



## **IMPROVING EFFICIENCY IN HEALTH SECTOR**

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### **Abstract**

*This study aims at investigate the efficiency of public hospitals performance in Jordan. The results are compared with old efficiency scores of the same hospitals reported in the literature. This comparison leads to signify that the efficiency of public sector hospitals in Jordan is varied over time, due to decreasing public expenditures on health care per capita, and the increasing of refugee's number. However, the results implying that these institutions are either having poor management or they treat long stays diseases.*

*Keywords: Efficiency, Hospitals, Health, Jordan*



## INTRODUCTION

In today's dynamic and rapidly changing socio-economic conditions, all institutions have to search and find ways for continuous improvement. As a service business, health care institutions have followed the similar goals with other organizations for achieving performance improvements. In recent years, efficiency has been one of the most important issues for hospitals which used limited resources for maximum value (Chu et al., 2003).

Furthermore, efficiency measurement in the healthcare sector is important for some aspects. The system is likely to reach a higher performance level without a large increase in input, and environmental factors causing the system inefficiency can be identified, as well regular measurement of efficiency is effective over time in monitoring and assessing how to conduct reforms that promote technical and a locative efficiency in a hospital.

Government service organizations, including the health sectors in many countries, are currently facing significant constraints on the resources allocated to them, and these organizations should use their resources efficiently to meet the changing and increasing needs of beneficiaries. The optimal use of these resources requires the availability of clear and accurate data on the flow of resources and their impact on the quality and performance of health services (Du, 2017).

The efficiency of hospitals is a major concern for governments, which often provide substantial funding to these hospitals through the Ministry of Health and its authorities. Leaders and managers need to evaluate investments using realistic decision-making such as performance and efficiency analysis (Bao & Bardhan, 2017). Healthcare organizations are required to achieve efficiency; they have to reduce costs, turning off waste of resources and optimal use of resources. Wang and Gao (2017).

## PROBLEM STATEMENT

The good performance of an organization is often described as efficiency that is commonly used to analyze the capacity of institutions to manage their costs well and to make good use of their resources, efficiency in health services is the relationship between final results achieved and efforts made in the form of money, resources and time. The importance of efficiency in health services is highlighted through indicators, Length of time spent in the process of preparing and qualifying the production of health service, especially doctors. And the health service provided depends to a large extent on the skill of those who produce it. And the importance of efficiency was linked to the available capital of the hospital, which is one of the main elements of its inputs (Helal & Elimam, 2017).

If efficiency is an important criterion in judging the quality of an organization's performance, it is of particular importance to hospitals, as they are required to provide high quality health services at the right time and place to maintain the health of the community, where the health services are characterized by high cost, with limited resources directed to them. Hospitals need to demonstrate their ability to deliver a high quality of services and efficiency at reasonable costs. This is achieved: good distribution of inputs, optimal use of inputs, achieves the best amount of outputs (Hassan et al., 2015).

The Jordanian health system is under great pressure to provide exceptional health services in the context of limited resources and the circumstances surrounding it due to regional conflicts and the influx of displaced persons and refugees. Hospitals are the most important components of this health system. There are many factors that increase these pressures, the most important of which is the increase in the expectations of the receiving community for health services, the decrease in government support. Despite the large number of studies conducted to measure the efficiency of health services in hospitals using multivariate models throughout the world and the Arab region, this study is the first attempt to apply these models to the health sector in the Hashemite Kingdom of Jordan, which aims at measuring the current level of efficiency levels in Government hospitals help to provide a clear vision and set achievable goals that can be met by government health providers in the Kingdom to meet the pressures they face by optimizing the available resources.

## **LITERATURE REVIEW**

### **Jordan Health System**

As a universal right, health is a vital resource for social and economic development. In this context, since independence, Jordan has endeavored to provide for the health needs of society in a complete, consistent and unified manner within the framework of the Health Charter and the Pacific National Health System. It is the basic framework for the provision of treatment through the use of all means to protect and promote health under certain restrictions. Through this talk, we try to cover the main axes of the health system in Jordan from the national policies and procedures, which show the vision and mission of this vital sector represented in government hospitals and health centers and set priorities to eliminate the spread of diseases, and provide medical and therapeutic services through vaccination of children, Motherhood, and childhood (Hassan et al., 2015).

Health services have experienced significant qualitative and quantitative development over the past years at the preventive and therapeutic levels. This development came as a result of efforts, planning, experiences and experiences that took many years in the process of development

and improvement. Since its inception, the Ministry of Health has adopted health programs to improve the quality of health services such as hospitals, health centers, and others. On several grounds related to raising the level of health in the Kingdom. Progressive progress has included budgets for health, manpower, hospitals, primary health care centers and services emergency and ambulance, and also included the development of private sector institutions (Zhang, 2016).

Figure 1 illustrates the composition of the Jordanian health sector, where Jordan serves a health sector consisting of several sectors, as follows:

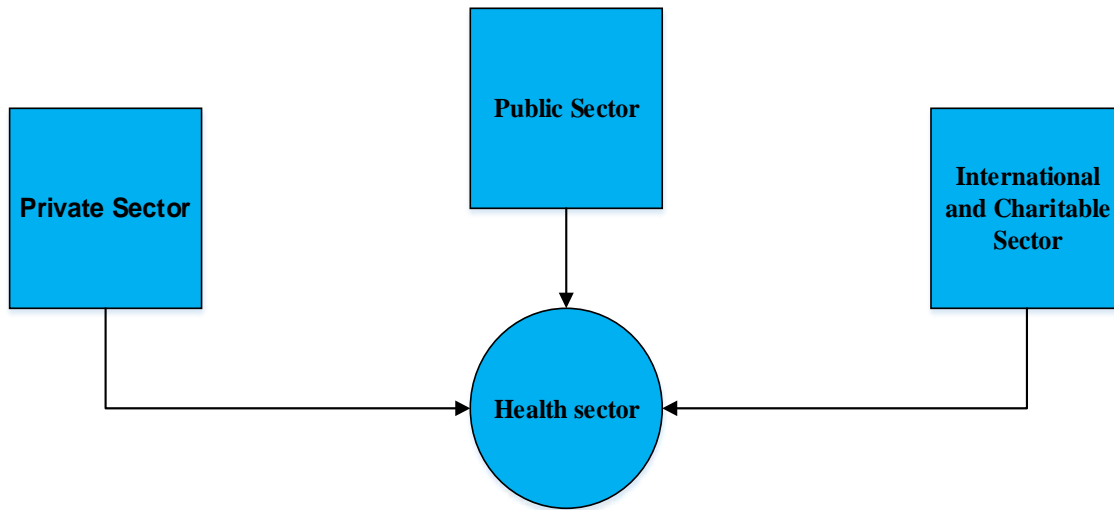


Figure 1: Health Sector of Jordan

Therefore, these sectors provide health and medical services in both diagnostic and therapeutic areas distributed throughout the Hashemite Kingdom of Jordan. Table 2.1 shows the types of public Health Sectors, which are focused in this study.

Table 1: Types of Public Health Sectors in Jordan

No	Public Health Sectors
1	Ministry of Health.
2	Royal Medical Services.
3	Medical services in public universities: <ul style="list-style-type: none"> <li>a) Jordan University Hospital.</li> <li>b) King Abdullah Hospital in the University of Science and Technology.</li> </ul>
4	Health services in ministries and government institutions Greater Amman Municipality and Municipalities in the Kingdom's Governorates: <ul style="list-style-type: none"> <li>a) Department of School Health in the Ministry of Education.</li> <li>b) Department of Health and Safety at the Ministry of Labor.</li> </ul>

The operational environment in Jordan continues to be considerably afflicted by the security situation in Syria and the influx of the Syrian refugees into the country, as well as by the development in Iraq and Gaza in 2014 (UNHCR, 2016). While the volume of residents in Jordan 9, 531, 712 in 2015, about thirty percent are not Jordanians, especially, 1, 300, 000 are Syrians (Ministry of Health, 2015).

Moreover, due to territorial political unsteadiness, there is an unpredictable activity of refugees which places higher demands on the country's infrastructure and health services. Centered on the Unified Nations around the world Refugee Agency (UNHCR), Jordan hosted more than a million refugees in 2015. Jordan has granted. The Syrian refugees. Access to services like health and education. The Jordanian Ministry of Health is an in business collaborates with UNHCR to react to the out of place people's needs (Ministry of Health, 2016). Along these lines, the Jordanian public hospitals expect more workloads and need to adapt to the administration duties toward the displaced people.

### **The Efficiencies in Health Sector**

Efficiency is particularly important for health organizations, due to the importance of results achieved as an output is a human life and the fact that it is a productive individual of society. These organizations are required internally and externally to produce high quality and efficient health services high and marginal rates of default, errors or waste of resources. Hospitals consume many inputs with relative cost - labor force - medical equipment- medicines, etc. - to produce services of value to society. The efficiency measurement is mainly based on measure the skills of these hospitals in converting these inputs into outputs. And generally deals Analysis of efficiency with hospitals as a closed box, not looking for an explanation of why the hospital enjoys a certain level of efficiency (Chen, Delmas, & Lieberman, 2015).

Who defined the efficiency of health services as achieving goals Health institutions with the least expenses and material costs and the least time and effort possible in addition to the extent Accepting the level of services provided by that organization and defined by the productivity Committee Australia as the extent to which health care resources are used to obtain health improvements, These include: Technical competence: indicating that health care interventions for a particular health condition - Such as disease treatment - if implemented with as little input as possible, and efficiency Customization: which indicates that efficient health interventions - such as intervention mix to address various diseases - were selected to produce as many improvements as possible (Li & Dong, 2015).

In recent years efficiency has become one of the most attractive work areas of healthcare management literature. Some authors argue that hospitals are profit organizations

while some others do not agree with them (White and Ozcan, 1996). Hospitals, whether are economic organizations or not (Ferrier and Valdmanis, 2004), have limited resources to gain maximum value like all other organizations (Watcharasriroj and Tang, 2004; Harris et al., 2000).

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Thus, as well as its instrumental value, tackling inefficiency has an important accountability value: to reassure patients, caregivers and the general population that their claims on the health system are being treated fairly and consistently. Also, health care funders including governments, insurance organizations and households are interested in knowing which systems, providers and treatments contribute the largest health gains in relation to the level of resources they consume. Efficiency becomes particularly important in the light of financial pressures and concerns over long-term financial sustainability experienced in many health systems, as decision-makers seek to demonstrate and ensure that health care resources are put to good use. When used appropriately, efficiency indicators can be important tools to help decision-makers determine whether resources are allocated optimally, and to pinpoint which parts of the health system are not performing as well as they should be.

## CONCLUSION

Efficiency scores show how close hospitals to using their maximum performance capacity. Thus, it is recommended that inefficient public hospitals need to improve their efficiency and performance, by either (1) appropriate service management, (2) conforming to the current admission and hospital stay standards, (3) shift towards outpatient services, and/or (4) encourage resources employment efficiency by better handling expenses.

Quality of health care inputs, i.e. staff and equipments, and health care outputs and satisfaction are among the missing factors in the model. Future research is recommended to incorporate these factors into the model. We recommend use of the DEA technique in assessing and measuring performance of hospitals because it can be used regardless of their types and seek to address the limitations of other models. However, more research employing advanced DEA modeling should be devoted to analyze the impact of other regulatory-specific and hospital-specific variables on efficiency such as quality of health care services.

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