



**The Hashemite Kingdom of Jordan**  
**The Higher Health Council**

**The National Strategy for Health Sector in Jordan**  
**2015- 2019**



***" and to improve the quality of life of each citizen requires attention to Heath care as a right for each citizen. The healthy reassured citizen for his health and the health of his children and family is the who is able to work and produce"***

From the speeches of His Majesty  
King Abdullah II Bin Al-Hussein

## **Acknowledgements**

Accomplishment of this national strategy of health sector in Jordan for 2015 - 2019 by the Higher Health Council was made with the support and cooperation of WHO through a participatory approach with all health sectors in Jordan and other related parties, without whom the strategy wouldn't have come into the light. We would like to extend our sincere thanks to the Minister of Health/ Chairman of the Higher Health Council for his continued support and valued guidance that allowed for the accomplishment of this document. Also we extend our sincere thanks to all who contributed to the completion of this national product particularly the local expert of the strategy, Dr. Musa Ajlouni, and to all members of the committees formed by His Excellency the Chairman of the Higher Health Council for the preparation of this strategy. Also we extend our sincere thanks and gratitude to technical support and assistance provided by the WHO representative in Jordan, and Chairman of its mission Dr. Maria Christina Profili and all employees in the organization's office in Jordan, and the WHO experts at the Regional Office in Cairo, headed by Regional Director HE Dr. Ala Alwan and HE. Director of health system development, Dr Thameen Sediqi.

## **The purpose of this document**

**This document represents the key features of the national strategy of health sector in Jordan for the years 2015 - 2019 based on the Higher Health Council Law No. 9 of 1999 and in line with the objectives set out in the National Agenda for Jordan and "We are all Jordan Document", the government action plan 2013 – 2016, the economic outlook for Jordan in 2025 as well as the goals, tasks and responsibilities stipulated in the Higher Health Council Law, in addition to all other strategies of health. A description and analysis of the health sector in Jordan was made and priorities and objectives were identified to ensure the advancement of the whole sector and enhance its capacity to provide efficient health services for all citizens in the Kingdom, and maintain Jordan's leading position in this field.**

## Table of contents

#		
1	Introduction	
2	Vision, Mission and Values	
3	Methodology	
4	Demographic situation	
5	Socio-economic situation	
6	Analysis of the current health situation	
6.1	Health System Governance	
6.2	Provision of health services	
6.2.1	Primary Health Care	
6.2.2	Secondary and tertiary health care	
6.2.3	The quality of health service	
6.2.4	Injuries and incidents	
6.3	Health care funding and investment in the field of health	
6.3.1	Health funding and spending	
6.3.2	Health insurance coverage	
6.3.3	Medical tourism	
6.4	Human Resources	
6.4.1	Current patterns of Human Resources for Health	
6.4.2	Governance of Human Resources for Health	
6.4.3	Production, education and training	
6.4.4	Management and employment of health human resources	
6.4.5	Information and studies related to health human resources	
6.6	Medicines and health technology	
6.6.1	The situation of the pharmaceutical sector	
6.6.2	Pharmaceutical Industries	
6.6.3	Spending on drugs	
6.6.4	Health Technology	
7	The impact of the Syrian refugees on the health sector	
8	Strategic Analysis	
9	General framework of the strategy	
10	Follow up and evaluation plan	
10.1	Follow up and evaluation methodology	
10.2	Indicators	
	Annexes	
	References	
	Technical committee members	

**List of Tables:**

#	Title	
1	Number of traffic accidents and their consequences, and the annual rate of increase or decrease 2009 - 2013	
2	Number of domestic violence cases dealt with by social service office in the Family Protection Department (2007- 2011)	
3	Key indicators of national health accounts in Jordan for 2008 - 2012	
4	Human resources indicators (2009- 2013)	
5	Spending on drugs indicators	
6	Distribution of Syrian refugees by age groups, in 2014	
7	Average incidence of some communicable diseases among Jordanians and Syrian refugees	
8	Health indicators in Jordan before and after Syrian refugees	

**List of Figures:**

#	Description	
1	The relative distribution of population by selected age groups	
2	Real GDP growth rate in Jordan and developing countries in the Middle East and North Africa, 2004 - 2013	
3	Projected GDP growth rate in Jordan for 2014 - 2016	
4	Inflation and GDP growth rates in the fixed prices (2009 - 2013)	
5	Poverty rates for 1997- 2010	
6	Unemployment rate for 2005 - 2012	
7	Major components of health sector in Jordan	
8	Governance indicators in Jordan for 2011, 2006 and 2002 (arranged from top to bottom)	
9	The evolution of the number of health centers during 2006- 2013	
10	Prevalence of smoking and tobacco products among adults 15 years and over / males (2009)	
11	The main causes of death in Jordan 2003/ 2009	

12	Infant mortality rate (infants, newborn and under five years of age) per 1,000 live births	
13	The birth rate in Jordan for 1976 - 2012	
14	The distribution of hospital beds in the Kingdom by health sectors for 2013	
15	The rate of hospital beds per 10,000 citizens in Jordan and some countries in the world	
16	Jordan projected need of hospital beds in 50 years (2014-2064)	
17	Number of inhabitants covered by health insurance by insurance party	
18	Percentage of individuals covered by health insurance by Governorate (2010)	
19	Rates of doctors and nurses per 10,000 citizens in Jordan and Arab countries for 2011	
20	The distribution of health human resources by profession in Jordan for 2013	
21	The distribution of health human resources professions in Jordan by sector (public, private) for 2013	
22	The number of Syrian refugees receiving medical assistance at MoH health centers January – August, 2014	
23	Number of Syrian refugees receiving medical assistance at MoH hospitals January - August, 2014	
24	The role of the National Strategy of health sector	
25	The general framework of the national strategy of health sector	

## **1. Introduction**

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

It is my pleasure to present the national strategy for health sector for 2015- 2019 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 steady 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 Higher Health Council 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 you...

Minister of Health / Head of the Higher Health Council

Dr. Ali Hiasat

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, an emergence 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 cease 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.

God grants you success,

Secretary General of the  
Higher Health Council

D. Hani Ameen Brosk Kurdi

## 2. Vision, Mission and Values

### Vision:

Effective health system with a human and economic dimension that ensures the entire population high-quality lifelong health care and puts the Kingdom at a cutting edge on the world health map.

### 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 citizens and residents within a healthy economy 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.

**Justice:** Access of all citizens 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 optimum 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:** Access of all citizens to health care under the umbrella of any health insurance scheme.

## **2. Strategy Development Methodology**

### **First: Setting the Stage**

1. A plan was developed to prepare the strategy including the required budget and the time schedule to implement it. It was submitted to WHO office in Jordan to get their approval to provide technical and financial support.
2. Official letters were sent to His Excellency the Prime Minister and approved
3. A local expert was contracted and he reviewed the document which has been prepared for the strategy by working closely with the Directorate of Technical Affairs at the General Secretariat of the Higher Health Council within the duly agreed upon and signed terms of reference (TOR).
4. Committees were formed by the Minister of Health / Head of the Higher Health Council for the preparation of the strategy. They were composed of representatives of all health sectors. These committees are: Steering Committee, Technical Committee, and the Committee on Monitoring and Evaluation. They were chaired by His Excellency the Secretary General of the Higher Health Council.
5. The Steering Committee took over the supervision and approval of the work of the Technical Committee and the monitoring and evaluation committee as part of the specific (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 and according to the specified (TOR).
7. Meetings were held for three focus groups 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 the (TOR).

### **Second: Situation Analysis**

This phase includes collecting and analysis of data, information and relevant studies and documents including all health strategies and plans and those related to health; holding committee meetings with

stakeholders for this end, and then conduct evaluation and comprehensive description of the current situation and development in 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 and identify 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 Higher Health Council as it is the authorized entity to draw health policies and the prepare national strategies of the health system.

### **Fifth: Strategy Conceptual Framework**

The Logical 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 to monitor the performance of the health system
2. This model allows to evaluate the long-term results and expected impact.
3. Using the model will facilitate getting support of health sector stakeholders as it has a logical and flat structure that can be easily followed.
4. This model relies on the participatory approach
5. It is commonly used recently by donors where it enables to negotiate with partners and donors to get their support to the strategy.

In this context, it was agreed on the national priorities that can be done during 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, introduce accountability and the final judgment on the feasibility of the plan, and to identify lessons learnt. Some monitoring and evaluation tools will be used in the national strategy of health sector in addition to a matrix that describes the indicators that will be adopted, the base year, timing and the responsible party for the measurement.

### **Seventh: Consensus and Participation of Stakeholders**

- A consultation meeting for all stakeholders in the health sector was held by the Higher Health Council in cooperation with the WHO in which the general framework and the draft strategy were presented and feedback of stakeholders were taken and included in the document.
- The strategy framework was presented and discussed by the members of the Higher Health Council
- The Higher Health Council 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 directives of His Majesty the King in his Speeches 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 brief document emanating from this strategy as "Health Policy Directions in Jordan". This document is aimed at decision-makers and health policy makers in the kingdom.

## **4. Demographic Situation**

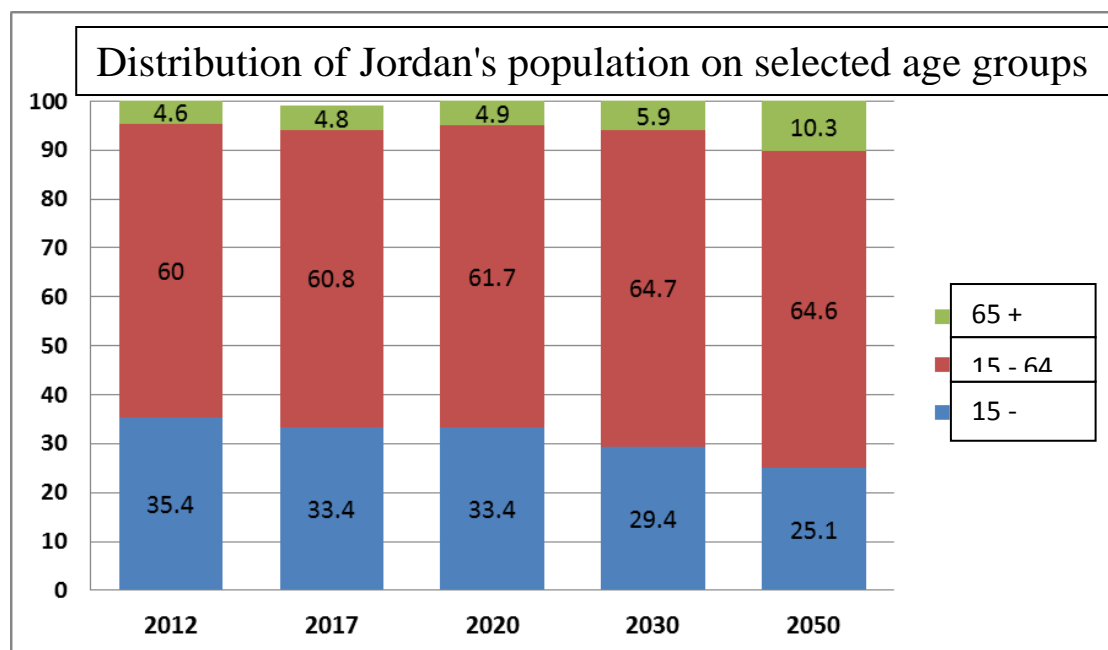
Jordan is a country that has limited natural resources and low middle income rates and high population growth rate. Statistics issued by Department of Statistics showed that the number of population in the kingdom has increased from 586 thousand people in 1952 to about 2.1 million in 1979 to about 4.2 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 population in 1952 to 27.6 births per thousand of population in 2013, the reproduction levels in Jordan are still among the highest compared with the advanced states.

The lower crude mortality rate and high total fertility rate (3.5 children per woman of childbearing age in 2012) in addition to the high rate of forced migration from neighboring countries, especially from Syria has 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.

Birth 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 4.6 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 35.4% in 2012 to 33.4 percent 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) Distribution of Jordan's population by selected age groups



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 of reproductive age (15- 49 years) in the coming years will be a major national challenge. The number of women of childbearing and reproduction age will jump from about 1.7 million in 2012 to around 2.1 million by 2022. If birth rates have not dropped according the objectives of the National Population Strategy and the Document of Population Opportunity Policies, a gradual decline in birth rates will occur and present dependency ratio of 67 individuals will be dropped to 54 persons per one hundred people 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. This will accelerate the Jordanian economy 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 its 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 rates of population growth and generating considerable pressure on the health system, especially services provided to citizens, including health services and infrastructure in the face of limited natural resources. This is 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 growth rate 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, specially the migration of our Syrian brothers
3. High proportion of young people
4. The changing age structure of the population and the increasing rise in the proportion of elderly people.
5. The large and unplanned population growth in the urban areas specially 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 has not taken advantage of the demographic opportunity.

## **5. Social and Economic Situation**

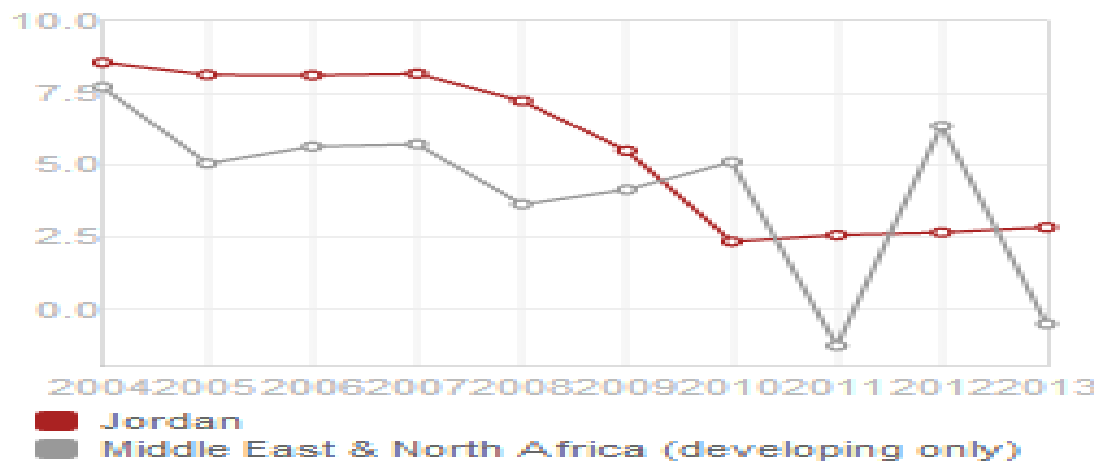
The national health strategies and policies result from political, social and economic conditions in the country. Jordan has gone great strides towards achieving the Millennium Development Goals over the past three decades. This enables it to assume a leading position among countries in the region as it looked at the development through a holistic perspective recognizing that poverty, illiteracy and health make up the triangle that must be treated 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 relies in its economy 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 one of the small-sized countries compared with most of the surrounding countries. Its area is about 89 thousand square km. In addition, most of the area is desert where water is very scarce. The arable land forms only about 6.2% of the total area of the Kingdom. Jordan also lacks the undiscovered natural resources such as oil and gas.

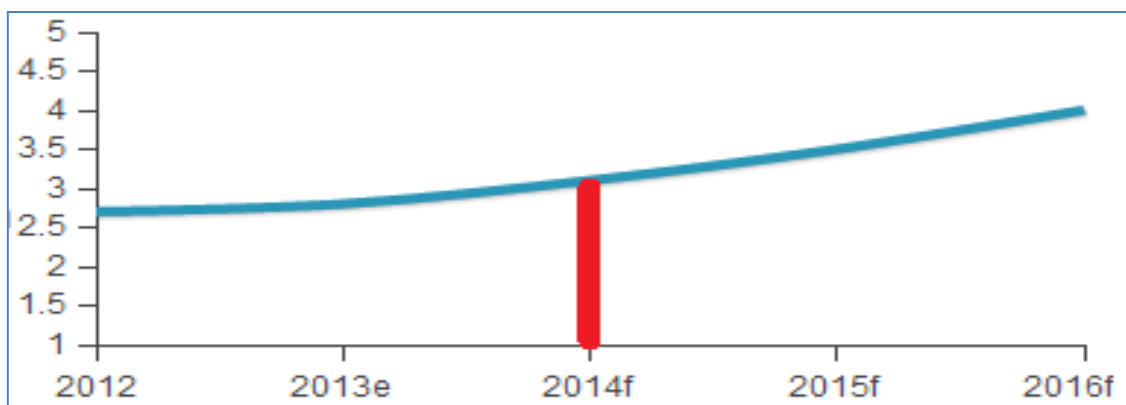
The rate of GDP has dropped from 8.2% in 2007 to 2.7% in 2012, and slightly rose in 2013 to 2.8%. It is expected that this growth will rise to 4% in 2016 (Figure 2 and Figure 3). GDP rate at current prices in 2013 reached about 23.8 billion dinars (33.7 billion US dollars). The increase in average consumer 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 2004-2013



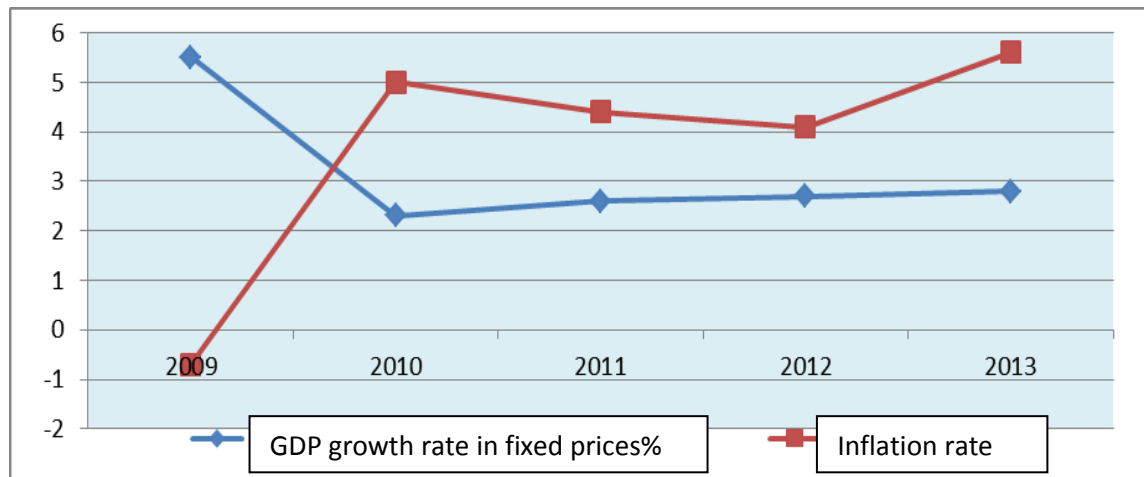
Source: World Bank <http://www.worldbank.org/en/country/jordan>

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)



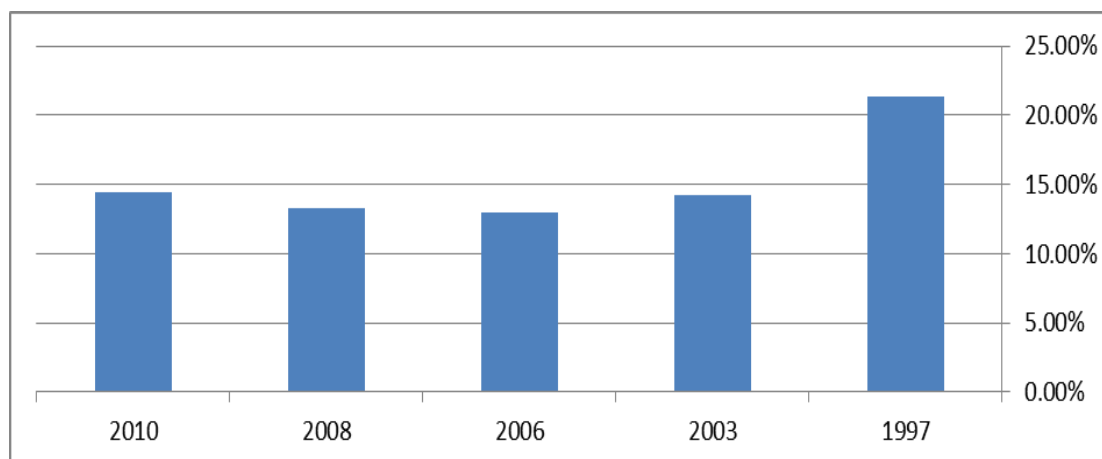
Source: - Jordan Chamber of Industry. Bulletin of economic indicators for the Jordanian industrial sector, third edition – February, 2013

The unnatural increase in the population and forced migration from neighboring countries has led to management 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 for providing jobs for tens of thousands of new comers to the labor market. 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.

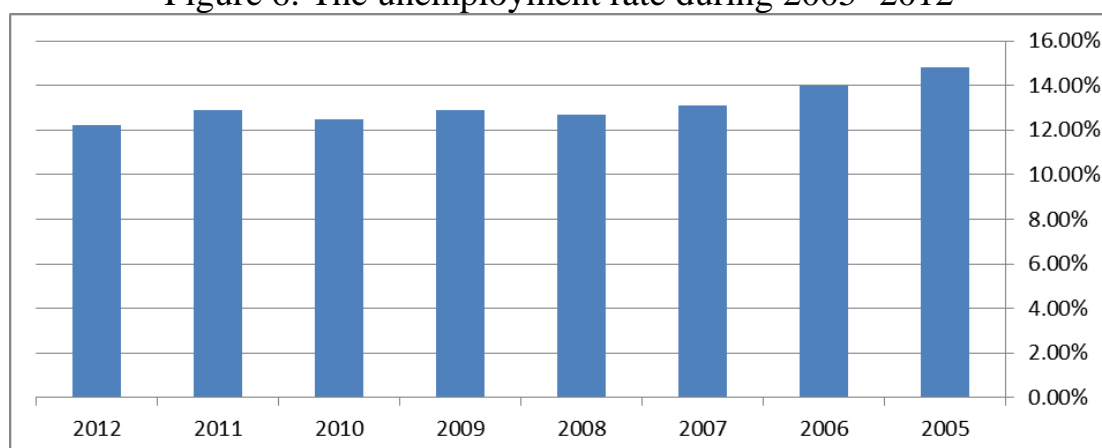
Figure 5: Poverty rates in 1997-2010



Source:

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 who 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:

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 restricted to a certain extent, especially in the next few years.

## 6. 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 as a result of 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 has stabilized at birth to 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 to 86%.

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 typical transformation 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 groups of young people and the elderly; and rising health care costs in light of the economic situation which faces many financial and economic crises.

## **6.1 Health system governance in Jordan**

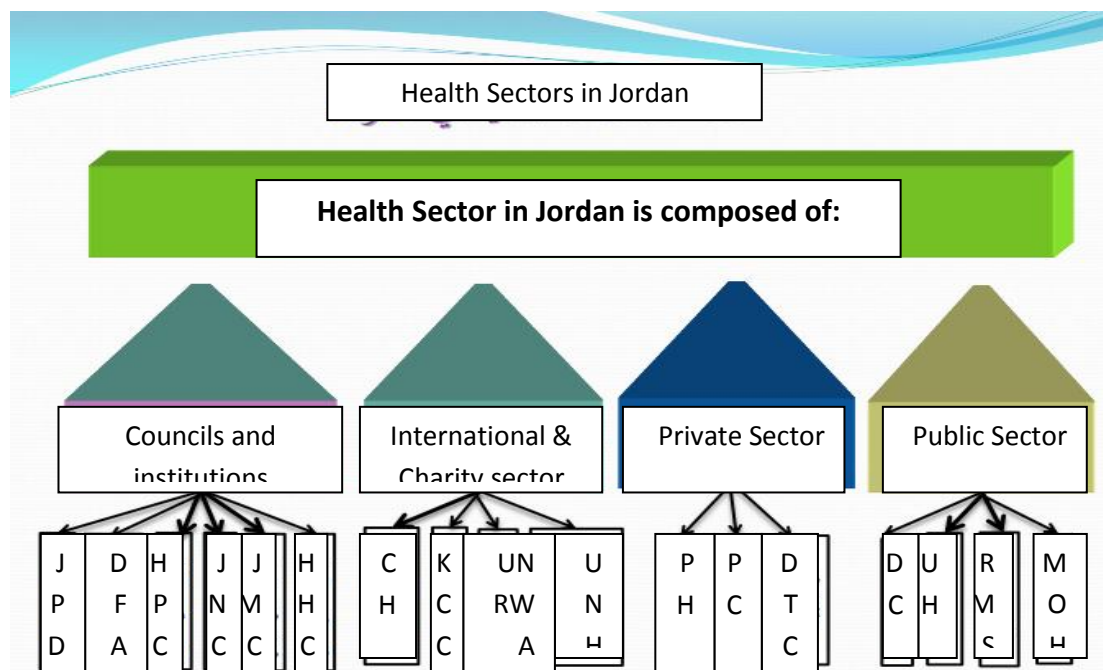
Since the inception of the emirate in 1921, governance in Jordan has been characterized by a stable political system which seeks to identify and allocate responsibilities between the public and private sectors. The government is responsible for supervising, monitoring and enacting laws for the protection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

The best evidence for the adoption of the principle of partnership in health decision making is the existence of a health committee represented in the parliament as being consulted in the revision of important laws and health issues, ensure that they observe the interest of the nation and citizens, ensure the validation of government decisions as well as the re-activation of the Higher Health Council, which is the umbrella for all

health sectors.

The health sector in Jordan consists of service providers (public, private, international and charity sectors) and 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 and Endocrinology and Genetics. 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 **Higher Health Council** 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 Supreme Council of the population, the Jordanian Nursing Council, the National Council for Family Affairs, Jordan Food and Drug Administration and the Joint procurement Department, figure number (7).

Figure (7) major components of health sector in Jordan



**The Higher Health Council** aims to draw public policy for health sector in the Kingdom, develop the strategy to achieve them, and organize and develop all health sectors to ensure that all citizens 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. And to implement the objectives and responsibilities of the council, the General Secretariat of the Council 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 health and media 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, licenses, controls, and regulates professions and health institutions in Jordan. Other institutions involved with the ministry in monitoring functions are; the national councils and health and medical bodies such as the doctors union, the Higher Health Council, the Jordanian Medical Council, and the Jordanian Nursing Council.

**The Jordanian Medical Council** aims to train and rehabilitate specialist and general practitioners through the planning, implementation and



supervision of the scientific programs, plans and academic curricula of various accredited medical specialties to grant the higher competence certificate (The Jordanian Board), which is considered the highest professional health certificate in Jordan.

**The Higher Population Council** is the national reference entity in regard to policy formulation, planning and implementation of the programs relevant to population and development issues. The council has set up national health plans and strategies for reproductive health / family planning and the document of population opportunity policies in addition to the creation of demographic research base and the implementation of many relative studies and researches.

**The Jordanian Nursing Council** is contributing to the protection of members of the community and improving their health by regulating the nursing profession and developing it scientifically and practically. The Jordanian Nursing Council has developed the National Strategy for Nursing in Jordan and created the licensing system for nursing professional levels, standards for the nursing, as well as the instructions for giving chemotherapy. The council also convenes regional and international conferences, identifies research priorities of nursing issues and implements many of them.

**The National Council for Family Affairs** is acting as a supportive umbrella for coordination and facilitation of the governmental and non-governmental partner national and international institutions, and the private sector, especially in the field of family protection to achieve a better future for the Jordanian families. The council has developed the Jordanian National Strategy for the elderly 2008- 2013 and is currently pursuing a participatory approach to evaluate and update it. The council also developed a national plan for children 2004- 2013 and carried out several studies and research on domestic violence, child labor and the analysis of the situation of the disadvantaged children.

**The Food and Drug Administration** is acting as a national reference body which aims to ensure food safety, quality and suitability for human consumption in all trading phases, as well as ensuring the safety of the drug and its quality, effectiveness and accessibility for all poor and marginalized people. It also regulates the circulation and use of many goods, consumables and medical devices. The administration pursues the obligations of Jordan after accession to the World Trade Organization and its signature on the free trade agreement with the United States. In order

to achieve these goals, the administration has developed strategies and action plans based on measurable indicators.

**The Joint Procurement Department** aims to organize a unified process for purchase of medicines and medical supplies in the public sector, conditions of participation and the way offers are studied, evaluated and decisions of awarding and the contracts of follow up and implementation. It also conducts the necessary studies for the development of this process provided that it maintains the approved standards for purchased materials and developing the principles and conditions of accepting the participation of companies and suppliers.

**The Health Professional Associations** participate in the organization and supervision of health professions and the enhancement of the capacity of their members to contribute to the provision of quality health services through various laws and special regulations on the work of these associations. The Private Hospitals Association covers 70% of private hospitals in Jordan in its membership in Jordan. It works on the application of the highest quality standards and stimulates member-hospitals to get the local and international accreditation, and provides the necessary support to them, thus works to promote the status of Jordan and the opening of new markets for Medical tourism. The Jordanian Hospital Association has sought include in its membership all Jordanian medical sector hospitals, starting from the Ministry of Health, the Royal Medical Services and university hospitals, and ending with the private sector hospitals, seeking to integrate the roles of the Jordanian medical sector.

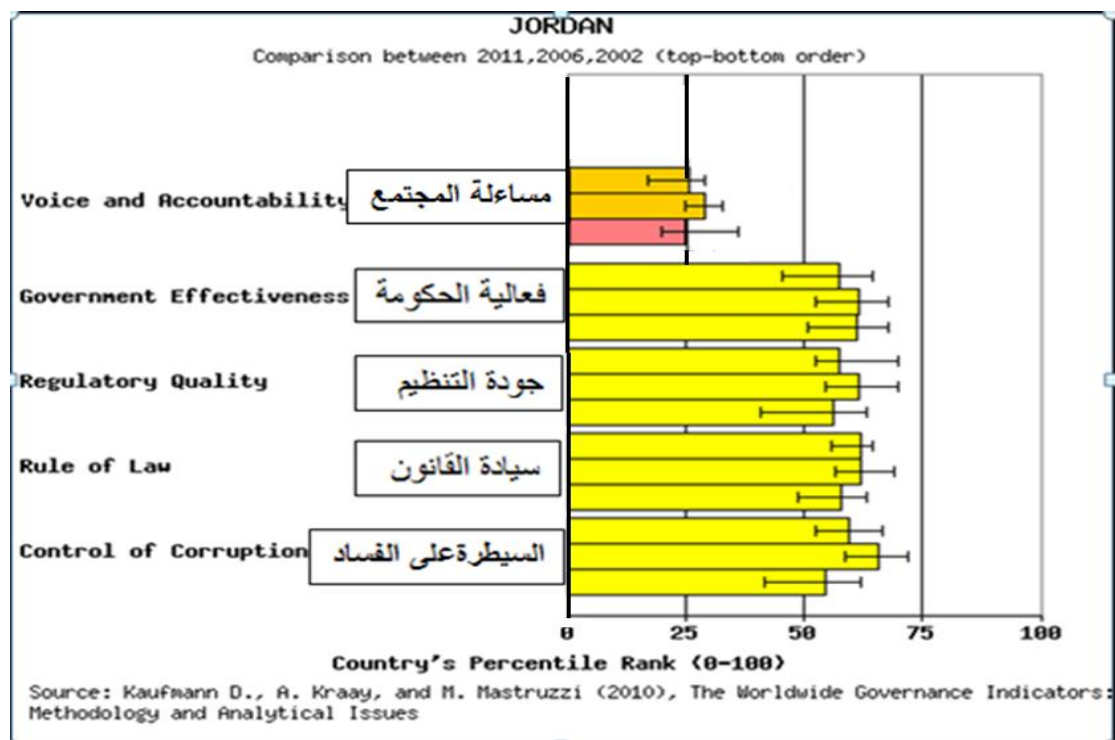
**The Civil Society Organizations, NGOs and Charity Organizations** help to a limited extent in the planning and provision of needed health services. So there is a need to involve these CSOs in decision making through finding national initiatives to facilitate dialogue between stakeholders and decision makers on the one hand and CSOs on the other.

### **Principles and Standards of Good Governance in health Sector**

Based on the international governance indicators of the World Bank in 2011, the societal accountability and government effectiveness indicators, organization 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 and 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 the application of the principle of transparency in major administrative decision making in the health sector. Also the government oversight and evaluation of performance is carried out by delegates from the Audit Bureau and the departments of internal control. Feedback reports are submitted to the higher authorities, but it is necessary to empower citizens to make advocacy for achieve their interests and promote accountability for errors through the adoption and application of medical accountability law. 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 Higher Health Council and the Anti-Corruption Commission with support of UNDP. The website "Shrik" (participate) was also launched and hosted by the Ministry of Health to enable citizens to express their views and comments about the delivery of health services.

There are a lot of challenges associated with governance that should be focused on and addressed in order to avoid poor effectiveness and efficiency of the health system, such as the central system, increased operational costs, lack of effective referral system, weak sense of fiscal responsibility 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, lack of prescribing drugs with their scientific name, lack of treatment protocols and lack of linking the establishment of new hospitals and costly technology with the actual 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 governorate) 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 two MoH hospitals; Karak Hospital, and Princess Raiya hospital. This experience has recorded relative success due to limited financial and administrative powers granted to the managers of these hospitals. At the same time it stressed the importance of activating decentralization, delegation of powers and granting some administrative flexibility in improving the performance of health institutions, raising their productivity and ensuring financial sustainability, if good administrative and technical cadres are well selected and rehabilitated to play full roles. The current government has prepared a integrated draft law on decentralization and presented 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 operational costs of health services, the need to raise the efficiency of therapeutic health services, especially in hospitals while taking care to improve the quality of health care in all its components.

There is a need to establish the principle of medical ethics and applying

performance linked incentive system with service providers especially doctors so that they 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 release of 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 sanitary laws. Therefore, the need arises to develop new laws or update and modify some existing laws to suit the needs and emerging requirements. 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 factors 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 without accurate and specific controls. Add to this rapid uncontrolled flow of the advanced technology, which is directly reflected on the therapeutic bill. This overwhelms citizen, increases the rate of pocket spending and leads to a continuation of the economic depletion and wastes 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 plans in the upper administrative levels. There is also a weakness in the process of developing protocols and procedures and in the implementation of policies at the national level with a lack in the training on management and strategic planning among managers and decision makers.

The above shows that the most important challenges facing the health system governance which must be taken into account in the strategic plan are: -

1. Poor cooperation and coordination between the various components of the health sector

2. Adoption of the central system
3. weakness in the training process on management and strategic planning
4. Overlapping and duplication in some health laws
5. Poor application of strategies to contain costs
6. Inactivated monitoring and evaluation systems of institutional performance in the public sector
7. Weak oversight systems on the private sector
8. Weak empowerment of citizens to gain support for their own interests and to hold local governments accountable
9. Weak commitment to implement national strategies and plans and weak monitoring and evaluation systems.

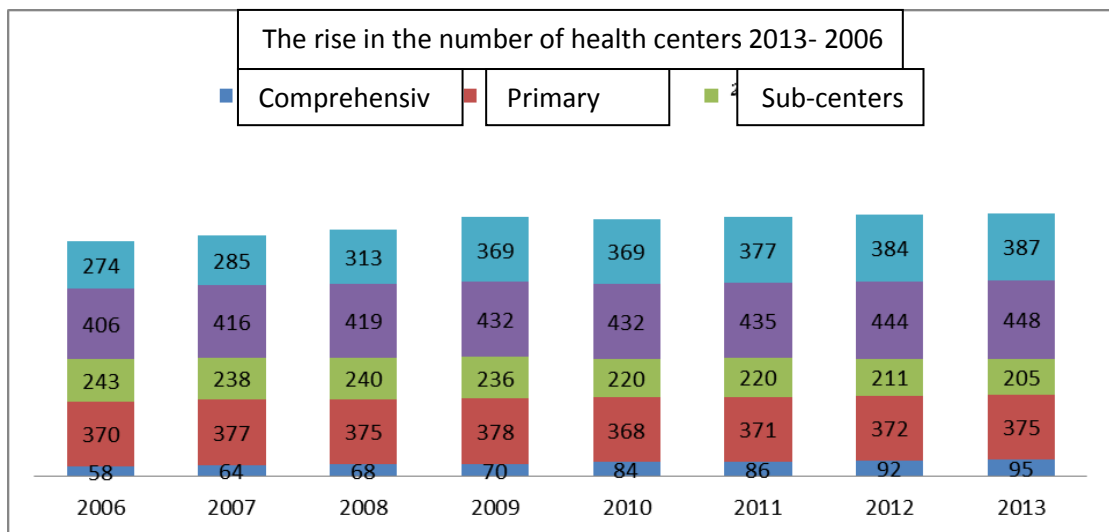
## **6.2 Health Services Delivery**

### **6.2.1 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 health sub-center in 2013), in addition to providing maternal, childhood and dental health services (448 Motherhood and Childhood Center and 387 dental clinic). 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 Society 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 medical clinics.

The number of various types of health centers in the Kingdom has risen gradually, as well as the dental clinics and women's and children's health centers during the period 2006 - 2013 (Figure 9) with the exception of health sub- centers, some of which have been merged together and other upgraded to primary health centers. These centers also developed the quality of the delivered services.

Figure (9)



Source: Annual Statistical Report, Ministry of Health, 2013

Primary health care services relies on the concept of universal health care where basic preventive and therapeutic services are provided such as health education, reproductive health, water safety, control of food, environmental health, early detection of chronic, genetic, congenital diseases, mental health and disability. In addition they include school health, occupational health, control of communicable disease, dental health services to the people with special needs, prevention of accidents, addiction and anti-smoking services, etc., as well as the provision of services that focus on the promotion of healthy lifestyles, and avoidance of risk factors.

Health services in the Kingdom are characterized by easy access and equitable distribution of health centers based on the geographical distance and the actual needs of the population so as to cover the needs of remote areas.

- **Communicable Disease:**

Jordan has made remarkable progress in the fight against communicable diseases as a result of following a number of important policies and strategies such as the creation of the national vaccination program, expanding it in terms of coverage rate of vaccination against measles by 100%. This contributed to the control of measles in Jordan. Polio was

eradicated since 1992. Diphtheria as well as neonatal tetanus cases were controlled and Jordan become free of disease that are not vaccinated against such as cholera, malaria and schistosomiasis. Jordan also has set an initiative to get rid of tuberculosis by 2025, but as a result of hosting more than a million and a half Syrian refugees who pose a burden on all health services, the implementation of this initiative has been postponed. 34314 cases of communicable diseases have been reported since the beginning of 2013 and the end of 2014 among Syrian refugees; 95% of these cases were watery and bloody diarrhea cases, while the number of detected TB cases among them have reached 138 during the past two years with a financial cost of more than two million dinars.

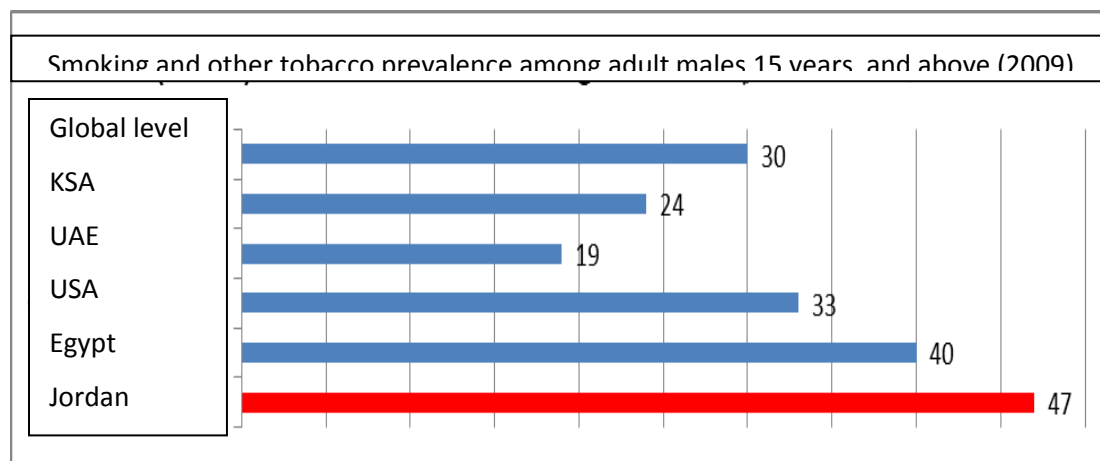
New and reemerged diseases and epidemics are addressed through the introduction of new vaccines in the national immunization program, as well as through the development of an electronic monitoring system and the application of an accurate and sensitive system for monitoring and controlling infectious diseases and activating some of the programs that are directed to a number of priority cases such as AIDS, tuberculosis, diarrheal diseases and acute infectious respiratory health problems in children. The 2012-2016 national strategy for AIDS has been developed and modernized in collaboration with the United Nations Program on AIDS in order to maintain a low prevalence rate of AIDS, especially among high-risk groups, noting that the spread rate of communicable diseases has dropped from 3.5 per 1,000 people in 1998 to only 1.09 per thousand people in 2011. The mortality rate in Jordan, has reached 84 per hundred thousand people, and it is much less than the global level of 230 per hundred thousand people.

- **Non Communicable Diseases**

The Kingdom has seen 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; 727 per hundred thousand people while the global level was 573 per hundred thousand people in 2008.



Heart diseases and circulatory system, diabetes and cancer were the most important of these diseases. Smoking is the major risk factor of contracting these diseases as the prevalence of smoking in Jordan between the adult male 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 national strategy to connect to the health, media. This calls for concerted national efforts of all relevant sectors to control and reduce the spread and in a way that is reflected positively on the health and safety of the individual and society on the one hand, and to reduce the cost of diseases on the other, figure (10).



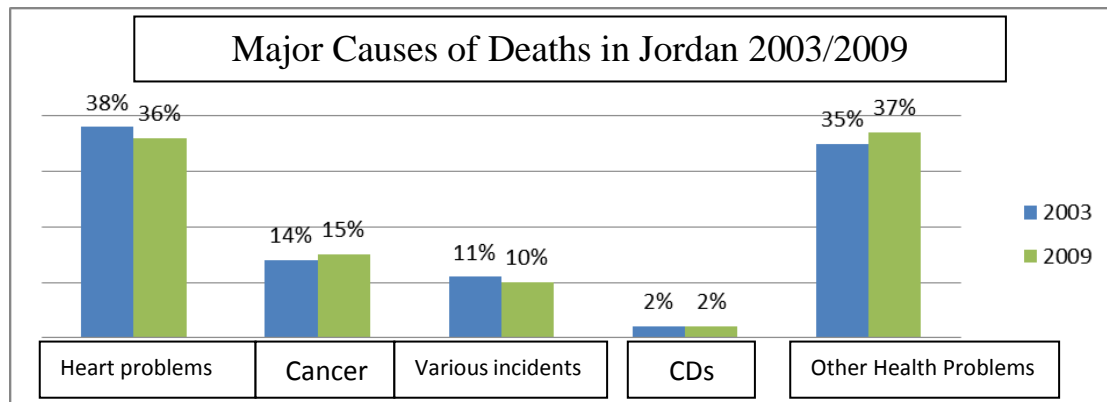
Source: World Health Statistics / WHO

Although there is a weak classification process of deaths by causes, the analysis of the current trend of mortality indicates that heart 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).

Blood pressure, arteries and strokes are the most prevalent diseases among heart and blood vessels 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 diabetes, approximately 39.5% of high cholesterol and 56.5% of high triglycerides.

**Figure (11)**

**Major Causes of Deaths in Jordan 2003/2009**



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

The National Strategy for Non-communicable diseases (diabetes, hypertension, obesity and mixing fats) was adopted by the Council of Ministers in 2011. Now the focus is on the medical survey programs for newborns and early diagnosing programs of chronic, congenital, genetic and cancerous diseases 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 of both genders. It accounts for 37.4% of cancer cases among females according to the National Cancer Registry.

A national register of kidney failure was created in 2007. It issues annual reports showing the growing size of the problem, and the morbidity and economic burden impact. Also a department to combat blindness and deafness was created in the MoH. Evaluation of early diagnosis and treatment services for people with disabilities is carried out in coordination with the Higher Council for Persons with Disabilities.

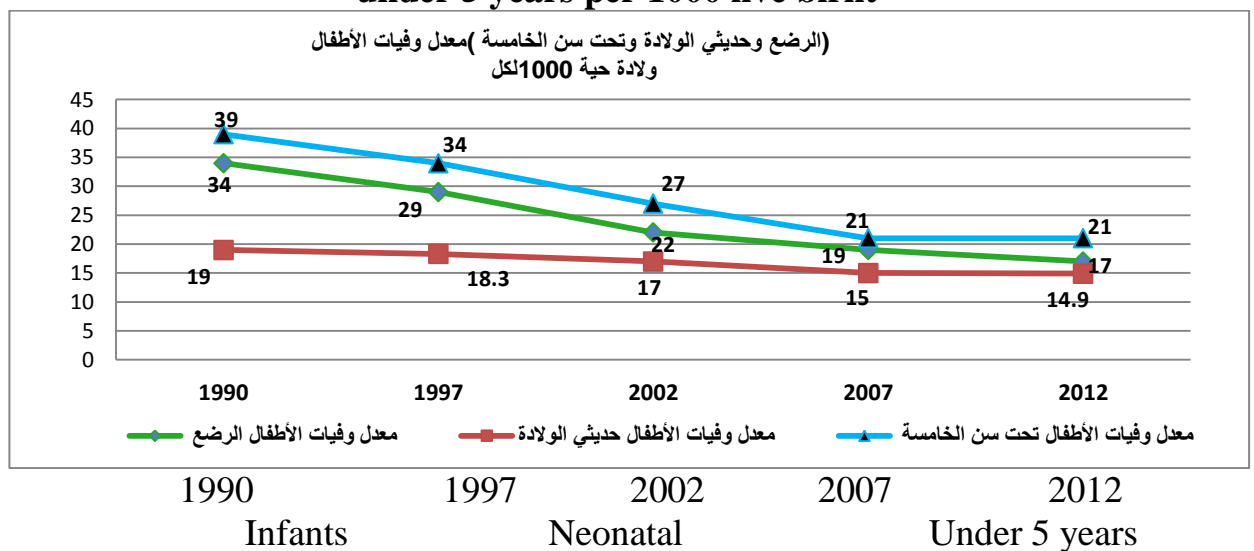
There are also several nutrition programs such as enrichment and support programs for the flour and salt iodizing. National nutrition data is updated based on the outcomes of the National Nutrition Survey of 2010.

- **Reproductive Health**

Jordan strides with clear steps towards achieving the Millennium Development Goals in respect to reproductive health especially the fourth goal related to reducing the mortality rate of children under five years by two-thirds during the period 1990- 2015 to 13/1000, and the infant mortality rate of to 11.3 / 1000. Despite the notable decline of deaths of children under five and the rate of infant mortality, the neonatal mortality rate did not fall to the desired level, figure (12). So this important rate should be reduced as it is affected by the level of quality of obstetric care, prematurity and genetic and epigenetic factors which are difficult to overcome sometimes. There is a need to focus on areas that recorded relatively high child mortality rate than the national average (the southern region, Tafila governorate and areas of refugee camps in Jordan).

Figure (12)

**Child Mortality rate (infant, neonatal and children under 5 years per 1000 live birth)**



Source: Department of Statistics

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

noting that 100% of children have a right to access and get free health service free of charge (there is a free government health insurance for all children under the age of six).

With regard to maternal mortality rate, it has declined from 40 per hundred thousand live births in 1996 to 19.1 in 2008, which means there a possibility of reaching the fifth Millennium Development Goal of reducing this rate to 12 by 2015. The survey also found that the rate of women who suffer from anemia of childbearing age are high at 34%, and 60% of women have never heard of sexually transmitted diseases. This indicates a low level of knowledge and awareness of these diseases.

Almost all women (99%) have received health care during pregnancy by medically trained people (96% received health care by a doctor) in 2012. 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 born by a doctor. The proportion of mothers who receive post natal care by a doctor, nurse or midwife during the two critical days after the birth reached 82%.

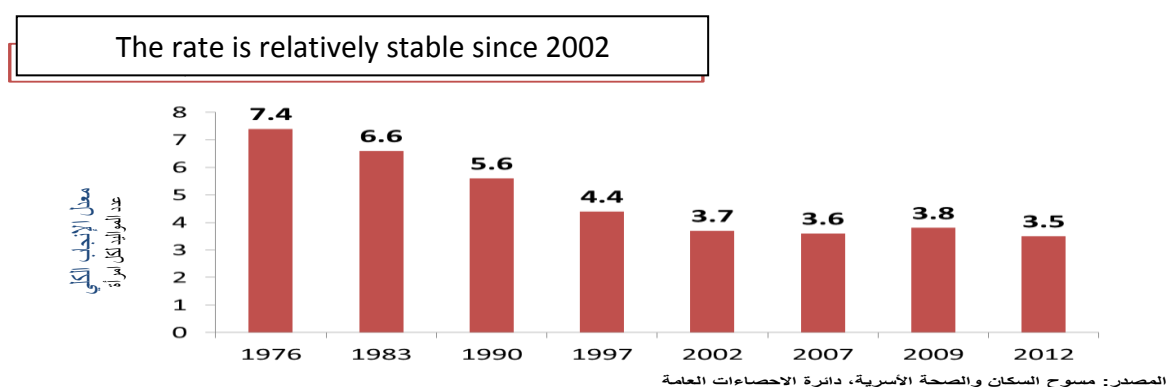
It should be noted here that MoH provides maternal and child health services at all its health centers including pre-natal and post-natal services, family planning and tests before marriage as well as child-care clinics. And out of the vision of Her Royal Highness Princess Aisha Bint al Hussein to promote an outstanding health care for women of Jordan, especially in underprivileged areas, the establishment of the National Center has come to take care of women's health in Tafila as an a pilot experiment to provide comprehensive care for women in all age stages in the same location and with comprehensive proper high quality care for women of childbearing and adolescent age, menopause, mental health, psychological and social health care, mouth and teeth, nutrition as well as pregnant and postpartum care, counseling, and early detection of breast cancer, osteoporosis and community outreach. The future vision of this center is to be the umbrella through which a number of specialized health centers to care for women's health in the various governorates of the Kingdom.

Pre marriage tests include prenuptial lab tests and they are limited to the detection of thalassemia and sickle-cell anemia. Conducting these tests is

important in Jordan because of the high percentage of inbreeding. Although the government has adopted mandatory prenuptial tests since 2004, the lack of facilities that provide this service and the desire of suitors to avoid conducting these tests as a result of the lack of awareness of their importance as well as the weakness of counseling programs and their inclusiveness in the detection of all genetic diseases as the national program for medical survey of newborn includes only three diseases; vinyl Kithonoria, congenital deficiency of the thyroid secretion and fava been disease. Free treatment is provided free of charge for these diseases. All these have led to an increase in the number of unhealthy children for parents of close kinship and inherited blood.

Despite the high proportion of the population in urban areas in Jordan and the high level of education among women as well as the higher age of both sexes at marriage, the birth rate is still high 3.5 (there is relative stability in it 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 benefits of demographic opportunity. Figure (13)

Figure 13: The rate of reproduction in Jordan for the years (1976- 2012)



Results of the 2012 Population and Household Health Survey showed that despite an increase in the rate of use of family planning methods in Jordan from 40% in 1990 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 pregnancy cases in Jordan resulted from the use of traditional means. Thus it is clear that reducing the use of these methods in half would help reduce the total fertility rate to 3.45 children per woman.

Reproductive health is considered one of the main components of the national strategy of the population in Jordan. The Higher Council of the population has developed a national strategy for reproductive health / family planning for 2013- 2017 in order 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, awareness and increased demand for services in this regard to the achievement of the demographic opportunity by 2030. On the other hand, MoH has developed family planning strategy for 2013 - 2017 in order to enable the Ministry to provide information and quality efficient and effective FP 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 and media, which includes reproductive health / family planning and women's 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 increase the elderly group of population of those aged sixty years and over up to 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 and the most common type of health insurance among them is the military insurance.

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 heads of families and breadwinners for their families, in addition to that, their low

educational achievement does not qualify them to work within a reasonable wage, leading to worsening their 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 dealing with these diseases, especially since complications of these chronic diseases were the cause of disabilities in approximately (7.4%) of the cases of the elderly, taking into account the fact that the simple 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 Higher Health Council has develop a national Jordanian strategy for the elderly people in 2008 ... and in 2009 the National Council for Family Affairs has prepared 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.

The second orientation of the Jordanian National Strategy for the elderly gave interest to health care re-rehabilitate them in order to prolong the years of their healthy and active life and provide them with comprehensive care through the promotion of preventive, curative and rehabilitative health programs for the elderly, including those with disabilities. in response to this trend, MoH has included those uninsured persons aged sixty years and above under the umbrella of health insurance in public hospitals and centers with the possibility of referring them to receive treatment at the Royal Medical Services in the case their treatment is not provided at MOH hospitals and against a nominal amount from each beneficiary (six dinars per month). MoH has also

developed treatment protocols to deal with aging chronic diseases; hypertension and diabetes, and prepared a guide to the families of the elderly on how to deal with them, in addition to provision of training to health care providers on the proper healthy patterns and treatment of the elderly.

The private institutions and civil society organizations are implementing health fitness program for this category. In addition, the health coalition of 12 CSOs associations is providing health and pharmaceutical needs for their patients in affordable prices and some physical activities for them. Darat Samir Shamma Association provides a program on how to delay aging, which includes tests for early detection of Alzheimer's as well as the use of games and mental exercises to stimulate memory.

Despite all these achievements, we still find a lot of challenges with regard to elderly issues that have not received prioritization yet, such as the absence of medical and nursing specialties for the elderly (geriatrics), insufficient number of specialized home care service providers, the lack of a legal framework to protect them as well as the high cost of these services if they are not available, and the lack of their coverage in the government and private health insurance programs.

**It can be seen from the above that the most important challenges facing the elderly in Jordan and should be taken into account by the strategic plan are:**

1. lack of interest in elderly issues as being a national priority
2. lack of specialized home care services and lack of coverage under public and private insurance in addition to their high cost if they available.
3. the absence of the elderly health specializations (geriatrics) and elderly nursing .

### **Psychiatric Health**

The MoH National Center for Mental Health is the lead agency for the provision of mental health services, treatment and awareness, supervisory 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' treatment is conducted also through the Karama hospital for psychiatric rehabilitation, which can accommodate up to 150 beds, and the National Center for the rehabilitation of drug addicts, which can accommodate up to 40 beds. Therapeutic 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 diagnose of early disability. It should be noted here that the psychiatric 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 introduced to deal with 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 which prevents the patients quest for treatment and thus widening the therapeutic gap (the disparity between the number of those in need of psychiatric treatment, and those who actually get it) as well as weakening the demand on specialization by doctors and nurses and the consequents of the severe shortage in the number of service providers, especially in the public sector, 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 hundred thousand 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 doctors should be

between 20 and 30 doctors for every 100 thousand citizens. Further, the lack of insurance coverage for mental illnesses in the private sector and the high cost of psychiatric treatment in this sector exacerbate the problem.

There is a need to increase the number of doctors and intensify psychological care for citizens, especially in the public sector. This should be done by increasing the clinics of psychological treatment in all governorates, especially in light of the difficult political and economic conditions experienced by the Jordanian citizen, which cause increased tension and stress. Mental health services should be integrated as an essential part in the primary health care services. Also, there is a need to increase the number of centers that cover the mental health in all regions of the Kingdom and permanently. Mental health services should be provided for children under the age of 18 years as they don't have access to these services except through psychiatric clinics. The establishment of psychological rehabilitation center should be accelerated and patient with mental retardation should be transferred from it to the Ministry of Social Development, being the exclusive party with jurisdiction to care for patients with disabilities.

Also there is a need to introduce courses related to mental health in school and university curricula to raise awareness about these diseases, remove the social stigma attached to them, apply a policy that encourages orientation towards psychiatry, as well as including it as a priority on the national health scale.

- **Home Health Care**

Home health care is a wide range of health and social services that are provided at the home including curative, preventive, nursing, nutritional therapy and 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 treatment to the house. This will contribute to reducing the costs of treatment and raise the morale of the patients.

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 MoH does not exceed 51, most of which face a lot challenges including:

- Multiplicity of 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 the hospitals in regular and integrated way (with the exception of home care provided by the King Hussein Cancer Center).
- The absence of laws and regulations, instructions and protocols that regulate and monitor the performance of home health care
- Lack of poor people access to the benefits from these services due to higher costs
- Failure to cover these services in 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

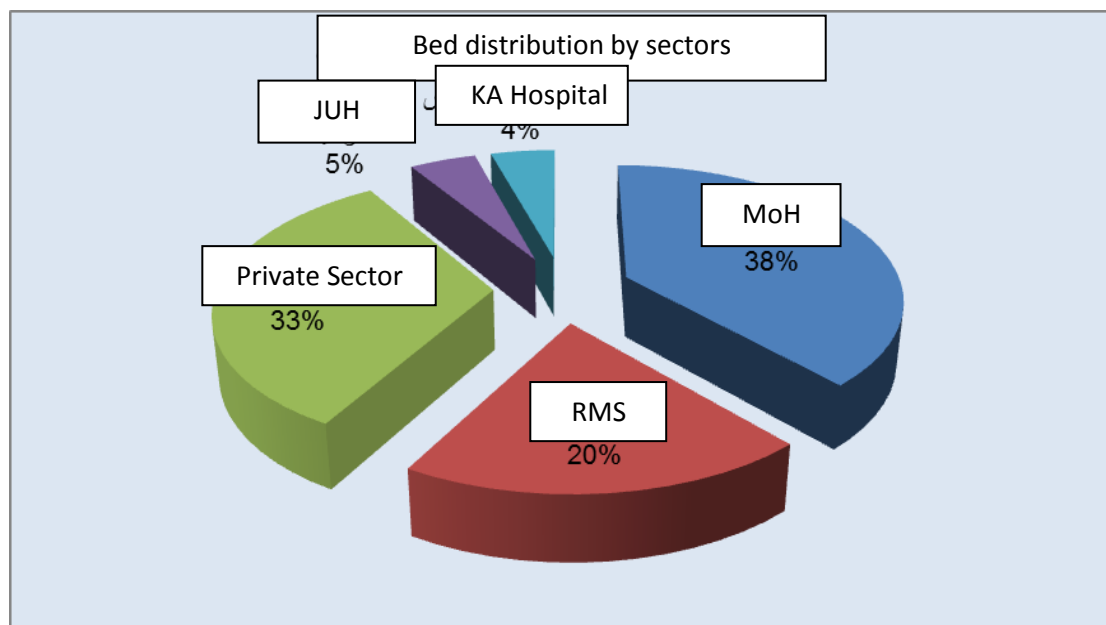
### **2.2.6 Secondary and Tertiary Health Services**

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. 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.

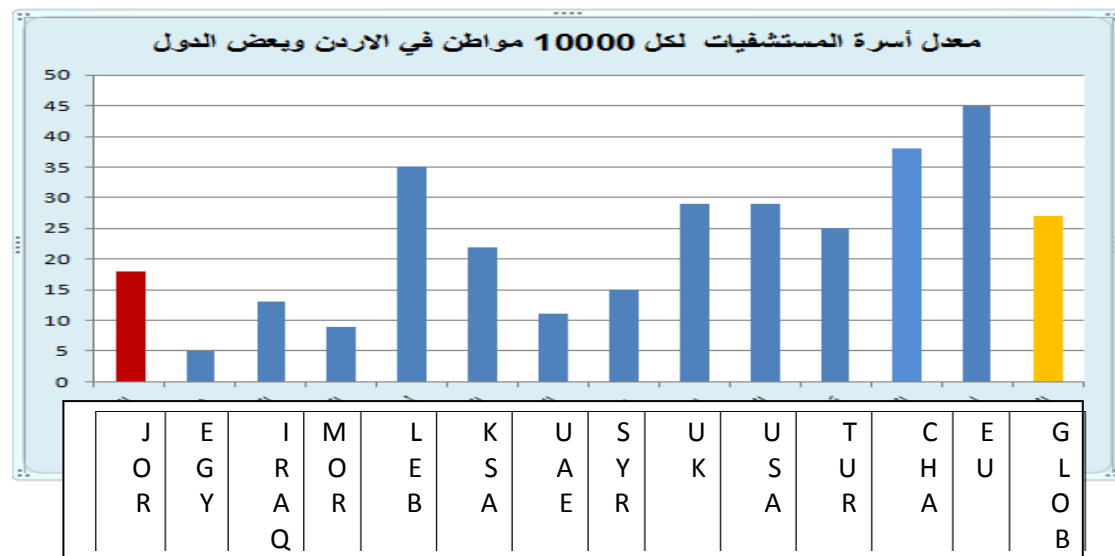
Figure 14: The distribution of hospital beds in the Kingdom by health sectors, 2013



Source: MoH, Annual Statistic Report, 2013

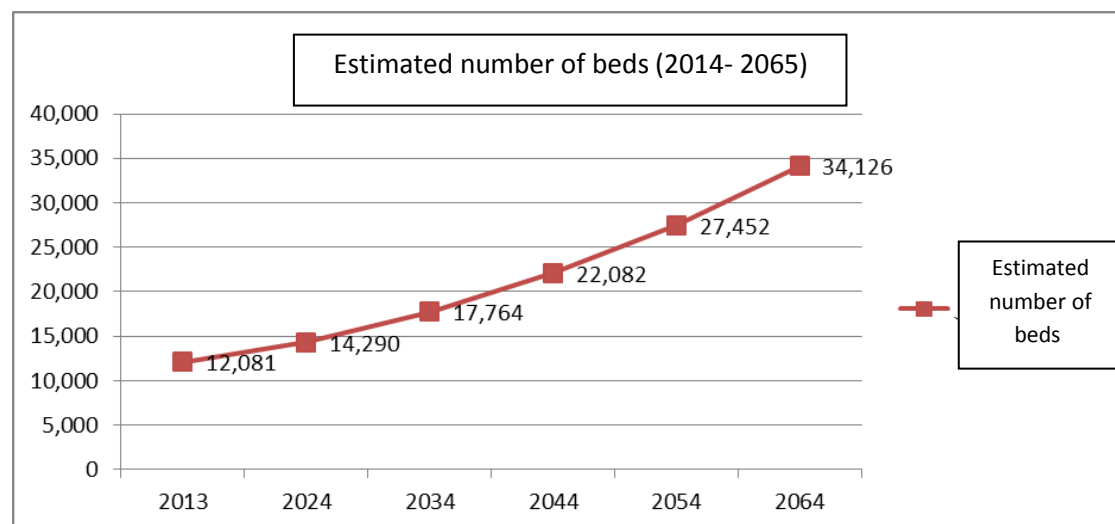
Hospital bed rate in Jordan reached 18 beds per 10,000 citizens in 2013. This rate is much better than the rates of some Arab countries, but it is less than the global rate (Figure 15). To this rate and to face the natural population growth (excluding the forced migrations from neighboring countries) 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



Source: Musa 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 excelled in providing tertiary health care services, which include advanced and specialized health and medical services that are focused on a particular organ in the body, or a particular disease or health condition, 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 and that was 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, as well as raise awareness and encourage organ donation and transplantation,. It 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. Sophisticated Surgery:** Most specialized surgeries like the open-heart operations catheterization, kidney transplantation operations, liver and bone marrow transplantation mainly at the Royal Medical Services and the private sector, and at a limited scale at MoH hospitals and university hospitals.

**3. Dialysis:** most Jordanian hospitals provide services to patients with kidney failure by providing dialysis sessions that require constant

maintenance of equipment to ensure its durability and avoid break down.

#### **4. the Treatment of Infertility and Pregnancy Help**

- 5. Other services:** such as repair and cosmetic services for some medical conditions, treatment of addiction cases in addiction center, provision of rehabilitation and functional therapy to patients in a number of public and private hospitals in the Kingdom in order to relieve pain and improve the functionality 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 their 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. Continue to improve the quality of services provided.
3. Weakness in the application of modern and private 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 air evacuation services.
6. Poor infrastructure in most of the public sector hospitals.
7. Poor patients' referral system from peripheral hospitals to specialized hospitals.
8. Congestion and the stress of working in the public sector hospitals resulting from population growth and forced migrations.

### 3.2.6 Quality of Health Services

Jordanian 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 the umbrella 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 Higher Health Council 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 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 Council of Accreditation of Healthcare Institutions (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 of accreditation. The Council has received three accreditation certificates from The International Society for Quality in Health Care (ISQua) in the areas of accreditation of the Health Institution Accreditation Council; the accreditation of training and preparation program for accredited internists; 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 conditions, etc. The total number of accreditation winning hospitals reached 17 hospitals and 42 health centers by the end of 2013.

It should be noted that there is a need to continue seeking to achieve accreditation standards for institutions that have 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 dealing with the diseases and provision of treatments.

Higher Health Council 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 for expansion in the application of accreditation programs to include more centers and hospitals in public sector
2. lack of guiding clinical signs and national therapeutic protocols
3. disparity in the quality of health services between the health sector institutions and between different geographic regions

## 6.2.4 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 divided into unintentional injuries (traffic accidents, poisoning, falls, drowning, and fire) and intentional (killing and suicide and the different types of violence).

### First: unintentional injuries

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

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	- 9.0%
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 equipment and machinery and trained and qualified cadres by using modern communication techniques between different mechanisms operation rooms and emergency departments in hospitals. It also works to achieve a response time (reached for accidents in normal times, 8.9 minutes) that complies with international standards to reach all citizens in the various communities and vital installations 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 rehabilitate 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 disciplines.

- **Public Security Department**

Based on the vision and mission of the Public Security Department, 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 base year. 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) accident. The traffic department worked to achieve the goal through traffic awareness, traffic control, traffic regulation and coordination with partners.

- **Ministry of Health**

Traffic safety strategy includes a procedural aspect at the moment the accident occurs. MoH and Civil Defense are concerned with the implementation of this side which includes dealing with the

situation in the location of the accident, transport and take measures to receive the casualties at the moment in the ambulance and 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 issue statistics and studies on this area, including MoH which showed that the death caused by intended incidents were mostly the result of suicide, then 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 the 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 decimal plan for children 2004- 2015.

PSD Family Protection Department provides the 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) The 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

### **The role of various institutions in addressing the phenomenon of violence:**

The national team for family protection was formed in 2000. It was incorporated under the umbrella of the National Council for Family Affairs in 2001. The council consists of decision-makers in the public and private national institutions as a reference for policy-making and follow-up at the national level in the field of family protection. The national framework for family protection against the violence was developed in 2005 to be a national reference for joint action among all institutions working in the field of family protection. Then it was institutionalized and developed to deal with victims of domestic violence in each of: MoH, Ministry of Education, Ministry of Social Development, the Judicial Council and the Ministry of Justice. It came in the form of protocols and procedures for dealing with cases of domestic violence by each of the above institutions in 2007.

In 2011 the accreditation and quality control project for the services provided to domestic violence cases and the automatic tracking system has begun in 2012. In the same year the strategic plan for the family protection and the prevention of domestic violence for 2005- 2009 was developed. It will be updated during 2015.

## **3.6 Health Finance and Investment**

### **1.3.6 Health Financing**

Although Jordan is ranked as one of middle-income countries (which have per capita annual health spending of about US \$ 160), it spends annually on an individual's health about twice as much of the spending of these countries on the individual's health. This has gradually increased

from 236 dinars in 2008 to reach 260.6 dinars in 2012. The size of the total health spending also rose during the same period of about one billion and 381 million dinars in 2008 to one billion and 665 million dinars in 2012. 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, as shown in Table (3).

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

	2008	2009	2010	2011	2012
Spending on HC (JDs)	1,381,460,034	1,610,352,435	1,537,135,395	1,580,677,286	1,665,014,650
Per capita health spending	236	269.3	251.5	252.9	260.6
Per capita GDP	2753.5	2828.1	3069.2	3275.8	3438.6
Spending on HC/GDP	8.58%	9.52%	8.19%	7.72%	7.58%
Spending on HC/Public budget	10.16	10.52	9.76	9.14	10.50
<b>Distribution of spending on HC</b>					
Public Sector	60.78%	69.17%	67.94%	66.85%	66.17%
Private Sector	38.24%	29.80%	30.27%	31.34%	31.88%
UNRWA	0.69%	0.59%	0.75%	0.67%	0.75%
CSOs	0.29%	0.43%	1.04%	1.14%	1.20%
Public sector spending/GDP	5.21%	6.59%	5.57%	5.16%	5.02%
Private sector/GDP	3.37%	2.93%	2.62%	2.56%	2.56%
Total spending on Medicines (JDs)	496,453,222	449,395,115	423,658,862	427,835,670	445,408,952
Per capita share of spending on Medicines	84.86	75.15	69.30	68.46	69.73
Spending on Medicines/GDP	3.08%	2.66%	2.26%	2.09%	2.03%
Spending on Medicines/spending on Health	35.94%	27.91%	27.56%	27.07%	26.75%

The direct health spending from citizen's pocket is estimated at about 26% of the total spending on health in 2012. The proportion of spending on medicines of the total spending on health has declined from about 36% in 2008 to 26.75% in 2012. This rate is still high for a country with

middle income. The volume of public sector spending which includes MoH, the Royal Medical Services and University Hospitals in 2012, reached 948.4 million dinars, i.e. 66.17% of the total spending on health.

In 2012 the volume of spending on secondary health care services (hospitals) amounted to 703.7 million dinars (74.2%) of the size of the public sector spending. The share of primary health care services amounted to 155.8 million dinars, (16.4%). This requires a focus on primary and preventive health care programs and reform procedures in the health system to contribute and help in making policies for the containment of health costs in hospitals.

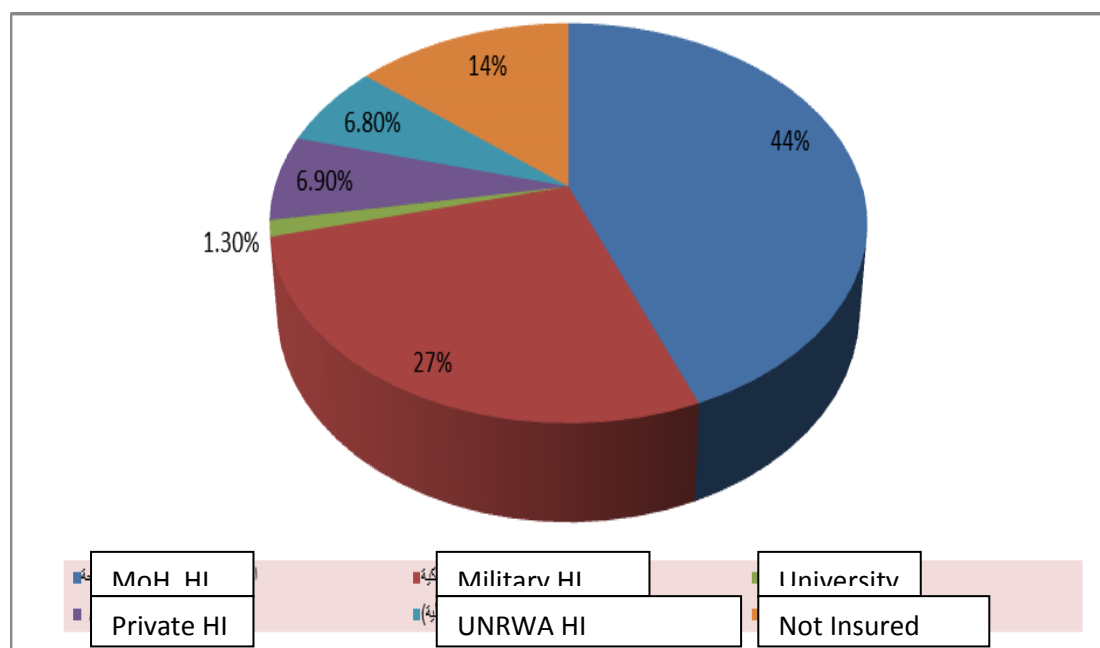
### **2.3.6 Health Insurance Coverage**

Access to universal health insurance for all citizens has become a strategic goal for all successive Jordanian governments for more than three decades.

Health insurance coverage in the kingdom has risen gradually over the past years until it reached about 86% of the population in 2013, according to MoH estimates. However, this coverage does not include the beneficiary cases of medical exemptions provided by the Non-insured Patients Affairs Unit at the (Royal Court). This percentage of coverage includes an estimated of 8% of citizens who hold more than one type of health insurance.

As shown in Figure 17 below, and according to official reports, MoH civil health insurance fund covers 44% of the population. The Royal Medical Services Military insurance fund covers 27% of the population, while the university hospitals insurance covers 1.3% of the population, and the private health insurance covers 6.9% of the population. The last includes health insurance companies and health insurance funds of the trade unions and some institutions. UNRWA covers 6.8% of the population by primary health care services only. With the exception of citizens who hold more than one type of health insurance, we find that the true proportion of the population covered by health insurance does not exceed 78%.

**Figure 17: Population covered by health insurance by insurer**

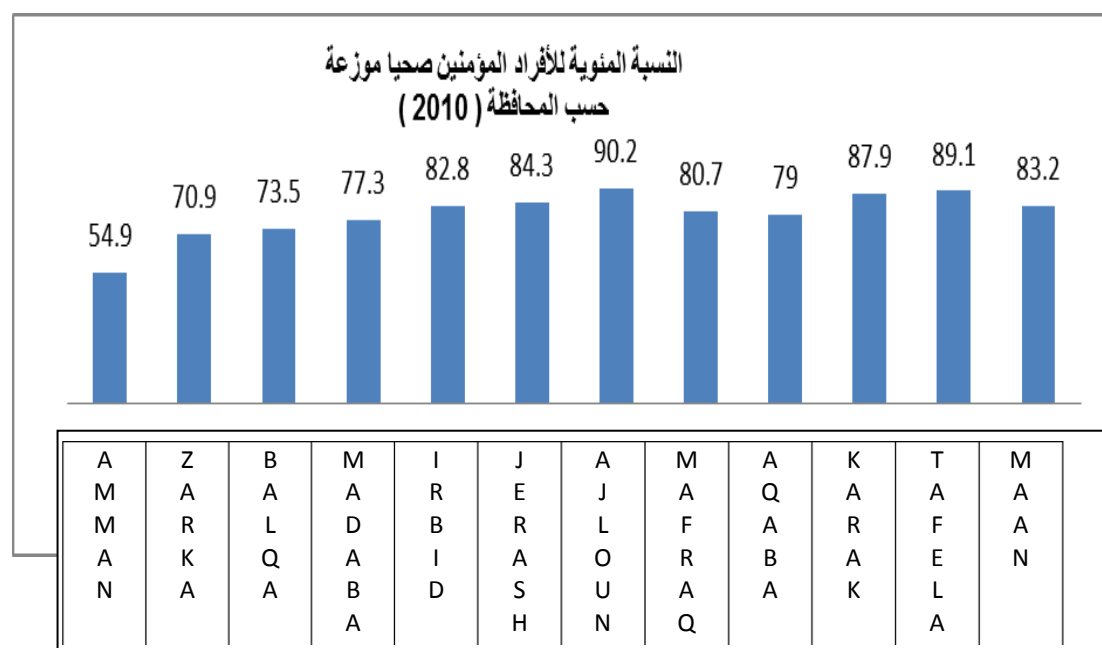


Source: Ministry of Health

The 2010 survey on health insurance and spending carried out by the Department of Statistics in collaboration with the Higher Health Council showed that the rate of insurance coverage in the Kingdom for citizens who carry health insurance card from any insurer (public or private) amounted to about 70%. The survey showed that there is a clear disparity of insurance coverage at the level of governorate. It is notable that the least insurance coverage was in the capital, Amman Governorate which is about 55%, while in other governorates it ranged between 71% in Zarqa Governorate to 90% in Ajloun, (Figure 18). The Higher Health Council in cooperation and coordination with the MoH is seeking to reach accurate and current indicators about insurance coverage and the duplication rate through cooperation with the Department of Statistics and taking advantage of the census intended to be conducted by the department during 2015.



Figure (18)



Source: Department of Statistics, the Higher Health Council (Health insurance and health spending survey, 2010)

All citizens receive MoH benefits that are provided to them with subsidized fees that do not cover the cost of the delivered health services. The civil health insurance fund exempts civil population who were classified as poor by the Ministry of Social Development from paying health care fees. In addition to this, MoH provides free of charge expensive medications for patients who suffer from certain medical conditions (such as contagious diseases, cancer, kidney disease, tuberculosis and pneumonia "TB", AIDS and addiction of alcohol and drugs) regardless of their ability to pay.

The civil health insurance fund is no longer restricted to all civil servants and their beneficiaries only, but it includes the following categories without incurring the beneficiary any financial costs:

- Children under the age of six.
- Segments of society that have been classified as poor by the Ministry of Social Development.
- Areas classified as the poorest and remote areas.

- Health insurance is paid to one member of the family of the one who donated organ (for a period of 5 years).
- Health insurance is paid for blood donor (for a period of 6 months).

Access to optional subscription to health insurance was provided for all wishing citizens including the categories of pregnant women and the elderly after the latest amendments have been introduced to the civil health insurance system.

### **Major challenges facing health insurance and population coverage in the Kingdom:**

- Lack of a competent authority to issue accurate statistics about insurance coverage in the kingdom which makes calculating the duplication rate in health insurance and determining the numbers and characteristics of the insured and un-insured difficult, and thus hinders the process of reform policy and decision-making to get to universal health insurance.
- Lack of mandatory health insurance in the Kingdom has led to keep a significant segment of about a quarter of the population without any health insurance, but this segment benefits from exemptions of the Royal Court without contributing to any pre-paid subscriptions, as in the case of those insured
- There is unfair financial contribution of the citizens represented by a defective application of the concept of health insurance which implies the application of the social solidarity principle.
- Failure to separate the process of providing health service and the purchase of these services from MoH and the Royal Medical Services.

### **Steps to Restructure Health Insurance in the Kingdom**

- Issue a binding Health Insurance Law and establish an independent national institution or body (or any another name) for health insurance as a reference party for buying health services from the providers, unify the subscription foundations, and organize the process of citizen's usage of medical service through the adoption of the national number and through a computerized database.

- Emphasize the need to study the successful experiences in the countries of the world in reforming the health insurance such as the Dubai experience and the experiences of some countries that achieved a comprehensive health insurance, such as Turkey and Taiwan.
- Develop a road map for achieving the goal of comprehensive health insurance in the Kingdom which ensures access for all citizens to quality health services.

It should be noted that the government will implement a study on health insurance in 2015 through a specialized technical team from the Higher Health Council and MoH in collaboration with the WHO about the policies to be adopted to reach the universal health coverage.

### **3.3.6 Medical Tourism:**

Jordan ranked first among Arab countries and 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 maintain this achievement by maintaining the patients who come from the traditional markets for treatment in the Kingdom and strengthening its attraction of 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 costs
- Quality of medical services provided in Jordan.
- Adoption of IT systems within the sector of medical services.
- Safe and effective health insurance systems.
- Winning international accreditation by a number of Jordanian hospitals.
- Availability of hospital resorts such as the Dead Sea and Ma'ain Spa, etc.
- The presence of a large number of competent doctors and nurses, who have got special education and proficiency in spoken Arabic and English.

- Provision of medical devices and diagnostic equipment of treatment 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 also is the hospitals winning of international quality certificates and international and local accreditation. This gives the patient motivation and reassurance on the quality and safety of therapeutic service received. Ten Jordanian hospitals have got international accreditation certificate (JCI) in addition to the rehabilitation of five hospitals for getting international accreditation certificate and twelve hospitals have got national accreditation of the National Health Care Accreditation Council (HCAC) in Jordan.

The Jordanian government is working to encourage and promote investment in the health and hospital sectors through the Investment Promotion Foundation, 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 providing medical services.

A quarter million patients from around the world have got medical services in the Jordanian private hospitals in 2012. This accounted for 23% of total patients who were given treatment services in the Kingdom. The total income from medical tourism exceeds one billion US dollars. Different types of medical services were provided to patients from outside Jordan, including most of the general and sub-specialties such as 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 Higher Health Council, which will develop strategies and enhance the quality

and development of the business of medical tourism. 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 rise the national income.

The approval of the medical liability 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. The presence of about 25% of the population are outside the comprehensive health insurance coverage
2. Weak implementation of strategies to contain costs
3. Multiple insurance agencies in the public sector and the duplication of government health insurance
4. High direct-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 spending on 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 the cost of health care and lack of funding
11. The need to issue a mandatory health insurance law to reach to comprehensive health insurance and establishment of an independent national institution or body for health insurance.

#### **4.6 Human Resources for Health**

Human resources are the main engine to meet the health needs of the citizens efficiently and effectively. This requires much attention in the planning and management of these resources in order to achieve justice in

the provision of health services and increase the productivity of the health sector.

#### **6.4.1 Current Patterns of Human Resources for Health:**

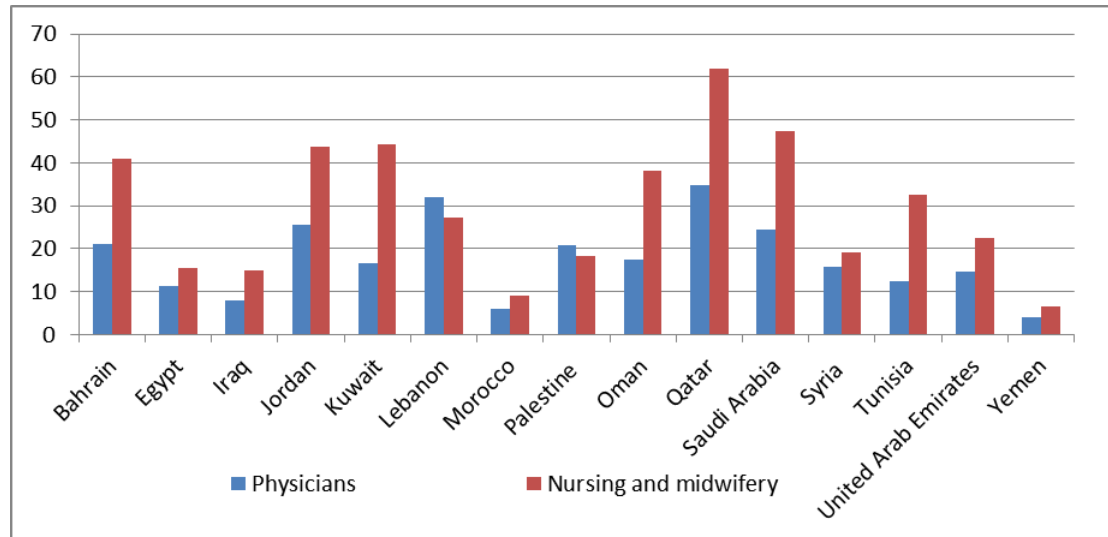
Jordan has a good number of health cadres in most of the specialties. The number of these cadres has significantly increased compared to the number of the population over the past five years (2009 - 2013), as shown in Table (4). However, there is a shortage of some medical specialties, such as psychological,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

**Table (4): Manpower indicators (2009- 2013)**

<b>Indicator/ per 100000 inhabitants</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
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 (legal, Associate, scalable, assistant)	39.0	41.9	43.7	46.6	44.8

Source: Annual Statistical Report / Ministry of Health, 2013

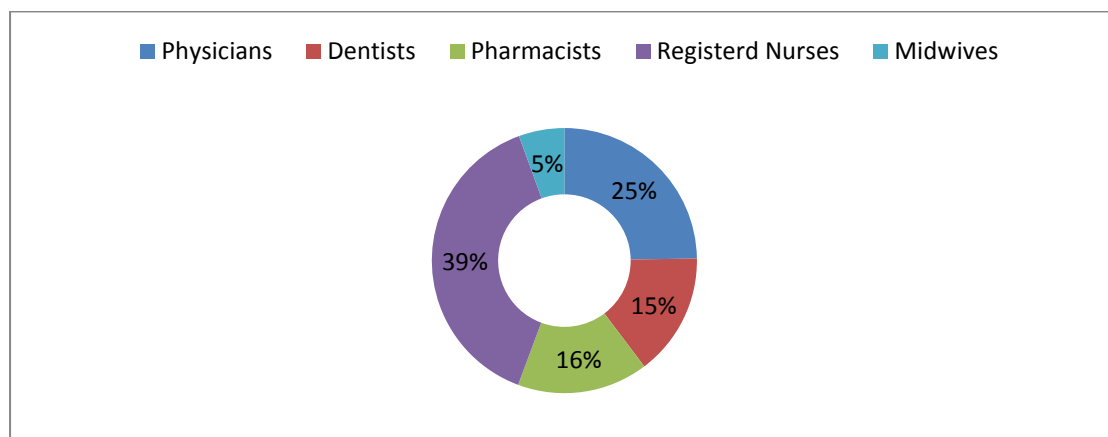
Figure (19): Doctors and nurses rates per 100,000 citizen in Jordan and the Arab countries, 2011



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

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

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



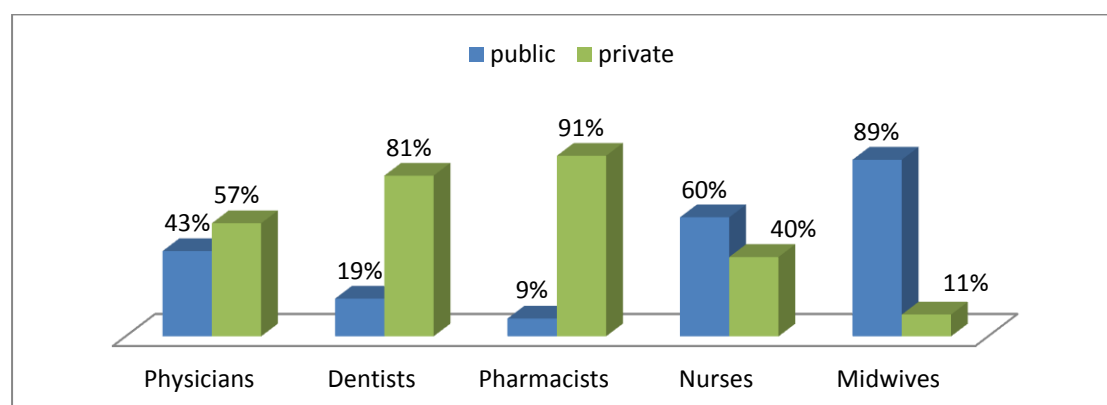
Source: Report of the National Observatory for Human Resources for Health in Jordan, 2013 - Higher Health Council

Females constitute about 44% of the total workers in the health sector in Jordan. Most of these health workers in Jordan 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 doctors category. 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 these disciplines 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 - Higher Health Council



#### **6.4.2 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.

#### **6.4.3 Production and 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 not taught except only in public universities. MoH and the Royal Medical Services share with the universities the provision of practical training for medicine, nursing students and other health disciplines.

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

Continuous education programs are administered and supervised by the Jordanian Medical Council. The internship programs are limited to accommodate for doctors and dentists in the public and private sectors in addition to the specialist programs for general practitioners and dentists. 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 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 implementation of studies and research.

The registration at trade unions in Jordan is mandatory for granting licenses to practitioners of the profession, while the Jordanian Medical Council conducts the examinations for granting general practitioners and specialists the required certificates to practice the provision, while trade unions play role in implementing and monitoring the compliance with the rules and regulations related to each profession.

The Council of Accreditation of Health Care Institutions (HCAC), a non-profit private organization, is responsible for the accreditation of the training programs in the field of health, which are not subject to the mandate of Board of Higher Education or the Jordanian Medical Council.

#### **6.4.4 Management and Recruitment of Human Resources for Health:**

Each side of health authorities in the health sector in Jordan has its mechanisms and regulations for their own hiring systems. MoH and the Royal Medical Services are the main employers of the recent graduates of health cadres. MoH and the Royal Medical Services pay salaries and bonuses to employees in accordance with the civil and military financial systems depending on the category and job class, level or rank, according to the current payroll. However, the private health sector has a different payroll in every hospital. Most of the doctors working in private hospitals are working in 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 is poor distribution management, and a high rate of turnover among medical and nursing staff, especially in 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 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. Incentives are not linked to actual performance.

#### **5.4.6 Information and Studies on Health Human Resources:**

Information related to human cadres of health is produced and updated on a regular basis, but most of the time they are not used in decision-making and policy-making process. The research and information department in MoH issues annual statistical reports on the staff working in the Ministry of Health and other health sectors, but the reliability of the information related to the private sector is not guaranteed. No in-depth analysis is carried out on the data to make use of them. The Higher Health Council collects and update basic information on the numbers and distribution of human resources in the health sector through the project of the National Observatory of human resources for health in Jordan and publish them on the website of the Council. It also issues annual reports to all stakeholders to be used as a tool in the decision and policy making process to ensure equitable access to quality health services.

Some recent studies on the evaluation of human resources for health in Jordan have shown that in spite of the specific systems and procedures for the management of human resources in all public and private health sectors, there are a lot of regulations and procedures for recruitment, hiring, termination, transfer, promotion and rewarding in need for revision and development. Also, there are significant gaps with respect to the management and performance evaluation in addition to the lack of coordination between the health sector and health education institutions. Such studies, recommended introducing a long term policy for the production of human resources for health.

Further, an integrated and comprehensive file was prepared through the WHO Regional Office on the situation of human resources in for health in Jordan for 2010. It showed many challenges facing the production, recruitment and management of human resources for health in Jordan. The observatory issues a number of policy briefs on the priority issues of human resources for health in Jordan. It also conducts surveys and studies required to create an updated database on human resources for health,

especially those related to doctors in the private sector, particularly in the capital Amman governorate, as the private sector is concentrated in this governorate on the one hand, and the lack of accurate information on this sector on the other hand.

There is an urgent need to develop appropriate health policies to meet the challenges and gaps facing the cadres of health through the development of a comprehensive national plan for human cadres of health, noting that the Higher Health Council has initiated, through the National Observatory for Human Resources for health and based on its national role in the adoption, harmonization and coordination between the different health sectors, the process of forming a national committee in 2008. It included all stakeholders of health human resources in discussion 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 doctors working in remote areas.

It can be seen from the above that the most important challenges facing the human resources for health, which should be considered by the strategic plan are:

1. The lack of a national comprehensive plan for the promotion and development of health manpower
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. Difficult attraction of new talent and drop out of highly qualified professionals (both internal and external migration)
5. The absence of the Higher Health Council role in drawing up health education policy
6. The great disparity in wages and incentives for cadres working in the public sector institutions
7. Lack of fairness in the distribution of health human resources among the governorates of the Kingdom, especially in remote areas
8. Weak information systems on human health cadres, especially in the private sector

## 6.5 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 the process of making informed policies and decisions. The importance of health information and research relies in 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 calculation of health indicators.

There are several institutions responsible for the collection and provision of health data and information in relation to health, 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 Kidney failure records. The ministry also has an electronic monitoring system for diseases, another system to provide family planning means, maternity and childhood and a database for General Medicine, hospitals systems, pre and postnatal care systems, sites for provision of 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 is preparing statistics and demographic, bio, economic, social and health indicators. Among the most prominent and periodic activities carried out by Department of statistics in relation to the national health information system are the surveys and census (the last census was in 2004 and the next census is expected in 2015) and the surveys of population and family health. 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 to follow-up national strategy of reproductive health and document of population opportunity policies.

With regard to the Department of Civil Status, its tasks are limited to recording data related to Jordanian families, recording and storing of vital

data on (birth, death, marriage and divorce) for citizens wherever they occur at home or abroad, 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 Higher Health Council. 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 costs and expenditures on health services. Also the National Observatory of health human resources was established in the General Secretariat of the Higher Health Council. It monitors the patterns of health human resources and their distribution in the Kingdom.

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

The various academic institutions conduct various health research 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 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 health policy and decision-making, including an initiative in cooperation between the MoH, WHO the US Center for Disease control under the title of "strengthening the monitoring of disease". 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 cases particularly cases of death, lack of national records similar to the national records of cancer as well as the scattered health research and the weakness in the translating research into possible adopted policies.

With regard to computerizing the 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 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 Department of Civil Status database the system 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 them is computerized patient record system, patients booking, laboratory and pharmacy systems and others. Following the success of its application in the sites of pilot phase, including Prince Hamzah Hospital and Amman Comprehensive Health Center, a deliberate plan has been prepared to circulate "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 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 the adoption of evidence based policies and decisions.
2. The lack of allocations for studies and research and 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 the electronic Modern Health Systems Applications (E-Health)
6. Weakness in access to data and information of the private sector
7. The absence of a national reference entity for research and health studies

## **6.6 Pharmaceuticals and Health Technology**

### **6.6.1 The situation of the pharmaceutical sector**

Medicine and pharmacology law no. 12 of 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, under the umbrella of 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 spending on medication. Perhaps the main reason for this, is absence of health insurance magnetic 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 center of treatment to access to medicines, especially antibiotics, medication of chronic diseases and the high cost medicines, leading to duplication of dispensed medications.

Among the main reasons for the rise in health spending on medicines are; the unavailability of tools to assess the needs of the drugs referred to in



the official bidding; lack of good inventory management; the lack of recycling medications between health institutions, which leads to the accumulation of stocks occasionally or unexpected running down, forcing institutions to go to direct purchase at high prices to avoid drugs interruption. This measure increases the therapeutic bill due to the lack of health providers' compliance to the guides and protocols of standard treatment, and lack of adoption of the pharmaceutical economic standards in decision making and evidence based medicine when choosing a medication on the list of good medicine. 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 to a greater reliance on generic drugs or generic brand name and expand their scope to cover the expensive therapeutic and pharmaceutical cliques in order to cut health spending bill.

#### 6.6.2 Pharmaceutical Industry

Jordanian pharmaceutical industry has evolved over the past five decades significantly as 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 headed towards developing the technological level in the pharmaceutical industry in an effort to make Jordan a center for technology 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 advancing 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 employment of the Jordanians. 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, which is an additional element in supporting the national economy by remittances of expatriates.

Jordanian medicine also contributes positively to reduce the therapeutic bill by competing with global companies in the official 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 local companies to unite and integrate, 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 tests and expand their market horizontally and vertically.

### **3.6.6 Spending on Medicine**

The spending on medicines in developing countries is high. It reaches up to 50% of total health spending, compared with 19% in the countries of European Union, while in Jordan the ratio stood at 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 has formed 2.03% of GDP in 2012 while the ratio was in the same year, about 1.6 of GDP in the countries of the European Union. This ratio is high for a state such as Jordan which is classified as middle-income country. This necessitated for the Higher Health Council to develop a strategy to rationalize spending on medicine in Jordan for 2014- 2016.

Table (5) Spending on Medicine Indicators

Indicator	2008	2009	2010	2011	2012
Total spending on drugs in dinars	496,453,222	449,395,115	423,658,862	427,835,670	445,408,952
Per capita share of spending on drugs	84.86	75.15	69.30	68.46	69.73
Spending on drugs/GDP	3.08%	2.66%	2.26%	2.09%	2.03%
Spending on drugs/spending on health	35.94%	27.91%	27.56%	27.07%	26.75%
Distribution of spending on drugs					
Public sector	13.81%	14.14%	13.01%	12.22%	12.17%
Private sector	22.12%	13.77%	14.55%	14.85%	14.58%
Distribution of spending on drugs/spending on health by sector					
Public sector	38.44%	50.67%	47.19%	45.12%	45.49%
Private sector	61.56%	49.33%	52.81%	54.88%	54.51%

#### 4.6.6 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 and others 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 therapeutic bill, which could be paid by the citizen from his own 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 objective data for

use in decision-making about the various alternatives related technology to ensure cost-effectiveness and clinical effectiveness.

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

1. Increased spending on medicine in Jordan of about 445 million dinars, split between the public sector 202.6 million dinars (12.17%) and the private sector 242.8 million dinars (14.58%).
2. High proportion of waste in the pharmaceuticals compounded with the increase in spending on medication.
3. Failure to adopt standards of pharmaceutical economy to take evidence based decisions
4. Lack of information and objective data for use in decision-making about the various technology alternatives to ensure cost-effectiveness and clinical effectiveness.

## **7. 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 that almost all have 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 was 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 Syrian brothers. About one fifth of Syrian refugees only 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:**

From 2012, the large number of Syrian refugees became a challenge and a big burden on health system, 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. 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 necessary facilities to provide health services for refugees Syrians, Figure No. (22) and Figure (23) show the evolution of the number of Syrian refugees who received health services at MoH centers and hospitals until the end of August 2013.

The statistical reports showed that the spread of communicable diseases among the Syrian refugees is much larger than their spread among Jordanians. This could lead to further spread and more risks to the Jordanians, Table (7). It is noted that a number of AIDS cases have been recorded among Syrian refugees and other cases are expected to appear. MoH provides primary health care services for Syrian refugees who inside outside the camps for free, such as immunization, reproductive health, health controls on foodstuffs, monitoring of infectious and communicable diseases, monitoring epidemics, recording injuries and registration of births and deaths, as well as supplying hospitals in the camps with their need of blood, serums and control and disposal of medical waste in proper means, food control, hygiene and water and sanitation.

Figure (22) the evolution of the number of Syrian refugees who were served by MoH health centers during the period January 2012 and August 2013

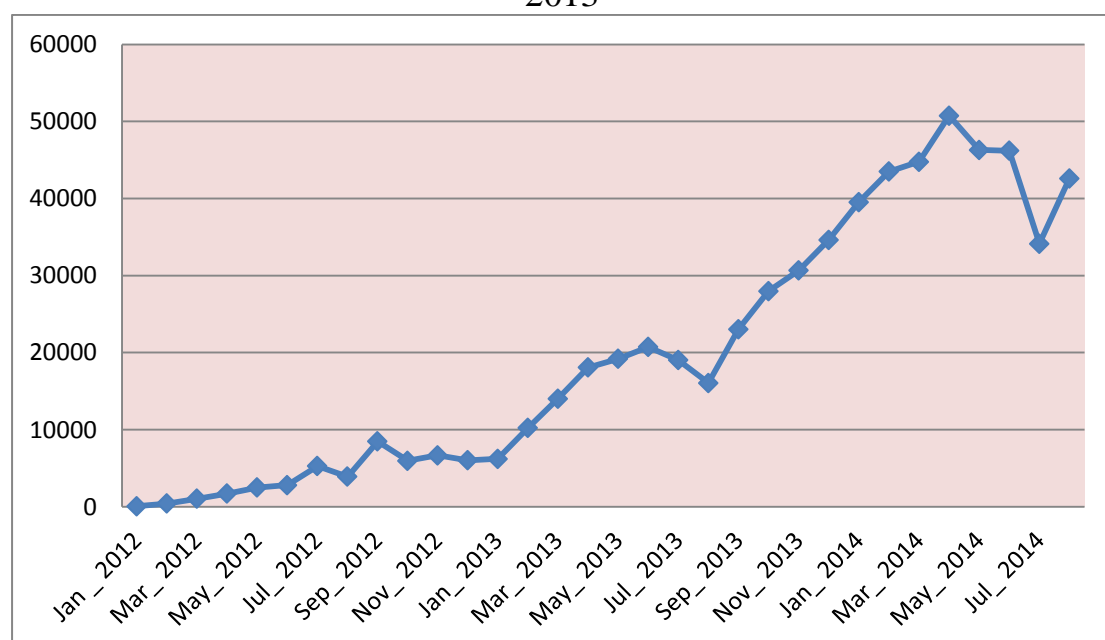
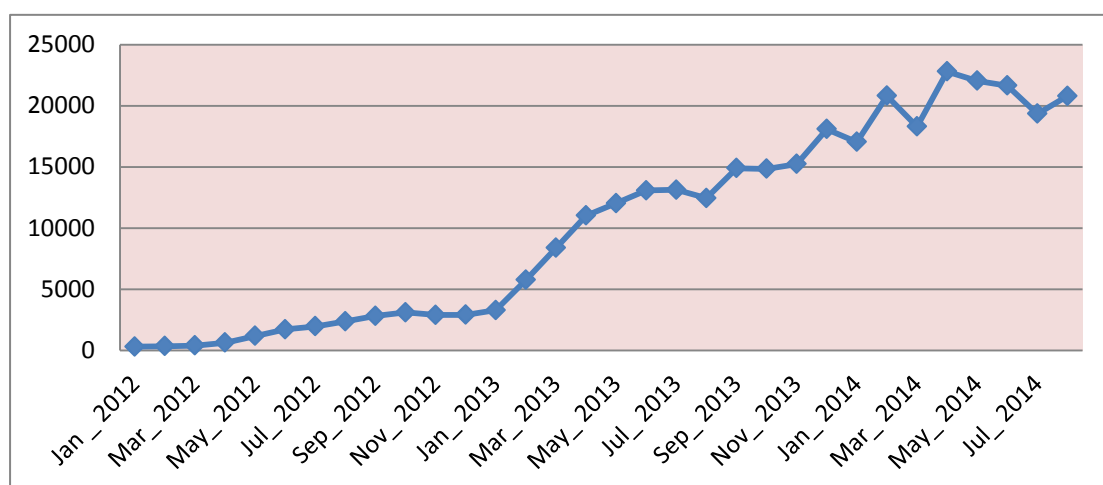


Figure (23): Number of Syrian refugees who received services of MoH hospitals, January 2012 - August 2014



Source: Ministry of Health

It should be noted here that the cancer cases recorded among Syrian refugee 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 MoH of 14% due to the high cost of the free 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 volume 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
- Lack of health human resources and medicine supplies.
- Negative impact on the Jordanian patients and competing with them 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)

- Pressure on the available financial resources, as MoH has born 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 failure of donor countries to provide the funding required.
- Increased risks of the spread of the disease among Jordanians, especially the host communities, and the need for additional vaccination campaigns.
- Negative consequences on the achievement of the health-related Millennium Development Goals

Table (8) some 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 citizens	28.6	23.4
Dentist/ 10.000	10.4	8.5
Nurse/ 10.000	44.8	36.6
Pharmacist/ 10.000	17.8	14.5
Bed/ 10.000 citizens	18	15.1
Bed/10.000 citizen in Mafraq	8	6
Proportion of population covered by health services	98	90

Source: Musa Ajlouni, **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.



## 8. 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.

The following table shows the results of the analysis:

Strengths
<ul style="list-style-type: none"><li>• Significant improvement in most health indicators</li><li>• Having good infrastructure and advanced technology in the areas of medical diagnostic, curative and rehabilitative services</li><li>• The existence of qualified and highly efficient medical and health cadres.</li><li>• Easy access and getting health service all over the kingdom</li><li>• The inclusion of the poor and disadvantaged groups under the umbrella of social health insurance</li><li>• The existence of distinct and highly reputable specialized medical centers at the level of the region</li><li>• The developed medical tourism industry and its acquiring of more markets and occupying advanced position at the global level.</li><li>• An advanced pharmaceutical industry that enhances the value of pharmaceutical exports</li><li>• A Higher Health Council 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</li><li>• The existence of Health Institutions Accreditation Council</li><li>• The existence of Health laws for regulating the health sector notably the Public Health Law</li><li>• The existence of strategy plans for most of the components of the health sector.</li><li>• Jordan effective participation at the international level in the provision of humanitarian emergency medical services in the areas of wars and disasters</li><li>• The existence of a national observatory for human resources for health in the Higher Health Council</li></ul>

- 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 mortality

### **Weaknesses**

- Lack of a comprehensive health insurance system 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, and weak ambulance and 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, the weak application of electronic medical records systems, and 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 sectors
- The absence of health emergency 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 characterization system (unified guide for medical protocols and procedures)
- Weak training process in the field of management and strategic planning
- Inactivation of the monitoring and evaluation systems for institutional performance in the public sector
- Adoption of the centralization system
- Overlap and duplication in some health laws
- Multiplicity of references in relation to scientific research on

health issues in Jordan, weak process of publication of studies for researchers and interested organizations to benefit from them, and the lack of research in the field of health policies and systems

### **Opportunities**

- Political support at the highest levels for health issues and giving top priority to the health of citizens
- Government conviction by the entrusted role of the Higher Health Council and its intention to activate it.
- Political and security stability in Jordan
- The presence of a health committee represented in the parliament which consulted in the study of important laws and health issues
- The existence of Higher Councils concerned with 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
- Creation of the Food and Drug Administration
- Creation of a 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 therapeutic sites that help the health sector to compete and attract more Arab and foreign patients for treatment in Jordan
- 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.
- The inclusion of health care in some of the national social and economic plans
- The existence of a strategic plan to reach the population

opportunity and its optimal use

- High quality health education level in Jordan
- The existence of the Department of Statistics as a governmental reference party 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**

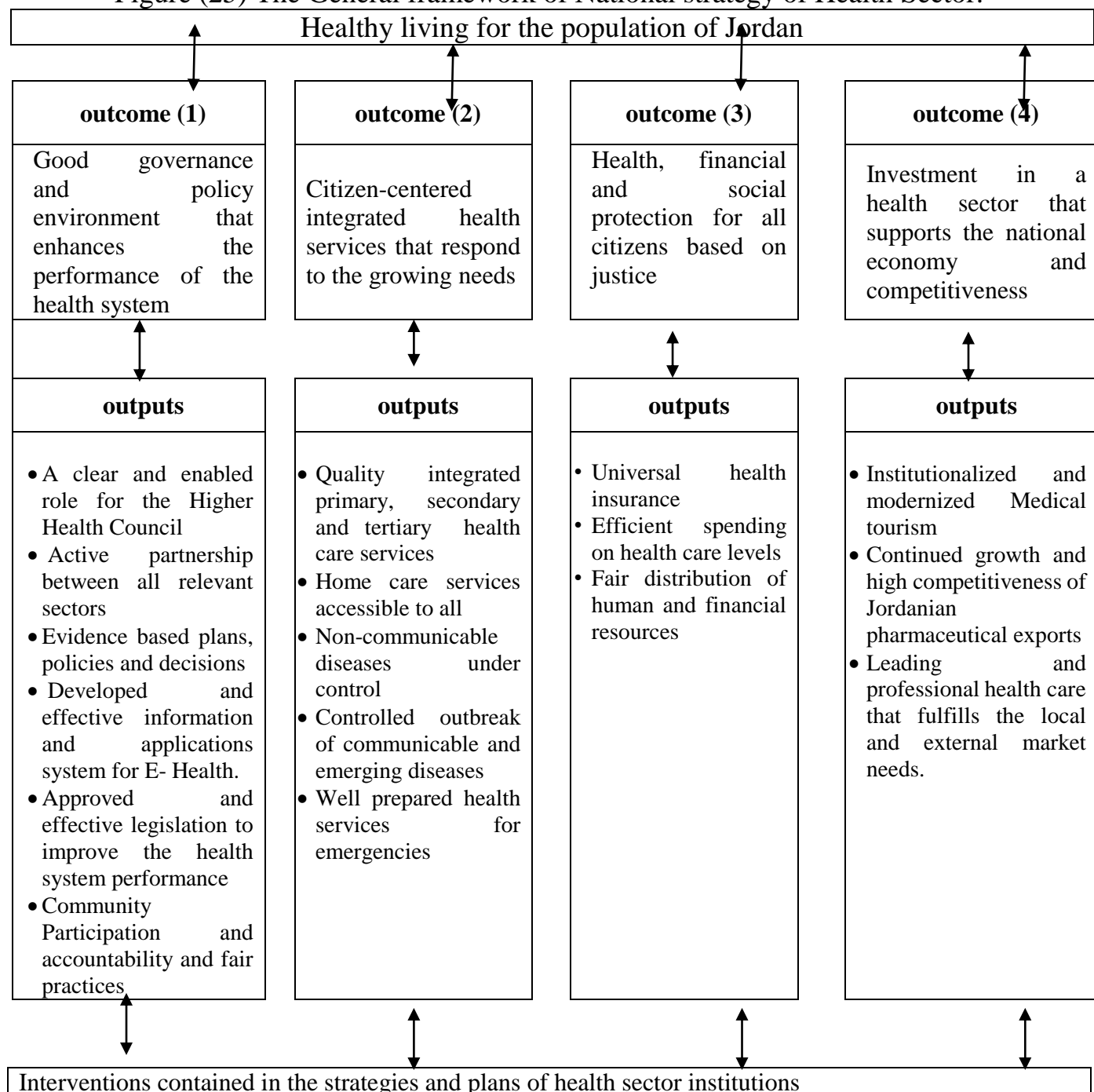
- Demographic challenges (the stability of the fertility rate, forced migrations, rapid population growth and the increasing proportion of elder persons)
- Paradigmatic shift of disease, increased rates of chronic disease and the difficulty of controlling the causes and risk factors
- Increased risk 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 direct-of-pocket health spending, particularly on drugs
- Quick volatility in senior positions leading to a change in the order of national priorities
- The absence of the role of the Higher Health Council 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
- Weak citizens empowerment to gain support for their own interests and to hold local governments accountable

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



## 1. General Framework of the Strategy

Figure (25) The General framework of National strategy of Health Sector:



**The First Objective: Good governance and policy environment that enhances the performance of health system**

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

**1.1 Outputs: A clear and enabled role for the Higher Health Council**

**Interventions:**

- Develop a new modern law for the Higher Health Council to expand its powers and functions so that it becomes binding on all health sectors
- Strengthening the role of the Higher Health Council 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 Higher Health Council and provide the Council with the necessary physical and human resources.

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

##### **Interventions:**

- Develop a public health monitoring system in Jordan (on communicable and non-communicable diseases and maternal and child health care 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 (instead of the concept of information management).
- Automate the system and develop health information systems

#### **1.5 Outputs: indorsed and effective legislation to improve health system performance**

##### **Interventions:**

- Enact laws to combat smoking and the use of narcotic substances.
- Adopt and approve a modern law of medical and health accountability
- Adopt amendments to the law of the Higher Health Council
- 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 the process of organizing the delivery of health services in all sectors
- Organize and institutionalize the work of CSOs concerned with the health sector



## **6.1 Outputs: Community participation and accountability and fair practices**

### **Interventions:**

- Promote community accountability in the health sector among citizens
- 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 individual and institutional performance in the health sector

## **The second objective: Provision of integrated citizen- centered health services that are responsive to the growing needs**

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

#### **2.1 Outputs: Integrated and quality primary, secondary and tertiary health services**

##### **Interventions:**

- Improve the level of primary, secondary and tertiary health care services
- Develop and promote human resources for health.
- 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.
- Adopt patient safety programs in all health sectors

- 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 citizens and without interruption

## **2.2 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, lipid mixing and obesity)
- Support the implementation of the national strategy to control the cancer
- Promote healthy lifestyles 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 Outputs: Communicable diseases and emerging limited prevalence diseases**

### **Interventions:**

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

## **2.4 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 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 Amman Greater Municipality, other municipalities, etc.
- Develop training programs for those involved in the implementation of disaster, emergency and rescue plans to achieve an effective crisis management
- 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 electronic communications technology and e-health care in the ambulance and rescue services

### **The third objective: Provision of health, financial and social protection for all citizens based on fair grounds**

#### **Result (3): Health, financial and social protection for all citizens based on fair grounds**

##### **3.1 Outputs: Universal health insurance**

###### **Interventions:**

- Review and amend legislation package related to health insurance industry.
- Implement mandatory health insurance.
- Conduct actuarial and economic studies to determine the insurance cost, subscription and benefits level.
- Apply health insurance provisions in the Social Security law
- Unify the public health insurance under one umbrella to reduce duplication of insurance and unify subscriptions and benefits to achieve justice
- Create a national database and a unified information system for all public and private health insurance programs

##### **3.2 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.

### **3.3 Outputs: Efficient spending between levels of health care**

#### **Interventions:**

- Increase financial allocations to primary health care services
- Expand the application of programs to contain the cost of health services
- Link the process of creating health institutions and the acquisition and use of health technology to actual needs

### **3.4 Outputs: Fair distribution of human and physical resources**

#### **Interventions:**

- Adopt strategic planning for services and resources and distribute them according to national priorities and needs.

## **The fourth objective: Strengthen the national economy in the health sector**

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

#### **4-1 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 Medical tourism programs (organ transplantation, heart surgeries, nerves and brain surgery, plastic and reconstructive surgery, stem cell services, IVF, and dental health, etc.)
- Establish a specialized database of patients of Medical tourism.

#### **4.2 Outputs: Exports of Jordan medicine continue to grow and achieve high competitiveness**

##### **Interventions:**

- Commit to the new international production standards
- Build strategic partnerships for the production of medicines
- 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 Outputs: High professional medical entrepreneurship to meet 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

## **2. Monitoring and Evaluation Plan**

A participatory approach was followed in the preparation phase of follow-up and evaluation plan as well as in other phases of this strategy. This was done through the formation of a follow-up 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 includes periodic measurement of outcome indicators in order to assess the progress towards the desired effect. The Higher Health Council will assume the responsibility of monitoring and assessing, correcting the implementation of this strategy through these indicators in collaboration with all stakeholders and partners.

#### **The objectives of monitoring and evaluation plan:**

The follow-up 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 operational plans of the partners.
2. Ensure cooperation, coordination and integration between the various health sector institutions through the Higher Health Council
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 reach the objectives.
5. Detect basic 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 proposing some improvements and modifications to the strategy.
7. Assess the extent to which the national strategy has achieved the national objectives, the government action program and the royal visions.
8. Exemplify the concept of participatory approach in the evaluation and seek to evaluate the implementation of the strategic interventions
9. Build the capacity of the health sector institutions in using the tools, mechanisms and methodologies of monitoring and evaluation.

### **10.1 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 monitoring and evaluation committee for the strategy, annex number (2)
1. 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 filling the monitoring and evaluation forms and feedback mechanism of annual reports which will be prepared by the Higher Health Council
2. Identify key interventions to be implemented by all partners during every year so that to synergize them with the schedule contained in the annual strategic plans
3. Collect the necessary information about the outcome indicators on an annual basis and classify these indicators to finished or unfinished based on the agreed upon criteria and then calculate the deviation of each indicator from the target value
4. Provide the Higher Health Council with the filled forms of monitoring and evaluation by the implementation parties including analysis of the reasons for the deviation from the indicators, and identify obstacles facing the implementation as well as the proposed recommendations to address these obstacles.
5. The Council reviews all of the indicators and follow-up and evaluation reports on an annual basis so as to include the results of indicators deviation analysis and the implementation obstacles, as well as proposed recommendations and solutions.
6. The Council 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
7. The Council shall conduct a final evaluation of the strategy to measure the targeted impact. This assessment should take place before the end of 2016, to give sufficient time in order to include lessons learned from this strategy in the subsequent strategy.

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

1. The political support at the highest levels for the important role of the Higher Health Council in the development of public health policy and the national strategy to be applied.
2. The Council exercises its mandate in accordance 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. Following up of 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 Higher Health Council to conduct regular analysis of the outcome indicators, identify deviations, prepare periodic monitoring and evaluation reports and provide feedback to the partners

## **10.2 Indicators**

### **Result (1): Policy and good governance environment to promote the performance of health system**

1. Update and develop the legislation of the Higher Health Council
2. Number of initiatives implemented in partnership between the public and private sectors through the Higher Health Council
3. Number of good governance initiatives implemented in the public sector
4. Number of national health initiatives implemented in partnership with local communities
5. Number of policy briefs developed in the field of policy-making
6. Databases linked to the public sector and King Hussein Cancer Center
7. Public Health monitoring system

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

1. Rate of Wasting in children below five years of age



2. Incidence rate of tuberculosis
3. Incidence of malaria among Jordanians
4. Number of graduates of the colleges of Directorate of Civil Defense
5. The total fertility rate
6. The rate of using modern family planning methods
7. Physical retardation rate among children under five years of age / height/age (stunting)
8. Prevalence of human immunodeficiency virus (HIV) in the population group (15- 24 years) per thousand people
9. The infant mortality rate (per 1,000 live births)
10. The mortality rate of children under five (per 1,000 live births)
11. The maternal mortality rate per 100,000 live births
12. Percentage of the use of post-natal services (puerperal)
13. Jordan rank on the health index in the assessment report of the status of the elderly in the Global Age Watch Index
14. The national strategy for the elderly
15. The prevalence of smoking in the population (18 years and over)
16. The proportion of cancers (such as breast cancer and colon cancer) that are discovered in the early stages according to the National Cancer Registry
17. Recovery rate (survival) of cancer after five years of treatment (Survivor Rate)
18. Number of rehabilitated centers that provide palliative care and psychological support to cancer patients and their families
19. Practitioners rate of moderate physical activity
20. Number of rehabilitated comprehensive health centers to receive and treat psychiatric cases
21. Number of hospitals that have ambulance and emergency specialist at their disposal
22. Number of hospitals that have accreditation
23. Number of beds per 10,000 citizens
24. Number of doctors per 10,000 citizens
25. Number of dentists per 10,000 citizens
26. Number of pharmacists per 10,000 citizens
27. Number of nursing staff per 10,000 citizens

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

1. The annual per capita share of total health expenditure in dinars
2. Coverage ratio of citizens by health insurance
3. Ratio of citizens covered by more than one health insurance

4. The proportion of public sector spending on the health of the total spending on health care sector
5. The public sector spending on health as a percentage of GDP
6. The proportion of spending on medicines of GDP
7. The proportion of direct out-of-pocket expenditure on health
8. The proportion of spending on primary health care of the total public sector spending on health

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

1. Returns from medical tourism
2. Proceeds from drug exports
3. Approved and applied medical accountability law
4. Number of approved training programs for health personnel
5. Number of accredited health care institutions
6. Activated council for medical tourism

### Annex (4)

#### Result (1): Policy and Good Governance Environment that Promotes the performance of health System

	Indicators	Current value 2013	Target value					Data source	Mea sure ment freq uenc y
			2015	2016	2017	2018	2019		
1	Update and develop legislation of the Higher Health Council	Proposed new law	Proposed new law	Proposed new law	Approved law	Enforced law	Enforced law	Higher Health Council	Annual
2	Number of executed initiative in partnership between public and private through the Higher Health Council	(4) 1. Comprehensive Health Insurance 2. National Strategy of Health Sector 3. National Observatory for Human Resources for Health 4. National Health Accounts	5	5	6	6	6	Higher Health Council	Annual
3	Number of good governance initiatives applied 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 applied in partnership with local communities	3	3	4	4	5	5	MoH HIAC	Annual
5	Number of policy briefs developed in health policies	2	3	5	6	7	8	Higher Health Council JMC	Annual
6	Databases linked to public sector and King Hussein Cancer Center	5	5	5	5	Complete the project	Continuous	Health Computerization company	Annual
7	Public Health Monitoring System	-	Piloted in some	Applied in all	Applied in all health	Continuous	Continuous	MoH and WHO	Annual

			MoH facilit ies	MoH facilit ies	public sector facilities				
--	--	--	-----------------------	-----------------------	--------------------------------	--	--	--	--

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

	Indicator	Current value 2013	Target value					Data source	Fre. Of mea sure ment
			2015	2016	2017	2018	2019		
1	Wasting rate in children under 5 years	2%	2%	2%	2%	2%	2%	MoH	
2	TB incidence rate	5.8	5.6	5.4	5.4	5.2	5%	MoH	
3	Malaria incidence rate among Jordanians	Zero	Zero	Zero	Zero	Zero	Zero	MoH	
4	Number of Paramedics from civil def. college	442	537	640	740	840	940	Civil defense	
5	Total fertility rate	3.5	-	-	3.2	-	-	Statistic s depart ment	
6	Use of modern RH/FP	42.3	52	55	57%	58	59	Statistic s depart ment	
7	Stunting rate in children under 5	8%	8%	7%	7%	6%	6%	MoH	
8	AIDS among 15-24 years per 1000 of population	0.1>	0.1>	0.1>	0.1>	0.1>	0.1>	MoH	
9	Infant mortality rate (per 1000)live birth	17	-	-	12	-	11	Statistic s depart ment	
10	Mortality in children under 5 (per 1000) live birth	21	-	-	17	-	15	Statistic s depart ment	
11	Maternal mortality per 100.000 live birth	19.1	-	-	-	-	18	MoH Higher Populat ion Council	
12	Rate of using postnatal	86%						General Statistic	

	services								Depart ment	
1 3	Jordan rank in elderly health on Global Age Watch Index		61						Nationa l Council for family affairs/ Global report on elderly	
1 4	National Strategy for elderly/Healt h		Exist						Nationa l Council for family affairs	
1 5	Policies supporting elderly Medicine		2	4	5	6	7	8	Nationa l Council for family affairs	
1 6	Smoking prevalence among persons aged (18+)		29	27	27	26	26	25	MoH	
1 7	Cancer cases(breast, colon) Detected at early phases (National record)		34%	35%	35%	36%	36%	37%	MoH	
1 8	Cancer survival rate		64%	64%	64%	64%	65%	65%	MoH	
1 9	Number of qualified centers to asses Palliative care		2	2	3	4	4	5	MoH	
2 0	Practitioners of modest physical activities		68%	70%	72%	72%	74%	75%	MoH	
2 1	Number of centers that treat physiological cases		13	18	20	28	30	35	MoH	
2 2	Number of hospitals providing paramedics		All hospital s	All hospital s	All hospital s	All hospital s	All hospital s	All hospital s	MoH	
2 3	Num ber of	Hosp ital	17	25	30	35	-	-	HIAC	Ann ual
		Heal	90	110	130	150	-	-		

	health care with accreditation (Accumulated)	Centers								
24	Bed rate per 10.000 persons		18	18	19	19	19	19	MoH	Annual
25	Doctor rate per 10.000		28.6	29	29	29	30	30	HHC MoH	Annual
26	Dentist rate per 10.000		10.4	11	11	11	12	12	HHC MoH	Annual
27	Pharmacist per 10.000		17.8	18	18	19	19	20	HHC MoH	Annual
28	Nurse (legal, associate, midwife, assistant		44.8	45	45	45	46	46	HHC MoH	Annual

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

1	Indicator	Current value, 2013	Target value					Data Source	Measurement frequency
			2015	2016	2017	2018	2019		
2	Per capita share of Health expenditure JDs	266.6	270	273	276	278	280	HHC	Annual
3	Health Insurance coverage	78	82	85	87	90	92	HHC, MoH	
4	More than one insurance	10	-	-	4	-	-	Statistics	Annual
5	Public exp/ total Health sector	66.2	66	65.5	64.5	63.5	62.5	HHC	Annual
6	Public exp/ GDP	7.6	7.5	7.5	7.4	7.3	7.2	HHC	Annual
7	Medicine exp/ GDP	26.8	25	24	23	22	21	HHC	Annual
8	Out of pocket exp	24	23	22	21	20	19	HHC	Annual
9	Exp on health care/Public exp.	16.4	18	19	20	21	22	HHC	Annual

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

1	Indicator	Current value, 2013	Target value					Data Source	Measurement frequency
			2015	2016	2017	2018	2019		
2	Medical Tourism returns (JDs)	849.600	936.684	983.412	1,032,264	-	-	Private H. Association	Annual
3	Medicine Exports returns	439.000	506.000	581.000	673.000	-	-	Drug Producers Ass	Annual
4	Enforced medical accountability law	Draft law	Draft	Approved	Applied	Applied		MoH	Annual
5	Approved Health training programs	3	3	4	5	-	-	MoH	Annual
6	Active Medical Tourism Council	Under establishment	Under Establishment	Active Council	Active council	Active Council	Active council	MoH PH Association	Annual

## Annex (2)

## Follow-up and evaluation Form of The National Strategy of Health Sector 2015- 2019

Date of filling out the form: .....

Name of the partner: .....

Liaison officer name (who fills the form): .....

[illegible]



## 11. References

1. [http://www.who.int/social\\_determinants/sdh\\_definition/en](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](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%20Aug.pdf](http://www.dos.gov.jo/dos_home_e/main/archive/inflation/2013/CPI%20Aug.pdf) Comprehensive Review of Jordan Health System
5. World Bank: <http://www.worldbank.org/en/country/Jordan>
6. Jordan Chamber of Industry. Economic Indicators Bulletin of the Jordanian industrial sector edition III – February, 2013
7. United Nations Development Program. Human Development Report, 2014
8. Ajlouni, Musa (2011). Jordan Health System Profile 2010 (Unpublished report submitted to WHO / EMRO), August 2011.
9. <http://www.ehs.com.jo/ar>
10. <http://www.dos.gov.jo>
11. <http://www.cspd.gov.jo>
12. Public Security Directorate / Central Traffic Department:  
<http://www.traffic.psd.gov.jo>
13. General Directorate of Civil Defense: Accidents annual statistical report in 2012
14. National Council for Family Affairs: National framework for the protection of family from violence, 2006
15. National Council for Family Affairs. Strategic Plan for the protection of the family and the prevention of domestic violence, 2005 – 2009
16. Ministry of Health: Ministry of Health's strategy for the years 2013-2017
17. Health Insurance Department / Ministry of Health, 2013.
18. Abu Samen, Taher. Abu Saif, Jamal. Saleh, Kamal. Et al. Health insurance and spending on health in Jordan, Department of Statistics in collaboration with the Higher Health Council, 2010.
19. Civil Health Insurance Regulation No. 83 of 2004, as amended.
20. Annual Statistical Report of the Royal Medical Services for 2013.
21. Abu-Saif, Jamal. Et al. Fairness in Financial Contribution in Jordan. High Health Council in collaboration with The World Health Organization, 2010.
22. <http://phajordan.org>

23. Technical Report Series of health accounts in Jordan / General Secretariat of the Higher Health Council 2008 – 2012
24. OECD- EU statistical pharmaceutical data, 2012.
25. National Strategy for rationalization of expenditure on medicine in Jordan, Higher Health Council, 2014 - 2016.
26. Jordanian pharmaceutical industry database / Jordanian Federation of Pharmaceutical Manufacturers - 2010.
27. Ajlouni, Musa. Comprehensive Review of Jordan Health System, (A country report submitted to WHO EMRO), Sep., 2013.
28. Ajlouni, Musa (2010). Jordan Human Resources for Health (HRH) Country Profile, 2010, WHO / EMRO.
29. National Agenda: Jordan we want 2006- 2015, the Ministry of Planning and International Cooperation, 2006.
30. National Health Strategy 2008- 2012, Higher Health Council
31. Annual report of health human resources in Jordan, Higher Health Council, 2013
32. Annual Statistical Report, the Ministry of Health 2013
33. World Health Organization / Regional Health Observatory  
<http://rho.emro.who.int/rhodata/?vid=2623#>
34. MOPIIC, UNDP (2011). Second National Millennium Development Goals Report Jordan 2010.
35. National Agenda: Jordan we want 2006- 2015, the Ministry of Planning and International Cooperation, 2006
36. National Strategy for reproductive health / Family Planning (2013- 2017), the Higher Population Council
37. Economic and social impacts of the Syrian Refugee Crisis, Dr. Khaled Wazani, 2014
38. Population and Household Health Survey, the Department of Statistics, 2012
39. Ministry of Health Strategy 2013- 2017
40. Ministry of Health, Primary Health Care Department
41. All Jordan document, the Ministry of Planning
42. The Higher Health Council Website
43. 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#](http://info.worldbank.org/governance/wgi/sc_chart.asp#)
44. Transparency International's 2012 Corruption Perceptions Index  
[http://www.transparency.org/whatwedo/pub/corruption\\_perceptions\\_index\\_2012](http://www.transparency.org/whatwedo/pub/corruption_perceptions_index_2012)
45. 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.

46. 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
47. The Higher Population Council Website
48. The Jordanian Nursing Council Website
49. The Jordanian Medical Council Website
50. The National Council for Family Affairs Website
51. The website of the Department of Joint Procurement
52. Food and Drug Administration Website
53. The website of the Association of Private Hospitals
54. Jordanian National Strategy for the elderly, the reference document 2008, the National Council for Family Affairs
55. Monitoring the implementation of the action plan of the implementation of National Strategy for the elderly "Monitor the achievements of institutions 2009 - 2011", the National Council for Family Affairs
56. Health Institutions Accreditation Council Website

## **12. Members of the Technical Committees**

Working committees of the National Strategy of Health Sector 2015 - 2019

- The Strategy Review Local expert, Dr. Musa Ajlouni
- Steering Committee of the National Strategy of Health
  - 1- The Secretary General of the Higher Health Council, 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
  - 5- Director of health Insurance Department - Ministry of Health, Dr. Khaled Abu Hdaib
  - 6- Director of the Primary Health Care Department - Ministry of Health Dr. Bashir Al Qasser
  - 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- The UNHCR representative Mr. Ibrahim Abu Siam
- 11- Chairman of the Private Hospitals Association, Dr. Fawzi Hammouri
- 12- Director of the Directorate of Technical Affairs and Research / Higher Health Council, Dr. Jamal Abu Saif

- Technical Committee of National Health Strategy

1. The Secretary General of the Higher Health Council, Dr. Hani Ameen Brusk Al Kurdish - Chairman of the Technical Committee
2. Director of Planning and Project Management Directorate- Ministry of Health, Dr. Riad Okour
3. Director of Planning Directorate - Royal Medical Services Brigadier Dr. Yassin Atwarah
4. UNHCR representative Mr. Ibrahim Abu Siam
5. Director of the Technical Affairs and Research Directorate / Higher Health Council, Dr. Jamal Abu Saif
6. Head of Planning and Project Management Department/ Higher Health Council, Dr. Raghad Mohammed Hadeedi
7. Head of the Department of Studies and Research / Higher Health Council, Dr. Ghada Talal Kayyali
8. Head of Department of Economics and health funding / Higher Health Council Mr. Muein Fouad Abu Sha'er

- National Health Strategy Follow-up and Evaluation Committee

1. Secretary General of the Higher Health Council, Dr. Hani Ameen Brusk Al Kurdi - Chairman of the Monitoring and Evaluation
2. Director of Quality Directorate - Ministry of Health, Dr. Ghassan Fakhoury
3. Director of the Information Directorate - Ministry of Health, Dr. Nidal al-Azab
4. Information Directorate - Ministry of Health, Dr. Majed Asaad
5. Medicine field commander - the Royal Medical Services, Brigadier doctor Mansour Karadsheh
6. UNHCR representative Mr. Ibrahim Abu Siam
7. Director of the health program in - UNRWA Dr. Eshteivi Abu Zayed

8. Director of the Directorate of Technical and Research Affairs / Higher Health Council, Dr. Jamal Abu Saif
9. Head of Planning and Project Management Department/ Higher Health Council, Dr. Raghad Mohammed Hadeedi
10. Head of the Department of Studies and Research / Higher Health Council Dr. Ghada Talal Kayyali
11. Head of the Department of Economics and health funding/ Higher Health Council, Mr. Muein Fouad Abu Sha'er

- Management team

1. Finance Officer / Mr. Fahmi Al-Osta
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
5. Secretary of the Monitoring and Evaluation Committee/ Ms. Manal Faleh Tamimi
6. Support Services Officer / Mr. Nazir Hinawi
7. Printing work / Ms. Susan Jamal Thunaibat