen partnership based on the principles of coordination, cooperation and integration between all health sectors operating in Jordan.

Equity : Access of the entire population to quality healthcare services without financial, geographic, or social barriers.

Quality and excellence: high quality safe health institutions that maintain the leading position of Jordan.

Efficiency: deliberate planning to determine the needs and optimal utilization of resources and directing all programs to work within a common mechanism that reduces duplication and enhances the system's capacity and sustainability.

Professionalism: health staff trained on the latest scientific and technical developments and responsive to the needs of patients.

Financial protection: social health insurance / universal health coverage.

2. Strategy Development Methodology

First: Setting the Stage

1. A plan was developed to prepare the strategy including the required budget and time schedule for its implementation. It was submitted to WHO office in Jordan to get their approval for providing technical and financial support.
2. Official letters were sent to His Excellency the Prime Minister for approval
3. A local expert was contracted to review the strategy document by working closely with the Directorate of Technical Affairs at the General Secretariat of the HHC.
4. Steering, Technical, and the Monitoring and Evaluation Committees were formed by the Minister of Health / Chairman of the HHC for the preparation of the strategy and were composed of representatives of all health sectors. They were chaired by His Excellency the Secretary General of the HHC.
5. The Steering Committee took over the supervision and approval of the work of the Technical Committee and the monitoring and evaluation committee within specified (TOR).
6. The Technical Committee has prepared perspective about the current situation and analyzed the internal and external environment. It has also prepared a general framework for the strategy using logic model according to specified (TOR).
7. Meetings were held for three focus groups to discuss priority issues such as health insurance, reproductive health and various types of injuries as these issues need extensive discussion and consensus by all concerned parties.
8. The Monitoring and Evaluation Committee has prepared a follow-up and evaluation plan of the strategy based on a system and tools for monitoring and evaluating the outcomes indicators that were adopted in accordance with specified (TOR).

Second: Situation Analysis

This phase included collecting and analyzing data, information as well as reviewing relevant studies and documents including all health strategies and plans. Committee meetings with stakeholders were held, to carry on comprehensive description of the current situation of the health system, using the WHO approved model/ the Six Building Blocks of the Health System.

Third: Strategic Analysis

This includes internal and external environment of the health system to identify the strengths and weaknesses as well as the opportunities and challenges (SWOT Analysis) to extract, identify and address the key issues within the strategy.

Fourth: Vision and Mission Development

The vision, mission and values of the national strategy of health sector were based on the vision, mission and values of the HHC as it is the authorized entity to draw health policies and prepare national strategies of the health system.

Fifth: Strategy Conceptual Framework

The Logic Model for Planning was adopted in the preparation of the general framework of the strategy for a number of reasons, including:

1. This model enables monitoring the health system performance
2. This model allows evaluating the long-term results and expected impact.
3. Using the model will facilitate getting support of health sector stakeholders as it has a logical structure that can be easily followed.
4. This model relies on the participatory approach
5. It facilitates negotiation process with partners and donors to get their buy-in.

In this context, it was agreed on the national priorities for this period where various results, outcomes and interventions were identified through holding several meetings for the steering and technical committees, as well as holding several meetings with the expert.

Sixth: Strategy Monitoring and Evaluation Plan

Monitoring and evaluation process should be part of a comprehensive and integrated framework, to ensure the achievement of results and projected impact. The process includes a scientific methodology to collect information through feedback with the aim to correct the progress of the plan ;allow accountability and identify lessons learned. A descriptive matrix that includes outcome indicators , bench mark values timing and responsible party for measurement indicators was adopted.

Seventh: Consensus and Participation of Stakeholders

- Consultation meetings for all stakeholders in the health sector were held by the HHC in cooperation with the WHO where the general framework and the draft strategy were presented and stakeholders' feedback was obtained and included in the document.
- The strategy framework was presented and discussed by the members of the HHC
- The HHC in cooperation with WHO held a national workshop for all stakeholders in which the strategy was adopted as framework for reforming the health sector through a participatory approach and national dialogue pursuant to the guidance of His Majesty the King in his Speech from the Throne at the opening of the Second Ordinary Session of the 17th Parliament. The action plans for all participating sectors were presented and discussed.
- The draft strategy document was presented and discussed with the WHO experts from Jordan and the regional office in Cairo. (HQ-EMRO).

Eighth: Production of the Final Document

- At this stage the document has been reviewed and approved in its final form. It was then printed and distributed to all partners and uploaded on the HHC website.
- There was a consensus on the issuance of a second document emanating from this strategy as "The General Framework of the National Strategy of Health Sector 2016-2020" and Health Policy Directions in Jordan". This document is aimed to inform and brief decision makers and health policy makers in the kingdom.

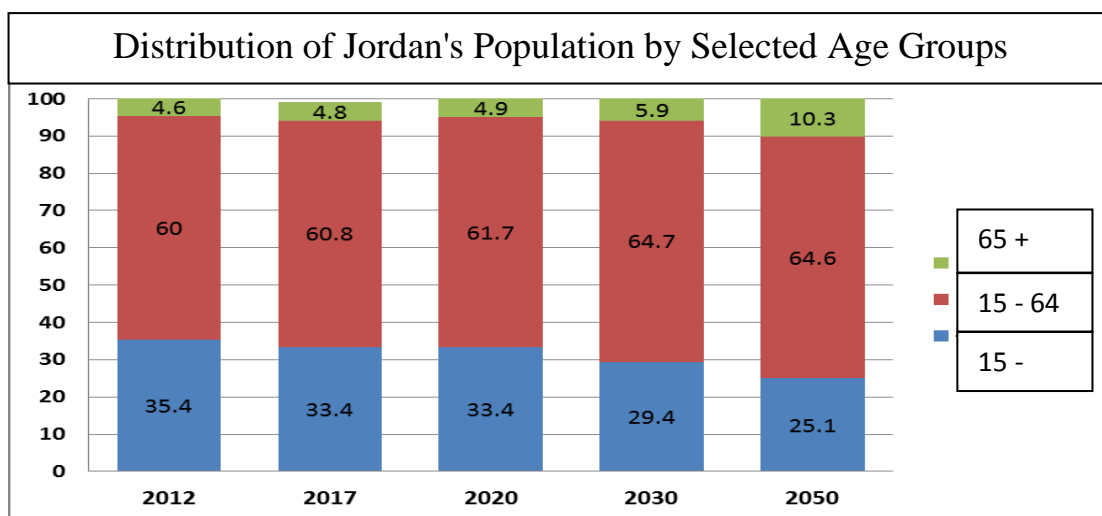
3. Demographic Situation

Jordan is a middle income country that has limited natural resources, and high population growth rate. Department of Statistics has indicated that the population of the kingdom has increased from 586 thousand people in 1952 to about 2.1 million in 1979 to about 4.2 million in 1994 and to almost 6.5 million people in 2013. Despite the decline in the crude birth rate of about 50 births per thousand of population in 1952 to 27.6 births per thousand of population in 2013, the total fertility in Jordan is still among the highest compared with the more developed countries

The lower crude mortality rate and high total fertility rate (3.5 children per woman of childbearing age in 2012) have contributed to the growing number of the population in Jordan. If the annual population growth rate continues as it is in 2014 of 2.2%, the number of Jordan's population will double after approximately 31.5 years.

Total fertility and mortality rates beside the immigration factors have affected the age structure of the population. It is expected that the increase in population will lead to increase the number of the elderly people in Jordan. This in turn will increase pressure on the government budget in the next decade and inflate the amount of health spending. The proportion of those in the age group of 65 and above will rise from 3.3 in 2012 to 4.9 in 2020 (Figure 1). The proportion of those in the age group of 15 years and below will drop down from 37.3% in 2012 to 33.4% in 2020. Therefore it is necessary to take this demographic shift into account when planning for health services especially those related to non-communicable diseases, health insurance and the provision of therapeutic, preventive and rehabilitative services particularly for the elderly people.

Figure (1)



Source: Higher Population Council and Department of Statistics / projections of the Kingdom's Population (2012- 2050) (medium scenario)

The increasing rise in the number of females in the reproductive age (15- 49 years) in the coming years will be a major national challenge. The number of childbearing women will jump from about 1.7 million in 2012 to around 2.1 million by 2022. If total fertility rates drops according the objectives of the National Population Strategy and the Document of Population Opportunity Policies, a gradual decline in total fertility will occur and present dependency ratio of 67 individuals per 100 people will be dropped to 54 persons in 2030. As a result of this demographic shift in the age structure, the Kingdom will enter into the

population opportunity where the proportion of people at the working age is expected to rise to 65% by 2030. Thus the Jordanian economy will flourish if the necessary planning and preparedness is provided for this phase.

On the other side, Jordan's distinguished geographic location makes it exposed to the consequences of numerous conflicts in the region. Almost all surrounding countries have suffered from internal and external crises. Jordan due to its political stability and security has hosted hundreds of thousands of refugees from neighboring countries such as Iraq, Syria, and refugee influxes are still in a row causing a rise in the population growth rate and generating considerable pressure on the health services and infrastructure in the face of limited natural resources. This negatively affected the social, economic and health development.

The aforementioned shows that the major demographic challenges that should be addresses by the strategic plan are:

1. The rise in natural population number resulting from the high growth rates and the slowdown in the decline of the total fertility rate during the period 2002-2012
2. The high rates of forced migrations, especially the migration of our Syrian brothers
3. High proportion of young people
4. The changing age structure of the population and the rise in the proportion of elderly people.
5. The large and unplanned population growth in the urban areas especially in Amman governorate and major cities.
6. The imbalance in population distribution between the governorates of the Kingdom
7. The population challenges that may result if Jordan does not take advantage of the demographic opportunity.

4. Social and Economic Situation

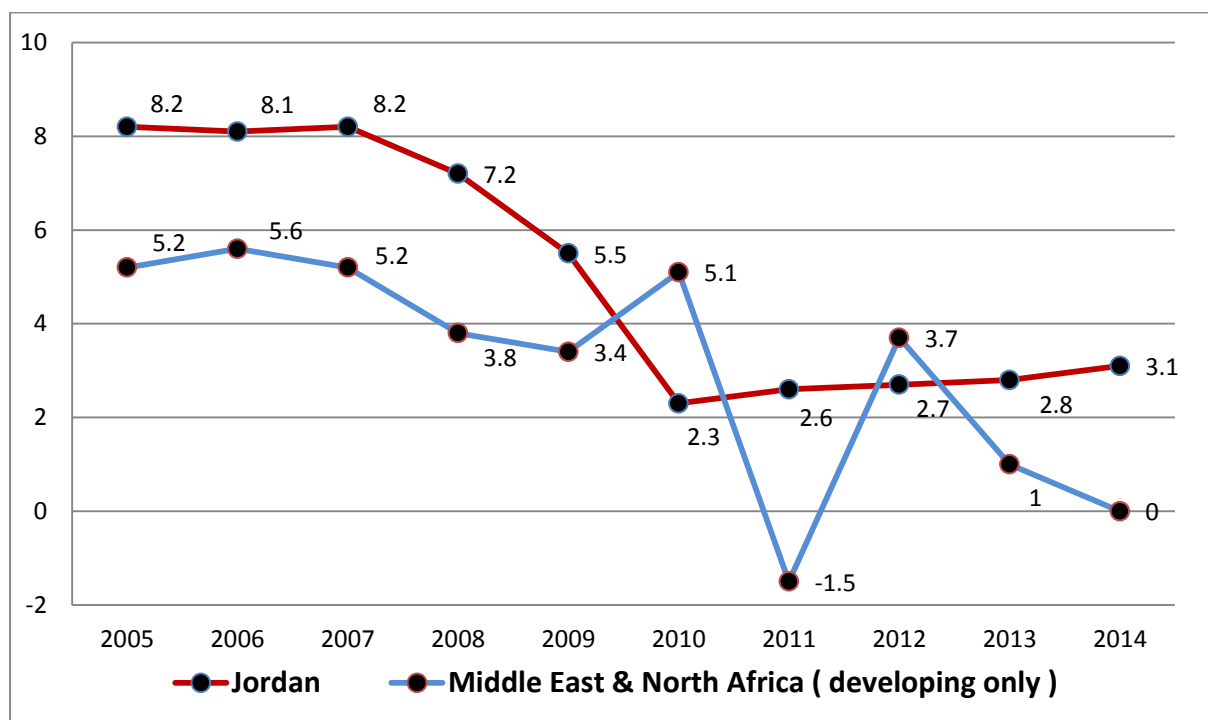
The national health strategies and policies result from political, social and economic conditions in the country. Jordan has gone great strides towards achieving the Millennium Development Goals over the past three decades. This enables it to assume a leading position among countries in the region as it looked at the development through a holistic perspective recognizing that poverty, illiteracy and health make up the triangle that must be tackled together. So it combines the progress in the fight against poverty and illiteracy on the one hand, and stretching health facilities, adequate housing, clean water, and nutrition on the other hand. Although Jordan is among the four poorest countries in the world in terms of water availability, the proportion of people who use improved sources of drinking water reached 97% in 2010 which is much higher than the global rate of 76%.

Illiteracy elimination is a core issue in education, thus the elimination of poverty and disease. In this context Jordan has made great strides towards eradicating illiteracy as the rate of people who can read and write among those aged 15 years and above reached 93% in 2012. Jordan also has made great achievements in all indicators of education in both provision of educational institutions and their quality, and in the aspects of justice, equality and alignment of education with the development needs. Jordan 's economy relies on human resources, in addition to its dependence on its geographical location which links the Arab Gulf States with the Levant and Turkey. Jordan is a small-sized country compared with most of the

surrounding countries. Its area is about 89 thousand square km. In addition, most of the area is arid where water is very scarce. The arable land forms only about 6.2% of the total area of the Kingdom. Jordan also lacks the natural resources such as oil and gas.

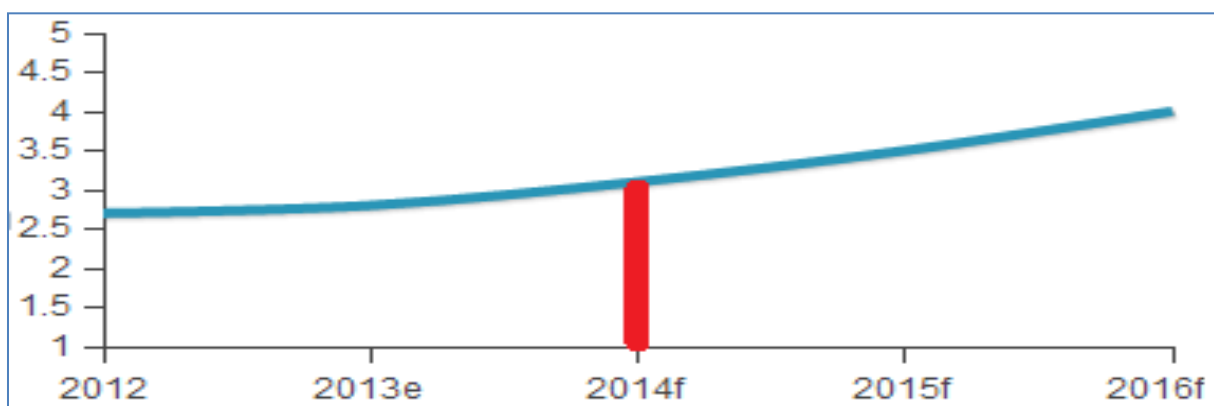
The growth rate of GDP has dropped from 8.2% in 2007 to 2.7% in 2012, and slightly rose in 2013 to 2.8%. It is expected that this growth will rise to 4% in 2016 (Figure 2 and Figure 3). GDP at current prices in 2013 reached about 23.8 billion dinars (33.7 billion US dollars). The increase in average consumer prices (inflation) in 2013 was 5.6% compared with 4.1% in 2012 (Figure 4). The total public domestic and external debt reached (19096.5) million JDs in 2013, or 80.1% of GDP.

Figure 2: The Real GDP Growth Rate in Jordan and Developing Countries in the Middle East and North Africa in 2005-2014



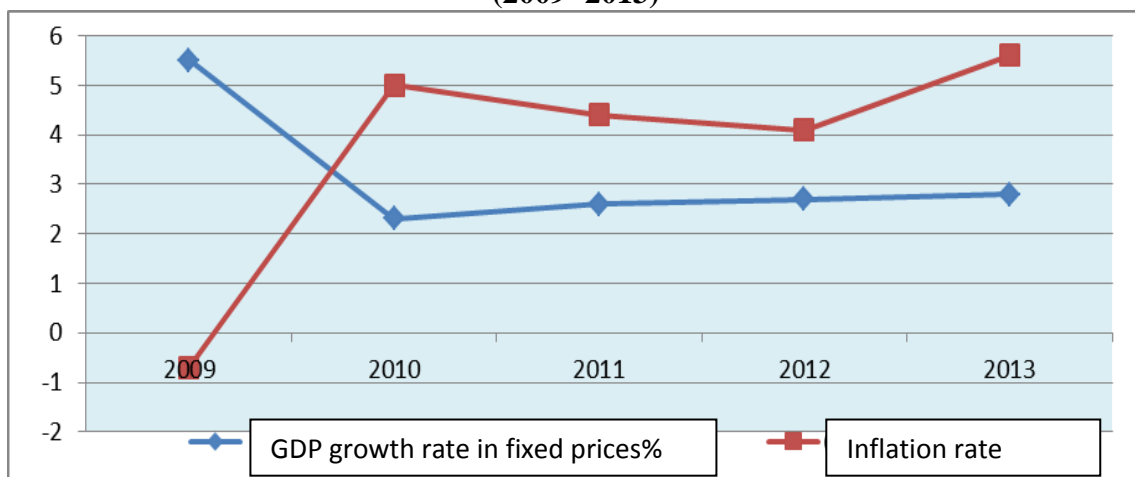
Source: World Bank <http://www.worldbank.org/en/country/jordan>

Figure 3: The Projected GDP Growth Rate in Jordan in 2012-2016



Source: World Bank <http://www.worldbank.org/en/country/jordan>

Figure (4): The Rate of Inflation and Growth in Gross Domestic Product at Fixed Prices (2009- 2013)



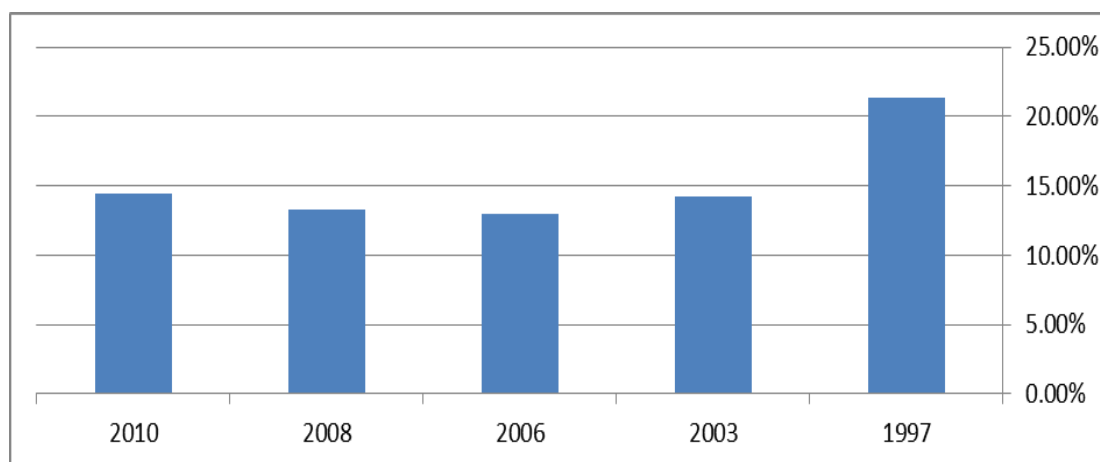
Source: - Jordan Chamber of Industry. Bulletin of economic indicators for the Jordanian industrial sector, third edition – February, 2013

The unnatural increase in the population and forced migration from neighboring countries has led to crises in the Jordanian economy and put pressure on the management of its resources, infrastructure and basic services of education, health, transportation and roads. The same challenges and situation were faced in the labor market in terms of providing job opportunities for tens of thousands of new comers. On the sideline of these transformations the problem of poverty emerged in the Jordanian society over the past six decades as one of the major problems and challenges facing the economic and social decision makers in Jordan.

The general poverty rate in Jordan was 14.4% in 2010. The rural areas experienced higher rates than urban areas. However it should be noted that urban areas in Jordan constitute about 83% and most populous cities are Amman, Irbid and Zerka.

Figure 5 shows a rise in poverty rates during 1997- 2010.

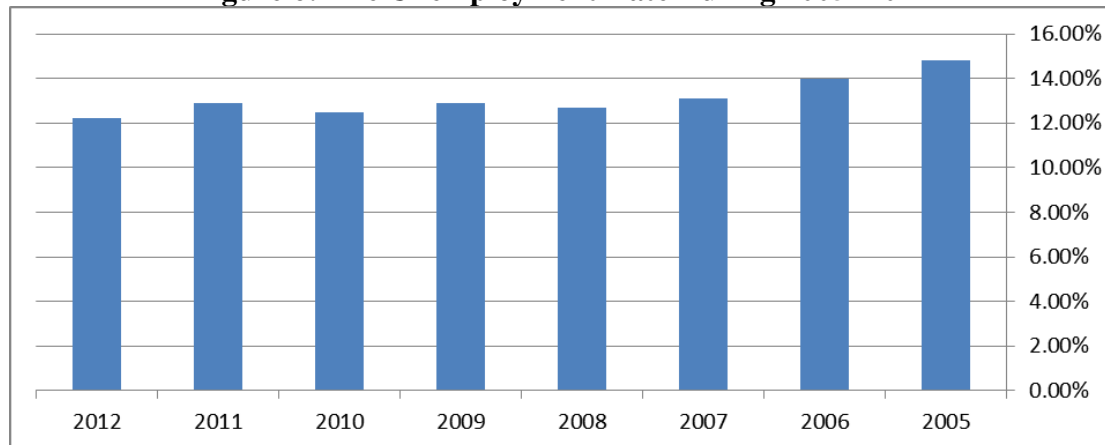
Figure 5: Poverty Rates in 1997-2010



Source: Department of Statistics

The unemployment rate was at 12.2 in 2012 (19.9%) for females compared to (10.8%) for males with a rise in unemployment rate for young people aged 20- 24 years to 28.8%. Meanwhile, the total dependency ratio was 68.2% in 2012. Below is a chart showing the evolution of the unemployment rates during 2005- 2012.

Figure 6: The Unemployment Rate During 2005- 2012



Source: Department of Statistics

Ability of the national economy to grow remains vulnerable to external shocks, particularly the forced migrations from neighboring countries. The growth rate is insufficient to solve the long-term economic, social and health development challenges. Therefore, the decisions of the government to invest in health and other areas will remain constrained to a certain extent, especially in the next few years.

5. Current Health Situation Analysis

The health situation in Jordan is one of the best in the Middle East due to the security and stability conditions in the Kingdom, and due to a set of effective development plans and projects which included health as an important element and essential part of sustainable development. The health sector in Jordan as such has witnessed remarkable development and reflected positively on the health status of citizens. The general health indicators have reflected the quality and efficiency of the delivered health services, putting Jordan in an advanced rank among the world nations. The overall average life expectancy at birth was stable at 74.4 years during 2007 - 2013 (increased for males from 70.6 years in 2006 to 72.4 in 2013 and 72.4 for females in 2006 to 76.7 in 2013). The maternal mortality rate has fallen to 41 per hundred thousand births in 1996 to 19.1 per hundred thousand live births in 2008. The population growth rate has declined from 2.3% in 2006 to 2.2 % in 2013. In addition to the expansion of civil health insurance and providing optional insurance subscription for all citizens including pregnant women, children under six years of age, the elderly, residents of remote areas, the less advantaged, and the beneficiaries of the social safety net, the proportion of health insured population according to official source has reached 55%.

Some of the factors pose a major challenge for the health system to meet the growing expectations of the population, including the increased demand for health services due to population growth and epidemiological transition of the diseases in Jordan (which means a lower prevalence of communicable disease, and a high prevalence of non-communicable diseases); and the presence of refugees in addition to the expected rise in the proportion of

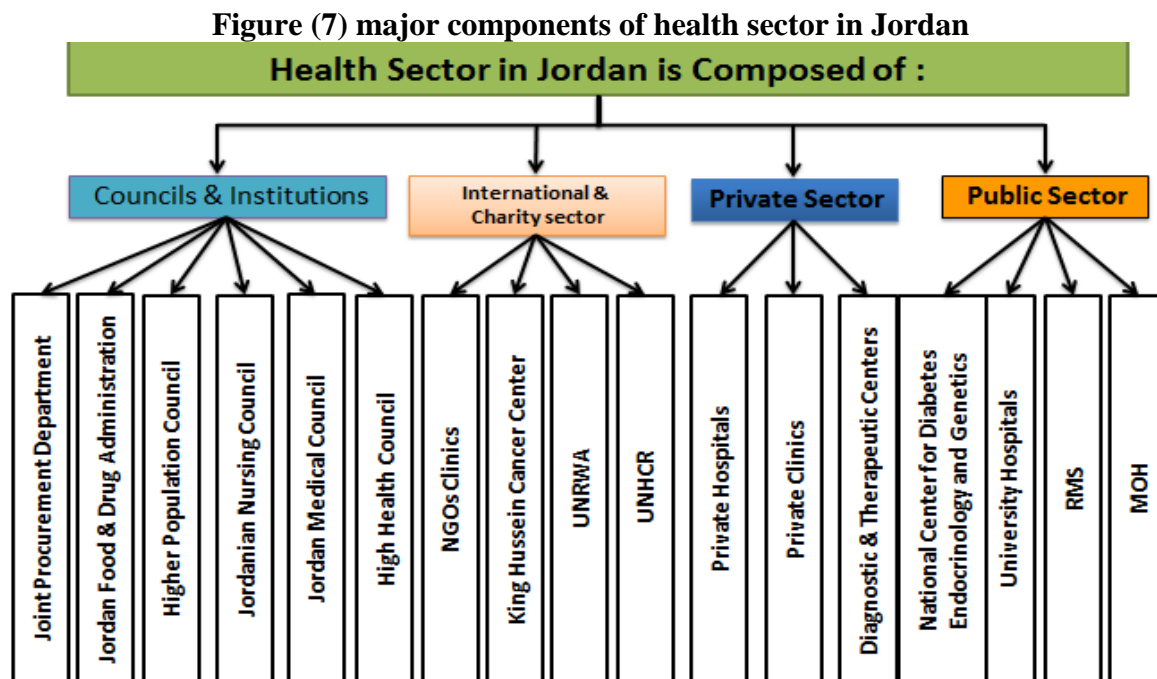
young people and the elderly; and rising health care costs in light of the already constrained economic situation .

5.1 Health system governance in Jordan

Since the inception of the emirate in 1921, governance in Jordan has been characterized by a stable political system which seeks to identify and allocate responsibilities for both the public and private sectors. The government is responsible for supervising, monitoring and enacting laws for the protection of public rights and justice between the citizens.

The best proof for the adoption of the principle of partnership in health decision making is the existence of a health committee in the parliament to provide consultation on the revision of important laws and health issues in the best interest of the nation and citizens as well as ensure the validation of government decisions and to reactivate the HHC, as a governing body for all health sectors.

The health sector in Jordan consists of service providers (public, private, international and charity sectors) as well as councils and institutions working on the development of health policy. The public sector includes the Ministry of Health, the Royal Medical Services and university hospitals (University of Jordan Hospital, King Abdullah University hospital) and the Centre for Diabetes, Endocrinology and Genetics as well as The National Center For Woman’s Health.. The private sector includes private hospitals and diagnostic and therapeutic centers in addition to hundreds of private clinics. The international sector and charitable sectors provide services through UNRWA clinics for Palestinian refugees and the UNHCR and King Hussein Cancer Center and charity association clinics. Drawing the general policy for health sector in Jordan is done mainly through the HHC pursuant to law No. 9 of 1999. It is noted that there are other institutions in the health sector involved in health policy, such as the Jordanian Medical Council, the Higher Population Council, the Jordanian Nursing Council, the National Council for Family Affairs, Jordan Food and Drug Administration and the Joint procurement Department, figure number (7).



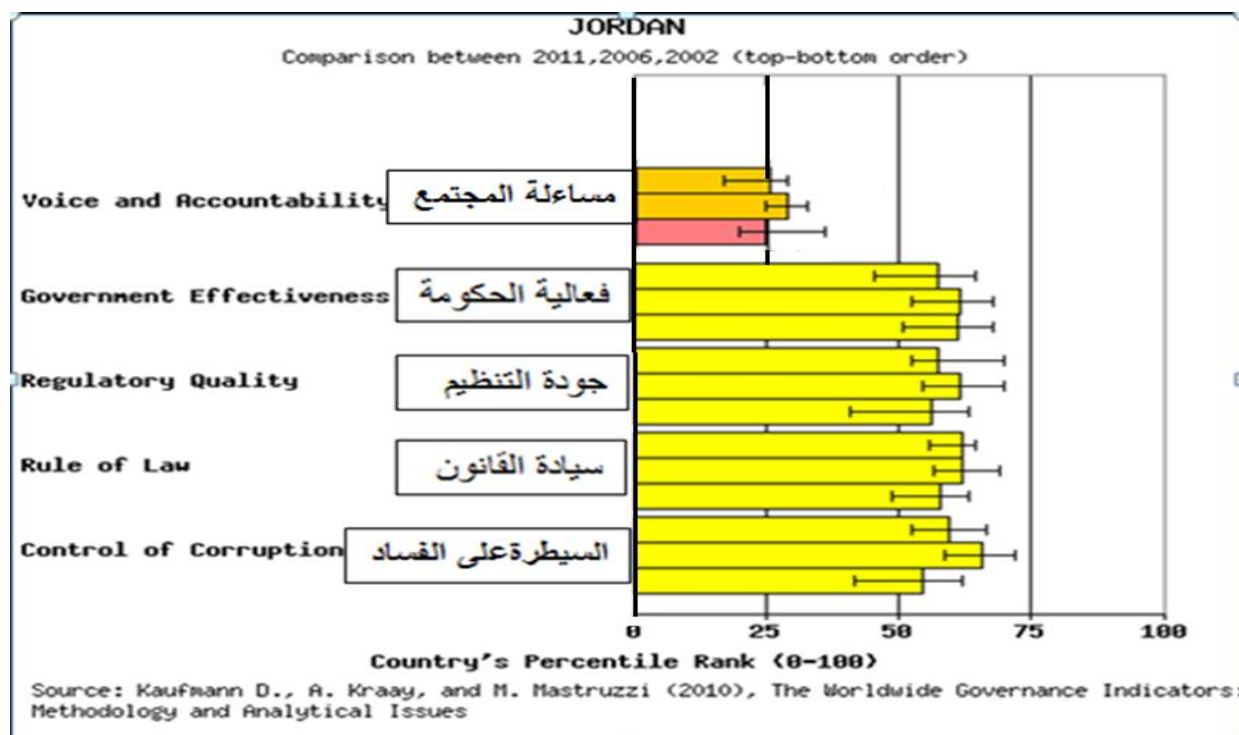
The HHC aims to draw public policy for health sector in the Kingdom, develop the strategy to achieve it, organize and develop all health sectors to ensure that all citizens can access the needed health services according to the latest scientific techniques and technologies. The Council membership includes representatives of all concerned public and private health sectors to implement the objectives and responsibilities of the council, the General Secretariat which is the executive arm of the Council has prepared the National Health Strategy for the years 2008 - 2012 and the National Strategy to Rationalize Spending on Medicine 2012- 2016. It also contributes with stakeholders in the development of important national strategies such as the Health Communication Strategy 2011- 2013, the Jordanian National Strategy for the Elderly 2008- 2013 and the National Strategy for Reproductive Health / Family Planning 2013 - 2017.

The Ministry of Health through the Public Health law No. 47 of 2008 and other legislation, serves to license, control, and regulate professions and health institutions in Jordan with the cooperation of other health related bodies in Jordan.

Principles and Standards in practicing Good Governance in Health Sector

Based on the international governance indicators of the World Bank in 2011, the societal accountability and government effectiveness indicators, regulatory quality, the rule of law and control of corruption in Jordan ranged from 25% to 65% as shown in Figure (8) below.

Figure (8)
Governance Indicators in Jordan for 2011, 2006 and 2002
 (arranged in top- down order)



As for integrity indicator, Jordan has ranked 58 among 176 countries in 2012 at a grade of 48 out of 100 on the International Transparency Organization. It came fourth among the Arab states after Qatar, UAE and Bahrain. The parliament members and CSOs are monitoring transparency in major administrative decision making in the health sector. The process of monitoring and evaluating the performance is carried out by delegates from the Audit Bureau and the departments of internal audit. Feedback reports are submitted to the higher authorities, but it is necessary to empower citizens to advocate for their interests and promote accountability through the enforcement of various accountability laws. It should be noted here that the results of the first phase of promoting the social accountability initiative have recently been launched to improve health services. It has been implemented in a joint collaboration between the HHC and the Anti-Corruption Commission with support of UNDP. The website "Sharik" (participate) was also launched and hosted by the Ministry of Health to enable citizens to express their views on the delivery of health services.

There are a lot of challenges associated with governance that lead to ineffectiveness and inefficiency of the health system, such as the centralized system, increased running costs, lack of effective referral system, weak sense of ownership by the service providers and patients regarding the use of health services, poor coordination between the public and private sectors, migration of competent human resources, weak use of primary health care services, prescribing drugs in brand names, lack of treatment protocols, establishment of new hospitals and buying high costly technology with no reference to the actual market needs.

Studies and experiments have shown that decentralization (which means the transfer of power from the upper levels of government to the lower levels; from the center to the governorates) helps to solve a lot of financial, technical, social and administrative problems facing health institutions. Therefore, the role of the peripheral departments in the governorates of Jordan should be activated and delegation of powers to local levels (decentralized decisions) should be expanded. The decentralization project was partially implemented in 2000 in MoH hospitals. However, the current government has proposed a comprehensive law on decentralization and submitted it to the House of Representatives for consideration and approval.

Perhaps the most important factors that impose a priority to the expansion of the current decentralized management of health services are; limited resources, high running costs of health services, the need to improve the efficiency of curative health services, especially in hospitals while taking care to improve the quality across all health care components.

There is a need to establish the principle of medical ethics and to apply performance linked incentive system to service providers especially physicians so that they can provide high quality and low cost health services.

As for the rule of law, the situational analysis of the health system governance in Jordan shows that there is an overlap and duplication in some of the health laws. There is a slow process in releasing the legislation, as well as weakness in the administrative skills of the cadres of the health sector in the management and monitoring of compliance with the

application of health related laws. Therefore, a need for developing new laws or update and modify some existing laws to suit the situation and emerging requirements is considered to be a priority. There is weakness also in the organization, cooperation and coordination between the various sectors. This creates a kind of roles duplication and overlapping. Perhaps the most important factor of this weakness lies in the weakness of the control, monitoring and regulation of the private sector, particularly in light of the great growth in this sector during the past two decades. Adding to this, the rapid uncontrolled flow of the advanced technology, which is directly reflected on the therapeutic bill. This overwhelms citizen, increases the out of pocket spending and leads to a continuation of the economic depletion and wastes of the limited health resources.

Although there is a clear strategic vision for health sector embodied in the national agenda, document of 'We are all Jordan', the action plan of the government 2013- 2016, and the national health strategy; there is weak synergy between objectives and plans set by the strategic level and those set by the executive level. This may be due to failure to involve the peripheral level in the preparation of strategies and work plans. There is also a weakness in the process of developing protocols and procedures and in the implementation of policies at the national level in addition to lack in the training on management and strategic planning among managers and decision makers.

The above shows the following most important challenges facing the health system governance function in Jordan: -

1. Poor cooperation and coordination between the various components of the health sector
2. A highly centralized system
3. Shortage of training on management and strategic planning
4. Overlapping and duplication in some health laws
5. Poor application of cost containment strategies
6. Weak assessment of the institutional performance in the public sector
7. Inadequate control on the private sector
8. Weak empowerment of citizens to advocate for their own interests and hold local governments accountable
9. Weak commitment to implement national strategies and plans and weak monitoring and evaluation systems.

5.2 Health Services Delivery

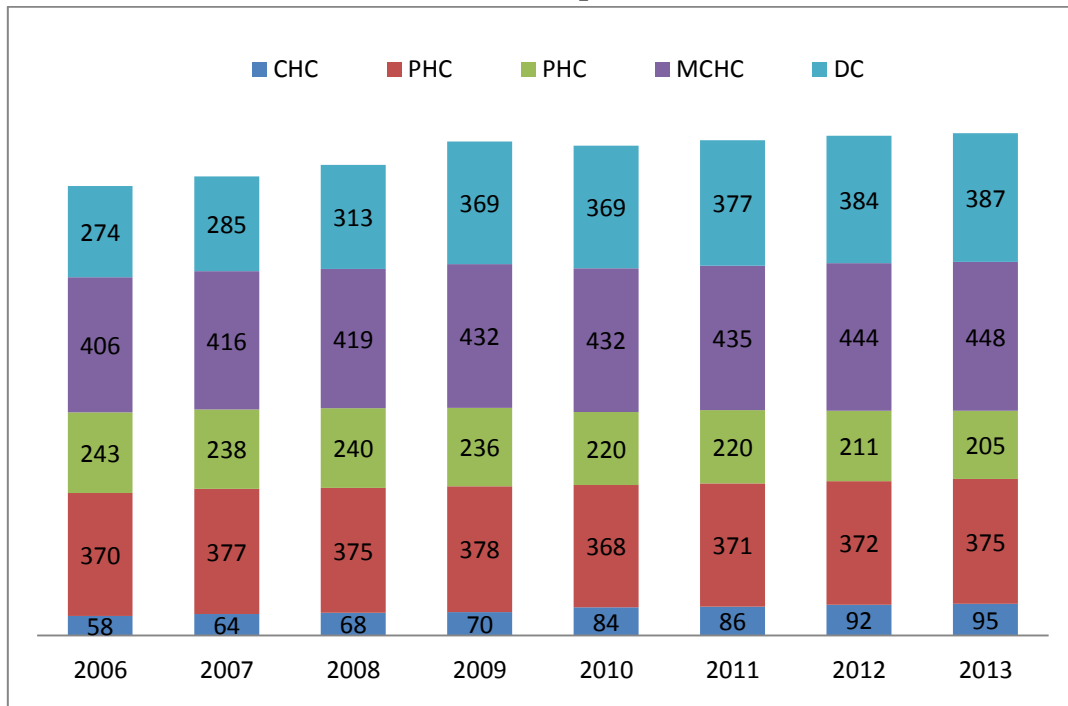
5.2.1 Primary Health Care

Primary health care services are managed through a wide network of MoH primary health care centers (95 comprehensive health center, 375 primary health care centers and 205 village centers for the year 2013), in addition to providing maternal, childhood and dental health services (448 Motherhood and Childhood Center and 387 dental clinics). The Royal Medical Services is involved in providing primary health care services through field clinics and eight comprehensive medical centers. UNRWA also provides primary health care services through 24 medical clinics. The Jordanian Association for Family Planning and Protection provides

services through 19 clinics. This is in addition to the contribution of the private sector in these services through hundreds of general practitioners' clinics.

The number of various types of health centers in the Kingdom has increased gradually, as well as the dental clinics and mother and child health centers during the period 2006 - 2013 (Figure 9) with the exception of village health centers, that in some cases have been merged together or upgraded to be primary health centers. These centers also improved the quality of services delivered to clients.

Figure (9)
Pattern of Health Centers Development in Jordan 2006-2013



Source: Annual Statistical Report, Ministry of Health, 2013

Primary health care services relies on the concept of comprehensive health care where basic preventive and curative services are provided such as health education, reproductive health, water and food safety, environmental health, early detection of chronic, genetic and congenital diseases, mental health and disability. In addition they include school health, occupational health, control of communicable disease, dental health as well as healthcare services to the people with special needs. They also include preventive services for addiction and smoking as well as accidents. Moreover, it includes promoting patterns of healthy lifestyles.

Health services in the Kingdom are characterized by easy access and equitable distribution of essential health centers based on the geographical distance and the actual needs of the population including those in remote areas.

- **Communicable Disease:**

Jordan has made remarkable progress in the field of combating communicable diseases as a result of following a number of important policies and strategies such as the institutionalization of the national vaccination program. For example Measles' coverage rate of 100% contributed to the control of measles in Jordan. Polio was eradicated since 1992. Diphtheria as well as neonatal tetanus cases were controlled and Jordan becomes free of diseases that have no vaccines as cholera, malaria and schistosomiasis. Jordan also has set an initiative to get rid of tuberculosis by the year 2025, but as a result of hosting more than one and half million of Syrian refugees who pose a burden on all health services, the implementation of this initiative has been postponed. During the years 2013-2014, about 34314 cases of communicable diseases have been reported among Syrian refugees; 95% of these cases were watery and bloody diarrhea cases. On the other hand the number of detected TB cases among Syrian refugees have reached 138 during the past two years costed of more than two million Jordanian dinars.

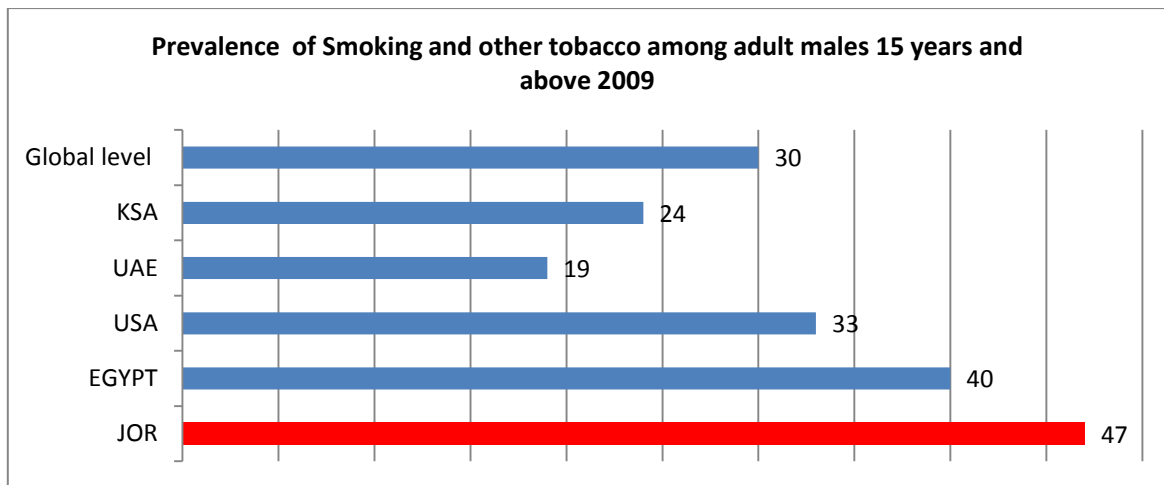
Combating new and re-emerging diseases and epidemics are addressed through the introduction of new vaccines into the national immunization program, as well as through the development of an electronic surveillance system and the application of an accurate and sensitive system for monitoring and controlling infectious diseases and activating some of the programs that are directed to a number of priority diseases such as AIDS, tuberculosis, diarrheal diseases and acute respiratory tract infections in children. The 2012- 2016 national strategy for AIDs has been developed and updated in collaboration with the United Nations Program of AIDS in order to maintain a low prevalence rate of AIDs, especially among high-risk groups. The spread rate of communicable diseases has dropped from 3.5 per one thousand population in 1998 to only 1.09 per one thousand population in 2011. The mortality rate from the communicable diseases in Jordan, has reached 84 deaths per hundred thousand population, and it is much less than the global level which reaches 230 death per hundred thousand population.

- **Non Communicable Diseases**

The Kingdom has witnessed in recent years a remarkable change in the epidemiological map. While the spread of communicable diseases rates have fallen down, the non-communicable diseases have raised in terms of mortality rate caused by these diseases in Jordan; it reaches 727 per hundred thousand population while the global mortality rate level from NCDs was 573 per hundred thousand people in 2008.

Cardiovascular diseases, diabetes and cancer were considered to be the commonest of these diseases. Smoking is considered a major risk factor for these diseases. Prevalence of smoking between the adult males in Jordan is very high (49.6%) compared with the global average of 30% in 2009 (Figure 10). The current focus is on health education and combating risk factors according to the Jordan National Health Communication Strategy. This calls for a multi sectoral efforts to control and reduce the prevalence of these diseases to improve the health and safety of the individual and society on the one hand, and to reduce the costs of these diseases on the other hand.

Figure (10)

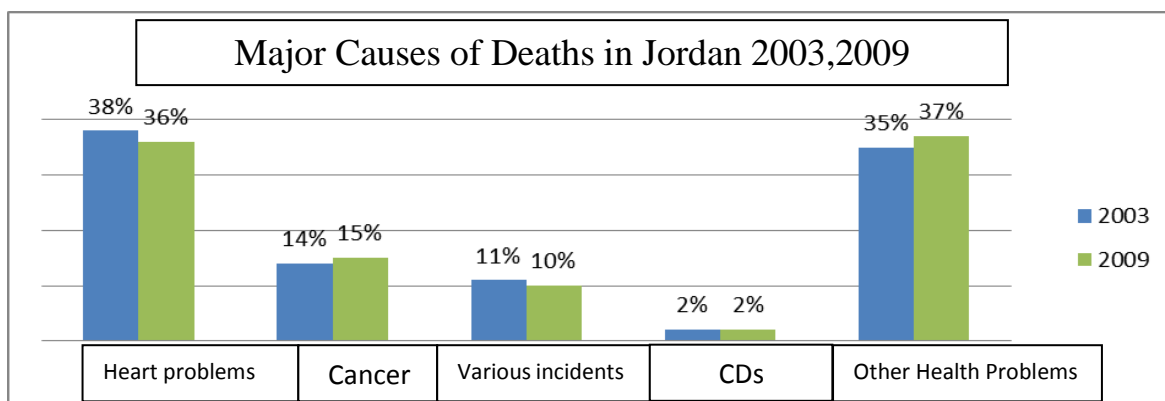


Source: World Health Statistics / WHO

Although there is weakness in classifying and coding causes of death, the analysis of the current trend of mortality indicates that cardiovascular disease is the main cause of death (38% of all deaths). The cancer comes in second place and constitutes 14% of all deaths, while incidents particularly traffic accidents account for 11% of deaths, as shown in Figure (11).

Hypertension and strokes are the most prevalent diseases among cardiovascular diseases. Referring to the latest studies on the morbidity in Jordan for the age group 25 years and above, we find that 28.6% of the population suffer from hypertension compared to 16.8% suffer from diabetes, 24% suffer from sub clinical diabetes, approximately 39.5% of hyperlipidemia and 56.5% of high triglycerides.

Figure (11)
Comparison between Major Causes of Deaths in Jordan in the years 2003 and 2009



Source: MoH / mortality report in Jordan, the Department of Statistics

The National Strategy for Non-communicable diseases (diabetes, hypertension, obesity and lipedema) was adopted by the Council of Ministers in 2011. On the other hand there is a focus is on early screening for newborns and early detection of chronic, congenital, genetic diseases in addition to cancer as a prelude to prepare an operational plan to face the risk of

these diseases which are constantly increasing. Breast cancer constitutes 20% of cancer cases among both genders. It accounts for 37.4% of cancer cases among females according to the National Cancer Registry.

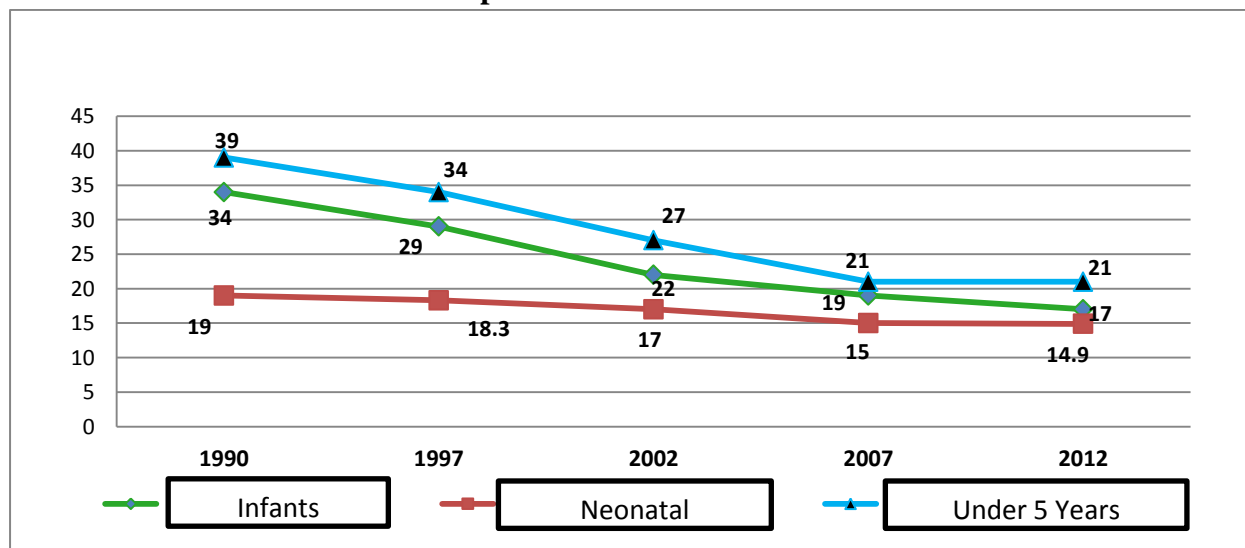
A national register of renal failure was established in 2007. It issues annual reports showing the growing size of the problem, and both the health and economic burden of it. Also a department to combat blindness and deafness was established in the MoH. Early diagnosis, assessment and treatment services for people with disabilities is carried out in coordination with the Higher Council for Affairs of Persons with Disabilities.

There are also several nutrition programs such as fortifying flour and iodizing salt. National nutrition data is updated based on the outcomes of the National Nutrition Survey conducted on the year 2010.

• **Reproductive Health**

Jordan strides with clear steps towards achieving the Millennium Development Goals in respect to reproductive health especially the fourth goal aimed to reducing the under-five child mortality rate by two-thirds during the period 1990- 2015 to reach 13/1000, and the infant mortality rate to 11.3 / 1000. Despite the notable decline of both the infant mortality and the under-five child mortality, the neonatal mortality rate did not fall to the desired level as shown in figure (12). The neonatal rate is affected by the level of quality of obstetric care neonatal care and genetic and hereditary factors which are sometimes difficult to be solved. There is a need to focus on geographical areas that recorded relatively high child mortality rates (above the national figures like the southern region, Tafila Governorate and areas of refugee camps in Jordan).

Figure (12) Child Mortality rate (infant, neonatal and under 5 years) per 1000 live births



Source: Department of Statistics

The 2012 Population and Family Health Survey in Jordan has illustrated that 32% of children under the age of five suffer from anemia, 8% of them suffer from stunting, 2% are wasting, 3% are underweight and 4% are overweight. It was also proved that 93% of the Jordanian children who were under the age of two years have been covered by all types of vaccines. It

is worth noting that 100% of children have a right to access and get health service free of charge (all children under the age of six in Jordan are covered with free health insurance).

Maternal mortality rate has declined from 40 per hundred thousand live births in 1996 to 19.1 in 2008, which means there is a possibility of reaching the fifth Millennium Development Goal of reducing this rate to 12 by 2015. Evidence showed that the prevalence of women who suffer from anemia in the childbearing age are high (34%), 60% of women have never heard about sexually transmitted diseases. This indicates a lack of knowledge and awareness about these diseases.

In 2012, almost all women (99%) have received antenatal care by medically trained people (96% received health care by a doctor). Jordan also maintained a high rate of births in medical facilities and it is almost the best among countries in the world (99%). Three out of every four children (76%) are delivered by a doctor. The proportion of mothers who receive post natal care by a doctor, nurse or midwife during the two critical days after birth reached 82%.

It should be noted here that MoH provides maternal and child health services at all its health centers including antenatal , post-natal services, family planning and pre-marital examination as well as child-care services.

Consanguineous marriage

Although the medical standard in Islamic sharia' is not against endogamy, it urges caution and prudence. Most scientific studies confirm that endogamy is the main cause of common genetic diseases; notably "hemoglobin" disorders, metabolic birth defects, and single genes diseases. Studies also confirm that endogamy is the main cause of many diseases and disabilities among children (75% of mental retardation cases are caused by endogamy).

Many scientific research conducted around endogamy revealed that the incidence of such diseases and disabilities among children whose parents are relatives is clear due to the lack of pre-marital medical examination. The chance is greater amongst relative parents to carry the recessive genetic disorder when each of them carry the abnormal gene for causing the disease.

According to some studies, the endogamy leads to 82 genetic diseases, such as recurrent miscarriage , multiple disabilities, polycystic kidney, thalassemia, hemoglobinopathy, facial and shoulder muscles atrophy, multiple colon tumors, underweight of newborns, and other diseases .

According to official statistics, 3-3.5% of population in Jordan are carriers for Thalassemia; i.e. about 150-200 thousand citizen carried the inherited gene. Numbers from the Ministry of Health showed that there is about one thousand cases of Thalassemia Minor, Thalassemia major and Sickle Cell Anemia in the country. Detection of Thalassemia disease is through the mandatory conducting the pre-marital examination at Maternal and Child Health Centers

belonged to the Ministry of Health. Favism is considered the most widespread disease in the country, it affects males more than females. Prevalence rate of Favism in Jordan is 3-4%. On the other hand, estimated rate of Phenylketonuria (PKU) in Jordan is one per 10,000 births. In 1988, the Ministry of Health established a special unit for PKU to provide genetic counseling and distribute the special type of milk and flour needed for PKU patients free of charges.

Early marriage in Jordan

Recently, early marriage phenomenon started to spread in Jordan community more remarkably. Early marriage represents a social issue that is not limited to increasing birth rates or population growth rates but also effect the socioeconomic and health status of the girls. Some Jordanian and Syrian families resort to marry their daughters and their sons before they complete eighteen years of age; thus, denying them to enjoy healthy lives and from education opportunities, which reflect negatively on their status within their families and community. A report by UNFPA in 2012 entitled "Marrying too young: End child marriage" pointed out that early marriage deprives them of their rights and expose them to danger, and is an obstacle to education, health and productivity of most of them. The report noted that there is an expected increase in cases of early marriage if the current global trend continues without intervention, action or activation of legislation to reduce it. In 2010 ,nearly (67) million women got married at ages ranged between (20-24) years before they finish eighteen years of age, half of them in Asia and one fifth in Africa. Over the next decade 2011 - 2020,(14.2) million girls annually are going to marry under eighteen years of age. These numbers are rising during the subsequent decade to reach up to (15.1) million girls annually during the period 2021-2030. As well, (37) thousand girls per day get married before they turn 18 years old. The size of the problem in the rural areas of developing countries is double that in urban areas. Uneducated girls are at risk of early marriage triple times the girls with high school or higher certificate. The report indicates that there were significant differences in child marriage in the Arab countries ratios were women aged between (20-24) years old and have been married before they turn 18 years old during the years 2000-2011 were as follows: Algeria (1.8%), Djibouti (5.4%),Egypt (16.6%), Iraq (17%), Jordan (10.2%), Lebanon (11%), Morocco (15.9%), Palestine (18.9%), Somalia (45.3%), Sudan (34%), Syria (13.3%) and Yemen (32.3%). It shows that the proportion of early marriages in Jordan is (10.2%) as cases of early marriage before the age of 18 years, out of which (7.1%) in rural areas ; in terms of education for this group of girls in Jordan, (14.1%) were uneducated and (17.7%) were with primary level education and (15.5%) attained a secondary or higher education; in terms of household wealth and distributed by wealth quintiles (Poorest- poor-average - rich- richest), rates were as follows: (13.6%) belong to the poorest families, (12.6%) belong to poor families, (12.5%) belong to the average wealth families, (10.8%) belong to rich families, and (4.2%) belong to the richest families. According to the UNICEF study entitled "Early marriages in Jordan" in 2014 that showed the overall proportion of early marriage between ages 15-17 years was 13.2% (12.7% among Jordanians and 17.6% among Palestinians , 25%among Syrians, 4% among Iraqis and 7.3% among other nationalities).

The report noted that early marriage rate was 12.6% in 2012, 7.4% among females, and 0.5% among males in the year 2015.

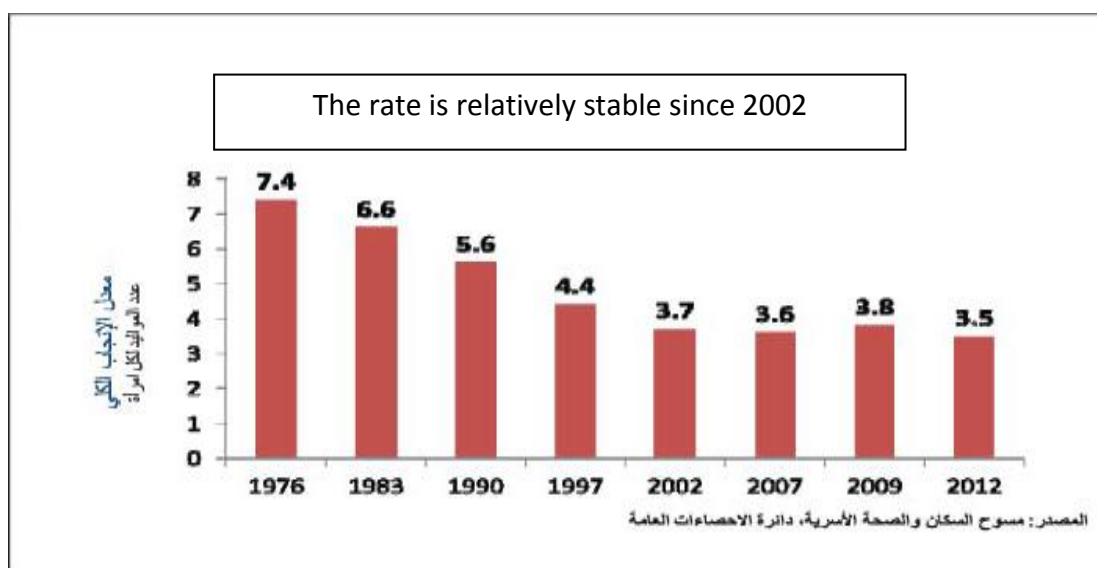
According to 2015 statistics from the Directorate of Family Reconciliation of the Supreme Judge Department, the total proportion of under 18 age marriage in the Kingdom is 13%, but it rises among Syrians to reach 35%.

Young age at first marriage may expose girls to many health risks that appear with early pregnancy, most important of which are infertility, miscarriages, and maternal mortality, as well as other social problems. It also expose girls to violation and other legitimate human rights, including the right to education, the right to capacity development, informed choice of the life partner without coerce, the right to secure equal marriage and build normal family relationship. Wasting these rights reflects negatively on the quality of the girls' life, reproductive health and also on the family's ability to carry out their duties in the education of the new generation, especially that building new generations depends on the woman characteristics as she holds the biggest role in the upbringing of the child comparing to men. It also threatens the demographics of the community and efforts to benefit from the demographic opportunity. Implications of early marriage on high birth rates result in population growth and lack of women's participation in the labor market.

Based on the role that the Higher Population Council as a coordinating body for all partners and stakeholders who are concerned with all population and development issues in order to develop national policies, strategies and action plans, advocacy and awareness through creating evidence for decision-makers, the Council planned to conduct a study aimed at identifying the size of the early marriage phenomenon by governorates, to explore attitudes, beliefs and practices of the community towards it; and to analyze the social, economic, health, and psychological impact of it on women this will help in developing a plan to raise community awareness on the negative effects of early marriage (health, social, psychological, and scientific , etc.) on both sexes; and thus promoting positive trends and practices within the local communities to apply the minimum legal age for marriage (18 years) for both sexes; as well as mobilizing legal persons in the Chief Justice Department and gain their support to ensure soundness of the judges' decisions towards approval marriage of those who are less than 18 years of age of both sex.

Despite the high proportion of the population in urban areas in Jordan and the high level of education among women as well as the increased age of first marriage for both sexes, the birth rate is still high at 3.5 (with relative stability since 2002). This requires the promotion and coordination of all national efforts to ensure easy access to quality reproductive health / family planning services to achieve the demographic opportunity. Figure (13)

Figure 13: The Total Fertility Rate in Jordan for the years (1976- 2012)



Source: Population and Family Surveys, Department of Statistics

Results of the 2012 Population and Family Health Survey showed that despite the increase in the contraceptive prevalence rates in Jordan from 40% in 1990 and to 61% in 2012, the use of traditional methods of which effectiveness does not exceed 50% is still high compared with other countries (19% in 2012). Studies have shown that 80% of unplanned pregnancies in Jordan resulted from the use of traditional methods. Thus it is clear that reducing the use of these methods by 50% would help reduce the total fertility rate to 3.45 children per woman.

Reproductive health is considered to be one of the main components of the national strategy of population in Jordan. The Higher Population Council has developed a national strategy for reproductive health / family planning for the years 2013- 2017 aiming to improve reproductive health / family planning policy environment, services and information, as well as enhancing the contribution of the private sector and non-governmental actors, raise awareness and increase demand for services in this field to help realizing the demographic opportunity by 2030. On the other hand, MoH has developed family planning strategy for the years 2013 - 2017 in order to enable the Ministry to provide information and quality family planning services to citizens and contribute to the achievement of national goals. The ministry is currently implementing the activities of the national strategy for health communication strategy, which includes reproductive health / family planning , women and child health care.

- **Senior Citizens' Health**

The decline in the death rate and high life expectancy at birth (74.4 years) have led to an increase in elderly group aged sixty years and over reaching 5.2% in 2011, and is expected to reach 7.6% in 2020.

The analysis showed the real situation of the elderly in Jordan. The number of old men slightly exceeded the number of women. It was shown that about half of the elderly have

been covered with some type of health insurance; the military health insurance being the most common type.

Among the challenges that pose a burden on the elderly is financial destitution where it was found that (78.5%) of the elderly are unable to work because of disability noting that (68.6%) of them are breadwinners for their families. In addition, their low educational achievement does not qualify them to work within a reasonable wage, leading to even worse financial situation.

The percentage of disability among the elderly is high (2.8%) compared with that of the total population (1.2%). Men also suffer from multiple disabilities more than women. In general, physical disabilities are the most frequent among elderly people regardless of gender.

Approximately 86% of the elderly suffer from chronic diseases such as high blood pressure (53%), high cholesterol (30%), diabetes (25%), heart diseases (13%) and asthma (10%). Here comes the importance of the role of prevention and proper management of these diseases, especially since their subsequences were the cause of disabilities in approximately (7.4%) of the elderly. Here, it should be taken into account the fact that the small part of spending (16%) only goes to primary health care services and programs despite their importance in reducing the incidence of chronic diseases and complications resulting thereof.

In order to maintain a decent and quality life for the elderly, the National Council for Family Affairs in cooperation with all concerned governmental and non-governmental institutions including the Secretariat of the HHC has developed a national Jordanian strategy for the elderly people in 2008 and an educational guide on ways to deal with the elderly who needs special attention as a result of physical, social and psychological changes. The work is currently underway to update the Jordanian National Strategy for the elderly.

MoH has covered persons aged sixty years and above with health insurance in public hospitals and centers. It has also developed treatment protocols to manage geriatric and chronic diseases; hypertension and diabetes, and prepared guidelines to the families of the elderly on how to manage them, in addition to provision of training to health care providers on the proper healthy life styles for the elderly and the best ways to communicate with them..

Some private institutions and civil society organizations offer fitness programs for this category of the population. In addition, the health coalition of 12 CSOs cover healthcare services including medicine for their patients at affordable prices as well as giving them a chance to practice physical activities.

Despite all these achievements, we still find a lot of challenges with regard to elderly issues that have not received priority yet; these issues can be summarized as follows:

1. Insufficient attention to the elderly issues
2. Unavailability of specialized home care services, unaffordable if found since they are not covered by public and private insurance.
3. Lack of the elderly health specializations such as geriatrics and elderly nursing.

Mental Health

The MoH National Center for Mental Health is the lead agency for the provision of mental health services, treatment and awareness, supervision and training, in addition to the issuance of judicial reports for the cases referred from all civil and military courts. It also provides services to non-governmental institutions such as the Jordan River Foundation, the elderly shelters, orphans institutions and people with special needs. There are 265 beds at the National Center for Mental Health.

Patients are also treated at the Karama hospital for psychiatric rehabilitation, which can accommodate up to 150 beds, as well as the National Center for the rehabilitation of drug addicts, which can accommodate up to 40 beds. Mental healthcare services are provided to all outpatient citizens by MoH clinics distributed in all cities in the Kingdom, as well as those provided by the center of diagnosis of early disability. It should be noted here that the mental healthcare services are provided free of charge at MoH facilities.

The Royal Medical Services provide Mental Health Services through the psychiatric department in Marka hospital which can accommodate up to 34 beds and through scattered clinics in all the 12 hospitals of the Royal Medical Services, in addition to children psychiatry clinic at Princess Aisha Medical Complex.

The university hospitals provide mental health services through clinics in each of the Jordan University Hospital, and King Abdullah the Founder University Hospital. 10 beds were allocated to treat mental illness in King Abdullah Hospital during 2012, and 12 beds for treatment of mental illness in University of Jordan Hospital during 2014. The private sector is a key provider of mental health services through Al Rasheed mental health hospital with a capacity of 120 beds and through a number of private clinics scattered in major cities in the Kingdom.

The big challenge in mental health lies in the negative attitudes towards mental illness among members of the community, and considering it a stigma prevents the patients quest for treatment and thus widen the gap (the disparity between the number of those in need of psychiatric treatment, and those who actually get it) as well as weaken the demand on specialization by doctors and nurses resulting in a severe shortage in the number of service providers, especially in the public sector, and not to mention the brain drain of the relevant competencies to other Arab and foreign countries. The number of psychiatrists does not exceed 10 per 100,000 citizens in Jordan and the number of nursing cadres is 0.04 per 100 000 citizens, while the studies and the WHO confirm that the number of psychiatrists should be between 20 and 30 doctors for every 100,000 citizens. Further, the lack of insurance coverage for mental illnesses in the private sector and the high cost of mental healthcare services in this sector exacerbate the problem.

Home Health Care

Home health care is a wide range of health and social services that are provided at home including curative, preventive, nursing, and nutritional as well as educating patients and their

families. It also includes helping patients with chronic diseases, bedridden, people with special needs and the elderly to perform their daily activities in their home context.

The main objective of home care lies in reducing reliance on hospitals and transfer case management to the context of a home. This will contribute to reducing the costs of treatment and lift up patients' spirit.

The need for home care services in Jordan has increased at an unprecedented rate as a result of the continuing rise in chronic diseases and accident injuries and the increase in the elderly population.

A recent study on home care services in Jordan has shown that most services are provided through the private sector and the number of institutions registered and licensed by the MoH does not exceed 51, most of which face a lot of challenges including:

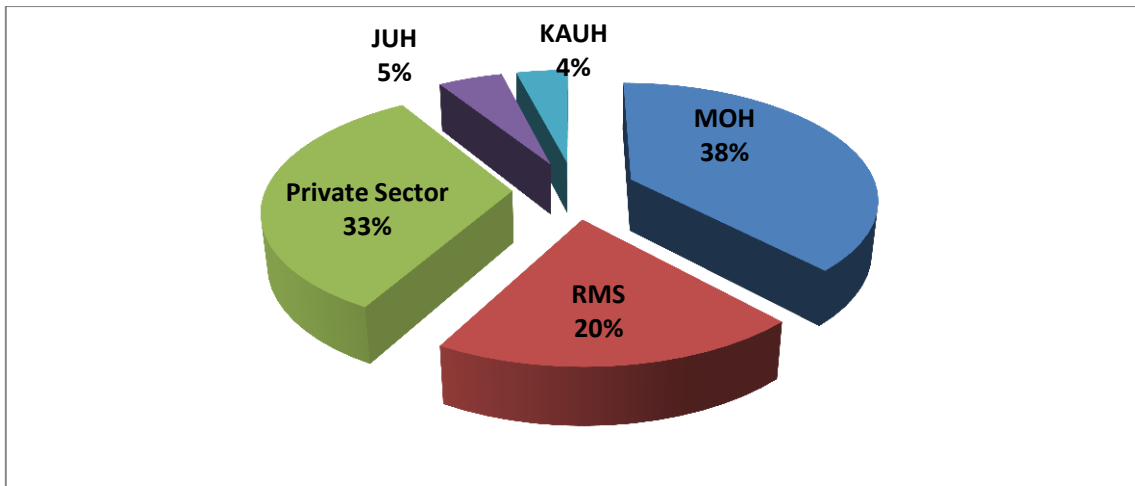
- Many companies and offices that offer these services. Most of them suffer of poor funding and management, lack of qualified and trained competencies and supportive administrative systems.
- Lack of accurate and available information on this sector
- Lack of home care services that are linked to hospitals in a regular and integrated way (with the exception of home care provided by King Hussein Cancer Center).
- The absence of laws, regulations, instructions and protocols that regulate and monitor the performance of home health care
- Unaffordability of these services
- Failure to cover these services by the public or private health insurance.
- Prevalence of a lot of illegal practices such as payment of commissions and financial exploitation of patients and their families

5.2.2 Secondary and Tertiary Health Services

The concept of secondary and tertiary health care services is based on provision of highly efficient and specialized services within distinct global standards. All health sectors participate in the provision of these services with a variation in the type and amount of service provided.

Secondary and tertiary health care services are provided in Jordan by the public and private sector hospitals in various governorates of the Kingdom. There were 106 hospitals in Jordan in 2013 with a total capacity of 12081 beds. The MoH hospitals accounted for 38% of these (4618 beds) while the number of hospital beds in the Royal Medical Services is 2439 beds (20% of the beds in Jordan). The University of Jordan Hospital has 534 beds, while King Abdullah University Hospital has 501 beds. The private sector has a total of 3998 beds (33% of the beds in Jordan), as shown in Figure (14). Another 500 beds were added at Bashir Hospital and 100 in Jerash, Princess Eman and Princess Rahma hospitals in 2014.

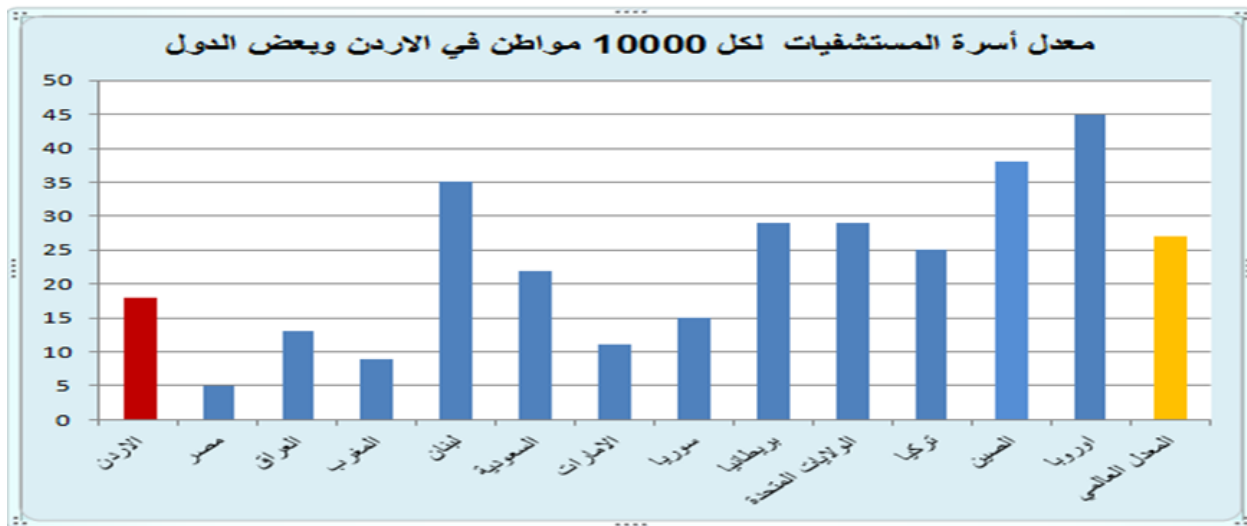
Figure 14: The distribution of hospital beds in the Kingdom by health sectors, 2013



Source: MoH, Annual Statistic Report, 2013

Hospital bed rate in Jordan reached 18 beds per 10,000 population in 2013. This rate is much better than the rates of some Arab countries, but it is less than the global rate (Figure 15). To keep this rate and to face the natural population growth (excluding the forced migrations from neighboring countries) Jordan needs to add new beds at a rate of 221 beds annually over the next ten years and to add new beds at a rate of 349 beds annually over the following next ten years starting from 2024 (Figure 16).

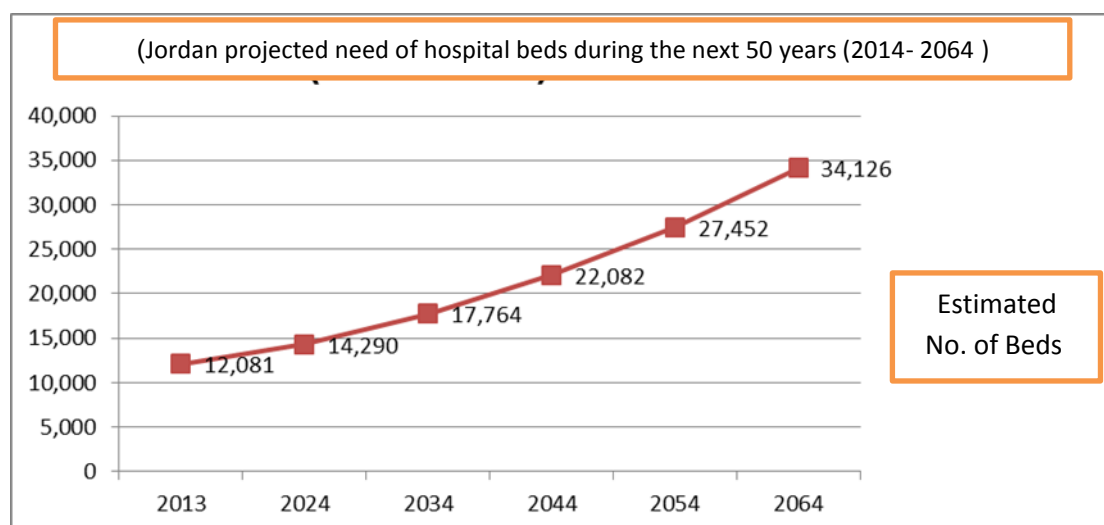
Figure (15) The Rate of Hospital Beds in Jordan and some Countries per 10,000 citizens



JOR	EGY	IRAQ	MOR	LEB	KSA	UAE	SYR	UK	USA	TUR	CHA	EU	GLOB
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Source: Mosa Ajlouni. Draft comprehensive plan of King Hussein Medical City: analysis of the current and future capacity, September, 2014

(Figure 16): Jordan projected need of hospital beds during the next 50 years (2014- 2064)



Source: Musa Ajlouni. Draft comprehensive plan of King Hussein Medical City: analysis of the current and future capacity, September, 2014

Total expenditure on curative health care services in the public sector in Jordan (MoH, the Royal Medical Services and University Hospitals) reached approximately 703,695,485 JD in 2012. This accounted for almost 74.2% of the total health expenditure on all functions.

Health sector in Jordan excels in providing tertiary health care services, which include advanced and specialized health and medical services, such as:

1. **Organ Transplantation:** Jordan is one of the first countries in the region to conduct organ transplantation in its hospitals. The first kidney transplantation was performed in 1972. Jordan also was one of the leading countries that have developed legislation to regulate organ donation, transfer and transplant in 1977. The National Center of Organ Transplantation was established in Jordan in 2010 in collaboration with hospitals and the relevant local and regional parties to develop and regulate the process of organ donation, transfer and transplant as well as the exchange of information and expertise in this area through conferences, seminars, research and studies, in addition to raising awareness and encouraging organ donation and transplantation. The center has set special standards and created a national register for organ donation. However, these services need competent cadres and further cooperation and coordination between all stakeholders, particularly with regard to data and information in this area.
2. **Advanced Surgery:** Most specialized surgeries like the open-heart operations catheterization, kidney transplantation, liver and bone marrow transplantation mainly are carried out at the Royal Medical Services and the private sector, and at a limited scale at the MoH hospitals and university hospitals.

3. **Dialysis:** most Jordanian hospitals provide dialysis to kidney failure patients. Dialysis sessions usually require constant maintenance of equipment to and continuity of services.

4. **Treatment of Infertility**

5. **Other services:** such as plastic and cosmetic surgery for some medical conditions, treatment of addiction cases in addiction center, provision of rehabilitation and occupational therapy to patients in a number of public and private hospitals in the Kingdom in order to relieve pain and improve the functioning of the affected organs. Forensic services are provided through the National Center for Forensic Medicine and the various MoH forensic centers in the governorates of the Kingdom. It is worth mentioning that legislations, information systems, and computerization need to be developed for these services to allow for data analysis and use in decision-making. Participatory approach between all the relevant authorities to reduce violence and its effects on victims and the community is needed, as well as building the capacity of workers, the exchange of experiences and the promotion of cooperation and agreements with the Arab and regional countries in this field.

Major issues facing the secondary and tertiary health care services to be focus on:

1. Computerization of hospitals in the public sector.
2. The need to continue improving the quality of services provided.
3. Weakness in the application of up to date electronic medical records.
4. The need to expand internship programs for rare specialties.
5. The need to develop the ambulance and emergency services and the development of aeromedical evacuation services.
6. Poor infrastructure in most of the public sector hospitals.
7. Poor referral system from peripheral hospitals to specialized hospitals.
8. Congestion and the stress of work in the public sector hospitals resulting from population growth and forced migrations.

5.2.3 Quality of Health Services

Jordan government realized twenty years ago the importance of hospitals accreditation program as a tool to improve the quality of health services. A national accreditation committee was formed in 1987, but its work did not last long due to the lack of a governing body under which various health sectors can be involved. In 1993, MoH has applied quality assurance program of health services in some public hospitals through the development of protocols and guidelines for workers, and the formation of committees to fight infection and improve quality in hospitals. Then the ministry has institutionalized the process of quality improvement in health centers and hospitals through creating quality control directorate in 1999. This directorate assumed the responsibility to develop quality units and teams to control quality and patient safety at the level of health departments and hospitals in order to

improve the quality of health services and raise the satisfaction of both providers and recipients of the service at all levels.

The HHC has adopted a hospital accreditation project in 2003 to fulfill the tasks and responsibilities stipulated in its law, namely to take the necessary decisions for upgrading quality of services. A national committee and another technical committee were formed, experts hired, and a number of meetings held, and an action plan was developed to implement the program in collaboration with WHO.

Hospital accreditation program was launched by the MoH Quality Assurance Directorate in collaboration with the Partnership for Health Reform Project for restructuring the health sector in 2004. 17 hospitals from different health sectors were identified to participate and training courses and workshops were held for the coordinators of the participating hospitals on the concept of accreditation and the preparation of action plans. Local standards for the different phases and procedures of evaluating the provision of health service were developed. The implementation started in hospitals in preparation for obtaining accreditation certificate.

The Healthcare Accreditation Council (hospitals and health centers) was established in 2007 to continuously improve the quality and safety of health care facilities, services and programs through the development of globally accepted standards, capacity building and granting accreditation certificates. The Council has received three accreditation certificates from The International Society for Quality in Health Care (ISQua) in the areas of accreditation of standards; the accreditation of training and preparation program for accredited surveyors; accreditation of the Council as a grantor of certification. It is the fifth institution to get the three certifications in the world, and the first in the region. The local accreditation certificate granted by the health institutions accreditation council are equal to the certificates granted by international bodies in terms of standards, requirements and evaluation processes, etc. The total number of accredited hospitals reached 17 hospitals and 106 health centers at the end of 2015.

It should be noted that there is a need to maintain accreditation standards for institutions that have already received the accreditation certificate, as well as to update their policies and procedures, conduct surveys and studies that contribute to the quality improvement, in addition to the expansion of the application of accreditation program to include more centers and hospitals. There is a disparity between health sector institutions especially hospitals in the application of (Clinical Pathways) in emergency centers. This in turn leads to a disparity in plans of managing the diseases and provision of treatments.

The HHC looks forward to the implementation of mandatory accreditation policy for all hospitals and enhancement of patient safety programs and adopts them as a base for the services provided by all health staff, especially doctors and nurses.

It can be seen from the above that the major challenges facing the quality of health services and should be taken into account in the strategic plan are:

1. Lack of the necessary financial resources to include more public centers and hospitals in the accreditation program
2. Lack of national clinical guidelines and protocols
3. Disparity in the quality of health services on the level of subsectors and as well as different geographic regions

5.2.4 Injuries and Accidents

In addition to the health effects and human losses, accidents and injuries are considered of the most important production constraints. They cause huge physical losses to the state. They are divided into unintentional injuries (traffic accidents, poisoning, falls, drowning, and burns) and intentional (killing, suicide and different types of violence).

First: Unintentional injuries

The MoH statistics have shown that death resulting from unintended accidents is mostly caused by traffic accidents, followed by those from the falls, drowning, fire and poisoning.

Road traffic accidents in Jordan constitute a major health problem and are the major unintentional injuries. They are the second leading cause of death after cardiovascular diseases. Jordan records a traffic accident every 5 minutes and the death of one person every 9 hours. The following Table (1) shows the volume of traffic accidents and damage caused by them during 2009- 2013.

Table (1): the number of traffic accidents and their consequences, and the annual rate of change during 2009- 2013

Year	Number of accidents	Accidents resulted in physical losses	Accidents resulted in human losses	Number of injured	Number of deaths	Rate of death increase/decrease
2009	122793	112559	10234	15662	676	-8.6%
2010	140014	129009	11005	17403	670	- 0.9%
2011	142588	131072	11516	18122	694	+ 3.6%
2012	112817	101813	11004	17143	816	+ 17.6%
2013	107864	97637	10227	15954	768	-5.9%

Source: PSD / central traffic department

The role of various institutions in response to unintentional accidents and injuries

- **Civil Defense**

The General Directorate of Civil Defense provides firefighting, rescue and ambulance services that have been specified under the Civil Defense Law No. 18 of 1999, as amended. It continuously improves its services according to the latest standards through advanced equipment and machinery as well as trained and qualified cadres by using modern communication techniques between different operation rooms and emergency departments in

hospitals. It also works to achieve a response time (arriving to accidents sites in normal times, 8.9 minutes) that complies with international standards to reach the various communities, vital facilities and high ways. The Directorate of Civil Defense also provides statistics on the numbers and types of accidents and damage and loss resulting thereof.

The Directorate provides its services through the establishment of departments, centers and stations in all (171) sites of the Kingdom. It also seeks through the implementation of its strategic plan to further develop and improve its services and qualify its cadres and raise their competence on scientific bases. The Civil Defense school and Prince Hussein bin Abdullah II Academy of Civil Protection grants diploma and bachelor's degrees in different related disciplines.

- **Public Security Directorate**

Based on the vision and mission of the Public Security Directorate, a national strategy was developed to reduce traffic accidents and provide a safe and distinct traffic environment on all roads of the kingdom in collaboration with all partners. The strategy aims to reduce the number of deaths by 20% over five years (2013- 2017), i.e. an average decrease of 4% per year, considering the traffic results in (2012) as the benchmark. A reduction of (5.9%) in the number of deaths was achieved in 2013, and the number of traffic accidents was reduced by equivalent to (5000) accidents. The traffic department works to achieve the goal through raising awareness, control, regulation and coordination with partners.

Ministry of Health

Traffic safety strategy includes procedures to be implemented at the moment the accident occurs. The MoH and Civil Defense are concerned with the implementation of this aspect which includes dealing with the situation on site, transportation and taking the right measures to receive the casualties in the ambulance and the emergency departments.

Civil Actors and Civil Society Organizations

The civil actors and civil society organizations have multiple initiatives in this area, such as the Royal Awareness Association, which sponsored the "Think First" project to educate children between the age of four and sixteen years on injury prevention issues.

Second: Intentional Injury

There is no comprehensive information regarding intended injuries including injuries of violence such as murder, suicide, domestic violence, sexual violence and violence in schools

and universities. Multiple agencies generate statistics and studies on this area, including MoH which showed that the death caused by intended incidents was mostly the result of suicide, followed by murder.

As for domestic violence (especially against women and children), Jordan has sought to achieve justice and equality between men and women. It addresses domestic violence through signing of international conventions and treaties. In this respect it has signed the Convention Of Elimination Of All Forms of Discrimination Against Women (CEDOW), in 1992, the Convention on Human Rights, the Convention on Children's rights and the Arab Plan of Action for Children (2004-2015).

Family Protection Department provides information about the number of cases of domestic violence and sexual assault it deals with. As shown in Table 2, the number of cases of violence that have been dealt with by this department has doubled in five years (2007- 2011).

Table (2):Tthe number of domestic violence cases dealt with by social service office at the Family Protection Department (2007- 2011)

Year	Number of cases
2007	2352
2008	2367
2009	4475
2010	4254
2011	4997

Source: Family Protection Department

5.3 Healthcare Finance and Investment

5.3.1 Health Financing

Although Jordan is ranked as one of middle-income countries, it spends annually on an individual's health about twice as much of the spending on health in these countries . The health expenditure has fallen from JoD 260.6 in 2012 to JoD 231.8 in 2013. The size of the total health spending also rose during the same period of about one billion and 665 million dinars in 2012 to one billion and 881 million dinars in 2013. The size of the total health spending as a percentage of GDP has gradually decreased from 9.52% in 2009 to 7.58% in 2012, to come up again to 7.89% in 2013 as shown in Table (3).

Table (3) Major Indicators of National Health Accounts in Jordan 2008- 2012.

	2008	2009	2010	2011	2012	2013
Total Healthcare Expenditure (JD)	1,381,460,034	1,610,352,435	1,537,135,395	1,580,677,286	1,665,014,650	1,880,953,104
Per Capita Healthcare Expenditure (JD)	236	269.3	251.5	252.9	260.6	231.8
Per Capita GDP	2753.5	2828.1	3069.2	3275.8	3438.6	2939.6
Healthcare Expenditure as a Percent of the GDP	8.58%	9.52%	8.19%	7.72%	7.58%	7.89%
Percent of Governmental Budget Allocated to Healthcare	%10.16	%10.52	%9.76	%9.14	%10.50	11%
Health Expenditure by sector						
Public Sector	60.78%	69.17%	67.94%	66.85%	66.17%	65.75 %
Private Sector	38.24%	29.80%	30.27%	31.34%	31.88%	31.57%
UNRWA	0.69%	0.59%	0.75%	0.67%	0.75%	0.74%
NGO's	0.29%	0.43%	1.04%	1.14%	1.20%	1.93%
Public Healthcare Expenditure as a Percent of the GDP	5.21%	6.59%	5.57%	5.16%	5.02%	5.18%
Private Healthcare Expenditure %GDP	3.37%	2.93%	2.62%	2.56%	2.56%	2.70%
Total Expenditure on Pharmaceuticals	496,453,222	449,395,115	423,658,862	427,835,670	445,408,952	500,330,700
Per Capita Pharmaceuticals Expenditure	84.86	75.15	69.30	68.46	69.73	61.66
Pharmaceuticals Expenditure as a percent of the GDP	3.08%	2.66%	2.26%	2.09%	2.03%	2.10%
Pharmaceuticals Expenditure as a percent of the Total Healthcare Expenditure	35.94%	27.91%	27.56%	27.07%	26.75%	26.60%

Source: National Health Accounts, HHC

Out of pocket health expenditure increased from 26% of total health expenditure in 2012 to 28.8% in 2013. Proportion of expenditure on medicines out of total health expenditure has dropped from about 36% in 2008 to 26.75% in 2012 and to 26.6% in 2013. These percentages remain high for a country like Jordan, which is classified as a middle income country.

Spending on secondary healthcare services (hospitals) is about 807 million dinars (75.5%) of the public sector expenditure. Share of primary health care services have amounted to about 168 million dinars, with an increase of (15.7%) requiring an emphasis on primary and preventive health care programs, to increase its allocations ,and carry out reform measures in the health system that will contribute to development and implementation of health costs containment policies at hospitals.

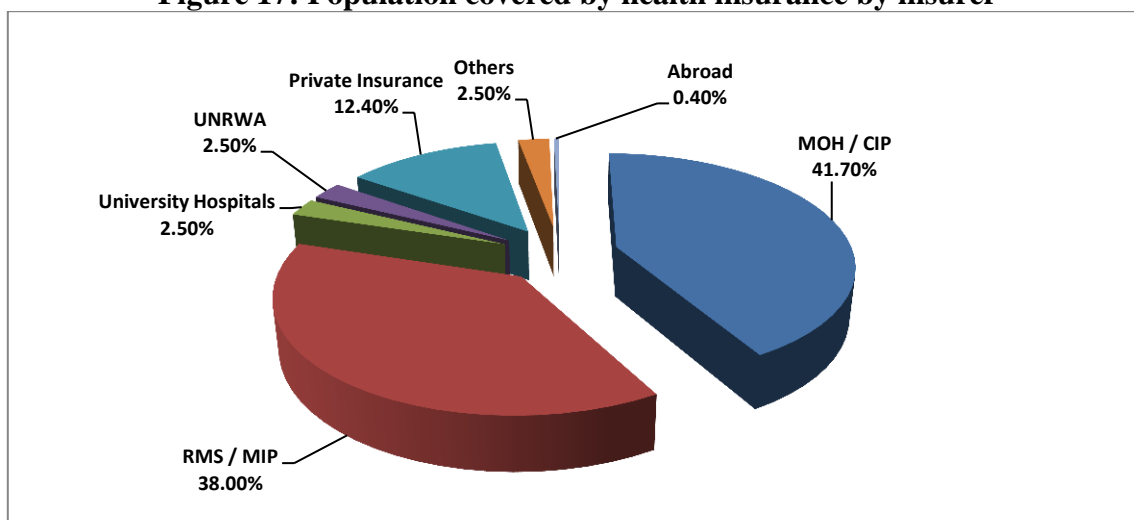
5.3.2 Health Insurance Coverage

Access to Universal Health Coverage became a strategic target for all successive governments in Jordan since more than three decades.

Cooperation between the High Health Council and the Department of Statistics was established and health insurance was incorporated within the questionnaire of the General Census for the Population and Housing in 2015. Results showed that the population amounts to approximately 9.5 million, out of which were 6.6 million Jordanian citizens. Percentage of health insurance coverage was 55% of the population and 68% among Jordanian citizens. However, this coverage does not include the beneficiaries of exemptions provided by Non-insured Patient Affairs Unit (the Royal Court).

Figure (17) shows distribution of Jordanian citizens covered by health insurance by insurer. Health Insurance Fund of the Ministry of Health covers 41.7%, the Military Health Insurance Fund of the Royal Medical Services covers 38%, while health insurance in university hospitals covers 2.5% and private health insurance covers 12.5% and includes private health insurance companies, syndicates and some corporations affiliated health insurance funds. It is noteworthy that UNRWA covers 2.5% by providing primary healthcare services only. There are only 0.4% insured abroad and 2.5% covered by other insurances.

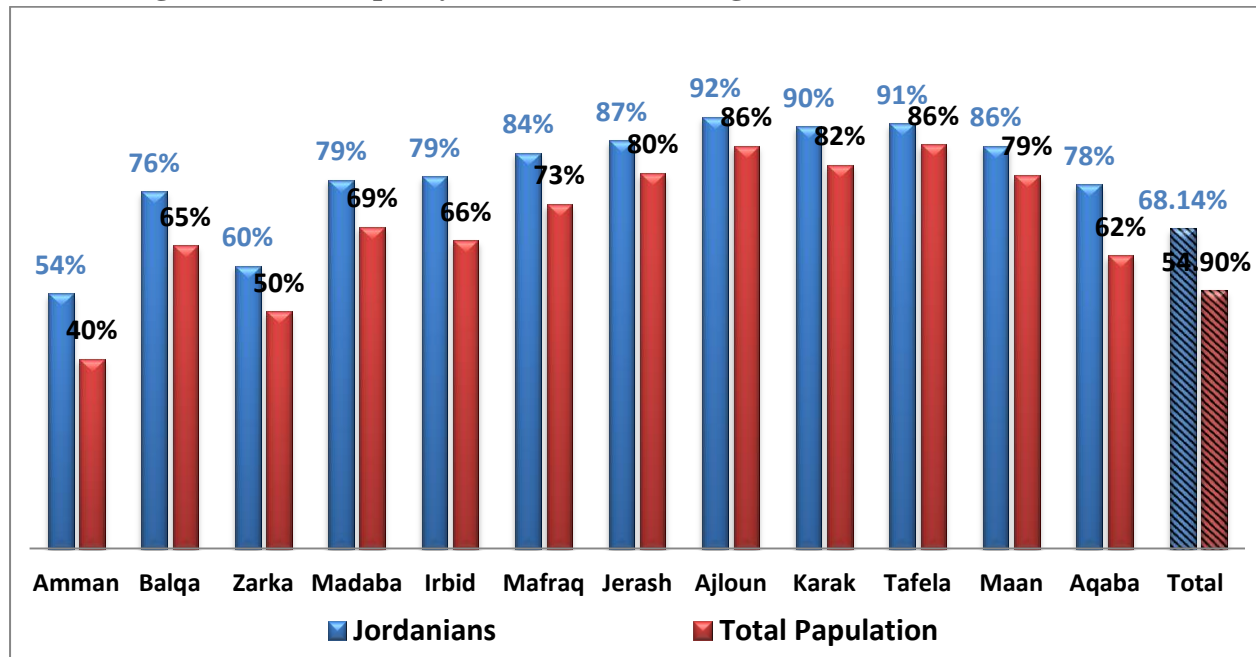
Figure 17: Population covered by health insurance by insurer



Source: Ministry of Health

The Census also shows that there is a clear discrepancy in insurance coverage at the governorate level. It is striking that the least insurance coverage of the population is in Amman Governorate, reaching 54% and 40% among Jordanians. While in other governorates, the coverage ranges from 50% in Zarqa Governorate to 86% in Ajloun, and among Jordanians between 60% in Zarqa and 92% in Ajloun (Figure 18).

Figure (18) Discrepancy in insurance coverage at the Governorate level



Source: Department of Statistics

All citizens benefit from the Ministry of Health subsidized services that does not cover the cost of health services provided. Health Insurance Fund offers exemption from healthcare fees to citizens who were classified by the Ministry of Social Development as poor. In addition, the Ministry of Health provides expensive medications free of charges for patients who suffer from certain medical conditions (certain infectious diseases, cancer, kidney diseases, tuberculosis, AIDS, and addiction to alcohol and drugs) regardless of their ability to pay.

Health Insurance Fund is no longer limited to all civil servants and their dependents, it includes the following categories without incurring any financial costs on the beneficiary:

- Children under six years old
- Segments of society that have been classified as poor by the Ministry of Social Development.
- Areas classified as least fortunate and remote areas
- Health insurance is issued to one member of the family of an organ donor (valid for five years).
- Health insurance is issued for a blood donor (valid for six months).

Optional health insurance was also made available for all citizens who wish to be enrolled, including pregnant women and the elderly, which came after the recent amendment to the civil health insurance bylaw.

Key challenges facing the health insurance and population coverage in the Kingdom:

- Lack of a reference that has accurate database on insurance coverage and has authority to generate information including duplication rate in the health insurance, and the number of insured and non-insured citizens and their characteristics. This hampers development of policy reform, decision-making and access to universal health insurance.
- Lack of mandatory health insurance led to leaving an important segment of the population, estimated at about a third of the population, without any health insurance, however, this segment could benefit from exemptions of the Royal Court without contributing to any pre-paid schemes, as applied in the insured group.
- There is a lack of fairness in financial contributions paid by citizens represented by a defect in application of the health insurance concept; which implies the application of social solidarity.
- Failure to split the process of providing health services and the purchase of these services at the Ministry of Health (MoH) and the Royal Medical Services (RMS)

Steps of Reforming Health Insurance in the Kingdom

- Issue a binding health insurance law and establishment of an institution or an independent national body for health insurance (or any other name) in the public sector to serve as a reference and procure health services from the health providers, standardize enrollment bases and organize citizen's use of medical service according to the national number and a computerized database.
- Confirm the need to study successful experiences in countries around the world in health insurance reform, such as Dubai experience, and the experiences of some countries that have reached the universal health coverage, such as Turkey and Taiwan.
- Develop a roadmap for achieving the goal of achieving universal health coverage in the Kingdom, which guarantees secure access for all citizens to quality health services, while providing protection from financial risks when getting sick. The roadmap includes a comprehensive review of health insurance legislation in Jordan and actuarial study to determine costs implications on inclusion of all citizens in health insurance. In addition, a study of the possibility to establish a unified national fund for health insurance or an independent national body by merging current pools and start by unifying civil and military health insurance funds. In addition, health policy needs to be directed towards establishing a body or institution for management of public hospitals, including hospitals of the Ministry of Health, Royal Medical Services and university hospitals as well as strengthening role of the Ministry of Health in primary and preventive healthcare.
- With regard to costs of patients referred by the Royal Court, it has reached high levels; amounting to 165.6 million dinars in 2012, 169.1 million dinars in 2013, 208

million dinars in 2014 and 185 million dinars in 2015. The proposed mechanisms to address these high costs are as follows:

1. Restrict the duplication of the exemption granted by either the royal court or prime ministry and restrict their processing to a competent and computerized body.
2. Restrict exemptions to treatment in hospitals of the Ministry of Health only and transfer cases that cannot be treated there by a specialist physician.
3. Adoption al-Bashir Hospital as a referral center for all cases.
4. Establish exemption criteria in accordance with the financial capacity of the household.
5. Create a computerized database for all health insured citizens in the Kingdom in order to avoid exemption of the insured under private, university and professional associations.

Universal Health Coverage - the Turkish experience

Turkey is one of the countries that have succeeded in achieving universal health coverage. They pursued a plan to reform the health system, which started in 2002 and took about ten years. The plan focused on three main dimensions:

1. Increase spending on health through increased government health funding and by reducing out-of-pocket health expenditures on health services.
2. Facilitate access, expansion and comprehensiveness of health services, especially maternal and child services.
3. Reduce levels of inequality in delivery of health services by geographical areas and by economic and social situation.

Lessons learned from the Turkish experience are as follows:

1. Health is a fundamental human right and thus the right to universal health coverage.
2. Political support has played an important and pivotal role. For example, the Turkish Council of Ministers in 2002, decided to abolish prison sentences for citizens who do not adhere to paying hospitals dues on them or on their relatives who die in hospitals, which was appreciated by the political circles and the public.
3. Benefiting from the experiences of other countries with the conviction that any successful model in a given country cannot be fully applied in another country.
4. Brilliant management of health reforms, including both technical and political reforms relating to the functions of the health system. For example, a very difficult situation facing Turkey has been resolved, in that health service providers were working in the public and private sectors at the same time. The government then pursued a successful policy which obliges service providers from the public sector to work in public sector institutions only and were given a raise salary as well as performance-based incentives. Such approach increased the percentage of specialists in the public sector from 20% to 80%.

5. Improve access to medicines and reduce its prices by adopting a pricing system based on international references whereby pharmaceuticals market moved from a status of decrease in quantities and increase in prices to increase in quantities and decrease in prices; resulting in expansion and promotion of pharmaceuticals market in Turkey.
6. Diligent and ongoing follow up on reforms and decisions through a special staff of coordinators including doctors that were appointed in the field.
7. Address problems arising from the application of decisions of reforms, for example, the issue of irrational drug use.
8. Focus on primary healthcare services and programs for chronic disease prevention, combating smoking and prevention of other risk factors.

5.3.3 Medical Tourism:

Jordan has ranked first among Arab countries and has been classified as one of the top ten countries in the field of medical tourism. For this reason, the private health sector exerts great efforts to sustain this achievement by maintaining the patients who come from the traditional markets for treatment and as well as on attracting new patients from non-traditional markets. Jordan success in medical tourism goes back to several reasons, namely:

- Highly qualified personnel in the disciplines of medicine, nursing, pharmacy and medical engineering etc.
- Competitive treatment prices
- Quality of medical services provided in Jordan.
- Adoption of IT systems within the sector of medical services.
- Guaranteed and effective health insurance systems.
- The large number of accredited Jordanian hospitals.
- Availability of health resorts such as the Dead Sea and Ma'ain Spa, etc.
- The presence of a large number of competent doctors and nurses, who are proficient in spoken Arabic and English.
- Available high tech medical devices and diagnostic equipment and advanced radiology centers, laboratories and centers of oncology, and nuclear medicine etc.
- Political stability and security in Jordan

What enhances the position of the Kingdom in the field of health and medical care is the nationally and internationally accredited healthcare facilities. This gives the patient motivation and reassurance on the quality and safety of healthcare service delivered. Ten Jordanian hospitals have got international accreditation certificate (JCI) in addition to the qualification of five hospitals for getting international accreditation certificate while twelve hospitals were accredited the National Health Care Accreditation Council (HCAC) in Jordan.

The Jordanian government is working to encourage and promote investment in the health sectors through the Jordan Investment Commission, which is the focal institution to highlight the role of Jordan's leadership in all sectors and increase the number of investors, especially in the field of healthcare.

A quarter million patients from around the world have received medical services in the Jordanian private hospitals in 2012. This accounted for 23% of total patients who were treated in the Jordan. The total income from medical tourism exceeds one billion US dollars. Different types of medical services were provided to patients from outside Jordan, including heart disease and surgery, orthopedics and joint replacement operations, neurosurgery, cancers of all kinds, retinal surgery and teeth implant and others. It is noteworthy that in 2013, about 1713 patients from different Arab and foreign countries received treatment in Royal Medical Services hospitals.

To develop the medical tourism sector in Jordan work has been done through the Jordanian Competitiveness Project funded by the US Agency for International Development to support medical tourism in Jordan through the establishment of a council for medical tourism and includes all health sectors, government and related institutions, notably the HHC, which will develop strategies and enhance the quality and development of the business of medical tourism. It will also focus on opening up new markets and provide new quality services will be made so as to increase investment in medical tourism which will lead to support the national income.

The endorsement of the Medical Malpractice Law is an additional factor in enhancing the quality of health services provided in the field of medical tourism by ensuring the safety of both providers and recipients of health service. It is one of the most important tools that will contribute to the increase of patients' number who come for treatment.

It can be seen from the above that the most important challenges facing the health system financing and should be taken into consideration by the strategic plan are the following:

1. Around 45% of the population are outside the health insurance coverage
2. Weak implementation of cost containment strategies
3. Multiple insurance agencies in the public sector and the duplication of public health insurance
4. Increased out-of-pocket health spending
5. Weak investment in primary health care services compared to secondary and tertiary
6. High proportion of spending on medicine
7. Uncontrolled and unplanned expansion of health services
8. weak marketing of medical tourism
9. Ineffective and inefficient referral systems and contracting with the private sector
10. The continuous rise in health care costs and lack of funding
11. There is a need to issue a mandatory health insurance law to expand social health insurance and establishment of an independent national institution or body for health insurance.

5.4 Human Resources for Health

Human resources are critical factors in meeting the health needs of the population. This requires much attention in the planning and management of these resources in order to achieve equity in the provision of health services and increase the productivity of the health sector.

5.4.1 Current Patterns of Human Resources for Health:

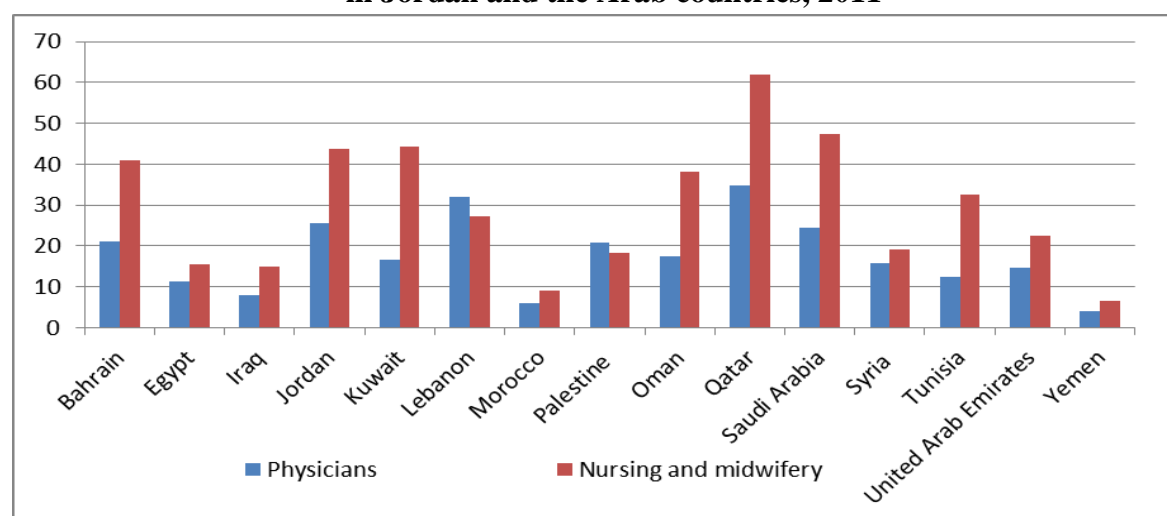
Jordan has a good number of health cadres in most of the specialties. The number of these cadres has significantly increased compared to the number of the population over the past five years (2009 - 2013), as shown in Table (4). However, there is a shortage of some medical specialties, such as psychiatry, family medicine, anesthesia, neurosurgery, cardiovascular surgery and others. The density of cadres working in the nursing profession in Jordan is higher than that found in most Arab countries, although there is still a shortage in the female nursing in some specialties. Doctors and nursing densities per population in Jordan are considered of the highest in the region measured, as shown in Figure (19).

Table (4): Manpower density per 10000 population (2009- 2013)

Indicator/ per 10000 inhabitants	2009	2010	2011	2012	2013
Physician	24.5	26.5	25.5	27.1	28.6
Dentist	7.3	9.3	9.8	10.0	10.4
Pharmacist	14.1	15.0	12.6	16.3	17.8
Nurse (registered, Associate, midwife, assistant)	39.0	41.9	43.7	46.6	44.8

Source: Annual Statistical Report / Ministry of Health, 2013

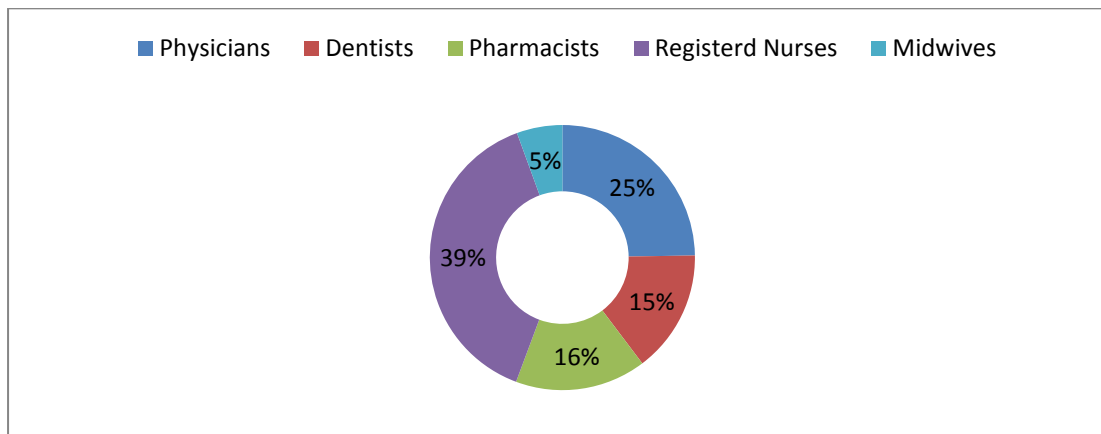
Figure (19): Doctors and nurses ratios per 10,000 citizen in Jordan and the Arab countries, 2011



Source: World Health Organization / Regional Health Observatory
<http://rho.emro.who.int/rhodata/?vid=2623#>

Figure (20) shows that the registered nurses represents the vast majority of human resources in Jordan in 2013 (39%), followed by medical doctors (25%), the Pharmacists (16%), dentists (15%) and finally midwives category (5 %).

Figure (20): Distribution of Health Human Resources by Profession in Jordan, 2013



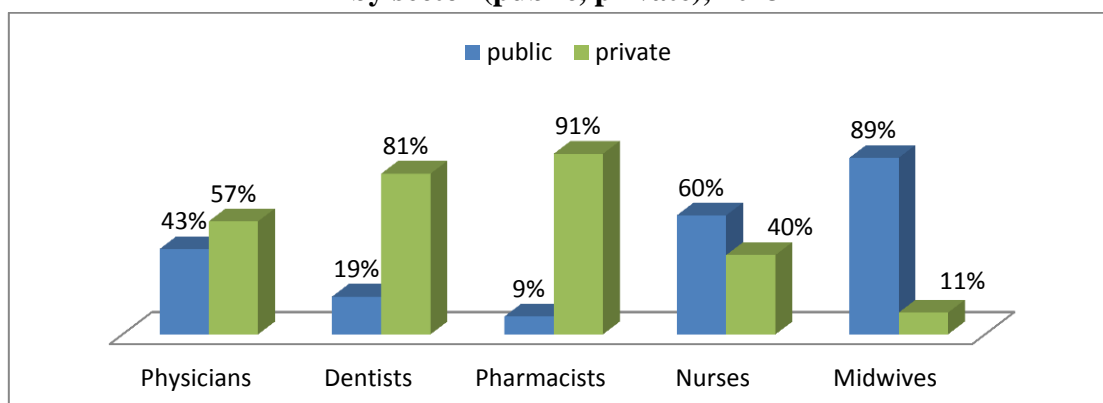
Source: Report of the National Observatory for Human Resources for Health in Jordan, 2013 - HHC

Females constitute about 44% of the total workers in the health sector in Jordan. Most of these health workers are aged less than 50 years (85% of them do not exceed 50 years of age). The youth (30 years or less) constitute about 40% of the total health workforce in Jordan.

Health workforce of all categories is concentrated in the Central Region with a geographic disparity in the distribution of health workers between the governorates of the Kingdom, especially among doctors. There are imbalances also in the distribution of health personnel between different health sectors and between primary and secondary health care levels and between different governorates.

The non-governmental sector (private and civil organization sector) is the main employer of health cadres in Jordan (especially medical doctors, dentists and pharmacists), Figure (21). The private sector attracts experienced professionals from the public sector due to the high financial returns in the private sector, noting that it is prohibited for public sector doctors and other health personnel to work in the private sector. MoH has recently contracted some private doctors in certain medical sub-specialties to cover the shortage in the public sector. There is continuous increase in the external migration of health personnel and technicians especially to the Gulf States.

Figure 21: The distribution of health human resources in Jordan by sector (public, private), 2013



Source: Report of the National Observatory for Human Resources for Health in Jordan, 2013 - HHC

5.4.2 The human resources for health governance:

Development of human resources policy is part of the public health policy in Jordan. In addition to MoH, the formulation of human resources for health policies and plans are developed by multiple governmental and non-governmental agencies, as well as international organizations. This leads to overlap and duplicate policy-making and decision-making. There is also centralized decision-making in relation to the appointment, recruitment, compensation, distribution and termination of health workers.

5.4.3 Production, Education and Training:

Jordan has a distinctive system in the teaching of health sciences in the public and private health colleges, noting that specialty of medicine and dentistry are only in public universities. MoH and the Royal Medical Services share with the universities the provision of training for practical medicine, nursing students and other health disciplines.

The Board of Higher Education develops policies and legislation regarding higher education, while the Ministry of Higher Education and Scientific Research implements these policies. The Higher Commission of Education Accreditation sets standards of higher education and monitors their application. The HHC also contributes to the development of educational policy for education of health and medical science inside the Kingdom and regulates the enrollment of students in these studies abroad.

Continuous education programs are managed and supervised by the Jordan Medical Council. The internship and residency programs are limited to doctors and dentists, they are implemented in both the public and private sectors. Continuous education programs are not provided on a regular or compulsory basis. They are provided optionally by educational institutions, hospitals and professional associations and as activities provided by some individuals. Most of these programs are provided in the form of on job training, seminars,

workshops and conferences, noting that the majority of hospitals do not allocate special budget for training and conducting studies and research.

The registration at the professional associations in Jordan is mandatory for granting licenses to practice the profession, while the Jordan Medical Council conducts the examinations for providing the general practitioners and specialists the required certificates to practice the profession, while the professional associations play a key role in implementing and monitoring the compliance with the rules and regulations related to each profession.

The Health Care Accreditation Council (HCAC), which is a private non-for profit organization, is responsible for accrediting training programs in the field of health, which are not under the umbrella of Higher Education Board or the Jordan Medical Council.

However, there is weaknesses in providing information necessary to develop evidence-based education policy. At the supply side, reliable data is lacking on number of Jordanian students enrolled to study Health Science in non- Jordanian universities as well as number of non-Jordanian students enrolled to study Health Science in Jordanian universities who do not enter Jordan's labor market. At the demand side, there are no estimate studies on Jordan's future needs of health staff distributed on occupation, discipline gender and geographical location. In addition, data on number of staff at the health private sector are not updated constantly; therefore, gap analysis between demand and supply sides is never an easy task and more research. Recently, a survey was concluded to determine the gap between supply and demand sides for the health private sector labor market. The survey was carried out by the National Center for Human Resources Development, except that this study is not repetitive of the whole health sector (Royal Medical Services and Non-Organized health sectors were excluded).

There is an urgent need to enact policies to control migration of health competencies outside Jordan, especially in the high demand and rare medical and health disciplines. Also, there is a need to develop policies that attract students to the high demand disciplines and distant them from the stagnant disciplines in the local labor market. In this context, the Civil Service Bureau issues an annual booklet determining stagnant disciplines. The booklet aims at informing students enrolling in Jordanian universities on professions required in the Jordanian labor market to take them into account when submitting applications for admission to universities.

Accordingly and in order to meet these challenges and to bridge the gaps, the Secretariat of the High Health Council prepared a proposal to assess the current situation of healthcare staff and to develop a relevant national human resources strategy with the participation of all relevant sectors, including international organizations. The High Health Council also seeks to establish mechanisms of cooperation and coordination with the Ministry of Higher Education and Scientific Research to contribute in shaping an evidence -based health education policy.

5.4.4 Management and Recruitment of Human Resources for Health:

Each institution in the health sector in Jordan has its own systems and regulations for hiring their staff. MoH and the Royal Medical Services are the main employers of the newly graduates from health colleges. MoH and the Royal Medical Services pay salaries and incentives to employees in accordance with the civil and military financial systems depending on the category, job classification, rank level, according to the active payroll. However, the private health sector has a different payroll in every hospital. Most of the doctors working in private hospitals having private clinics as well. They receive payments directly from patients or through private health insurance programs, according to the rule of fees for service.

In addition, there are issues of HRH mal distribution, high turnover rates among medical and nursing staff, especially at MoH, which leads to **a shortage in the number of health care providers**. This is due to the lack of a fair system of incentives, and the low wages and salaries compared with those applied in the university hospitals, the Royal Medical Services and the private sector and the availability of attractive job opportunities in the Gulf States.

Performance evaluation is conducted on regular bases and documented for the majority of the staff. The performance appraisal process in the MoH and other public sectors is based on the evaluation of the overall behavior of the employee and his commitment to the official working hours. Never the less incentives are not linked to actual performance.

There is an urgent need to develop appropriate health policies to meet the challenges and gaps facing the health workforce through the development of a comprehensive national HRH plan, noting that the HHC has initiated the process of forming a national HRH committee in 2008, through the National HRH Observatory and based on its national role in the adoption, harmonization and coordination between the different health sectors. It includes all stakeholders of health human resources that continuously engage in dialogue of all the challenges facing these cadres and propose recommendations for the adoption of appropriate policies; foremost of which is that related to maintaining the health human cadres in the public sector particularly MOH physicians working in remote underserved areas.

From the above, the most important challenges facing the HRH which should be addressed by this strategic plan are:

1. The lack of a national HRH comprehensive strategic plan
2. Centralized decisions for the recruitment, appointment, compensation and termination of employees in the health sector.
3. Weakness in the training process in the field of management and strategic planning
4. Difficulty in attracting new competencies and brain drain of highly qualified professionals (both internal and external migration)
5. The absence of the HHC role in drawing up health education policies
6. The great disparity in wages and incentives for HRH staff working in the public sector institutions.
7. Inequitable distribution of human resources for health among the governorates of the Kingdom, especially in remote areas
8. Weak HRH information systems, especially in the private sector.

5.5 Health Information and Research

The availability of data and information on the health sector is a key issue in monitoring the health system performance and in formulating informed policies and decisions. The importance of health information and research relies on the design of health programs and management, monitoring and evaluation of the community health status, as well as planning and fair distribution of health care services, and extraction of health indicators.

There are several institutions responsible for the collection and provision of health data and information, but MoH is considered the main party in this respect. In addition to the annual statistical report issued by MoH which is considered the main source of information and national health statistics, the ministry manages the National Cancer Registry, as well as the National Mortality and renal failure registry . The ministry also has an electronic surveillance for communicable diseases, another system is the family planning logistic information system, maternity and childhood system , General Practitioners database, hospitals information systems, perinatal care system, geographical information system for family planning services (GIS), medical laboratory and radiology systems.

The Department of Statistics, being the only body authorized to collect and disseminate statistical data at the national level, as well as calculating the demographic, economic, social and health indicators. One of the most prominent and periodic activities carried out by Department of statistics is conducting surveys and census (the last Population and Housing census was conducted in 2015). It should be noted that, in cooperation with the Higher Population Council, the development indicators (Devinfo) (health, social and economic indicators) were launched and included all indicators for monitoring the implementation of national strategy of reproductive health and the population opportunity policies document.

The responsibility of Civil Status Department is limited to recording data related to Jordanian families, recording vital statistics (on birth, death, marriage and divorce) for citizens wherever they occur inside or outside the country, and for residents, refugees and visitors on the territories of the Kingdom as well.

One of the main institutions that provides specialized data and information in the field of health is the General Secretariat of the HHC. It issues periodic reports on national health accounts following the global methodologies. The health accounts have been institutionalized since 2007. The national health accounts system in the kingdom tracks the financial flows at various levels of the health system to identify the patterns of expenditures on health services. Also we have the National HRH Observatory which was launched by the General Secretariat of the HHC in the year 2008. It monitors the patterns of HRH and their distribution all over the Kingdom.

The Higher Population Council also contributes to the population projections and provides information and studies on maternal and neonatal mortalities, as well as the provision of different demographic indicators.

The various academic institutions conduct various health studies addressing multiple issues in the health sector.

All health sectors in Jordan participate in an initiative called **electronic medical library**. It aims at dissemination of knowledge to all sectors in Jordan.

The parties that provide information also have to publish them in scientific journals or in the form of reports, bulletins, summaries, printed papers, electronic copies (CDs) or through conferences, dialogue meetings and websites.

There are several initiatives to support health information systems and link studies and research outputs to create evidence-based health policies and decisions, including a cooperative initiative between the MoH, WHO the Center for Disease Control under the title of "Promoting disease Surveillance". Recently a national list of priorities for scientific research on health system was published on the official website of the MoH, and multiple meetings and conferences were held to publish and disseminate the results of the various health studies. The Higher Population Council also recently launched a website for the publication of studies and reports related to reproductive health (PROMISE).

However, health information system in Jordan is facing several challenges including weakness in the proportion of spending on research and studies, lack of actual practices of evidence based health policy and decision making, lack of efficient registration of vital statistics particularly deaths, lack of national records like the national records of cancer as well as the scattered of health related studies and research and the weakness in translating research into possible adopted policies.

Regarding computerizing health sector, there is a national initiative called "Hakeem" which is a health computing company program, launched at the end of 2009. "Hakeem" program aims to increase the effectiveness of medical management, achieve a radical development in the health care provided to citizens, reach the best international standards as well as economic efficiency and improve workflow procedures and patient service in a hospital and or health center. Through the creation of an electronic health file for each citizen and facilitate the access of users of the system to any medical facility using the national number and linking the of Civil Status Department database with the system national database so that the file contains procedural and surgical comprehensive reports, current medications and the notes taken in each visit to the hospital or clinic.

"Hakeem" program consists of several sub-systems, the most important of which is electronic health records system,, patients booking, laboratory and pharmacy systems and others. Following the success of its implementation in the pilot phase, including Prince Hamzah Hospital and Amman Comprehensive Health Center, a deliberate plan has been prepared to expand the implementation of "Hakeem" program in the coming years in all MoH hospitals and centers, the centers of the Royal Medical Services, King Hussein Cancer Center and University Hospitals, in order to improve the quality of health services provided to citizens.

From the above, it can be seen that the most important **challenges facing the information and research** in the health system, which should be taken into consideration by the strategic plan are:

1. Weakness in formulation evidence based policies and decisions.
2. The shortage of financial allocations for studies and research and weak publishing of research in scientific journals
3. The absence of a national strategy for health information and research
4. Weakness in the computerization of the health system
5. Weakness in Modern Electronic Health Systems Applications (E-Health)
6. Weakness in access to private sector data and information
7. The absence of a national reference entity for research and health studies

5.6 Pharmaceuticals and Health Technology

5.6.1 The Situation of the Pharmaceutical Sector

Medicine and pharmacology law no. 12 for the year 2013 regulates the pharmaceutical sector in Jordan. Food and Drug Administration is considered the umbrella which oversees the effectiveness, quality and safety of the drug in the Kingdom according the best international standards, governed by the MOH and on the basis of the provisions of the Public Health Law No. 47 of 2008.

Pharmaceutical sector faces several challenges, the most important of which is the high proportion of waste in the pharmaceuticals compounding the increase in expenditure on medication. Perhaps the main reason for this, is the absence of health insurance smart card and non-adoption of computerized electronic record in the institutions that provide health services in the public sector, where the patient resort to more than one care center to access to medicines, especially antibiotics, chronic diseases' and other high cost medication, absence of smart card leads to duplication of dispensed medications.

Among the main reasons for the rise in health expenditure on medicines are; the lack of accurate tools to assess the actual needs of drugs identified in the official bidding; lack of good inventory management; the lack of circulating medications between health institutions, which leads to the accumulation of stocks occasionally or unexpected stock out, forcing institutions to go to direct purchase at high prices to avoid drugs interruption. This measure increases the health expenditure due to the lack of health providers' compliance to the guides and protocols of treatment standards, and lack of adoption of the pharmaco-economic evidence regarding decisions when selecting any drug from the rational (essential) drug list. This leads to the unjustified expansion of the list of drugs covered in the official bidding. The list should be periodically reviewed and the compliance of public sector institutions to the list as a reference should be monitored when government tenders for medicines.

Most governments in the world are moving rely on generic brand name of drugs and expand their scope to cover the expensive therapeutic and pharmaceutical cliques in order to cut health expenditure bill.

5.6.2 Pharmaceutical Industry

Jordanian pharmaceutical industry has evolved over the past five decades significantly. The number of pharmaceutical companies in Jordan reached to 20 companies exporting about 75% of their production to foreign markets as Jordanian medicine has high quality and conforms with international standards. Jordanian medicines are sold in more than 70 Arab and foreign countries, and the largest part is exported to Arab countries.

The Jordanian pharmaceutical companies have been committed towards developing the technological level in the pharmaceutical industry in an effort to make Jordan a center for pharmaceutical industry in the region. Some companies started to manufacture drugs to treat cancer and manufacture of biotechnology and biological drugs through strategic alliances with advanced companies in drugs industry. This enhanced the role of the Jordanian pharmaceutical industry in achieving drug security and increased its contribution to the national economy.

The pharmaceutical industry contributes in strengthening the national economy through its positive contribution to the trade balance and reduction of the deficit with exports of about 438 million Jordanian dinars in 2013 compared with 382 million dinars in 2012, with a growth of 14.6%. The Jordanian exports of pharmaceutical products accounted for about 9% of the total Jordanian exports and occupy the second place among export-oriented sectors in Jordan.

Pharmaceutical industry also contributes mainly in labor market. The sector provides more than six thousand direct jobs for Jordanians, in addition to thousands of workers in the supporting sectors, including shipping, transportation, distribution, advertising, printing, packaging and other staff. The sector also exports hundreds of competencies of Jordanians to work in the branches of Jordanian companies operating outside Jordan or in other pharmaceutical companies, through 17 owned, affiliated or alliance companies with the Jordanian pharmaceutical companies in 8 Arab and foreign countries. Thus is considered as an added value in supporting the national economy by remittances of expatriates.

Jordanian medicine also contributes positively to reduce health expenditure by competing with global companies in the governmental bidding, as well as in the private sector.

Among the major challenges that face the sector is the increased competition both locally and internationally, the need for merging and acquisition, the need to build more strategic alliances with international pharmaceutical companies to cope with intense competition, increase their ability on research and development, conduct further pharmaceutical experiments and trials and expand their market both horizontally and vertically.

5.6.3 Pharmaceutical Expenditure

The expenditure on medicines in developing countries is high. It reaches up to 50% of total health expenditure, compared with 19% in the countries of European Union, while in Jordan the ratio reached 26.75% in 2012, as the size of spending on medication reached about 445 million dinars. This spending was divided between the public sector 202.6 million dinars (12.17%) and the private sector 242.8 million (14.58%), Table (5). The proportion of spending on medication as a percentage of total health expenditure has fallen from about 36% to 26.75% between 2008 and 2012.

Spending on medicines in Jordan constituted 2.03% of GDP in 2012 while the ratio in the same year, was about 1.6 of GDP in the countries of the European Union. This ratio is considered to be high for a country like Jordan which is classified as middle-income country. This necessitated for the HHC to develop “a national strategy for rationalizing drug use for the years 2014- 2016.

Table (5): Pharmaceutical Expenditure Indicators

	2008	2009	2010	2011	2012	2013
Total Expenditure on Pharmaceuticals (JD)	496,453,222	449,395,115	423,658,862	427,835,670	445,408,952	500,330,700
Per Capita Pharmaceuticals Expenditure(JD)	84.86	75.15	69.30	68.46	69.73	61.66
Pharmaceuticals Expenditure as a percent of the GDP	3.08%	2.66%	2.26%	2.09%	2.03%	2.10%
Pharmaceuticals Expenditure as a percent of the Total Healthcare Expenditure	35.94%	27.91%	27.56%	27.07%	26.75%	26.60%
Distribution Of Pharmaceutical Expenditure						
Public	13.81%	14.14%	13.01%	12.22%	12.17%	12.17%
Private	22.12%	13.77%	14.55%	14.85%	14.58%	14.43%
Distribution Of Pharmaceutical Expenditure Of Total Pharmaceutical Expenditure						
Public	38.44%	50.67%	47.19%	45.12%	45.49%	45.77%
Private	61.56%	49.33%	52.81%	54.88%	54.51%	54.23%

Source: Jordan NHA, HHC

5.6.4 Health Technology

Jordan has made steady steps to keep up with health technology in the field of pharmaceutical industry, machinery, medical supplies, diagnostic, therapeutic and surgical procedures in addition to the computerized systems in health facilities in order to improve the quality of delivered health services. However, this progress is not systematic and does not support evidence based decisions. It doesn't take into account the resources available in Jordan, especially in the private sector and thus it is reflected negatively on the health expenditure, which could be paid directly as out of pocket. It is reported that the government has implemented some health technological initiatives in cooperation with donors. The latest initiative was health technology assessment project in partnership with the WHO, which aimed to raise awareness about the importance of assessing health technology and positive effects on the health sector. It also aimed to provide information and accurate data for use in

decision-making about the various alternatives related technology to ensure effectiveness and efficiency.

From the above it can be seen that the major challenges facing the pharmaceutical and health technology that should be considered within the strategic plan are:

1. Increased spending on medicine in Jordan of about 445 million dinars, distributed between the public sector 202.6 million dinars (12.17%) and the private sector 242.8 million dinars (14.58%).
2. High percentage of pharmaceuticals waste which increase the spending on medication.
3. Inefficient application of health economy standards and lack of information and studies for use in decision-making related to various technology and medicine alternatives to ensure effectiveness and efficiency.
4. Expansion in importing and use of medical technology which is not based on planned and actual needs.
5. Increased competition in pharmaceutical industry (locally and internationally)
6. Local companies need for acquisition and merging to build more strategic alliances with global pharmaceutical companies.

6. The Impact of Syrian Refugees on Health Sector

Given the political and security stability in Jordan, and its privileged geographic location as it is surrounded by countries suffered from internal and external crises, Jordan has recently hosted hundreds of thousands of refugees from neighboring countries such as Iraq and Syria in successive waves. This forced and unplanned migration caused high rates of population growth, and generated considerable pressure on the health system, especially health services provided to citizens, infrastructure and health institutions, especially in the public sector. In view of the limited financial and natural resources, this influx of refugees reflected negative impact on social, economic and health development.

Population Numbers and Composition:

The number of non-Jordanians living in Jordan until 1/7/2014 reached about 2.5 million people, including 1.4 million of Syrians. Only fifth of Syrian refugees live in the camps. The rest live throughout the Kingdom, particularly in the northern governorates of Jordan. The age group 18- 59 constitutes the largest among these refugees (44.4%) as shown in Figure (6).

Table 6: Distribution of Syrian refugees by age group, 2014

Age group (year)	Male %	Female %	Total %
0-4	9.0	8.5	17.5
5-11	10.0	10.3	21.1
12-17	7.0	6.6	13.6
18-59	20.7	23.7	44.4
60+	1.4	2.0	3.4
Total	48.9	51.1	100

Source: The Higher Population Council, demographic changes and the population opportunity in Jordan, "a policy document", the second edition, 2014

Health services provided to Syrian refugees:

Since 2012, the large number of Syrian refugees became a challenge and a big burden on health system of Jordan, especially in the Northern governorates, where the Syrian refugees concentrated. Different health services such as immunization and infectious diseases screening, primary health care as well as secondary health care were provided. Jordan remains committed to providing humanitarian aid to Syrian refugees despite the fact that this poses a serious impact on the health system in the public sector due to the lack of funding in the health sector, the limited number of workers in the health care, the lack of sufficient facilities to provide health services for Syrian refugees. Figure (22) and Figure (23) show the evolution of the number of Syrian refugees who received health services at the MoH centers and hospitals until the end of August 2013.

The statistical reports showed that the prevalence of communicable diseases among the Syrian refugees is much higher than their spread among Jordanians. This could lead to the increase in the prevalence and risks of these diseases among the Jordanians, Table (7). It is noted that a number of AIDS cases have been reported among Syrian refugees and other cases are expected to be discovered. The MoH provides primary health care services for Syrian refugees who live inside and outside the camps for free, such as immunization, reproductive health services, food monitoring and control, surveillance of infectious and communicable diseases, reporting injuries and registration of births and deaths, as well as providing the hospitals in the camps with their need of blood and serum, as well as proper disposal of medical waste, food and water hygiene and sanitation.

Figure (22) The evolution of the number of Syrian refugees who were served by MoH health centers during the period from January 2012 to August 2014



Source: Ministry of Health, 2014

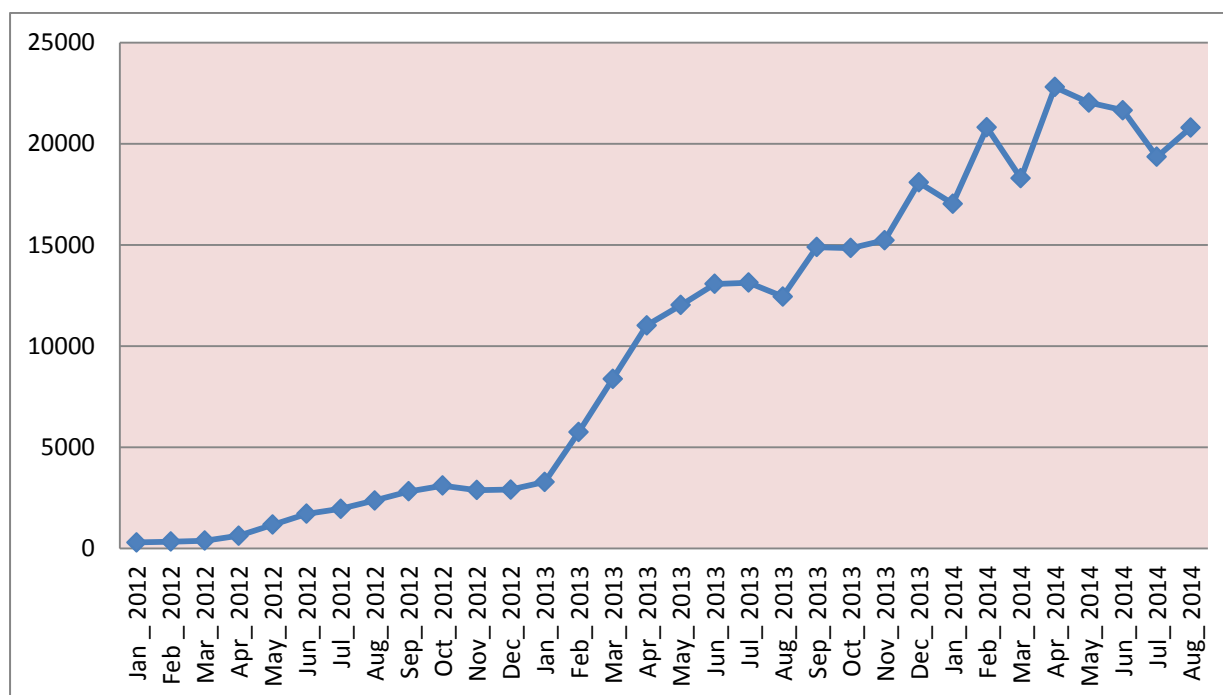
Table (7) Annual incidence rate of some communicable diseases among Jordanians and Syrian refugees

Disease	Incidence rate among Jordanians	Incidence rate among Syrian refugees
Pulmonary TB	5 per 100.000	13 per 100.000
Measles	2.8 per million	51.2 per million
Leishmaniasis	3.1 per million	158.1 per million

Source: Ministry of Planning and International Cooperation: Needs Assessment Review of the Impact of the Syrian Crisis on Jordan, November 2013

The following chart shows the growth in the number of Syrian refugees who received services from MoH hospitals during the period from January 2012 to August 2014

Figure (23): Number of Syrian refugees who received services at MoH hospitals, January 2012 - August 2014



Source: Ministry of Health

It should be noted here that the cancer cases recorded among Syrian refugees in the National Cancer Registry have increased from 135 cases in 2010 to 155 cases in 2011. (196) cases of cancer were recorded in 2012 and 250 cases in 2013 while there were 265 cases in 2014. This shows the extra burden for the MoH of 14% due to the free and high cost of the treatment of this disease.

The Impact of the Syrian Refugees on Health Sector:

The main challenges facing the health sector as a result of the Syrian refugees can be summarized as follows:

- Increasing demand for health services at an unprecedented rate that exceeds the capacity of the public health sector, especially in Northern governorates. For example the burden of work in health centers has increased from 9 to 50 percent and the bed occupancy rate in each of Mafraq Public Hospital and Ramtha Public Hospital reached to 100%.
 - High pressure on human resources, medical staff, hospitals infrastructure and health facilities
 - Shortage of health human resources and medical supplies.
 - Negative impact on the Jordanian patients as competing on the limited health resources, for example bed rate has become 15 beds per 10,000 Jordanian after it was 18 beds per 10,000 citizens before the Syrian crises. See Table (8)
 - Burden on the available financial resources, as MoH has hold extra expenses due to Syrian displacement estimated at 53 million dinars in 2013, including 20 million dinars for the vaccination campaigns.
 - The fiscal deficit as a result of the lack of necessary financial resources and the withdrawal of donors to provide their committed aids.
 - Increased risks of the spread of diseases among Jordanians, particularly the host communities, and the need for additional vaccination campaigns.
- Negative consequences on the achievement of the health-related Millennium Development Goals.

Table (8) Health Indicators in Jordan before and after the Syrian Crisis

Indicator	Before Syrian Refugees (population number = 6.4 million)	After Syrian Refugees (population number = 8 million)
Doctor/ 10.000 population	28.6	23.4
Dentist/ 10.000 population	10.4	8.5
Nurse/ 10.000 population	44.8	36.6
Pharmacist/ 10.000 population	17.8	14.5
Bed/ 10.000 population	18	15.1
Bed/10.000 population in Mafraq	8	6
Proportion of population covered by health services	98%	90%

Source: Ajlouni, M. The impact of Syrian crisis on the health sector in Jordan: Challenges and proposed health policies, the conference of "Refugees in Jordan: A Question of society and the media." Jordan Media Institute in collaboration with the Norwegian Institute of Journalism, the Dead Sea: 8-10 / 12/2014.

7. Strategic Analysis (SWOT)

Strategic analysis using SWOT model included a study of internal and external environment for the health sector in terms of identifying strengths and weaknesses in the internal environment in addition to the analysis of the opportunities and risks in the external environment

Strengths
<ul style="list-style-type: none">• Significant improvement in most health indicators• Good infrastructure and advanced technology in the areas of medical diagnostic, curative and rehabilitative services• The existence of qualified and highly efficient medical and health cadres.• Easy access to health service all over the kingdom• Poor and disadvantaged groups have health insurance• The existence of distinct and highly reputable specialized medical centers at the level of the region• Developed medical tourism industry and its new acquired markets and advanced position at the global level.• An advanced pharmaceutical industry that enhances the value of pharmaceutical exports• The HHC with law No. 9 of 1999 with the aim of drawing the public health policies and the development of strategies for implementation and coordination between all health sectors• The existence of Health Institutions Accreditation Council• The existence of health laws for regulating the health sector notably the Public Health Law• The existence of strategic plans for most of the sectors of the health system.• Jordan effective participation at the international level in the provision of humanitarian emergency medical services in the areas of wars and disasters• The existence of a national observatory for human resources for health in the HHC• Institutionalized national health accounts as an important tool to draw a health policy in Jordan• The existence of national registries such as the National Cancer Registry, Kidney and mortalities

Weaknesses

- Lack of a universal health insurance and duplication of public health insurance and health service delivery
- Lack of a comprehensive national plan for the promotion and development of human resources for health
- Weak emergency services
- Lack of strategies and policies to contain and recover costs
- Weak investment in primary health care services compared to secondary and tertiary services
- Unplanned expansion of health services based on demand and not on the actual need
- Lack of a comprehensive national health information system that covers all health sectors, weak application of electronic medical records systems, as well as weak cooperation and coordination between the different health sectors and the concerned health councils
- Poor governance and lack of governmental or independent technical and administrative arm to monitor the performance of health subsectors
- The absence of health resilience plans to cope with crises and forced migrations.
- Weak synergies between the objectives and plans set by the strategic level and those set by the executive level
- Lack of a national standardized clinical guidelines and protocols
- Inadequate training in the field of management and strategic planning
- Inactive monitoring and evaluation systems for institutional performance in the public sector
- A centralized system
- Overlap and duplication in some health laws
- The lack of a governing body for research on health issues in Jordan, dearth in publication, and shortage of research in the field of health policies and systems

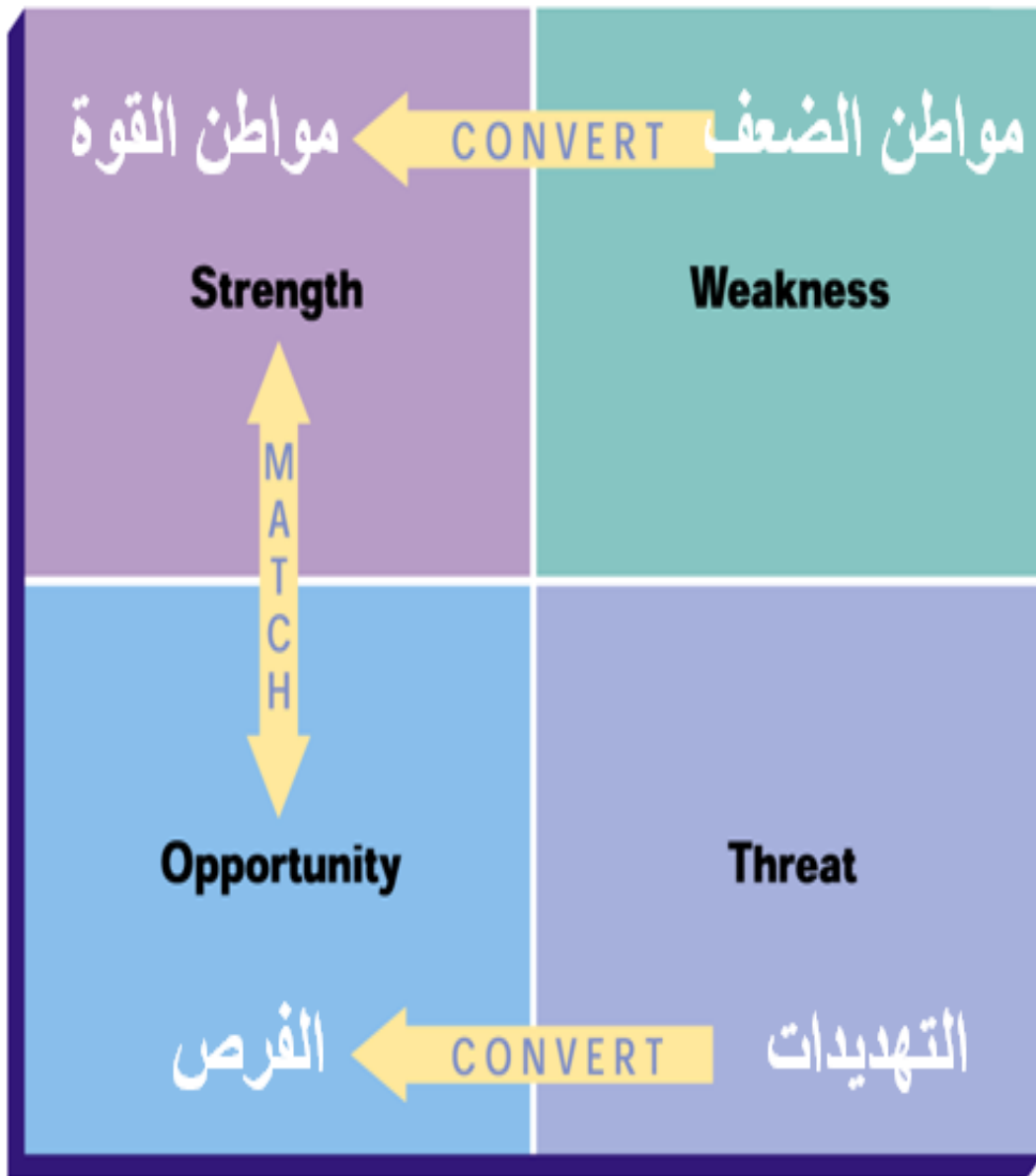
Opportunities

- Political support at the highest levels for health issues putting health on top priority
- Government belief in the role entrusted to the HHC and its intention to activate it.
- Political and security stability in Jordan
- The presence of a health committee represented in the parliament which is consulted in the review of important laws and health issues
- The existence of governing bodies for health issues such as the Jordanian Nursing Council, the Higher Population Council, the National Council for Family Affairs and the Higher Council for Persons with Disabilities
- Establishment of the Food and Drug Administration
- Establishment of the Joint Procurement Department
- The existence of strategies for many health-related issues such as: the National Strategy for reproductive health / family planning, the Jordanian Strategy for the elderly, Health Communication and Media strategy, the National Strategy for Diabetes and the National Strategy for AIDS
- The existence of supporting international bodies and organizations
- The existence of tourist and natural resorts and spas that help the health sector to compete for medical tourism
- The existence of initiatives to promote integrity, transparency, and accountability in the government agencies
- Increased citizens' awareness and interest in health issues
- The advanced ITC means and social media and broad number of users and the possibility to take advantage of these in the health sector.
- Integrating health issues in some of the national social and economic plans
- The existence of a strategic plan to reach the demographic opportunity and its optimal use
- High quality health education in Jordan
- The existence of the Department of Statistics as a governmental reference for data and information
- The existence of the Department of Civil Status and the possibility of linking their databases with health institutions
- Investment in infrastructure

Threats

- Demographic challenges (stable fertility rate, forced migrations, rapid population growth and increasing proportion of elder persons)
- Epidemiological transition of disease; increased rates of chronic disease and the difficulty of controlling the causes and risk factors
- Increased risk of pandemics & emerging diseases
- Climate change and its impact on health
- High debt, slow economic growth and high poverty and unemployment rates
- The high cost of health services
- Scarcity of financial resources allocated to health care, including the current expenditures in the public sector
- Migration of health competencies
- High out-of-pocket health spending, particularly on drugs
- High turnover in senior positions leading to a change in national priorities
- The absence of the role of the HHC in the formulation of health education policy
- Slow enactment of the legislation
- Corruption and slow deterrent sanctions against the corrupts
- Acceleration in technological development in general and in medical technology in particular
- Globalization and the global financial crisis
- Inadequate empowerment of individuals and communities to advocate for their own interests and to hold local governments accountable

Figure (24) The role of the National Strategy of Health Sector



The purpose of this document is to address the weaknesses and build on strengths by facing the threats and using the available opportunities in the health system. Therefore the strategy document contained the following:

The purpose of the strategy:

Achieve a decent standard of health for the population of Jordan

- A. **First Strategic Goal:** Support the policy environment and good governance in the health system

Strategic objectives emanating from this objective:

1. Activate the role of the HHC
2. Establish an effective partnership between all relevant sectors
3. Develop evidence-based plans, policies and decisions
4. Develop information systems and apply E-health systems
5. Develop and adopt effective legislation that improves performance of the health system
6. Encourage community participation, accountability and fair practices

- B. **Second Strategic Goal:** Provide individual-centered integrated health services and respond to the growing needs

Strategic objectives emanating from this objective:

1. Provide integrated and quality primary, secondary and tertiary health care
2. Control the spread of non-communicable diseases
3. Reduce the spread of communicable and emerging diseases
4. Provide home care services accessible for all
5. Develop the readiness of health services in case of emergency
6. Develop and rehabilitate human resources, fairly manage and distribute them.

- C. **Third Strategic Goal:** Provide health, financial and social protection to the entire population on a fair basis

Strategic objectives emanating from this objective:

1. Universal coverage for all citizens under social health insurance
2. Adopting cost containment strategies and plans to achieve efficient health spending between levels of health care.

D. Fourth Strategic Goal: Promote investment in the health sector to support the national economy.

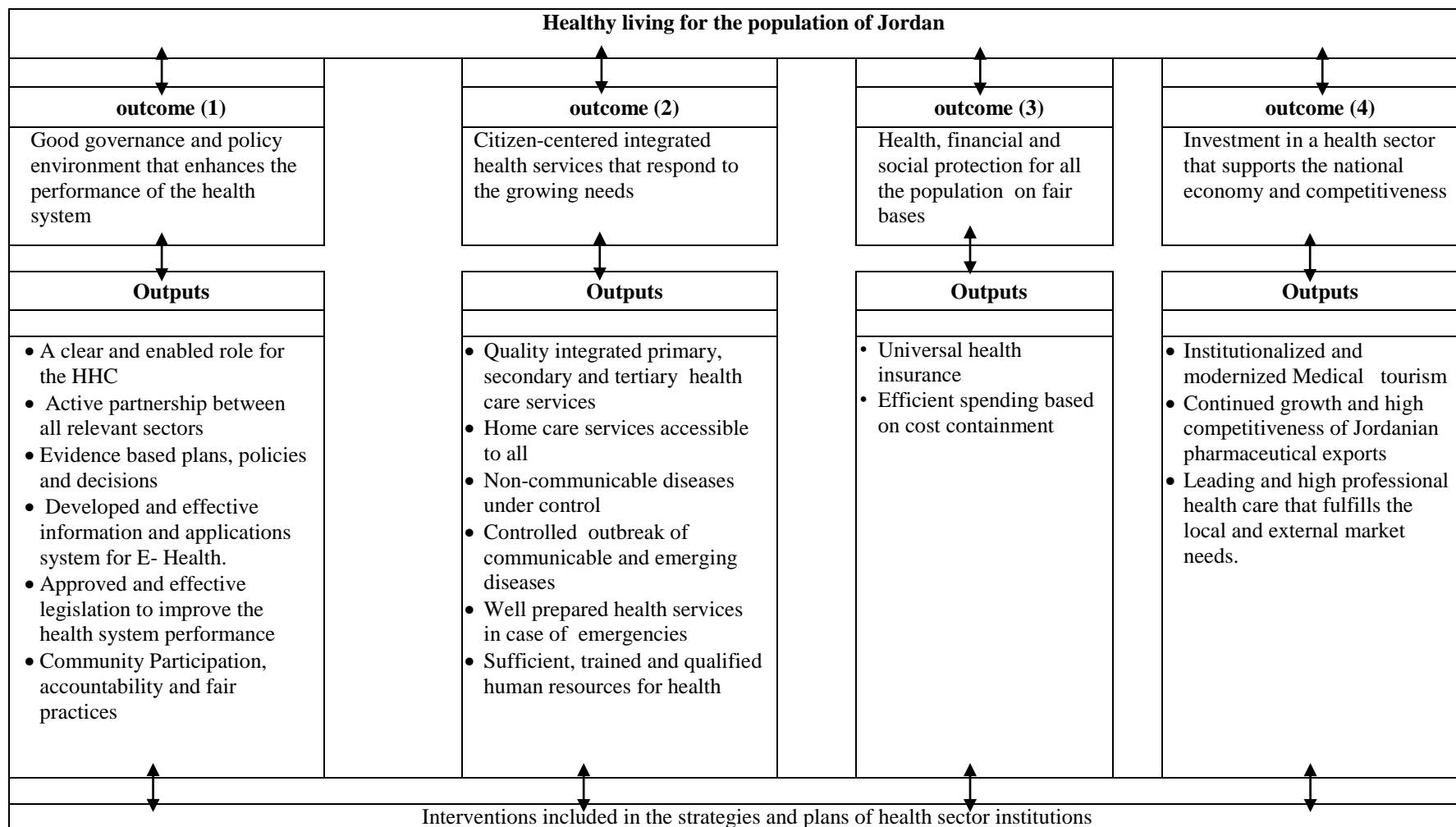
Strategic objectives emanating from this objective:

1. Institutionalize and develop medical tourism
2. Increase Jordan's medicine exports and global competitiveness
3. Achieve high professional medical leading position to meet the domestic and external market needs

The interventions have emerged from the strategies and plans of the health sector institutions. The following figure shows the impact and expected results and outputs to be achieved by the above objectives according to the Logic Model.

8. General Framework of the Strategy

Figure (25) The General Framework of National Strategy of Health Sector



The First Strategic Goal: Support good governance and policy environment in health system

Result (1): Good governance and policy environment to promote health system performance

1.1 Strategic objective: Activate the role of HHC

Outputs: A clear and enabled role for the HHC

Interventions:

- Develop a new modern law for the HHC to expand its powers and functions so that it becomes binding to all health sectors
- Strengthening the role of the HHC as a high reference body that draws health policies and coordinates between all health sectors and other concerned parties.
- Support the General Secretariat of the HHC and provide the Council with the necessary physical and human resources.

1.2 Strategic objective: Establish effective partnership between all relevant sectors

Outputs: Effective partnership between all relevant sectors

Interventions:

- Strengthen the partnership between public and private institutions and CSOs (charity) and the international organizations
- Improve coordination within the health sector to achieve integration in the delivery of health care services.

1.3 Strategic objectives: Develop evidence based plans, policies and decisions

Outputs: evidence based plans, policies and decisions

Interventions:

- Link the results of studies and research in the field of health with policy and decision-making based on the health sector needs
- Strengthen the role of the National Observatory of Health Human Resources as a national reference body in decision-making and related policies
- Promote the use of national health accounts and linking results to health policy-making.
- Establish a national regional center for training, studies and research in the field of health policy in collaboration with WHO and relevant International and local parties.
- Update the health map and use it as a tool to ensure the provision of health services to all citizens
- Include the health dimension in all strategies and policies

1.4 strategic objective: develop information systems and apply E-Health system

Outputs: advanced information systems and effective applications for E- health systems

Interventions:

- Develop a national strategy for information management, policy researches and health systems
- Develop a public health monitoring system in Jordan (on CDs and NCDs, maternal and child health care, and mental health for Jordanians and non-Jordanians)
- Develop a monitoring system for causes of morbidity and mortality and oblige all health institutions to adopt the international classification of diseases (ICD) in all hospitals.
- Promote the concept of knowledge management.
- Encourage and support automation programs and E-health in all health sectors
- Accelerate the implementation of the National Program for E-Health Smart Card
- Enact appropriate legislation to commit the private sector to provide the concerned parties with the required health information.

1.5 Strategic objective: develop and indorse effective legislation to improve performance of the health system

Outputs: indorsed and effective legislation to improve health system performance

Interventions:

- Activate the laws related to combating smoking and the use of narcotic substances.
- Adopt and endorse health and medical liability law
- Adopt amendments to the law of the HHC
- Activate the Medical Council law relative to re-evaluation of competence certification and issue legislation to oblige health institutions to organize ongoing training programs for all employees in health professions
- Activate the regulatory legislation for organizing the delivery of health services in all sectors
- Organize and institutionalize the work of CSOs concerned with the health sector

1.6 Strategic objective: encourage community participation and accountability and fair practices

Outputs: Community participation and accountability and fair practices

Interventions:

- Promote community accountability among citizens in the health sector
- Support research and studies on integrity issues in the health sector
- Promote information disclosure policy to achieve transparency and accountability
- Introduce mandatory implementation of the Code of Ethics and professional conduct in all health sectors
- Adopt monitoring and evaluation systems for professional performance in the health sector at individual and institutional levels.

The second strategic goal: Provision of integrated client- centered health services that are responsive to the growing needs

Result (2): Integrated client-centered health services that are responsive to the growing needs

2.1 Strategic objective: provide integrated and quality primary, secondary and tertiary health services

Outputs: Integrated and quality primary, secondary and tertiary health services

Interventions:

- Improve the level of primary, secondary and tertiary health care services and make them accessible on fair bases
- Promote reproductive health/ family planning programs to ensure the provision of high quality RH/FP services and information.
- Support the implementation of national strategies for the most vulnerable groups such as the elderly and persons with disabilities
- Improve the ambulance and emergency services
- Implement an efficient referral system of patients between levels of health care and between public and private institutions.
- Create and strengthen the capacities of health care institutions for accreditation certificate.
- Extend quality and safety programs and ensure their sustainability in all health institutions
- Establish an internal mechanism to manage errors in practice for monitoring, identifying and addressing the causes, and preserving the rights of patients and service providers.
- Provide essential drugs to all population and without interruption
- Establish a mechanism to involve the local community in planning, implementation and following up the health programs
- Approve family medicine as an entrance for health care in the private and public sectors.

2.2 Strategic objective: Control non communicable diseases

Outputs: Non-communicable diseases under control

Interventions:

- Support the implementation of the national strategy for the prevention of diabetes and non-communicable diseases (such as diabetes, hypertension, hyperlipidemia and obesity)
- Support the implementation of the national strategy of cancer control.
- Promote healthy lifestyles patterns with a focus on children and youth groups.
- Reduce traffic accidents and work injuries.
- Promote mental health programs at the primary and secondary levels

2.3 Strategic objective: Control communicable and emerging diseases

Outputs: Controlled prevalence of communicable and emerging diseases

Interventions:

- Enhance the electronic monitoring program of communicable diseases.
- Support communicable disease control programs
- Support the national immunization program
- Strengthen the monitoring and implementation of the International Health Regulations

2.4 Strategic objective: Accessible home care services for all

Outputs: Home care services accessible to all

Interventions:

- Develop and support home health care, especially for the elderly, people with disabilities and people with chronic diseases.
- Organize home care institutions and monitor them
- Include home care services in the government and private health insurance programs

2.5 Strategic objective: Develop the readiness of the health services in emergency situations.

Outputs: Emergency health services with high readiness

Interventions:

- Review of disaster and emergency rescue plans and update them in coordination with the concerned authorities in the state such as MOH, Civil Defense, Public Security Department, Royal Medical Services and Greater Amman Municipality, other municipalities, etc.
- Develop training programs for those involved in the implementation of disaster, emergency and rescue plans to achieve an effective management of crisis.
- Raise the efficiency of emergency departments in public and private hospitals to deal with injuries, accidents, armed conflict and mass incidents

- Support the development of the patient and injured people transportation means and the effective use of communication technology and E-health care in the ambulance and rescue services.

2.6 Strategic objective: Development, training, management and fairly distribution of human resources

Outputs: Qualified, trained, qualified, and sufficient health human resources

Interventions:

- Adopt strategic planning for human resources and distribute them according to actual needs.
- Support the national observatory of human resources for health and enhance its role in decision making and related policies.
- Increase investment in training and management of human resources
- Develop a national strategy to control the migration of competent human resources, and attract the emigrant and expatriate competencies
- Require all public and private health sectors to apply the continuous learning and training programs for all health professions.
- Establish a mechanism for the participation of the health sector represented by the HHC in drawing the health education policy.
- Standardize the wages and incentives for the health workers in the public sector institutions and link them to the performance.

The third strategic Goal: Provision of health, financial and social protection for all citizens on fair bases

Result (3): Health, financial and social protection for all citizens on fair bases

3.1 Strategic Objective: Social, health and financial risk protection for all population based on equity.

Outputs: Universal social health insurance for all population.

Interventions: (interventions to reform health financing system to achieve social health insurance for all population)

- Convert the civil health insurance fund to a national health insurance fund.
- Integrate the government health insurance which is based on "prepayment" into the national health insurance fund such as (the royal medical services and the universities hospitals)
- Enlarge the coverage of the national health insurance fund to include the private sector.
- Make the national health insurance fund an independent body under supervision of a trustee board composed of all concerned sectors.
- Unify contributions, benefit package, and provider payment mechanism.
- Capacity building for the national health insurance fund on contracting with service providers in the private sector

- Grant more regulatory powers to: MoH and HHC on the insurance parties of the private sector to ensure their compliance with the policies of the national health insurance fund.
- Capacity building for the cadres of the fund especially in the fields of subscription, finance management, design insurance benefits, cost calculations and information management.

3.2 Strategic objective: Adopting cost containment strategies and policies for effective health spending on all health care levels

Outputs: Spending on health sector based on cost containment

Interventions:

- Increase financial allocations to primary health care services (both directly and indirectly through cost containment in hospitals).
- Expand the application of cost containment programs of health services (such as the joint purchase and rational use of medicines).
- Link the process of creating health institutions, the acquisition and use of health technology to the actual needs.

Fourth Strategic Goal: Promote Investment in the Health Sector to Support the National Economy:

Result (4): Investment in the health sector that is supportive to the national economy and competitiveness

4.1 Strategic objective: Institutionalize and develop medical tourism

Outputs: Institutionalized and developed medical tourism

Interventions:

- Establish a Medical tourism council
- Adopt a national strategy for Medical tourism
- Develop a national plan to promote medical tourism
- Promote entrepreneurship in medical tourism programs (organ transplantation, heart surgeries, neuro surgery, plastic and reconstructive surgery, stem cell services, IVF, and dental health, etc.)
- Establish a specialized database of patients of medical tourism.

4.2 Strategic objective: increase Jordanian pharmaceutical exports and achieve global competitiveness

Outputs: Continuous growth of Jordan pharmaceutical exports and achieving high competitiveness

Interventions:

- Compliance to the new international production standards
- Build strategic partnerships for the production of pharmaceuticals
- Build factories in large regional export markets

- Access new markets
- Open new production lines
- Adopt the principles of good governance
- Attract and encourage investment in the pharmaceutical industry

4.3 Strategic objective: Achieve medical entrepreneurship with high professionalism to meet the local and external market needs

Outputs: High professional medical entrepreneurship meets local and external market needs

Intervention:

- Establish medical Centers of Excellence in partnership with the public and private sectors
- Support and develop accredited medical and health education programs
- Use and develop electronic E-Learning applications
- Support and encourage medical simulation in teaching
- Strengthen and develop health management

9. Monitoring and Evaluation Plan

A participatory approach was followed in the preparation phase of monitoring and evaluation plan as well as in other phases of this strategy. This was done through the formation of a monitoring and evaluation committee that involved all stakeholders. The committee has developed an integrated approach for the process of monitoring the implementation of the strategy interventions. It also included periodic measurement of outcome indicators in order to assess the progress towards the desired effect. The HHC will assume the responsibility of monitoring, assessing and correcting the implementation of this strategy through these indicators in collaboration with all stakeholders and partners.

Objectives of monitoring and evaluation plan:

The monitoring and evaluation plan seeks to achieve the following objectives:

1. Follow up the implementation of the national strategy interventions and adapt them to the health sector with the action plans of the partners.
2. Ensure cooperation, coordination and integration between the various health sector institutions through the HHC
3. Provide standardized tools and indicators for monitoring and evaluating the achievements of the health sector
4. Ensure the provision of feedback on an ongoing basis in order to achieve the objectives.
5. Detect main problems and obstacles facing the implementation of the strategic interventions at an early stage and propose possible solutions.
6. Keep abreast with the new developments and emerging health issues and control them by modifying the strategy.
7. Evaluate the progress of the national strategy, the government action program and the Jordan 2025 economic blueprint.

8. Exemplify the concept of participatory approach in the evaluation of the strategic interventions
9. Build the capacity of the health sector institutions in using monitoring and evaluation tools, mechanisms and methodologies.

Monitoring and evaluation methodology

1. Determine the actors involved in the implementation of the national strategy of health sector interventions
2. Address the actors that have been identified to nominate liaison officer for each party
3. Prepare follow-up and evaluation forms by the strategy monitoring and evaluation committee.
4. Hold a preliminary meeting for the liaison officers in order to familiarize them with their duties and inform them of the adopted follow-up and evaluation methodology as well as advise them on filling the monitoring and evaluation forms and the use of annual reports as feedback mechanism.
5. Identify key interventions to be implemented according to the timeline as per their annual strategic plans
6. Collect the necessary information on the outcome indicators on an annual basis to check whether they are on track, and calculate the deviation of each indicator from the target value
7. Provide the HHC with the filled forms of monitoring and evaluation including analysis of the reasons for the deviation of the indicators, as well as identifying obstacles facing the implementation proposing recommendations to address these obstacles.
8. The HHC reviews all of the indicators and follow-up and evaluation
9. The HHC will hold bilateral or multilateral meetings with relevant institutions in order to develop a plan to deal with the obstacles that have been identified with respect to deviant indicators
10. The HHC shall conduct a final evaluation of the strategy .This assessment should take place before the end of 2020, to give sufficient time in order to include lessons learned from this strategy in the subsequent one.

The success factors of the follow-up and evaluation process:

1. The political support at the highest levels to the role of the HHC in the development of public health policy and the national strategy.
2. The HHC is authorized according to its mandate as per with paragraph (a) of Article 4 of law No. 9 of 1999, which states: "Periodic assessment of health policy for making the necessary modifications in the light of the outcome of its application."

3. Applying a participatory approach in the preparation of a clear methodology and agree on appropriate mechanisms of implementation of the monitoring and evaluation with the participation of all stakeholders.
4. Cooperation of all partners and stakeholders in gathering information on the strategic indicators, filling out forms of follow-up and evaluation in a transparent way, and provide them to the Council in a timely manner.
5. Commitment of the HHC to conduct regular analysis of the outcome indicators, identify deviations, prepare periodic monitoring and evaluation reports and provide feedback to the partners

10 . Indicators

Result (1): Policy and Good Governance Environment that Promotes Performance of the Health System

	Indicators	Current value 2015	Target value					Data source	Measurement frequency
			2016	2017	2018	2019	2020		
1	Update the legislation of the HHC	Amendments to HHC law	Amendments to HHC law	Amendments to HHC law	Approved law	Enforced law	Enforced law	HHC	Annual
2	Number of implemented initiatives in partnership between public and private through the HHC	(4) 1. Universal Health Coverage 2. National Strategy of Health Sector 3. National Observatory for Human Resources for Health 4. National Health Accounts	5	5	6	6	6	HHC	Annual
3	Number of good governance initiatives implemented in the public sector	(3) 1. Medicines Transparency Alliance 2. Good governance in Medicine 3. Project of integrity in health sector	3	4	4	5	5	Food & Drug Administration MoH	Annual

4	Number of national health initiatives implemented in partnership with local communities	3 Healthy villages project Accreditation program Patients' rights initiatives	3	4	4	5	5	MoH HIAC	Annual
5	Number of policy briefs developed in health policies	2 Coordinating different parties in HRH Retaining MOH physicians in remote areas	4	5	6	7	8	HHC JMC	Annual
6	Databases linking public sector and King Hussein Cancer Center	5 MOH RMS University of Jordan Hospital King Abdulla the First Hospital KHCC	5	5	5	project Completed	Continuous	Health Computerization company	Annual
7	Public Health Surveillance System	-	Pilot phase in some MoH facilities	Applied in all MoH facilities	Applied in all health public sector facilities	Continuous	Continuous	MoH and WHO	Annual

Result (2): Integrated citizen-centered health services that respond to the growing needs

	Indicators	Current value 2015	Target value					Data source	Measurement frequency
			2016	2017	2018	2019	2020		
1	Wasting rate in children under 5years	2%	2%	2%	2%	2%	2%	MoH	Every 5 years
2	TB incidence rate per 100,000	4.42	4.32	4.22	4.11	4.0	3.9	MoH	Annual
3	Malaria incidence rate among Jordanians	Zero	Zero	Zero	Zero	Zero	Zero	MoH	Annual
4	Number of Paramedics from civil def. college	552	652	752	852	952	1052	Civil defense	Annual
5	Total fertility rate	3.5	-	-	3.2	-	-	Statistics department	Every 5 years
6	Use of modern RH/FP	42.3%	52%	55%	57%	58%	59%	Statistics department	Every 5 years
7	Stunting rate in children under 5	8%	8%	7%	7%	6%	6%	MoH	Every 5 years
8	AIDS 10.000 of population	1>	1>	1>	1>	1>	1>	MoH	Annual
9	Infant mortality rate (per 1000)live birth	17	-	-	12	-	11	Statistics department	Every 5 years
10	Under 5 child Mortality (per 1000) live birth	21	-	-	17	-	15	Statistics department	Every 5 years

11	Maternal mortality per 100.000 live birth	19.1	-	-	-	-	18	MoH Higher Population Council	Possible study
12	Rate of using postnatal services	86%					90%	Statistic Department	Every 5 years
13	Jordan rank in elderly health on Global Age Watch Index	67 (2014)	67	65	60	55	63	National Council for family affairs/Global report on elderly	Annual
14	National Strategy for elderly/Health	Exist	Progress report on health dimension in the strategy	Update Health dimension in the strategy	Implementation of Health initiatives	Monitor health performance indicators	Health Initiatives final assessment	National Council for family affairs	Every 5 years
15	Number of policies supporting geriatric medicine	4 National Strategy for elderly MoH strategy National Strategy for Health Sector Demographic opportunity document	5	6	7	8	9	National Council for family affairs	Annual
	Number of physicians specialized in elderly medicine	1	1		5		12	NCFA	Every 2 years

17	Diabetes prevalence among citizens of 18+ years	16% (2007)*	16%	16%	16%	16%	16%	MoH	Possible study
18	Hypertension Prevalence among citizens of 18+ years	26% (2007)	26%	26%	26%	26%	26%	MoH	Possible study
19	Smoking prevalence among citizens of 18+ years	29% (2007)	27%	27%	26%	26%	25%	MoH	Possible study
20	Cancer cases(breast, colon) Detected at early phases (National record)	3.5	-	-	3.2	-	-	Statistics department	Annual
21	Cancer survival rate(after 5 years of treatment)	64%	64%	64%	64%	65%	65%	MoH	Annual
22	Number of qualified centers to provide Palliative and psychological care for cancer patients and families	2	2	3	4	4	5	MoH	Annual
23	Practitioners of modest physical activities	68%	70%	72%	72%	74%	75%	MoH	Possible study

24	Number of primary & comprehensive centers qualified to treat physiological cases		31	32	34	36	38	40	MoH	Annual
25	Number of health care institutions with accreditation (Accumulated)	Hospitals	17	25	30	35	-	-	HCAC	Annual
		Health Centers	90	106	130	150	-	-		
26	Bed rate per 10.000 pop.		14	14	15	15	15	15	MoH	Annual
27	Physician rate per 10.000pop.		15.6	16	17	18	19	20	HHC	Annual
28	Dentist rate per 10.000pop.		7.2	7.5	7.8	8	8.1	8.2	HHC	Annual
29	Pharmacist per 10.000pop.		11.8	12	12.5	13	13.5	14	HHC	Annual
30	Registered Nurse per 10.000pop		15.2	15.5	15.7	16	16.5	17	HHC	Annual
31	Midwife per 10.000pop		2	2.1	2.2	2.2	2.3	2.3	HHC	Annual

*Those indicators are the latest available

Result (3): health, financial and social protection to all citizens based on fair grounds

	Indicator	Current value, 2015	Target value					Data Source	Measurement frequency
			2016	2017	2018	2019	2020		
1	Per Capita Health Care Expenditures (JD)	231.8 (2013)*	236	240	245	250	256	HHC	Annual
2	Health Insurance coverage rate among Jordanians	%68.14 **	%70	%72	%74	%78	%82	HHC, MoH ,DOS	
3	Health Insurance coverage rate among Population	%55 **	%55.5	%56	%57.5	%59	%61	HHC, MoH ,DOS	Annual
4	Public Health Expenditure as Percent Of THE	%65.75 (2013)*	%66	%66.2	%66.4	%66.6	%66.8	HHC	Annual
5	Public Health Expenditure as Percent Of GDP	%7.89 (2013)	%7.5	%7.5	%7.4	%7.3	%7.2	HHC	Annual
6	Pharmaceutical Exp As Percent of THE	%26.60 (2013)*	%26	%25.5	%25	%24.5	%24	HHC	Annual
7	Out of Pocket Expenditure	%28.8 (2013)*	%27.5	%27	%26.5	%26	%26	HHC	Annual
8	Primary health care Exp. as Percent of Public Health Expenditure	%15.69 (2013)*	%16	%17	%18	%19	%20	HHC	Annual

Source:

*Jordan NHA, HHC - Those indicators are the latest available

**DOS

Result (4): Investment in health sector that supports the national economy and competitiveness

	Indicator	Current value, 2015	Target value					Data Source	Measurement frequency
			2016	2017	2018	2019	2020		
1	Medical tourism revenues (in million JD)	849.600	936.684	983.412	1,032,264	1,182,000	1,242,000	Private H. Association	Annual
2	Medicines exports revenues (in million JD)	439.000	506.000	581.000	673.000	775,000	880,000	Drug Producers Ass	Annual
3	Medical accountability law enforced and implemented	Draft law	Draft law	Approved	implemented	implemented	implemented	MoH	Annual
4	Active medical tourism council established	Under establishment	Under Establishment	Active Council	Active council	Active Council	Active council	MoH PH Association	Annual

Monitoring and evaluation Form of the National Strategy of Health Sector 2016- 2020

Date of filling out the form:

Name of the partner institution:

M&E focal person's name (who fills the form):

Indicator No	Indicator	Indicator Value		Deviation value	Challenges Barriers for Non-Implementation	Recommendation to improve performance
		Base line value	Target value			

11. References

* References in Arabic Language:

1. Jordan Chamber of Industry. Economic Indicators Bulletin of the Jordanian industrial sector edition III – February, 2013
2. United Nations Development Program. Human Development Report, 2014
3. Public Security Directorate / Central Traffic Department: <http://www.traffic.psd.gov.jo>
4. General Directorate of Civil Defense: Accidents annual statistical report in 2012
5. National Council for Family Affairs: National framework for the protection of family from violence, 2006
6. National Council for Family Affairs. Strategic Plan for the protection of the family and the prevention of domestic violence, 2005 – 2009
7. Ministry of Health: Ministry of Health's strategy for the years 2013-2017
8. Health Insurance Department / Ministry of Health, 2013.
9. Abu Saif, Jamal. Abu Samen, Taher. Saleh, Kamal. Et al. Health insurance and spending on health in Jordan, Department of Statistics in collaboration with the HHC, 2010.
10. Civil Health Insurance Regulation No. 83 of 2004, as amended.
11. Annual Statistical Report of the Royal Medical Services for 2013.
12. Technical Report Series of health accounts in Jordan / General Secretariat of the HHC 2008 – 2012
13. National Strategy for rationalization of expenditure on medicine in Jordan, HHC, 2014 - 2016.
14. Jordanian pharmaceutical industry database / Jordanian Federation of Pharmaceutical Manufacturers - 2010.
15. National Agenda: Jordan we want 2006- 2015, the Ministry of Planning and International Cooperation, 2006.
16. National Health Strategy 2008- 2012, HHC
17. Annual report on human resources for health in Jordan, HHC, 2013
18. Annual Statistical Report, Ministry of Health 2013
19. National Agenda: Jordan we want 2006- 2015, the Ministry of Planning and International Cooperation, 2006
20. National Strategy for reproductive health / Family Planning (2013-2017), the Higher Population Council
21. Economic and social impacts of the Syrian Refugee Crisis, Dr. Khaled Wazani, 2014
22. Population and Household Health Survey, the Department of Statistics, 2012
23. Ministry of Health Strategy 2013- 2017
24. Ministry of Health, Primary Health Care Department
25. "We All Jordan" document, Ministry of Planning
26. The HHC Website
27. "Jordan 2025" document
28. World Health Organization / Regional Health Observatory
<http://rho.emro.who.int/rhodata/?vid=2623#>
29. Musa Ajlouni, the impact of Syrian refugees on health sector in Jordan: Challenges and proposed health policies, "Refugees in Jordan: Question of society and media" conference, organized by the Jordan Media Institute in collaboration with the Norwegian Institute of Journalism. Dead Sea, 8-10 / 12/2014

30. The Higher Population Council Website
31. The Jordanian Nursing Council Website
32. The Jordanian Medical Council Website
33. The National Council for Family Affairs Website
34. The Department of Joint Procurement Website
35. Food and Drug Administration Website
36. The Association of Private Hospitals Website
37. Jordanian National Strategy for the elderly, the reference document 2008, the National Council for Family Affairs
38. Report on the implementation of National Strategy for the elderly "Monitor the achievements of institutions 2009 - 2011", the National Council for Family Affairs
39. Health Institutions Accreditation Council Website
40. Consanguinity and its relation with genetic diseases.
41. Alzyoud Ismail, Jordan society attitude towards early marriage: field study, journal of social and humanitarian science. Folder 39. Edition 2, 2012.
42. Instructions of the year 2011 to give marriage permission for those under the age of 18 years, published on 16/1/2011, page 162-official newspaper no. 5076
43. Children marriage. UNDP, 2012.

References in English language

1. http://www.who.int/social_determinants/sdh_definition/en
2. Ministry of Planning and International Cooperation: <http://193.188.65.54/dashboard/En/Default.aspx>
3. Department of Statistics: http://www.dos.gov.jo/sdb_ec/sdb_ec_e/index.htm
4. http://www.dos.gov.jo/dos_home_e/main/archive/inflation/2013/CPI%20_Aug.pdf
Comprehensive Review of Jordan Health System
5. World Bank: <http://www.worldbank.org/en/country/Jordan>
6. Ajlouni, Musa (2011). Jordan Health System Profile 2010 (Unpublished report submitted to WHO / EMRO), August 2011.
7. <http://www.ehs.com.jo/ar>
8. <http://www.dos.gov.jo>
9. <http://www.cspd.gov.jo>
10. Abu-Saif, Jamal. Et al. Fairness in Financial Contribution in Jordan. High Health Council in collaboration with The World Health Organization, 2010.
11. <http://phajordan.org>
12. OECD- EU statistical pharmaceutical data, 2012.
13. Ajlouni, Musa. Comprehensive Review of Jordan Health System, (A country report submitted to WHO EMRO), Sep., 2013.
14. Ajlouni, Musa (2010). Jordan Human Resources for Health (HRH) Country Profile, 2010, WHO / EMRO.
15. MOPIC, UNDP (2011). Second National Millennium Development Goals Report Jordan 2010.
16. Kaufman D, A.Kraay, and M. Mastruzzi (2010), *The Worldwide Governance Indicators: Methodology and Analytical Issues*. http://info.worldbank.org/governance/wgi/sc_chart.asp#
17. Transparency International's 2012 Corruption Perceptions Index http://www.transparency.org/whatwedo/pub/corruption_perceptions_index_2012

18. Hania Dewani and Musa Ajlouni, Assessment of Current Situation of Home Health Care Services in Jordan: A study report submitted to Scientific Research Support Fund, Ministry of Higher Education and Research, August 2012.
19. A study on early marriage in Jordan, UNICEF, 2014.

12. Members of the Technical Committees

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- **The Strategy Review Local expert, Dr. Musa Ajlouni**
- **Steering Committee of the National Strategy of Health**
 - 1- The Secretary General of the HHC, Dr. Hani Ameen Brosk al Kurdi - Chairman of the Steering Committee
 - 2- Secretary General of the Jordanian Nursing Council, Dr. Muntaha Gharaibeh
 - 3- Secretary General of the Higher Population Council, Dr. Sawsan Majali
 - 4- Director of the Royal Medical Services, Major General doctor Khalaf Jader Sarhan
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 - 7- Director of the Department of Health Directorates - Ministry of Health, Dr. Bashar Abu Salim
 - 8- Director of Hospital Administrations - Ministry of Health, Dr. Ahmed Kotaitat
 - 9- Director of the Directorate of Planning and Project Management - Ministry of Health, Dr. Riad Okour
 - 10- Director of the Directorate of Technical Affairs and Research / HHC, Dr. Jamal Abu Saif
 - 11- Chairman of the Private Hospitals Association, Dr. Fawzi Hammouri
 - 12- The UNHCR representative Mr. Ibrahim Abu Siam
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 2. Director of the Technical Affairs, Studies and Research Directorate / HHC, Dr. Jamal Abu Saif
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 6. Head of Planning and Project Management Department/ HHC, Dr. Raghad Mohammed Hadeedi
 7. Head of the Department of Studies and Research / HHC, Dr. Ghada Talal Kayyali
 8. Head of Department of Health Economics and Funding / HHC Mr. MUIEN ABU – SHAER

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2. Director of the Directorate of Technical and Research Affairs / HHC, Dr. Jamal Abu Saif
3. Director of Quality Directorate - Ministry of Health, Dr. Ghassan Fakhoury
4. Director of the Information Directorate - Ministry of Health, Dr. Nidal al-Azab
5. Information Directorate - Ministry of Health, Dr. Majed Asaad
6. Medicine field commander - the Royal Medical Services, Brigadier doctor Mansour Karadsheh
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- Dr. Jamal Abu Saif/ HHC- Head of the group
- Dr. Taiseer Fardous/ Representative of MoH
- Dr. Khalid Abu Hudeib/ Representative of MoH / Health Insurance Department
- Sa'ed Al Qusous/ Representative of Jordan Association of Insurance Companies.
- Mr. Fahmi Al Osta/ HHC
- Dr. Farhan Ahmad Mufleh/ Representative of Royal Medical Services.

Second Focus Group: Injuries and Incidents

- Dr. Ghada Al Kaiyali/ HHC – Head of the group
- Dr. Malik Al Habashneh/ Health Information and Awareness
- Captain Sulaiman Woreikat/ Representative of Civil Defense Department
- Lieutenant Colonel Basim Al Kharabsheh/ Representative of Central Traffic Department
- Mr. Seraj Al Hmoud/ Representative of Royal Society for Health Awareness
- Ms. Mai Sultan/ Representative of Higher Council for Family Affairs

Third Focus Group: Reproductive Health Services

- Dr. Raghad/ HHC- Head of the group
- Mrs. Assma Ameer / National Woman's Health Care Center
- Dr. Khawla Kou/ Representative of MoH
- Ms. Nesreen Qatamish/ Representative of Jordan Program for Breast Cancer.
- Dr. Salma Al Zu'bi/ Representative of Jordan Association for Family Planning and Protection
- Dr. Sawsan AL De'ajah/ Representative of Higher Council for Population.

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2. Accountant / Ms. Alia Atiya
3. Secretary of the Steering Committee / Mr. Ali Anees Tarifi
4. Secretary of the Technical Committee / Mr. Sami Issa Salem
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