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**The Expected Impact of the Introduction of the Social Health
Insurance on the Syrian Public Hospital Management**

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Table of Contents

Tables	VII
Figures	VIII
Acronyms	IX
Symbols	X
1 Introduction	2
2 Background	7
2.1 Hospital Management	7
2.1.1 Definition and Types of Hospitals	7
2.1.2 Hospital System Model	8
2.1.3 Environmental Analysis	9
2.1.4 Values and Objectives System	10
2.1.5 Input Factors.....	11
2.1.5.1 Human Labour.....	11
2.1.5.2 Hospital Buildings.....	13
2.1.5.3 Equipment	14
2.1.5.4 Materials.....	14
2.1.5.5 Patients	14
2.1.5.6 Public Services	15
2.1.6 Hospital Financing	15
2.1.6.1 Payment Methods.....	15
2.1.6.2 Expenses.....	17
2.1.7 Production	18
2.1.7.1 Health Care Services Production.....	18
2.1.7.2 Quantity of Health Care Services.....	19
2.1.7.3 Quality of the Health Care Services	20
2.1.7.3.1 Concept.....	21
2.1.7.3.2 Quality Management System	22
2.1.7.3.3 Total Quality Management Models.....	23
2.1.7.3.3.1 International Organization for Standardization	23
2.1.7.3.3.2 European Foundation of Quality Management	24
2.1.7.3.4 Results from Total Quality Management models.....	26
2.1.8 Output Factors	26
2.1.8.1 Main Output	26
2.1.8.2 Satisfaction of Patient.....	28
2.1.8.3 Secondary Outputs	29
2.1.8.4 Unintended Outputs.....	29
2.2 Social Health Insurance.....	30
2.2.1 Health Care Financing Alternatives	31
2.2.2 Social Health Insurance System.....	33
2.2.2.1 Historical Evolution	33
2.2.2.2 Concept and Aims	33
2.2.2.3 Design.....	35
2.2.2.3.1 Population Coverage	35
2.2.2.3.2 Financing	37

2.2.2.3.3	Single Pool Fund or Multiple Risk Pools Funds	39
2.2.2.3.4	Composition of Risk Pools	39
2.2.2.3.5	Determining the Benefits Package	40
2.2.2.3.6	Supervision	41
2.2.2.4	Implementation	41
2.2.2.5	Role of Government	42
2.2.2.6	Risks	43
2.2.2.6.1	Moral Hazard	43
2.2.2.6.2	Adverse Selection	44
2.2.2.6.3	Administrative Costs	44
3	Health Care in Syria	47
3.1	Health Situation	47
3.1.1	Geography	47
3.1.2	Demographic and Socioeconomic Situation	48
3.1.2.1	Demographic Trends	48
3.1.2.1.1	Population	48
3.1.2.1.2	Life Expectancy at Birth	49
3.1.2.1.3	Urbanization and Migration	50
3.1.2.1.4	Crude Birth (Death) Rate	51
3.1.2.2	Socioeconomic Trends	52
3.1.2.2.1	Economy	52
3.1.2.2.2	Lifestyle	53
3.1.3	Trends in Health Status	54
3.1.3.1	Infant Mortality	54
3.1.3.2	Under-Five Mortality Rate	55
3.1.3.3	Maternal Mortality	56
3.1.3.4	Fertility	57
3.1.3.5	Leading Causes of Morbidity and Mortality	57
3.2	Health Care System	60
3.2.1	Structure	61
3.2.2	Management	61
3.2.2.1	Government Involvement	62
3.2.2.2	Private Providers	65
3.2.2.3	Philanthropic Providers	66
3.2.3	Financing	68
3.2.3.1	General Government Budget	68
3.2.3.2	Households	69
3.2.3.3	Public and Private Health Benefit Plans	69
3.2.3.4	Voluntary Health Insurance	70
3.2.3.5	External Sources of Financing	70
3.2.4	Health Care Expenditure	70
3.2.4.1	Total Health Care Expenditure	70
3.2.4.2	Health Care Expenditure Per Capita	71
3.2.4.3	Health Care Expenditure Resources	72
3.2.4.4	Ministry of Health and Health Directorates Budgets	73
3.2.5	Health Care Delivery System	74

3.2.5.1	Primary Health Care.....	74
3.2.5.2	Secondary and Tertiary Health Care.....	75
3.2.5.3	Human Resources.....	76
3.2.5.4	Pharmaceuticals.....	78
3.3	Social Health Insurance Project.....	78
3.3.1	Law Project.....	78
3.3.2	Health Sector Modernization Programme.....	79
3.3.3	Expected Costs of the Social Health Insurance System.....	79
3.3.4	Multiple Health Insurance Fund.....	83
3.3.5	Work Plan.....	83
3.3.6	Legal Framework of Proposed Insurance Plans.....	85
3.3.7	Performance Improvement of Public Hospitals.....	86
3.3.8	Organization Location.....	86
4	Feasibility Study.....	89
4.1	Hypothesis.....	89
4.2	Data Collection and Methods of Research.....	93
4.2.1	Study Methods and Research Strategy.....	93
4.2.2	Study Samples.....	95
4.2.3	Questionnaire Survey.....	95
4.2.3.1	Questionnaire Development.....	95
4.2.3.2	Evaluation of the Questionnaire.....	98
4.2.3.3	Ensuring the Cooperation.....	99
4.2.3.4	Procedure.....	99
4.2.3.5	Statistical Methods.....	99
4.3	Results.....	100
4.3.1	Reliability.....	101
4.3.2	Respondents' Structures.....	102
4.3.3	Quantity of Hospital Services.....	103
4.3.4	Quality of Management.....	105
4.3.4.1	Leadership.....	105
4.3.4.2	Policies and Strategies.....	107
4.3.4.3	People.....	108
4.3.4.4	Partnerships.....	109
4.3.4.5	Processes.....	111
4.3.4.6	Patients' Results.....	112
4.3.4.7	Staff Results.....	113
4.3.4.8	Society Results.....	114
4.3.4.9	Key Performance Results.....	115
4.3.5	Patients' Satisfaction with Hospital's Services.....	117
4.3.6	Demand.....	118
4.4	Discussion.....	120
4.4.1	Quantity of Provided Services.....	120
4.4.2	Quality of Management.....	126
4.4.2.1	Leadership.....	126
4.4.2.2	Policy and Strategy.....	128
4.4.2.3	People.....	129

4.4.2.4	Partnerships and Resources.....	132
4.4.2.5	Processes	134
4.4.2.6	Patients' Results.....	136
4.4.2.7	People Satisfaction.....	138
4.4.2.8	Society Satisfaction.....	139
4.4.2.9	Key Performance Results.....	140
4.4.3	Satisfaction.....	142
4.4.4	Demand	143
5	Conclusion.....	150
5.1	Implications.....	150
5.2	Study Limitations and Avenues for Further Research	152
5.3	Final Thoughts.....	153
6	References.....	155
7	Annexes.....	173
7.1	Annex 1: Project of the Syrian Health Insurance Law.....	173
7.2	Annex 2: Coverage and Main Work Plan	177
7.3	Annex 3: English Version of the Questionnaire.....	178
7.4	Annex 4: Arabic Version of the Questionnaire.....	183
7.5	Annex 5: Letter of Ensuring Cooperation.....	187
7.6	Annex 6: Descriptive Statistics of the Study Variables	188

Tables

Table 3-1: Communicable Diseases in Syria (2000-2005)	59
Table 3-2: Organizations Involved in the Health Care System.....	61
Table 3-3: Public Spending for Health Care (2003)	68
Table 3-4: Ministry of Health and Health Directorates' Budgets (1996-2005)	74
Table 3-5: Number of Hospitals and Hospital Beds (2000–2005).....	76
Table 3-6: Expected Contributions of the Formal Employed Workforce per Year	82
Table 3-7: Expected Contributions of the Whole Workforce and Poor per Year	82
Table 4-1 Internal Consistency Analysis for Study Scales	102

Figures

Figure 1-1: Structure of the Study.....	5
Figure 2-1: Complete Hospital System Model.....	9
Figure 2-2: EFQM Excellence Model.....	25
Figure 3-1: Map of Syria.....	47
Figure 3-2: Population Pyramids Constructed in 1981 and 2004.....	49
Figure 3-3: Trends in Life Expectancy at Birth (1970-2005).....	50
Figure 3-4: Trends in the Infant Mortality Rates (1970-2004).....	55
Figure 3-5: Trends in Under-Five Mortality Rate (1970-2004).....	56
Figure 3-6: Total Fertility Rate.....	57
Figure 3-7: Government Involvement in the Health Care System.....	63
Figure 3-8: Total Health Care Expenditure as a Percentage of Gross Domestic Products for Selected Countries (2004).....	71
Figure 3-9: Health Care Expenditure per Capita for Selected Countries (2000).....	72
Figure 3-10: Health Care Expenditure Resources in Selected Countries (2004).....	73
Figure 3-11: Average Number of Hospital Beds per 10,000 Population for Selected Countries (2005).....	76
Figure 3-12: Number of Physicians and Health Workers per 1000 Population in Selected Countries (2004).....	77
Figure 3-13: Framework Table for Social Health Insurance System.....	81
Figure 3-14: Multiple Health Insurance Fund System.....	83
Figure 3-15: Prospective Development of Social Health Insurance System.....	84
Figure 4-1: Expected impact of the SHI on the public hospitals in Syria.....	91
Figure 4-2: Respondents' Structure on the Quantity and Demand Parts.....	102
Figure 4-3: Respondents' Structure on the Patients' Satisfaction Part.....	103
Figure 4-4: Respondents' Differences about the Quantity of Hospital Services.....	105
Figure 4-5: Respondents' Answers on the Quality of Leadership.....	106
Figure 4-6: Respondents' Answers on the Quality of Policies and Strategies.....	108
Figure 4-7: Respondents' Answers on the Quality of Staff.....	109
Figure 4-8: Respondents' Answers on the Quality of Partnerships.....	110
Figure 4-9: Respondents' Answers on the Quality of Processes.....	111
Figure 4-10: Respondents' Answers on the Quality of Patients Results.....	112
Figure 4-11: Respondents' Answers on the Quality of Staff Results.....	114
Figure 4-12: Respondents' Answers on the Quality of Society.....	115
Figure 4-13: Respondents' Answers on the Quality of Key Performance Results.....	116
Figure 4-14: Respondents' Differences about the Patient's Satisfaction.....	118
Figure 4-15: Respondents' Differences about the Demand for Hospital Services.....	120

Acronyms

A&E	Accident and Emergency
AIDS	Acquired Immunodeficiency Syndrome
CDR	Crude Death Rate
CBR	Crude Birth Rate
CHIC	Centre for Health Insurance Competence
DIN	German Institute for Standardization
DRGs	Diagnosis Related Groups
EFQM	European Foundation for Quality Management
EMRO	European Media Research Organisations
EU	European Union
GDP	Gross Domestic Product
GBD	Global Burden of Disease
GNP	Gross National Product
GTZ	German Development Cooperation
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HSMP	Health Sector Modernization Programme
IMR	Infant Mortality Rate
ISO	International Organisation for Standardization
UNAIDS	Joint United Nations Programme on HIV/AIDS
LEB	Life Expectancy at Birth
MMR	Maternal Mortality Ratio
MoD	Ministry of Defence
MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Health
MoHE	Ministry of Higher Education
MoI	Ministry of Interior
MoLA	Ministry of Local Administration
MoSAL	Ministry of Social Affairs and Labour
NHI	National Health Insurance
OECD	Organisation for Economic Co-operation and Development
PPP	Purchasing Power Parity
PHI	Private Health Insurance
QM	Quality Management
SAR	Syrian Arab Republic
SARC	Syrian Arab Red Crescent
SHI	Social Health Insurance
SYP	Syrian Pounds
TQM	Total Quality Management
UN	United Nations
UNCT	United Nations Country Team

U5MR	Under-Five Mortality Rate
UNDP	United Nations Development Programme
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Symbols

Art.	Article
Ed.	Edited
e.g.	for example
etc.	and other things
i.e.	That is
Mio.	Million
P.	Pages
Vol.	Volume
&	and
\$	Dollar
€	Euro
%	Percent
<	smaller
>	bigger

Chapter 1

Introduction

1 Introduction

Public hospitals are the main provider of hospital services in Syria. The vast majority of patients have no access to advanced outpatient services or inpatient services of other providers as charity health care services do hardly exist and private-for-profit providers are too expensive for the majority of people.¹ Consequently, the efficiency and professionalism of public hospitals are crucial for the well-being of the Syrian people.

However, there are complaints about the quantity and quality of health care services of public hospitals. Although this is hardly expressed in writing, it is a matter of fact that the majority of Syrians is dissatisfied with their hospital services. The shortcomings of Syrian public hospitals can be partly due to the limited financial, personnel and material resources, partly due to poor management in the institutions. Every attempt to improve the service production in public hospitals will be of great value for the entire health care system of Syria and for the welfare of the entire nation.

One attempt that has been frequently discussed during the last few years is the introduction of a Social Health Insurance (SHI) as a new financing mechanism. A first attempt was already made as early as 1979 when an SHI policy was drafted by the Government of Syria. However, at that time this policy could not be implemented and was abandoned soon.² After 2003, the scheme was resurrected and a law was passed. Although this law was never issued, SHI has become an important issue of the health policy arena of Syria. During the last few years, the pros and cons of a SHI have been frequently discussed in this country,³ but most opinions and statements focus on the pooling of risks and a possible positive impact on the Government budget after introducing the insurance scheme.

However, one might also expect that a SHI should have consequences for the management and service provision of public hospitals in Syria. However, this aspect was never studied although there is a strong need to improve the management as well as the quantity and quality of public hospital services in this country.

¹ Al-Rifai, A., Amer, W., & Deeb, S. (2006). P. 217-235.

² Schwefel, D. (2008). P. 9.

³ Schwefel, D., Kaderi, R., Fadda, H., Dashash, M. (2007). P. 1-2.

This thesis would like to fill this research gap. The key objective of this dissertation is to study the expected impact of the introduction of a SHI on the management of public hospitals. It is obvious that it would be best to make a longitudinal study, i.e., analyse the hospital situation before and after the introduction of the insurance scheme and compare it. However, for the following reasons the researcher had to go another way and do research on the expected impact of a SHI on the management of public hospitals in Syria.

Firstly, it is not known when the SHI law will be issued and implemented. When this piece of research started, it is expected that SHI would have been reality by 2008. However, the opposition prolonged the process and until now, it is not known when the new health care financing scheme will be implemented. It could be today – or in several years.

Secondly, even if we see a longitudinal study as the standard, we have to start with a baseline. This thesis can be seen as a baseline for an *expost-exante* comparison study of a SHI in Syria.

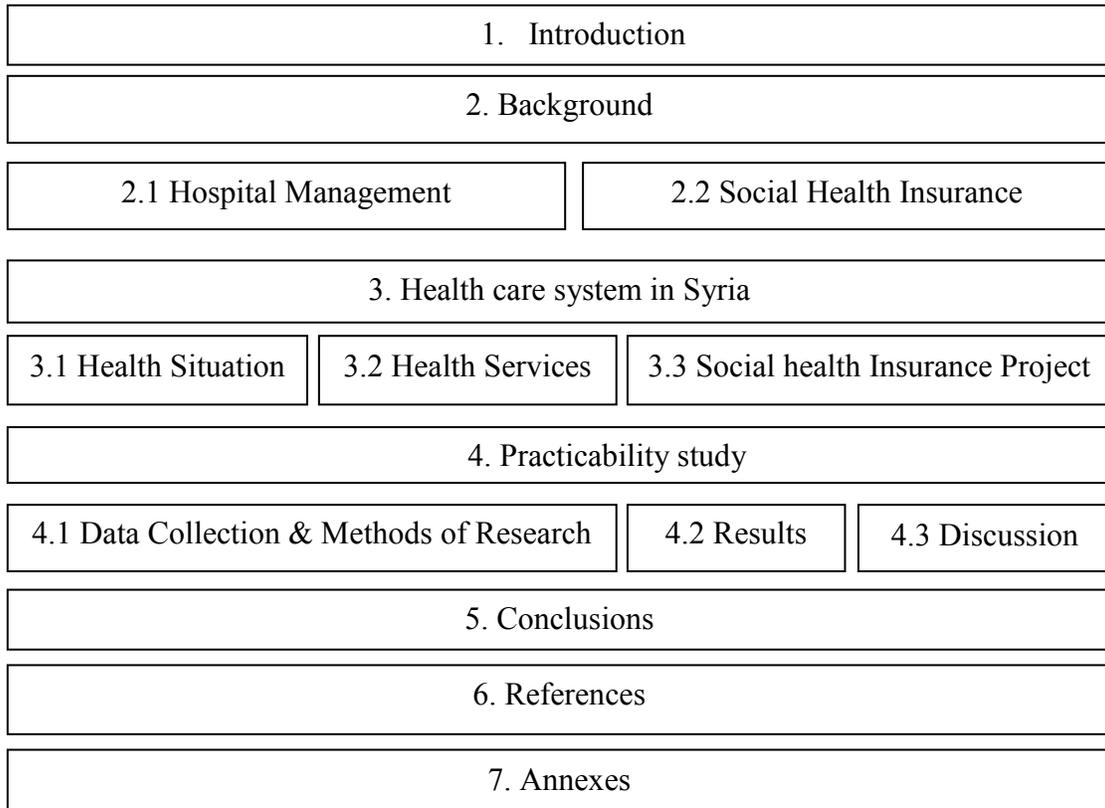
Thirdly, it is very important to know the expectations of patients, staff and management of public hospitals before implementing the SHI so that recommendations on how to adapt this new financing mechanism can be made so that it can contribute to an improvement of public hospital management in Syria. Consequently, it is one aim of this study to develop recommendations that will improve the implementation process of the SHI.

Fourthly, it is a basic assumption of this study that expectations are not irrelevant for the management process. Expectations motivate, but unrealistic and finally unmet expectations demotivate. This means that the expectations of patients, staff and management of public hospitals have to be known in order to safeguard that their assumptions are realistic and that the SHI can satisfy them. It might be necessary to educate these respondents groups on what is realistic – but for this, their expectations have to be known.

Consequently, the core of this dissertation is a survey of the expected impact of the SHI on the public hospital management in Syria. In order to understand this, the reader must have some background on hospital management, SHI and the health care system of Syria.

Thus, chapter 2 describes the concept of hospital management and the concept of SHI as a background for this study. Chapter 3 includes three primary sections. It focuses on the health situation and the health care system of Syria in the sections 3.1 and 3.2. A description of the health status of Syria is carried out; it describes the organizational structure of health system and health system financing. An analysis of the problems of the health system is also carried out. Section 3.3 includes a display and analysis for the SHI project in Syria. In chapter 4, the study displays the feasibility study, which includes four primary sections. In sections 4.1, the hypotheses are provided. Section 4.2 presents the methodological perspectives of this research. The strategies adopted in this research are discussed in detail. The issues of how to develop the research questionnaire and how to conduct the questionnaire survey are described in this chapter. Section 4.3 presents the study results about the expected impact of the introduction of Syrian SHI on the surveyed public hospitals management. The results are discussed in the section 4.4. Chapter 5 reflects the policy and practical implications of this study. The limitations of the research and issues requiring further study are also addressed. After that, the study displays the references used and the study's annexes.

Figure 1-1: Structure of the Study



Source: Own

Chapter 2

Background

2 Background

In this chapter, the theoretical basis for the study is reviewed and explained. Section 2.1 studies the hospital management, while section 2.2 focuses on the SHI as an instrument to finance the health care sector.

2.1 Hospital Management

2.1.1 Definition and Types of Hospitals

The word hospital derives from the Latin “Hospitium”, which meant something quite different from the hospital term. A hospitium is a place for the reception of strangers and pilgrims. The hospital as a guest home is a place where guests should be comfortable in a pleasant atmosphere.⁴

According to the WHO, a hospital is defined as “both a medical and social institution whose services can be reached in the facility. Furthermore, a hospital is a medical and social training and examination centre”. The WHO pointed out, however, that this definition does not correspond to the practical situation of the hospitals in many developing countries. Therefore, it defines a hospital in those countries as an organization where admitted inpatients receive medical and nursing care.⁵

In general, a hospital is “an institution for the care and treatment of ill, injured, infirm, mentally abnormal, or deformed persons, with organized facilities for diagnosis and surgery and providing 24-hr nursing service and medical supervision. In addition, the term of hospital includes a nursing home, a convalescent facility, nursing facility, rest facility, or facility for the aged”.⁶

Hospitals can be divided on several dimensions by: ownership, into public and private hospitals; educational responsibilities, into nonteaching and teaching hospitals; financial

⁴ Fleßa, S. (2007a). P. 23; Griffin, D. (2006). P. 3; Willan J.A. (1990). P. 2.

⁵ WHO (1980). P. 6-7.

⁶ Marcinko, D.E. & Hetico, H.R. (2006). P. 145.

objectives, into non-profit and for-profit hospitals, specialization, into primary, secondary, and tertiary hospitals; and locations, into rural and urban hospitals.⁷

2.1.2 Hospital System Model

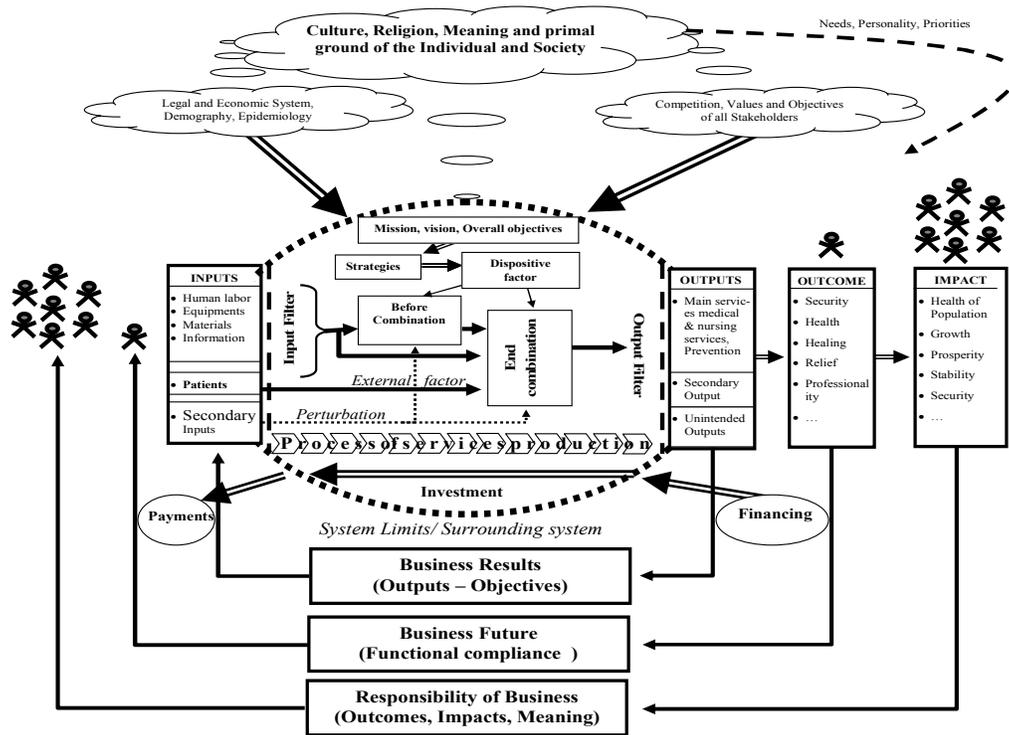
Since the middle of the 20th century, systems theory has turned out to be a helpful instrument for the general representation of research objects in various fields of science. Thus, biologists, engineers or business economists use similar models. Today, systems theory is generally accepted as an abstract of empirical sciences. It proves useful when describing and analyzing systems thoroughly, such as a hospital. The systemic perspective has the advantage that interdependences between subsystems or rather between the system and its surrounding system can be recognized and assessed. A system is an entity including number of elements and relations between the elements of the observed entity. Each element is a part of the observed entity.⁸

Figure 2-1 presents the complete hospital system model. It presents that the hospital's system is integrated into a large number of circumstances that do not belong to the system itself but exert an immediate influence on it. These circumstances, which include all of the culture, religion, meaning and primal ground of the individual and society, legal and economic system, demography, epidemiology, competition, and values and objectives of all stakeholders are generally called surrounding system. Inputs include human labour, hospital buildings, equipments, materials, patients, and secondary inputs. The production is the transformation of inputs into outputs. Only an intelligent combination of the production factors and the specific process enable an achievement of the production. The transformation process must be controlled. The control of every system starts with a related variable. It does not come from the system but has to be "loaded" externally. To this end, a normative framework is necessary from which values and visions are deduced and then transformed into real and achievable targets through a process of target definition. Furthermore, in business administration, external specifications are always necessary to produce these reference variables. Outputs include the main hospital services (medical and nursing services), presentation, and secondary and unintended outputs.

⁷ Griffin, D. (2006). P. 9; Liu, X. & Mills, A. (2007a). P. 210-211; Fleßa, S. (2007a). P. 26-28.

⁸ Fleßa, S. (2007a). P. 4; Fleßa, S. (2007b). P.98; Fleßa, S. (2006). P. 54.

Figure 2-1: Complete Hospital System Model



Source: Fleβa, S. (2007a)

More detail about the elements, which are included in figure 1-1 will be in the following.

2.1.3 Environmental Analysis

The hospital system is separated from its environment through a system boundary; on the other hand, it is embedded in its environment through the transformation process and the surrounding conditions. The hospital is fundamentally intertwined with its demographic and epidemiological environment. Its patients reflect the age structure and the morbidity of society. The hospital staff is member of a society with a specific age structure and burden of disease. The average age of the staff, the disease figures and staff shortfalls due to premature death point form the strong interdependence between the hospital management and the demographic and epidemiological system.⁹

⁹ Fleβa, S. (2007a). P. 72; Fleβa, S. (2007b). P. 33-44.

In addition, hospitals are embedded in economic situation. The resources used by hospitals must be obtained elsewhere. If the economic situation of surrounding environment people would change, *ceteris paribus*, it will also have an impact on the financing of hospital services. The economic system, the level of development, the economic cycle, the ratio of government expenditures to the Gross National Product (GNP), and the social security rate are therefore extremely important for a hospital within its environment.¹⁰

Furthermore, each hospital is involved in the market of hospital services. It appears as a partner and/or business rival of other hospitals. It is therefore important to know the other hospitals and to observe the entire hospital sector. This also includes establishing good relationships with the organizations of the hospital system.¹¹

Finally, the hospital is embedded in the social value system on multiple levels. It derives its own values, objectives and strategies from this system. It depends on social evaluation as society provides the hospital with resources. The culture of society as a foundation of its values and the reflection of these values are very important for the enterprise in this respect.¹²

2.1.4 Values and Objectives System

According to the model of systems theory, all open systems require objectives and values. A hospital as an open system has its special objectives and values. Hospitals produce services that have an existential dimension. Therefore, they are responsible for the quantity and quality of their services; this responsibility far exceeds the moral commitment of other sectors. On the other hand, society attaches much importance to the role of hospitals. It pays more attention to their behaviour, their services and the significance of their actions for humans so that their unethical behaviour will be punished more severely than that of other enterprises by drawing off resources.¹³

¹⁰ FleBa, S. (2007a). P. 73.

¹¹ FleBa, S. (2007a). P. 73.

¹² FleBa, S. (2007a). P. 73.

¹³ FleBa, S. (2007a). P. 77.

As already presented in the figure 1.1, the meaning of the values and objectives was clarified by defining three efficiency measures. On the first level, efficiency in a hospital can be measured as the ratio between the output and the input. The consumed resources can be easily determined relatively. However, definition and valuation of the output of a hospital directly depend on the objectives of the system. On the second level, it must be analyzed whether an enterprise fulfils its function in its environment. The objective and function of not-for-profit hospitals is usually the compliance of the customer's requirements. While, the realization of profits is the primary objective of the for-profit-hospitals, which can only be preserved in the long term if they fulfil their function from the customer's point of view and at an appropriate level of quality. If the patients are dissatisfied with the outcome of the hospital in relation to the input, the organisation will not achieve its basic objective, which is profit for these hospitals. Finally, society judges the utility of the hospital. Not only the output, but also the outcome for the customer and the impact on the whole society must be justified and correspond to the resources in use (Figure 2-1).¹⁴

Public hospitals, which are focused by this study, make a direct contribution to the implementation of health policy objectives that can be derived directly from the social values. The primary objective of health policy is the maintenance and improvement of the health of the population and, consequently, of social security. Fundamental objectives of public hospitals are therefore efficiency and quality. These objectives are to be achieved not only today, but also in the future. Therefore, sustainability and viability can be added as equal objectives.¹⁵

2.1.5 Input Factors

2.1.5.1 Human Labour

Human labour in a hospital includes those who work in medical, technical and administrative fields. Management of hospitals focuses on employees as input factors, because their satisfaction on the work, their identification with the company and their attention to the

¹⁴ FleBa, S. (2007a). P. 77-78 & 90.

¹⁵ FleBa, S. (2007a). P. 86.

patient decides for better or worse of the hospital. Therefore, personnel policy and personnel management are important factors at the strategic and operational level.

Physicians

Physicians traditionally have been the focus of the healthcare industry and up to now, they still play primary roles in healthcare and are the symbolic icons of the industry. In addition to primary evaluation and diagnostics of patients' conditions and prescription of treatment, physicians' work includes the visits, which take place in the hospital to follow up, finding, control and document the treatment progress. They will study arrangements with the nursing staff and other professionals, and set out the following procedures. Furthermore, the diagnostic test of patients is important. According to the timing and predictability, they can distinguish host diagnostic test, including the prominence of background, disease development, and the current mental state of a patient, check study, emergency diagnostic test, and final examination. Other important tasks of physicians are informative activities, such as the preoperative interview with the patient and the communication with relatives. Furthermore, they are responsible for blood collection and the bedside diagnosis.¹⁶

Nursing Staff

Nurses constitute the largest groups of professionals in the hospital.¹⁷ They have the most frequent direct contact with the patient.¹⁸ Their functions in the hospital are summarized with aiding and following-up the diagnosis and treatment processes of human responses to actual or potential health problems.¹⁹ To perform these functions, nursing leaders developed the following nursing processes to explain the method used to provide nursing care. Nurses should gather the data systematically, sort and organize the collected data, and document the data in a retrievable fashion. They analyze the collected data to identify the client's needs or problems. The following process includes developing a care plan through setting priorities, establishing goals, identifying desired client outcomes, and determining specific nursing interventions. These actions are documented as the plan of

¹⁶ Shi, L. (2007). P. 5; Fleßa, S. (2007a). P. 193.

¹⁷ Shi, L. & Singh, D.A. (2008). P. 140.

¹⁸ Weinberg, D.B. (2003). P. 15.

¹⁹ Doenges, M., Moorhouse, M., & Murr, A. (2006) P. 1.

care. This process requires input from the patient/ others to reach agreement regarding the plan and the achievement of the desired outcomes and goals. The Implementation of the plan occurs when the nurse performs the planned interventions. Individual knowledge and expertise and agency routines allow the flexibility that is necessary to adapt to the changing needs of the client. Legal and ethical concerns related to interventions have to be also considered as well. The evaluation is accomplished by determining the client's progress toward attaining the identified outcomes and by monitoring the client's response to/effectiveness of the selected nursing interventions for altering the plan as indicated.²⁰

Other Occupations

In addition to the medical staff, other occupations usually have different functions in the hospital. These occupations include not only the following professions such as psychologists, social workers, medical technical assistants, computer specialists, administrative staff, logo therapists, physiotherapists, but also the crafts such as carpenters. This list is certainly not complete, but it gives an insight how difficult it is to set up a group of specialists working on a highly heterogeneous level. According to this heterogeneity, the information needs are very different.²¹

The patient-related professions such as social workers, psychologists, physiotherapists have a different role than the other professions (administration, artisans). They can also provide a competitive advantage on the healthcare market in order to gain patients. The other groups (such as technical repair service) have a necessary job in the hospital but their role in supporting the provision of health services is hardly visible.²²

2.1.5.2 Hospital Buildings

Modern hospital buildings have several requirements. They must meet the legal, structural and architectural requirements and be planned economically efficient in order to reach minimum operational costs. In addition, they must be designed to support the primary functions of the hospital, and to contribute to the success of the treatment. In addi-

²⁰ Doenges, M., Moorhouse, M., & Murr, A. (2006) P. 1-4.

²¹ Stubenvoll, M. (2007). P. 22.

²² Stubenvoll, M. (2007). P. 23.

tion, they can contribute to the improvement of effectiveness and efficiency of the work. Hospital buildings must meet medical and nursing requirements. This includes the assurance of the best possible space for existing equipment.²³

2.1.5.3 Equipment

Hospital equipment includes many different elements. The most important items are the medical equipment, which should be purchased, maintained, used, and disposed in the end. The medical equipment spans a wide spectrum from simple blood pressure monitor up to positron emission tomography. The basic equipment of a German hospital would cost between 50.000 and 100.000 € per bed, depending on the level of care and specialization and on the life cycle of the hospital.²⁴

2.1.5.4 Materials

The list of materials as inputs of the hospital includes all of drugs, food, injections, implants, gloves, X-ray film, laboratory reagents, detergents, etc. They are in common to be used one time only; therefore, they do not wear out as equipments.²⁵

2.1.5.5 Patients

The patient is the most important input factor. The function of hospital performance is measured not in number or quality of services or in the hospital profits, but by the satisfaction of patients. The patient has three roles in the production process of service. He is one of the inputs; he enters the hospital toward a different process according to space and time until he is discharged again. He is a customer, because he will take a purchase decision of the service based on his subjective criteria. Furthermore, he is a co-producer in providing services, since he is present and part of the production and the largest part of the work happens because of his cooperation, which will significantly influence the performance results. It is necessary and appropriate to deal intensively with the patients as

²³ FleBa, S. (2007a). P. 198-199.

²⁴ FleBa, S. (2007a). P. 208.

²⁵ FleBa, S. (2007a). P. 218.

input factor according to their desires and values and metaphysical beliefs. He alone is ultimately the success of a hospital.²⁶

2.1.5.6 Public Services

Other factors that could be added to the list of hospitals' inputs are public services, which could be regarded as secondary inputs. Governments impose taxes for obtaining funds, which cover the costs of public services. Hospitals use public services, such as infrastructure, security and national prestige (as a promotional advantage) in international markets.²⁷

2.1.6 Hospital Financing

Generally, hospitals get their revenue by providing medical services and nonmedical services, as well as, through donations and grants from individuals, foundations, or the government, and through investments.²⁸ On the other hand, hospitals must spend money to function and provide patient care.²⁹

2.1.6.1 Payment Methods

There are several different methods of refunding the provider. Each method has several advantages and disadvantages. Each type of these methods has variations that may create a different set of incentives, and the methods may be used in combination to enhance or mitigate the incentives that are created by each method individually.³⁰ They will be described in more detail below:

Fee for services: It is the most common method of payment. Hospitals receive fees for each product or medical treatment they provide. For instance, a hospital is financed through its medical treatment provided by its physicians and for its inpatient accommoda-

²⁶ FleBa, S. (2007a). P. 222, 224.

²⁷ FleBa, S. (2007a). P. 224-225.

²⁸ Lane, S.G., Longstreth, E., & Nixon, V. (2001). P. 7.

²⁹ Lane, S.G., Longstreth, E., & Nixon, V. (2001). P. 17.

³⁰ Langenbrunner, J.C., Cashin, C., & O'Dougherty, S. (2009). P. 4-12; Liu, X. (2003). P. 21-46; Nowicki, M. (2001). P. 65-68.

tion.³¹ By using this method, providers are encouraged to improve the quality of the services provided as well as to overproduce the health services.³²

A daily payment system (Per Diem): In this system, hospitals receive a daily payment from some institutions like SHI Agency to treat their patients for a long period. Only in hospitals, this payment system has proven to be extremely practical.³³ This system has a weak capacity for cost-containment; it leads to an extension of the length of stay of patients and an increase in numbers of admissions. Moreover, it is inexpensive and easy to administer/manage.³⁴

A case payment system: It is based on a single case rather than on a single medical treatment. After each treatment, the physician gets his fee. A case payment system can be based either on a single flat rate per case, regardless of diagnosis or on a schedule of diagnoses.³⁵ The Diagnosis Related Groups (DRGs) method is an important example of this system. It supports cost containment and efficiency improvement, but it also encourages increasing the number of admissions. According to DRGs payment method, all illnesses are spilt into the DRGs and the cost per case is estimated within each group. Adjustments are made for these factors: local wages in the area in which the hospital is located, extremely long or short stay, hospitals with large teaching programs, and hospitals with a large proportion of indigent patients.

Salaries method: In the salaries method, the provider is an employee of the SHI agency, and provides services to its members.³⁶ The providers do not receive their salaries based on the quantity of services provided but on a work time.³⁷

Capitation payment: In the capitation payment method, the providers receive payment according to the size of the population served, irrespective of the services provided. It is

³¹ Liu, X. & Mills, A. (2007b). P. 261.

³² Normand, C. Weber, A. (2009). P. 87.

³³ Normand, C. Weber, A. (2009). P. 92.

³⁴ Carrin, G. & James, C. (2004). P. 36.

³⁵ Normand, C. & Weber, A. (2009). P. 89-90.

³⁶ Chawla, M. & Berman, P. (1996). P. 30.

³⁷ Normand, C. & Weber, A. (2009). P. 82.

easy to administer and helps to contain costs in case of the payment being adequate, but the providers have no incentive to provide excessive health services.³⁸

The Budget method: It is defined as a payment of a particular sum, which covers the total costs of services or products delivered during a given period.³⁹ As the previous method, it helps to decrease costs. In this situation, if the budget were not entirely strict, the provider would have no incentive to minimize costs. On the other hand, if the budgets or the payments were not sufficiently, it would lead the provider to minimize costs to provide only the necessary care, as well as to transfer some undesirable cases to other providers.⁴⁰ This method of payment is typical for government and military hospitals.⁴¹ In Syria, global budgets are the most common form of public hospital payment.

Grants: They are funds that are donated for a specific purpose, e.g., to conduct cancer research. This revenue flows from belief of the donor that the task facing the hospital is important and socially valuable, and is not to make profits. In addition, “tax break” is considered as a form of grant for non-profit hospitals.⁴²

Cost Reimbursement: This form of payment is typical for not-for-profit hospitals, which can break even by setting charges to cover costs (including costs for treating non-paying patients and setting aside money for a prudent reserve).⁴³

2.1.6.2 Expenses

Expenses are defined as “an outflow of assets consumed to generate revenue”.⁴⁴ In the past, food and housing took up most of hospital's expenses, but today such "hotel functions" are relatively minor in comparison with wages of the physician care and other skilled people. Although, lithotripters, magnetic resonance imaging, and other medical technology are expensive, the wages of skilled people required operating each new piece

³⁸ Chawla, M. & Berman, P. (1996) P. 30; Carrin, G. & James, C. (2004). P. 37.

³⁹ Normand, C. & Weber A. (2009). P. 84.

⁴⁰ Carrin, G. & James, C. (2004). P. 37.

⁴¹ Getzen, T. (2010). P. 186.

⁴² Getzen, T. (2010). P. 185.

⁴³ Getzen, T. (2010). P. 186-187.

⁴⁴ Jagels, M.G. & Coltman, M.M. (2004). P. 55.

of equipment are high.⁴⁵ In general, wages of the physician care, nurses, skilled people, and the other service labours formalize more than 60% of a hospital's costs.⁴⁶ In addition, the for-profit-hospitals pay most imposed types of taxes as the other companies, whereas the not-for-profit hospitals are exempted from some taxes.

Most of hospital's costs are considered as fixed in the short run, independent of patients. In the very long run, almost all costs become variable. The director can hire clinical staff, rewrite treatment protocols, replace the existing building with a new one, pave some grounds for parking, and even move the facility to a more accessible site near a freeway. Permanent employees take a while to be trained. This ability to plan and choose the optimal scale and combination of inputs allows management to minimize the costs of production for any desired level of output.⁴⁷

2.1.7 Production

Production is the transformation of inputs into outputs. This is done by a recombination and space-time realization of the input factors. For instance, in order to treat a wound a nurse has to make use of her knowledge and bandages and scissors are used. Neither the production of labour factor (Nurse), nor the equipment (Scissors) or material factors (Bandage) are per se able to create the output of the patient. Only an intelligent combination of the production factors and the specific process enable an achievement of the production and the outcome.⁴⁸

2.1.7.1 Health Care Services Production

The hospital is an organization that offers health care services for patients being present in person. Health care services are considered as immaterial, non-storable, non-capable for transporting, and non-transferable goods. The dominant production factor is human operational labour. The customer who has to be present for procedure engages into establishing a close relationship with the physician and the nurse. The behaviour of the staff consid-

⁴⁵ Getzen, T.(2010). P. 190.

⁴⁶ FleBa, S. (2007a). P. 22.

⁴⁷ Getzen, T. (2010). P. 205.

⁴⁸ FleBa, S. (2007a). P. 233.

erably influences the success of the treatment and exceeds technical expertise by far. Through their charisma, choice of words, care, and friendliness they have a significant effect on the output. Therefore, health care services are predominantly services provided by individuals for individuals and can only be understood from this point of view.⁴⁹

Products significantly differ from material goods. Hospital services are services and credence goods with a predominantly existential dimension, no alternative good that is able to substitute all functions will be detected (apart from a low substitution between curative and preventive medicine). All human beings are potential customers, even if the probability per year that a citizen gets in contact with the hospital is relatively low or rather the purchase is unique or rare. The patients are the direct customers of the hospital; indirect customers are the health insurance companies, ministries, etc..⁵⁰

The transformation process from production factors to products characterizes the hospital as a multi-product company (several diagnoses and respectively case groups) with a multi-level production process (nursing care, operation, diagnosis, etc.). In the majority of cases, the production process will be adjusted individually for every patient. Normally, every patient goes through an individual diagnosis and therapy plan, although certain standards (Clinical Pathway) should be followed. Apart from some exceptions (e.g. mobile X-ray apparatus in intensive care), it is a matter of job-shop production where the patient is brought to the functional sections.⁵¹

2.1.7.2 Quantity of Health Care Services

After presenting the hospital production, the two basic dimensions of it will be discussed: the quantity and quality of health services. First, the performance quantity management will be considered, before focusing on the performance Quality Management (QM).

The production program is used to determine the quantity of production. When the given capacities are defined for production volumes of each possible product, the marginal contribution will be maximized. Therefore the production program is a medium-term plan-

⁴⁹ FleBa, S. (2007a). P. 22 & 234.

⁵⁰ FleBa, S. (2007a). P. 23.

⁵¹ FleBa, S. (2007a). P. 23.

ning. It is assumed that the capacity and investment planning, and the variable costs are known. The production program planning, used in industrial concepts, can be paraphrased with service program planning concepts in a hospital. Specifically, the question is answered, how many patients in a particular case class in a particular period should be treated so that the hospital maximizes its marginal contribution.⁵²

The importance of this question depends on the situation and cooperation from the hospital. In the classic situation, a public hospital had a comprehensive supply contract without competition and with a spatial monopoly. Usually, it is assumed that, all possible increase of products should be covered by the hospital itself and should be transferred to higher levels of care only in extreme emergencies. In this situation, the service program planning has no meaning, because the hospital is obliged to reply to the epidemiologically related demand.⁵³

However, private hospitals might be able to be selective. They seek out specific cases, where they can earn a high profit margin (Cherry Picking). Within a case class, they can select the next patient clientele, whom are for example patients with low medical costs (Cream Skimming) or referring the patients with high medical costs to higher levels of care (dumping, creative referral). Even a minimal treatment (Skimping) is possible. The services program for cherry picking is relevant such as for the chemical industry where it has been routine for decades.⁵⁴

2.1.7.3 Quality of the Health Care Services

In addition to the quantity, the quality as a dimension of the operational outputs represents an integral part of production management. It reflects the success of the enterprise on the long-term, even if the government would decide about hospital services' prices. Therefore, the QM is at the core of an organization regardless of legal requirements.⁵⁵

⁵² FleBa, S. (2007a). P. 263.

⁵³ FleBa, S. (2007a). P. 263.

⁵⁴ FleBa, S. (2007a). P. 263.

⁵⁵ FleBa, S. (2007a). P. 260.

2.1.7.3.1 Concept

The German Institute for Standardization (DIN) provided the following definition of quality equally suitable for processes, material products and services. "Quality is the totality of features of a unit as regards its suitability to fulfil specified and expected requirements".⁵⁶ Consequently, quality is not absolute but relative to what is acceptable from the receiver's (customer's) standpoint. It is based upon not only what the customer needs but also what the customer expects.

High quality care is required in all hospitals for the following reasons. First, the hospital is related to the patient or the health insurance company under a contract or agreement, which includes a qualitative description of the service. Therefore, hospitals are responsible for providing a good quality by contract. Second, patients can claim compensation for damages from the hospital if they suffer harm in the case of the failure to comply with the requisite care. Consequently, liability obliges hospitals to perform good quality. Third, several other legal bases define the requirements for the quality of equipments and services, e.g. the medicines law, the radiation protection law, etc. (safety laws). Fourth, a law of medical career obliges physicians to provide the conscientious care with suitable methods of diagnosis and treatment as well as to train and quality assurance.⁵⁷

The relationship of quantity and cost is obvious. The higher the number of cases, the lower is the cost of each single case (economies of scale, lower fixed cost ratio). The correlation between quality and quantity is not intelligible. On the one hand, there are unquestionable effects of training, but on the other hand, it is an over-routine and thus leading to carelessness and a decline in quality.⁵⁸

The quality of the service alone is not enough to guaranty the survival of a hospital. The performance must be successful, as well as the patient must satisfy his needs. In addition, this quality has an impact on the society the patient lives. Therefore, it must be distinguished between output (service because of the production process, such as surgery, nurs-

⁵⁶ Pfeifer, T., Schmitt, R., & Voight, T. (2005). P. 299.

⁵⁷ FleBa, S. (2007a). P. 260.

⁵⁸ FleBa, S. (2007a). P. 261.

ing care), outcome (impact of the service on the patient, such as curing a disease) and impact (long-term effects beyond the patients, such as the economic impact of a cure, and increase the immunity of society).⁵⁹

2.1.7.3.2 Quality Management System

The concept of the QM system pursues to achieve the quality of services and production's delivery processes with the help of management functions (planning, organizing, human-resource allocation, personnel management, control and supervision), inside an overall system, that relates the individual elements (e.g. testing incoming goods, personnel management, medical audit, etc.) together, and implements and evaluates on the basis of written standard rules. The QM system is the result of this systematization.⁶⁰ It is not part of the management system, but it is the management system.⁶¹

QM is more than the control of final products or monitoring of service delivery processes. It is a concept of corporate governance. It fully includes all parts of the company; this is called Total Quality Management (TQM). Under this conception, all operational activities are directed towards the quality requirements. Therefore, TQM implies that the quality will be considered in all operational decisions. For instance, the choice of drugs was not only taken for cost or acceptability matters, but on its impact on patient care.⁶²

TQM involves the complete management cycle with quality planning, quality implementation, quality control, quality of presentation (documentation) and quality improvement as feedback for future quality measures.⁶³

QM has a main role in securing the hospital's livelihood. First, the increasing competition means that a hospital needs to develop a comparative advantage, to differ from the competition. Second, risk management and QM can be well integrated. Risk management is the systematic prevention of hazards (malpractice, exposure to radiation, fire, etc.), as well as the learning evaluation from occurring risks. Therefore, risk management is an element

⁵⁹ FleBa, S. (2007a). P. 244.

⁶⁰ FleBa, S. (2007a). P. 244.

⁶¹ Hoyle, D. (2006). P. 59.

⁶² FleBa, S. (2007a). P. 244.

⁶³ FleBa, S. (2007a). P. 245.

of QM. A successful risk management reduces the operating failures and allows for affording lower insurance premiums. Finally, the management of a hospital should also introduce a quality beyond the statutory obligation, because the acquired transparency for patients and staff is important. Patients demand the possibility to assess the quality and to choose the hospital that gives them that opportunity. In addition, employees need methods, meeting their ethical responsibilities. Currently, an aging society with multi-morbid patients requires a focus on quality, so that the employees can meet the increasing demands on health services and their professional motivation remains true.⁶⁴

2.1.7.3.3 Total Quality Management Models

2.1.7.3.3.1 International Organization for Standardization

The International Organisation for Standardization (ISO) created ISO 9000 to provide a non-prescriptive quality standard of management system for nontechnical business functions. It started with manufacturers. It expanded to include their suppliers, then white-collar service industries such as legal firms and insurance companies. The last expansion included government departments, state agencies, and public organisations.⁶⁵

The term ISO 9000 has two different meanings: it refers to a single standard (ISO 9000) and it refers to a set of three standards (ISO 9000, ISO 9001, and ISO 9004). All three are referred to as QM system standards. ISO 9000 discusses definitions and terminology and is used to clarify the concepts used by the ISO 9001 and ISO 9004 standards. ISO 9001 contains requirements and is to be used for all contractual agreements while ISO 9004 presents a set of guidelines for performance improvements and is to be used to design the QM system that go beyond ISO 9001.⁶⁶ ISO 9000 was improved many times. The most recent improved version of ISO 9000 is ISO 9001:2008, where some important clarifications and modifications were made on the last previous version.⁶⁷

⁶⁴ Fleßa, S. (2007a). P. 245-246.

⁶⁵ Macpherson, M. (1999). P. 2.

⁶⁶ Hoyle, D. (2006). P.3; Schlickman, J. (2003). P. 25.

⁶⁷ ISO (2008).P. 21-28.

ISO 9000 standard requires the identification of processes and interactions and process monitoring. The construction of the systematic management system is based on four core requirements: (1) responsibility of management, (2) management of resources, (3) production and service realization, and (4) measurement analysis and improvements.⁶⁸

If the organization has a functioning QM system and has decided to develop to the ISO 9000, it is suggested to carry out an analysis to identify the gaps that exist between the ISO 9000 standard and the organization's processes. Once it is known where the gaps are, the organization can take steps to fill the gaps. However, if the organization does not have a QM system, it is suggested to use an ISO 9000 process-based QM system development plan to develop the QM system. Once QM system has been fully developed and implemented, an internal compliance audit can be carried out.⁶⁹

2.1.7.3.3.2 European Foundation of Quality Management

The European Foundation for Quality Management (EFQM) is a non-profit organization, created in 1988 by 14 leading European businesses. Providing an internationally recognised framework for quality improvement, it is focusing on all aspects of an organisation's business. It is enabling an institution to take a holistic view of how well they are doing while making an improvement of planning possible. EFQM does not only examine QM as a subsystem of the operation system, but the whole company with all internal and external relations. Consequently, it is a systematic assessment procedure of the whole company, based on clearly defined criteria. Throughout Europe EFQM is used as an instrument for the improvement of businesses and its' appliance is principally possible for all types of businesses and industries. Accordingly, there are no defined standards, but only the criteria, which must be carefully compiled.⁷⁰

EFQM assumes that a company can achieve the excellence only, if the company is working outstandingly as a whole and in all related parts. It allows organisations to evaluate

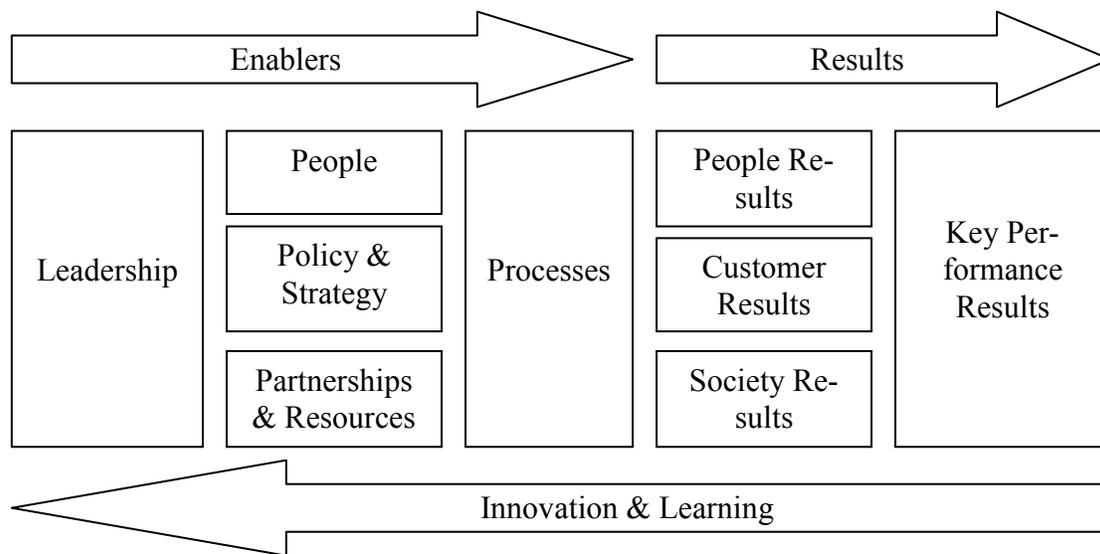
⁶⁸ Kirsch, M., Vogg, I., Hosten, N., & Fleßa, S. (2009) P. 3.

⁶⁹ Hoyle, D. (2006). P. 139-140.

⁷⁰ Franceschini, F., Galetto, M., & Maisano, D. (2007). P. 129,135; Fleßa, S. (2007a). P. 253; Sánchez, E., Letona, J., González, R., García, M., Darpón, J., & Garay, J. (2005). P. 58; Gene-Badia, J., Jodar-Sola, G., Peguero-Rodriguez, E., Contel-Segura, J.C., & Moliner-Molins, C. (2001). P. 408; Ogg, G.d. (2006). P. 183.

themselves according to criteria, which are shown in the figure 2-2. The criteria as leadership, people, policy and strategy, partners and resources, and processes are known as enablers. The criteria as satisfaction of providers, satisfaction of patients, social responsibility, and key performance results, which are defined as medical, nursing and administrative earnings quality, are known as results. It is noticeable that, these criteria represent 50% of the overall evaluation, i.e., EFQM is strongly interested in the output and outcome, in some cases (social responsibility) on the impact of the operational process.⁷¹

Figure 2-2: EFQM Excellence Model



Source: Ogg (2006)

Each of these criteria is split in two to five sub-criteria to be individually assessed. Thus, for instance, the criterion "Partnerships and Resources" is rated based on five sub-criteria: a). External partnerships are managed; b). Finances are managed; c). Buildings, equipment and materials are managed; d). Technology is managed; e). Information and knowledge are managed.⁷²

⁷¹ Franceschini, F., Galetto, M., & Maisano, D. (2007). P. 129,135; Fleßa, S. (2007a). P. 255; Sánchez, E., Letona, J., González, R., García, M., Darpon, J., & Garay, J. (2005). P. 58; Oakland, J.S & Marosszeky, M. (2006). P. 144; Oakland, J.S. (2003). P. 131; Ogg, G.d. (2006). P. 183-184.

⁷² Bruhn, M. (2008). P.408-410; Franceschini, F., Galetto, M., & Maisano, D. (2007). P. 133; Oakland, J.S. & Marosszeky, M. (2006). P. 147; McCabe, S. (2001). P. 153; Oakland, J.S. (2003). P. 134.

2.1.7.3.4 Results from Total Quality Management models

Both TQM models provide a universal framework for evaluating aspects of TQM practices, which can be implemented in hospitals. In addition, they provide a framework for identifying a range of intangible and tangible processes that influence the organisation's TQM implementation and the results. Although each award has its own unique categories and emphasis, there are some common areas. For instance, the both models emphasize the importance of leadership, human resources management, employee participation, employee education and training, process management, strategy and policy, information, supplier QM, and customer focus. They provide organisations with tools to measure their position against a set of universal criteria, and to identify their strengths and weaknesses in the areas of QM practices and business results. These models provide an insight into the practical way of applying or measuring the implementation of TQM; as well, they present a solid foundation for this study, and give the researcher a better understanding of the concept of TQM.⁷³ Consequently, it can be assumed that the measurement of the extension of implementation of any of these QM Systems leads to knowledge about the implementation of TQM in a hospital.

2.1.8 Output Factors

2.1.8.1 Main Output

The main output of a hospital's activity is the provision of health care service for patients. One of the major tasks of the different types of hospitals is the determination of health care services they offer. Small hospitals cannot provide the same number or types of services as the large hospitals. However, for-profit hospitals will seek to provide the profit services at variance of public or not-for-profit hospitals. It is common to provide the following services in general hospitals:

Emergency services include the following: 24-hour physician staffing, 24-hour emergency department, and trauma system.

⁷³ Zhang, Z. (2000). P. 23.

Surgical services include the following: outpatient surgery, surgery suites, recovery room, 24-hour anaesthesia coverage, outpatient care unit, laparoscopy, endoscopy lab, and Arthroscopic surgery.

Diagnostic imaging services include the following: clinical diagnostic radiology, mammography, fluoroscopy, ultrasound, nuclear medicine, computed tomography, magnetic resonance Imaging, bone densitometer, and X-ray.

Women's services include the following: obstetrics, gynaecology, women's centre, labour-delivery-recovery-postpartum-rooms rooms, antenatal observation room, level I nursery, childbirth classes, and stereotactic breast biopsy.

Cardiopulmonary services include the following: electrocardiography, electroencephalography, pulmonary function testing, cardiac stress testing, cardiac rehabilitation, stress echocardiography, vascular studies, venous, and carotid and lower arterial studies.

Medical specialties include the following: allergy, anaesthesiology, cardiology, dermatology, emergency medicine, family practice, gastroenterology, general surgery, gynaecology, internal medicine, obstetrics, oncology, ophthalmology, orthopaedics, orthopaedic surgery, otolaryngology, palliative care, pathology, paediatrics, podiatry, radiology, sleep medicine, and urology.

Rehabilitative services include the following: therapeutic exercise and massage, electrical stimulation, hydrotherapy, heat therapy, whirlpool, ergonomic evaluation/training, occupational therapy, physical therapy, speech therapy, and safety In-services.

Acute care services, which include the following: med/surgery beds, telemetry monitoring capabilities, wound care program, airborne infection isolation rooms, and telemetry unit

Intensive care includes the intensive care unit.

Support services include the following: community education programs, nutritional counselling, case management/utilization review, social services, volunteer services, support groups, pastoral care program, and bereavement care.

In addition, there are some other services including the following: pharmacy, laboratory service, cytology lab, lithotripsy, hospice, home health agency, skilled nursing facility, medical office building, sleep studies, and senior programs.

2.1.8.2 Satisfaction of Patient

The production of health services for the patients alone might not suffice to generate higher levels of satisfaction among patients, good capacity utilization, and full income. In competitive markets, there are many examples of companies, which have produced excellent products with high quality and nevertheless they declared bankruptcy, because their services were too expensive, and/or suited more to the designers' ideas than the needs of customers. Therefore, the product of these companies was not competitive enough in a comparison with the other competing products from the consumers' perspective. Therefore, there is not only the need to create hospital services, but also the necessity to present the outcomes to the patients in order to be able to make the products.⁷⁴

The benefits of patient satisfaction can be summarized as follows: increase of patient referrals, long-term stay of improved patients, who are more compliant and require less time, more productive staff, reduced staff turn-over, greater efficiency, greater profitability, and pay the bills on time.⁷⁵

Hospital marketing is a philosophy of consistent patient orientation in all areas. The hospital construction, equipment planning, the selection and training of employees, the choice of surgical techniques, the design of patient information and all possible activities of the hospital should always be pursued with the aim of satisfaction of the patient. It is necessary to consider that the patient is under the impact of alternative options throughout the procedure of his decision-making. Keeping this fact in mind, decisions within the hospital should be judged according to the patient's needs, as well. The most important person in the hospital is not the medical director or the head of administration, but it is

⁷⁴ FleBa, S. (2007a). P. 282.

⁷⁵ Nelson, A.M., Wood, S.D., Brown, S., Bronkesh, S., & Gerbarg, Z. (1997). P. 24-25.

the patient with his needs. The conversion of the latter concept to a practice is the objective of hospital marketing.⁷⁶

2.1.8.3 Secondary Outputs

In addition to the main output, hospitals provide the education and training of physicians.⁷⁷ In general, physicians graduate in medical schools, but only residencies can prepare them for practice. Nowadays, many of the features that made the hospital the prime location for physicians' residency appear to be eroding under the pressures of technological advances and the demands to improve the efficiency in healthcare systems. Nevertheless, hospital-based training will remain the location critical to the creation of superior physicians.⁷⁸

2.1.8.4 Unintended Outputs

In addition to the desirable outputs, there are some of the unintended outputs, which include waste, medical errors, death and dying. Hospitals' waste includes discarded sharps (such as objects that can cut or puncture the skin); infectious waste that is expected to contain pathogens (such as bacteria, viruses, parasites, or fungi); pathological waste (such as human tissues, fluids, and body parts); and chemical wastes (such as drugs, vaccines, cleaning chemicals, radioactive materials, and pharmaceuticals no longer required).⁷⁹

In Germany, for instance, each hospital has to develop a waste management concept and publish it. Furthermore, an agent of waste must be designated. Waste must be recycled or environmentally disposed of. The waste management concept should provide information on the size type and location of the waste, which should be disposed. It should provide prevention and recovery strategies, identify and demonstrate the safe disposal.⁸⁰

Other unintended outputs are the medical errors, which occur because of a planned sequence of mental or physical activities that fails to achieve its intended outcome. Errors

⁷⁶ FleBa, S. (2007a). P. 284 -285.

⁷⁷ FleBa, S. (2007a). P. 307.

⁷⁸ Pecker, M.S. & Siegler, E.L. (2003). P. 52.

⁷⁹ Peters, G.A. & Peters, B.J. (2008). P. 36.

⁸⁰ FleBa, S. (2007a). P. 309 -310; Peters, G.A. & Peters, B.J. (2008). P. 36.

are caused by execution failure (something was done wrongly) and planning failure, (something wrong was done). Execution errors are usually skill-based errors. Planning failures can be rule-based errors as well as knowledge-based errors (errors in problem solving). Medical errors adversely affect the safety margin and satisfaction of a patient, therefore hospital management should have a strategy that ensures failure reduction and the treatment their effects.⁸¹

Furthermore, death and dying are considered as unintended outputs, where the relief of pain and suffering that accompany death is considered as one of the hospital's functions. The importance of death and dying as one of hospital's outputs has increased due to the rise in average ageing. Dying people are relocated from domesticity into institution like the hospital more often. However, death as the final part of the process of treatment is considered the last event in a process of raising awareness by the hospital management.⁸²

2.2 Social Health Insurance

After independence, the health care system in most developing countries was financed by the government budget, which is based on general public revenues. Free treatment was provided to all citizens, but the financing of health care systems was confronted with a severe crisis. Poor economic development, severe deficits of public households, and high population growth led to difficulties concerning the financing of the health care system and deterioration of quality in health care services. All these parameters required a change of the health care financing system and to create a new system based on health insurance schemes.⁸³

⁸¹ St.Pierre, M., Hofinger, G., & Buerschaper, C. (2008). P. 37-38.

⁸² Fleßa, S. (2007a). P. 311.

⁸³ Greiner, W., Schulenburg, J.M., Graf v.d., & Fleßa, S. (2001). P. 261.

2.2.1 Health Care Financing Alternatives

Health care can generally be financed by four different ways. These four various financing ways include: private direct payments (out of pocket), tax revenues and other public resources, Private Health Insurance (PHI) and SHI.⁸⁴

Private direct payments (out-of-pocket) were often implemented to improve service quality and to cover the health expenditure, which could not be covered by public finance. This system has negative effects on the equity and ability to pay for health care utilization, especially among the poorest.⁸⁵ Therefore, to make this method more equitable, it requires exempting the poor people from charges.⁸⁶ Private direct payments reach around 30% of total health expenditure in most of the low-income countries.⁸⁷

In this context, health care systems can be financed by the governmental budget, which is based on general public revenues. To achieve these revenues, the government depends on the taxes of individual and business incomes, as well on the levies such as import duties, license fees, property taxes, sales and market taxes.⁸⁸ This system is prevalent in many industrial countries such as Great Britain and Spain.⁸⁹ It can ensure access to free health care for the whole population, even for the poorest groups; and therefore it is the most equitable system.⁹⁰ However, it causes many problems when it is implemented in developing countries. They are characterized by a limited tax base and a low organizational capacity to enforce tax compliance or to avoid extensive tax evasion.⁹¹

Health care can also be financed by PHI. In most developing countries, PHI plays a marginal role in risk sharing and coverage rates do not reach even 10% of the population. The differences in risk between the populations reflect into differences in premiums.⁹² On

⁸⁴ Normand C. & Weber. A. (2009). P. 26; Drechsler, D. & Jütting, J. (2005). P. 181-211; WHO (2006). P. 23-27; Kornai, J. Eggleston, K. (2001). P. 102-103.

⁸⁵ Gertler, P. & Gruber, J. (2002). P. 51-70

⁸⁶ WHO (2006). P. 24.

⁸⁷ Drechsler, D. & Jütting, J.P. (2005). P. 181-211.

⁸⁸ WHO (2006). P. 23.

⁸⁹ Streveler, D.J. Sherlock, S. M. (2004). P. 19.

⁹⁰ WHO (2006). P. 23.

⁹¹ Hsiao, W. C., Shaw, P.R. (2007). P. 8.

⁹² Zweifel, P.(2007). P. 10.

the one hand, the financing role of PHI began to be more important. The growing dissatisfaction with public health care and the liberalization of markets led to a growing demand for PHI.⁹³ Due to the fact that it is well managed and adapted to local needs and preferences, the PHI might be a necessary addendum to the health care system, especially for individuals who earn over a certain threshold and want to have more benefits than those provided by the SHI system such as in the German healthcare system.⁹⁴ On the other hand, PHI might have a negative impact on the aim of total coverage and the equal access to health care for everyone.⁹⁵

The fourth method of financing health care is the SHI system, which is called National Health Insurance (NHI).⁹⁶ It was implemented in many of the world's countries. Its role in health care financing differs according to many issues. The high number of workers in the formal and informal sectors in some countries and their high proportion of salaries have contributed to implementing or expanding SHI schemes. In addition, the countries that utilize general tax revenue to provide free health care might consider using alternative means such as SHI to finance health care. In this situation, SHI helps to ensure access to health services, especially from private providers. Besides collecting sources to finance health care through SHI, governments should continue their responsibility to provide primary care and public health functions.⁹⁷

Health care finance systems differ from one country to another. Each country has its own system, which may include many sub-systems. Health care finance systems are the result of complex national, historical and political path-dependent evolutions. They reflect inherent norms and values of the societies that have shaped them, and consequently the systems are not identical.⁹⁸

⁹³ Drechsler, D. & Jütting, J.P. (2010). P. 29.

⁹⁴ Robinson, S. (2006). P. 42; Drechsler, D. & Jütting, J. (2005). P. 181-211.

⁹⁵ Drechsler, D. & Jütting, J. (2005).). P. 181-211.

⁹⁶ McIntyre, D., Whitehead, M., Gilson, L., Dahlgren, G., & Tang, S. (2007). P. 704.

⁹⁷ WHO (2003). P. 22.

⁹⁸ Doetinchem, O., Schramm, B., & Schmidt, J.O. (2006). P. 27-28.

2.2.2 Social Health Insurance System

2.2.2.1 Historical Evolution

In the early nineteenth century, a very early development of voluntary community health insurance schemes existed, constituting the basis of SHI. In 1835, poverty and the fluctuating farmer income in Japan's rural villages had resulted in a low effective demand for health care. This situation led to the formation of "Jyorei", the oldest prototype of community health care, to ensure the continued demand by poor farmers for health service.⁹⁹

Germany was the first country, which established the SHI system. The German chancellor Otto von Bismarck received approval for a compulsory sickness-insurance law in 1883.¹⁰⁰ Currently, SHI systems are established in more than 60 countries, twenty-seven have reached total coverage via SHI.¹⁰¹ It is established in the Organization for Economic Co-operation and Development (OECD) countries, as well as in developing countries, especially in Latin America (e.g., Argentina, Bolivia, and Brazil) and to a lesser extent in other parts of the world (Algeria, and Lebanon). Currently, many low and middle-income countries have started to establish SHI systems (e.g., China, Croatia, Estonia, Ghana, Indonesia, Macedonia, Nigeria, the Philippines, Poland, Syria, Tanzania, and Vietnam).¹⁰² Syria is currently working on a project of SHI. It will be described in the section (3.3).

2.2.2.2 Concept and Aims

SHI can be described as a mechanism for financing and managing health care via pooling of health risks of its members on the one hand and the financial contributions of enterprises, households and the government on the other hand. Generally, SHI schemes cover a group of the health risks, which include at the minimum those risks that in absence of

⁹⁹ Ogawa, S., Hasegawa, T., Carrin, G., & Kawabata, K. (2003). P. 270.

¹⁰⁰ Saltman, R. B. & Dubois H.F.W. (2004). P. 21.

¹⁰¹ Carrin, G. & James, C. (2004). P. 3.

¹⁰² Gottret, P. & Schieber, G. (2006). P. 82.

insurance would entail a catastrophic financial burden on households because of the high costs of treatment.¹⁰³

Despite differences in implementing SHI in international experiments, its major structures can be summed up in the following. In general, under SHI, every one of people in the contributory regime group must enrol and pay the specified premium or contribution. This compulsory character differentiates SHI from voluntary private insurance. The contribution is most often specified by the percentage of wages or payroll. For all the other categories of the population, who are not able to pay, the government may pay the premiums on their behalf.¹⁰⁴

Although a relatively small number of individuals suffer from serious illnesses and disabilities every year, these medical problems can cause a huge rise in medical expenses, which could bankrupt patients and their families, especially when these illnesses are associated with life and death issues. Therefore, the existence of a health insurance is necessary. On the other hand, the insurance may be unwanted by those who expect that they will not need intensive health care in the near future. They also do not want to share their low health risk with high-risk people such as the elderly and the chronically ill people, who are not able to afford the insurance premiums and thus have to be subsidized. Consequently, many nations have implemented SHI and many others tend to implement it.¹⁰⁵

Many countries have aimed of the implementation of SHI to the attainment of equity in the health care, via attracting addition funding to the health sector and focusing the limited resources of the governments on the needs of the poorest and least served sectors of the population.¹⁰⁶ SHI Systems aims to ensure that everyone has a financial accessibility to health services solely based on need and not on ability to pay.

SHI contributes to improving the health status of the population through its ability to remove the barriers for adequate utilization of quality health care facilities,¹⁰⁷ as well as by

¹⁰³ Carrin G., Desmet, M., & Basaza R. (2001). P. 126.

¹⁰⁴ Hsaio, W.C. & Shaw, P.R. (2007). P. 15.

¹⁰⁵ Hsaio, W.C. & Shaw, P.R. (2007). P. 14.

¹⁰⁶ Zigora, T.A. (1998). P. 119.

¹⁰⁷ Jürgensen, N., (2005). P. 233.

ensuring that everyone has a financial accessibility to health services solely based on need and not on ability to pay.¹⁰⁸

2.2.2.3 Design

Concerning benefits, the designing of SHI should be adequately comprehensive and it needs to be affordable and sustainable over time. In addition, the designing of SHI should not exceed the capacity of health systems to assure quality.¹⁰⁹

The designing of SHI includes many issues, which should be considered before SHI is implemented. The first two issues to consider are the revenue collecting and the determination of the population coverage as well as the method of finance. The next two issues deal with risk pooling which explains the level of fragmentation and composition of risk pools. Further issues to consider are the location of the SHI as well as the purchasing processes, which determine the benefit package and the provider's payment mechanisms.

2.2.2.3.1 Population Coverage

SHI schemes aim to increase the percentage of population covered by SHI in order to achieve the total coverage.¹¹⁰ This share of coverage depends on many issues. The economic structure also affects the level of population coverage and the speed of implementation. Collecting contributions from people who are working in the formal sector is often easier than from people working in the informal sector.¹¹¹

When SHI is designed, the population is separated according to the premium and benefits package into three groups: compulsory enrolment and payment, voluntary enrolment and payment as well as fully or partially subsidized.¹¹²

The design of SHI must ensure a relatively easy enrolment and a premium collection from workers and their families in the formal sector by convincing their employers to

¹⁰⁸ Carrin, G. & James, C. (2004). P. 18.

¹⁰⁹ Hsaio, W.C. (2007). P. 21.

¹¹⁰ WHO (2004). P. 15.

¹¹¹ Carrin, G. & James, C. (2004). P. 23.

¹¹² Hsaio, W.C. (2007). P. 22.

enrol and pay a proportion of the premiums instead of them. SHI has also to provide incentives to ensure the enrolment of workers and their employers in it.¹¹³

The non-poor self-employed (such as farmers) and informal sector workers (such as house cleaners) may have to be treated differently. Compared to workers in the formal sector these groups are less able to pay for SHI because on average their incomes are low, although they are not poor. Therefore, the SHI designing should offer this group of people a voluntary enrolment.¹¹⁴ The increase of the share coverage by the SHI scheme is a realistic performance indicator about the development of SHI. On the other hand, the increase of the percentage of population is one of the greatest challenges of SHI.¹¹⁵ SHI should also be designed in such a way that a covering of these groups is ensured by subsidizing them and providing incentives for those people to enrol and to pay the premium in subsequent stages.¹¹⁶

The poor and near poor often cannot afford to pay the premiums. The government has to subsidize these groups by giving the poor full support and partially supporting the near poor. In this context problems arise in terms of defining who could be considered as poor and who is close to poverty. To resolve this problem the countries, which have a SHI system usually do an income, test or subsidize some groups, which are known as poor groups. For instance, the poor includes farmers and inhabitants of poor areas, orphans, the elderly and the disabled. A problem occurs through the approval of subsidies when local officials use their power to bestow subsidies to their relatives, friends, or political supporters. Therefore, the designing of SHI has to ensure that every person in need of health care receives these subsidies.¹¹⁷

¹¹³ Hsaio, W.C. (2007). P. 23.

¹¹⁴ Hsaio, W.C. (2007). P. 23-25.

¹¹⁵ Carrin, G. & James, C. (2004). P. 23.

¹¹⁶ Hsaio, W.C. (2007). P. 25.

¹¹⁷ Hsaio, W.C. (2007). P. 24.

2.2.2.3.2 Financing

SHI is financed using various methods. These methods have to be defined during the process of designing SHI. These methods include contributions, government subsidies, consumer taxes and other sources of income.

There are many methods of calculating contributions. The calculation of contributions depends on wage, income or region. Each method has some advantages and disadvantage compared with other methods. Insured persons pay for contributions themselves or their employer pays part of these costs.¹¹⁸

Most of the countries with SHI calculate the contributions as a percentage of the wage. This method is easy in the implementation, flexible to the individual's ability to pay, and ensures an increase of the contributions. A disadvantage of this method is that each individual pays a different amount of contribution, which differs considerably. Therefore, it is preferred to put an upper limit to the contribution from the wage for instance, Germany. Calculation contributions include not only the wage but also other sources of incomes of the insured, whilst contributions according to regions depend on the available infrastructure in those regions.¹¹⁹

Government subsidies are another source of financing SHI. There are two types of government subsidies: The direct subsidies and indirect subsidies. These subsidies exist in different kind of ways. To increase the population coverage, subsidies cover the costs of certain groups, which are not able to afford the premiums of SHI. Subsidies might cover certain investment costs via the construction of hospitals. In addition, subsidies may cover the cost of certain services provided by SHI. For instance, the government may cover some or all-primary health care cost. Furthermore, in some SHI countries the government grants subsidies. It may collect the contributions from pre-tax income, as well; each of non-profit-making hospitals, health technology import, pharmaceuticals might be exempted from the taxes.¹²⁰

¹¹⁸ Normand, C. & Weber, A. (2009). P. 46.

¹¹⁹ Normand, C. & Weber A. (2009). P. 47-49.

¹²⁰ Normand, C. & Weber A. (2009). P. 52-54.

On the other hand, the governmental subsidies, which are considered very important to SHI, are preferred to be without any limit. Otherwise, in the case of subsidies being of high percentage of the sources of SHI, the government will try to control the SHI agency, which in this case will lose its independence.¹²¹

Co-payments as a method to finance SHI are additional payments, which are made by patients when receiving health care services.¹²² They are necessary to limit the demand for health care services and to encourage a certain type of healthy behaviour such as teeth cleaning or to discourage unhealthy behaviour such as alcohol abuse. In addition, co-payments are an additional source of financing. Co-payment might be a part of a percentage of the cost for medical treatment, or a lump sum per prescription within a certain period.¹²³ On the other hand, co-payments can be repaid/ are refundable if people pay more than a certain limit during a certain period. According to this method, chronically ill patients do not have to make large payments. Furthermore, some countries grant certain exception of co-payments for various groups such as students and the unemployed or even diseases and certain circumstances such as maternity leave.¹²⁴

SHI can also be financed by consumer taxes. There are some human activities, which are considered hazardous to health. Such activities are, for instance, hazardous sports, tobacco, and alcohol consumption. In this case, the costs for a medical treatment would be very high. Many countries excise on these hazardous activities or behaviours in order to discouraging people to stop these hazardous activities or behaviours, as well to provide an additional source of financing.¹²⁵

Moreover, SHI can be financed by additional sources of income. These sources are, for instance, interest on reserves, payments for services provided on behalf of other authori-

¹²¹ Normand, C. & Weber A. (2009). P. 54.

¹²² Normand, C. & Weber A. (2009). P. 51.

¹²³ Preker, A.S. & Langenbrunner, J.C. (2005). P. 229; Roodenbeke, E. (2004). P. 16; Normand, C. Weber, A. (2009). P. 51.

¹²⁴ Preker, A.S. & Langenbrunner, J.C. (2005). P. 229, 230; Roodenbeke, E. (2004). P. 15-16; Normand, C. Weber, A. (2009). P. 51.

¹²⁵ Carrin, G. & James, C. (2004). P. 28.

ties, indemnities from other insurance organizations as indemnities of cars insurance organizations on victims of traffic accidents.¹²⁶

2.2.2.3.3 Single Pool Fund or Multiple Risk Pools Funds

Another important issue concerning the design of SHI is the determination of the risk pool fund. This fund can be either multiple risk pool funds or a single risk pool fund. In a single risk pool fund system, all financial operations go through one fund. This is contrary to a multiple fund system, where each risk pool has its own financial fund.¹²⁷

To achieve a necessary connection between pools, it is preferred to adopt one benefit package for all the insured. In this situation, the subsidies could be given to high-risk individuals via establishing a so called "solidarity fund".¹²⁸

In terms of efficiency, the financial responsibility may differ between the single and the multiple fund system. In a multiple fund system, there may be a positive incentive for each fund to be efficient, when it retains the revenues it receives from its various contributors minus the contributions to a solidarity fund. In contrast, in a single fund system branch offices have no incentive to contain costs if they have no financial responsibility and if all their expenditures are financed through the central fund. In this situation, the single fund system can be improved by giving financial incentives to branch offices in order to administer the work as efficiently as possible and/or to engage in contracts with efficient providers.¹²⁹

2.2.2.3.4 Composition of Risk Pools

When designing risk pools, SHI (scheme) policy makers should take some aspects in consideration. An important issue is the compulsory membership. Many of the countries with SHI prefer the compulsory membership by pooling citizens with different risks together regardless of what kind of differences in risk they have and whether they are able to pay. If membership is optional, the people with low risks might not want to pool their

¹²⁶ Carrin, G. & James, C. (2004). P. 27-28.

¹²⁷ Carrin, G. & James, C. (2004). P. 29.

¹²⁸ Carrin, G. & James, C. (2004). P. 29.

¹²⁹ Carrin, G. & James, C. (2004). P. 31.

risks with the other groups. The rich people might also want to pay more and want to receive a bigger benefit package in SHI schemes. In this case, the health care system in many SHI countries allowed PHI to provide these services according to the size of income above a specific level.¹³⁰

Another issue to consider is the registration unit. Many of the countries with SHI depend on the household level, which is used as a registration unit more than on the individual level. The household level reduces the total risk by adding many healthy young members to the scheme and by increasing the proportion of coverage. Because family members have to pay less, individuals often prefer to enrol as a member of a family even when they are not a member. In order to avoid this risk one should clearly define the individual and the family during the design phase of a SHI.¹³¹

2.2.2.3.5 Determining the Benefits Package

Another important issue of designing the SHI system is to determine the benefits package. The benefit package should include the following issues: First, the benefits of SHI should be defined clearly. The designing of SHI should include monitoring mechanisms to ensure that health care is provided to all patients without over-production. In addition, it must establish mechanisms to inform the insured about all their rights and responsibilities. Furthermore, a benefit package should be made available for all those people who are entitled to the benefits according to the level of the required efficiency and equity criteria.¹³²

When designing SHI, decision-makers should choose between extensive benefits where fewer people are covered or less comprehensive benefits where more people are covered. This issue arises due to the distinction of population groups, because some of them are unable to pay for insurance payments.¹³³ The benefits package may include preventive

¹³⁰ Carrin, G. & James, C. (2004). P. 32-33.

¹³¹ Carrin, G. & James, C. (2004). P. 32-33.

¹³² Carrin, G. & James, C. (2004). P. 34-35.

¹³³ Hsaio, W.C. (2007). P. 25.

and curative care, immunization and vaccination, dentistry, drugs, tests, family planning needs and ambulance services.¹³⁴

2.2.2.3.6 Supervision

Another issue of SHI designing deals with the supervision on the SHI agency. In this context, policies makers can choose between several options. In early stages of SHI it might be a good decision for the agency to be under the supervision of the Ministry of Health (MoH) or the Ministry of Social Affairs and Labour (MoSAL), but viewed on a long-term basis, it is not a good choice because it undermines the independence of the government. The SHI agency can also be initiated as an autonomous governmental agency. Although the agency is free of political control from ministries, it is very difficult to politically control. It could also be set up as a semi-autonomous governmental agency: In this structure, the agency is able to manage its affairs separate from interference from others. On the other hand, the head of the agency is appointed either by the Prime Minister or by the Minister of Health.

2.2.2.4 Implementation

Passing a SHI law is considered more difficult than to implement it. The implementation of SHI often faces many challenges. The SHI law promises to achieve many high aims, but the resources needed to achieve these aims might be unavailable.¹³⁵ On the other hand, there are many factors, which help to improve the implementation of SHI so that a total coverage of the population can be achieved.

An important factor, which helps to improve the implementation, is the general level of income available to the country. A greater amount of income per capita and more tax revenue are necessary to increase SHI system resources. In addition, a steady economic growth ensures the capacity to prepay. Another factor is the structure of the economy, which depends on the size of the formal and informal sector. Countries, which have a big informal sector, are likely to face administrative difficulties in the implementation of SHI

¹³⁴ Chawla, M. & Berman, P. (1996). P. 29.

¹³⁵ Hsaio, W.C. (2007). P. 33.

and therefore the coverage is not provided on time. The Distribution of the population between urban and rural areas is the next factor: The implementation of SHI in rural areas requires a better quality of infrastructure and communication. The implementation of a SHI system creates administrative difficulties to meet the need for a new sufficiently skilled worker force with capacities in bookkeeping, banking and information processing as well as many other jobs.

2.2.2.5 Role of Government

SHI is concerned with the whole nation: Society would have to pronounce its choice and consensus, usually through parliamentary consultations and/or constitutional provisions.¹³⁶

The government has an important role in the implementation of SHI. It opens the political debate about the SHI and its implementation and prepares the related policies and expansion of SHI.¹³⁷ Generally, one can distinguish between two stages: The designing of SHI and the implementation of SHI. While designing SHI, the government should clarify some points. It should clarify a timeline for the total coverage of the population, and define the contributors and beneficiaries, financing sources for the SHI contributions, the allocation of these revenues and provider payment methods as well as an organizational and administrative framework. These points need to be attached by a draft SHI law, which contains the broad principles of total coverage via SHI. The basic design features and regulations provide details about these design features. A timetable for the implementation of SHI should be set up, specifying when the SHI law will be passed and when the implementation will start.¹³⁸ The government has different tasks to fulfil. During the process of implementation, the government should supervise the commencement of the scheme. It should ensure that health services of the benefit package are provided and that the development of the scheme is monitored and evaluated.¹³⁹

¹³⁶ Carrin G., Desmet M., & Basaza R. (2000). P. 13.

¹³⁷ WHO (2000). P. 129.

¹³⁸ Carrin, G. & James, C. (2004). P. 39-40.

¹³⁹ Carrin, G. & James, C. (2004). P. 40.

2.2.2.6 Risks

2.2.2.6.1 Moral Hazard

In the health sector, moral hazard results from the excessive increase of supply and demand for health care services. It takes place as a result of the decrease of health care services price for patients, after the implementation of health insurance.¹⁴⁰ It also appears as a result of payment of health care expenditures through a third party.¹⁴¹ Because of moral hazard, the insurers have to pay more than they expected.¹⁴²

There are many sorts of moral hazard which are caused by health service providers and receivers. The health insurance encourages insured people to demand health services even if it is not necessary. On the other hand, Health service providers depend on the health insurance to achieve a higher patient satisfaction by providing the health services more than it is required. In addition, moral hazard is caused when insurance companies are not able to observe the activities of insured individuals completely.¹⁴³ Therefore, insurance organizations and health insurance providers should ensure that they are working together efficiently to increase efficiency and the quality of data exchange. Furthermore, insurance organizations should determine benefits packages, the price structure and restrictions.¹⁴⁴

Moral hazard is not always a negative concept because the supplemental health expenditures, which are provided by health insurance, often allow ill individuals to acquire health care they really need. Therefore, these supplemental expenditures are good for society. In addition, these supplemental health expenditures from SHI help to increase the welfare of society. It helps to redistribute the income from those who are healthy to those who are ill, because people prefer to receive an additional income from insurance when they be-

¹⁴⁰ Barros, P.P., Machado, M.P., & Sanz-de-Galdeano, A. (2008). P. 1006.

¹⁴¹ Pauly, M. (1974). 44-62; Gabel, J.T.A., Mansfield, N.R., & Jones, G.T. (2006). P. 649.

¹⁴² Cutler, D. M. & Reber, S.J. (1998). P. 433-466.

¹⁴³ Arodiogbu, I. (2005). P. 30-31.

¹⁴⁴ Gray, A. (2006). P. 34-35.

come ill more than they prefer the paid income as premiums when they remain healthy. In fact, the chance of becoming ill is theoretically equal.¹⁴⁵

2.2.2.6.2 Adverse Selection

Another form of health insurance market failure is Adverse Selection.¹⁴⁶ It occurs when the insured think they have more information about their situation than the insurer has or when insurance's premiums do not reflect the insurer's situation.¹⁴⁷ There are many problems connected to adverse selection. One of them is free-riding which occurs when individuals enjoy risk-sharing arrangements without reciprocity.¹⁴⁸ Another problem is “cream-skimming”, which occurs when insurer companies select customers with low risks and do not insure the ones who are really in need of insurance.¹⁴⁹ Adverse selection can be avoided by requesting some initial tests to figure out the facts about the health of the enrollee and special risk pools will be created for people with a high health risk as well as for people with a lower health risk. Incentives could be used to encourage people enrolling as a family member. Waiting periods can be imposed to prevent people from joining right after the onset of an illness or to prevent people dropping out after insurance benefits are drawn up.¹⁵⁰ Adverse selection phenomenon occurs when health insurance is voluntary.¹⁵¹ Therefore, an adverse selection is not possible if the membership is compulsory and is based on a one-fund system.¹⁵² Adverse selection only applies if the membership is completely or partial voluntary.¹⁵³

2.2.2.6.3 Administrative Costs

Administrative costs are the result of planning, management, regulation and the collection of contributions and administration of claims payout of the delivery system,¹⁵⁴ which are necessary to ensure a better performance and administrative efficiency. Despite their

¹⁴⁵ Gray, A. (2006). P. 34.35.

¹⁴⁶ White, A.C. Merrick, T.W., & Yazbeck, A. (2006). P. 183.

¹⁴⁷ Pauly, M.V. (2006). P. 36.

¹⁴⁸ Tabor, S.R. (2005). P. 39.

¹⁴⁹ Scott, A. (2002). P. 18.

¹⁵⁰ Tabor, S.R. (2005). P. 39.

¹⁵¹ Pauly, M.V. (2006). P. 36.

¹⁵² Bärnighausen, T. & Sauerborn, R. (2002). P. 1573.

¹⁵³ Carrin, G., James, C. (2004). P. 32.

¹⁵⁴ Nicolle, E. & Mathauer, I. (2010). P. 3.

importance, it is preferred to save these costs within a determinant percentage of total SHI expenditures, to ensure that more money is provided to health care for a bigger percentage of the population. Therefore, SHI design should achieve the best performance with lower administrative costs.¹⁵⁵

With this background on Hospital Management and SHI, an analysing the health care system in Syria can be started.

¹⁵⁵ Carrin, G. James, C. (2004). P. 38-39.

Chapter 3

Health Care in Syria

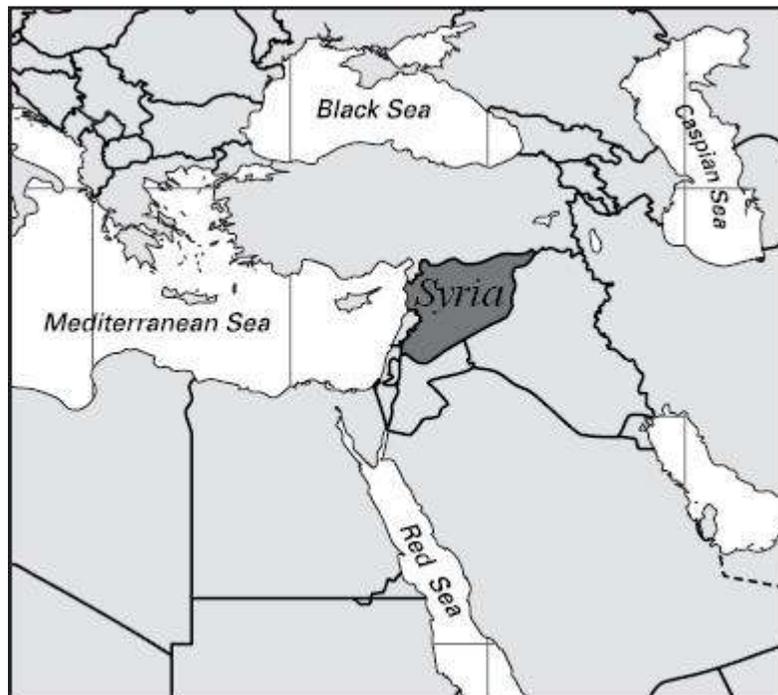
3 Health Care in Syria

3.1 Health Situation

3.1.1 Geography

Syrian Arab Republic (SAR) is located in south-western Asia, at the eastern end of the Mediterranean Sea, adjoining to Turkey to the north, Iraq to the east, Palestine and Jordan from south and by Lebanon and Mediterranean Sea, to the west. The total area of Syria is 18,180 square kilometre.¹⁵⁶ A map of Syria is presented in the figure 3-1.

Figure 3-1: Map of Syria



Source: Encyclopaedia Britannica (2009). P. 441.

¹⁵⁶ World Almanac Books (2007). P. 832; Encyclopaedia Britannica (2009). P. 441-442.

3.1.2 Demographic and Socioeconomic Situation

3.1.2.1 Demographic Trends

3.1.2.1.1 Population

According to the World Population Prospects, the world population reached 6.7 billion on, July 1st, 2007. It is projected to reach 9.2 billion people by 2050 that is 2.5 billion more than in 2007. The population of Syria is estimated to be 19.929 million in 2005 and is projected to increase to 34.887 million until the year 2050.¹⁵⁷ The average annual growth rate of population in Syria was estimated to be 3.3% during the period 1980-1994, and was estimated to be 2.46% during the period 2001-2005.¹⁵⁸

Syria is one of the most densely populated countries in the Middle East (363 inhabitants per square kilometre in 2004), but there are significant regional variations. The main population is concentrated along the coastline in the west, in the south around Damascus (Capital of Syria), and in the Euphrates river valley in the northeast.

The sex rate is defined as the number of females per 1000 males.¹⁵⁹ For the last decade, according to Syrian Statistical Abstract 2006, the proportion of males and females in Syria is almost equal, and this ratio was estimated at 104.7 males per 100 females by 1994, and 104.5 males per 100 females by 2004.¹⁶⁰

The Total Dependency Ratio, which is defined as “the ratio of the population between 0 and 14 years and the population of 65 years and above compared to the population aged 15-64 years”, declined from 95% to 68 % between 1993 and 2003 in Syria.¹⁶¹ The relative growth in the working-age group compared to the older and younger groups can be viewed as a “demographic bonus” and this continues the need to take advantage of this bonus.

¹⁵⁷ United Nations (UN) (2007). P. 38-56.

¹⁵⁸ United Nations Country Team (UNCT) in Syria (2005).

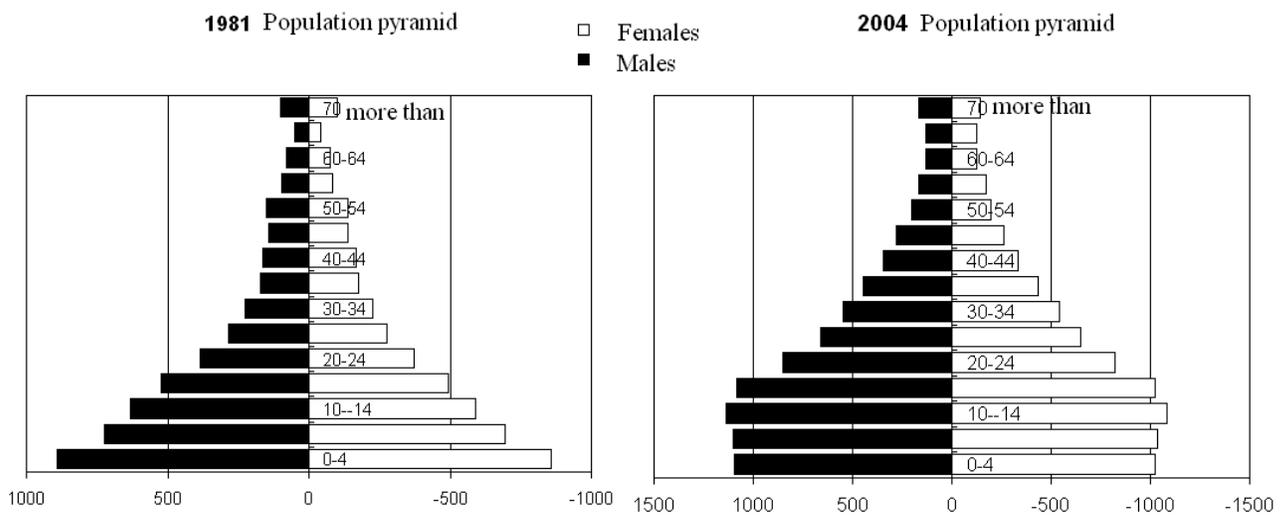
¹⁵⁹ Sharma, R.K. (2007). P. 85.

¹⁶⁰ Office of Prime Minister-Syria (2006). P. 65.

¹⁶¹ WHO (2005). P. 180.

Figure 3-2 shows the change in the age structure of the population through the population pyramids constructed for the years 1981, and 2004. The age structure of the population in Syria shows a declining trend in the younger age group (0-14 years) and an increase in the adult age group (15-64). The population of young people declined from 48.4% in 1981 to 39.5% in 2004. The proportion of the adult age group, increased from 48.3 % to 57.2% during the same period. The pronounced change results in the young age group and a less marked change in the elderly group in a shape, which shows a prominent bulge in the adult age group.¹⁶²

Figure 3-2: Population Pyramids Constructed in 1981 and 2004



Source: Central Bureau of Statistics (2006)

3.1.2.1.2 Life Expectancy at Birth

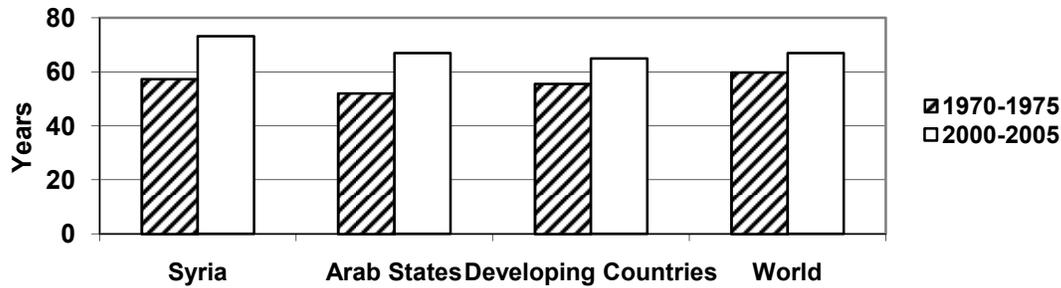
The Life Expectancy at Birth (LEB) is defined as “the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life”.¹⁶³ Globally, LEB increased from 59.9 years during 1970-1975 to 67.0 years during 2000-2005, an increase of 7.1 years in the life span of over a 25-year period. In Syria, LEB has increased by more than 15 years since 1970. The average number of years a person was expected to live from birth was 57.4 years during 1970-1975. It

¹⁶² Central Bureau of Statistics (2006). P. 31-50

¹⁶³ World Bank (2006). P. 37.

has increased to 73.2 years during 2000-2005.¹⁶⁴ Figure 3-3 shows the trends in life expectancy in Syria comparison with the Arab States, Developing Countries and the World during 1970-1975 and 2000-2005. It shows that the life expectancy is better in Syria than in an average Arab state, average developing country or average world.¹⁶⁵

Figure 3-3: Trends in Life Expectancy at Birth (1970-2005)



Source: UNDP (2006)

3.1.2.1.3 Urbanization and Migration

The last quarter of the twentieth century has witnessed a big growth in urban population in Syria. There has been a continuous migration of people to the urban areas. In 1975, only 45.1% of the population in Syria lived in urban areas; by 2004, this proportion had risen to 50.5% and is expected to reach 53.4% in 2015.¹⁶⁶ A major reason for the rapid urban growth is the development of the cities and the self-perceived opportunities for improved employment.

The Syrian governments have not planned for this population increase in the big cities, as well as they were ill prepared to provide the necessary basic amenities like water, sanitation and garbage disposal etc.. As a consequence squatter settlements and cycles of poverty where diseases and illness are not controlled have surrounded the major cities in

¹⁶⁴ UNDP (2006). P. 285-286.

¹⁶⁵ UN (2000). P. 14.

¹⁶⁶ UNDP (2006). P. 298-300.

Syria.¹⁶⁷ These slums are hotbeds for drug, prostitution, and other anti-social activities. These problems are bound to exacerbate as the trend in urbanization continues.¹⁶⁸

Another phenomenon observed in addition to internal migration is external migration from Syria. External migrants, often with little skill, venture out in search of better employment opportunities and higher income. The economies of the countries of origin of the migrants are bolstered largely by funds remitted by them.

Syria had a negative external migration balance during long periods of the last century. The closer migration was to the Arab oil countries, principally Kuwait and Saudi Arabia.¹⁶⁹ On the other hand, more than 400,000 Palestinian refugees are estimated to reside in Syria, as well as, Syria had been "overwhelmed" by the influx of more than 1.2 million of Iraqi refugees since the U.S.-led invasion of Iraq in 2003.¹⁷⁰

3.1.2.1.4 Crude Birth (Death) Rate

Crude Death Rate (CDR) and Crude Birth Rate (CBR) are the number of deaths and the number of live births occurring during the year, per 1,000 population, estimated at mid-year. Subtracting the CDR from the CBR provides the rate of natural increase, which is equal to the population growth rate in absence of migration.¹⁷¹

According to World Development Indicators 2006, Syria had a CBR below the world average. The CBR in 2004 was estimated at 28 births per 1,000, when the world average was estimated at 20 births per 1,000. Globally, CDR declined from 19.7 in the 1950-1955 period to 9.0 in the 2004. In Syria, it was estimated in 2004 at 3 deaths per 1,000 people.¹⁷²

¹⁶⁷ El-Laithy, H. & Abu-Ismael, K.H. (2005). P. 6.

¹⁶⁸ WHO (2002a). P. 24-26.

¹⁶⁹ Ayalon, A. (1993). P. 304.

¹⁷⁰ Al-miqdad, F. (2007). P. 19.

¹⁷¹ World Bank (2006). P. 49.

¹⁷² World Bank (2006). P. 48.

3.1.2.2 Socioeconomic Trends

3.1.2.2.1 Economy

In the past five years, Syria has undergone an economic transformation, shifting away from central planning towards a true market economy and reducing dependence on oil. Processes of liberalisation has allowed for the private sector appears increasingly capable to support the Syria's integration into the global economy.¹⁷³

Gross Domestic Product (GDP) is defined as “the sum of value added by all resident producers and any product taxes (fewer subsidies) not included in the valuation of output, when GDP per capita is GDP divided by midyear population”.¹⁷⁴ In 2007, the GDP and GDP per capita in Syria were estimated to be 37.7 billion US\$, and 4,511 US\$ respectively.¹⁷⁵ Syria recorded an average annual GDP growth rate of 5.1% during the period 1990 and 2000 and of 4.5% during the period 2000-2007.¹⁷⁶

Syria is one of the Medial East countries that have been comparatively less affected by the global financial crisis. While advanced economies are estimated to achieve a negative growth rate of 0.3% in 2009, and the global economy is estimated with a growth rate of 2.2% in the same year, Syria should witness solid economic growth at about 5% per annum over the next five years.¹⁷⁷

Economic growth alone does not give a true picture of human development in a country. The UNDP defines human development as “the process of enlarging peoples' choices”. The Human Development Index (HDI) is a composite index of achievements in basic capabilities in three fundamental dimensions: life expectancy, literacy and GDP per capita Purchasing Power Parity (PPP). Syria was ranked 107 out of 177 countries in the Me-

¹⁷³ Oxford Business Group. (2009). P. 22.

¹⁷⁴ World Bank (2006). P. 23.

¹⁷⁵ UNDP (2009). P. 196.

¹⁷⁶ World Bank (2009). P. 196.

¹⁷⁷ Oxford Business Group. (2009). P. 53.

dium Human Development group with an index of 0.716 (the minimum value of the index is 0 and the maximum 1).¹⁷⁸

Poverty spread is the world's greatest challenge. It is not only low income and consumption but also low achievement in education, health, nutrition, and other areas of human development.¹⁷⁹ A quite new research has studied the poverty in Syria in 2003-2004.¹⁸⁰ It showed that, the poverty in Syria rose to 30.1 per cent, representing almost 5.3 million individuals. Almost 2 million individuals in Syria (11.4 per cent of the population) could not obtain their basic food and non-food needs. Poverty decreased between 1996-1997 and 2003-2004 in Syria as a whole. At the national level, non-poor individuals proportionally benefited more than the poor individuals did from economic growth. Between the years 1997-2004, the bottom 20 per cent of the population consumed only 7 per cent of all expenditure in Syria, and the richest 20 per cent consumed 45 per cent. 58.1 per cent of the poor in Syria live just in the north-eastern region, which has 44.8% of the total population. In this region, 35.8 per cent of the rural individuals are poor.

3.1.2.2.2 Lifestyle

Lifestyle-related diseases and conditions are responsible for 70-80 % of deaths in the developed countries and about 40% of deaths in the developing part of the world. The promotion of healthy lifestyle should stimulate health awareness and responsibility and should be directed to both the individual and the community. Healthy lifestyles should be promoted in the community and the whole population while focusing on high-risk groups.¹⁸¹

Changes of lifestyles in Syria, which have resulted in sedentary habits, poor physical activity, change in dietary habits from low fat, low salt, fibre-rich diets to high salt, low-fibre food, and smoking, have all contributed to cardiovascular diseases becoming one of the main reasons of morbidity and mortality. A study about the life style and related diseases has been conducted in Syria. The study sample involved 9,184 household represen-

¹⁷⁸ UNDP (2006). P. 283-287.

¹⁷⁹ WHO (2002a). P. 37.

¹⁸⁰ El-Laithy, H. & Abu-Ismail, K.H. (2005). P. 1-2.

¹⁸¹ WHO (2002a). P. 44.

tatives between 51 to 64 years of age in Syrian governorates in the years 2003 and 2004. A population-based survey showed that 22.9% of males and 18.9% of females have a high sugar level, 85% of them check their sugar on a regular basis and 15% do not check their sugar or follow-up on their diabetes. Just 74.9% of people who were diagnosed with hypertension said that they take medication for it. Prevalence of heart disease increased with age from 0.7% below the age of 19 up to 17.5% by the age of 60 and above. The daily smoking rate among men was 48% and among women, 8.9%. About 11% of males and only 3.25% of females quoted that they were drinking alcohol during the last year.¹⁸² Consequently, the rapid change of lifestyle coupled with the increased average age of the Syrian population will increase the burden of cancer and other chronic diseases and the demand for health care services in Syria.

3.1.3 Trends in Health Status

3.1.3.1 Infant Mortality

The Infant Mortality Rate (IMR) is defined as “the number of infants dying before reaching one year of age, per 1,000 live births in a given year”. The infant mortality rate is considered a key indicator of measuring the overall health status when comparing different countries.¹⁸³ High infant mortality rates may indicate poor maternal health, inadequate prenatal care, infant malnutrition and/or limited access to adequate health care.¹⁸⁴

Figure 3-4 shows that Syria has shown a remarkable decline in the IMR between 1970 and 2004, the IMR declined from 90 to 15 deaths per 1,000 live births during 1970-2004. Globally IMR declined from 97 deaths per 1,000 live births in 1970 to 51 deaths in 2004. In the Arab States and developing countries, the IMR decreased from 132 and 109 deaths per 1,000 live births in 1970 to 38 and 57 deaths per 1,000 live births in 2004. The figure shows that the decline in the IMR is higher in Syria than in an average Arab state, average developing country, or on average worldwide.¹⁸⁵ This decline reflects the increase of

¹⁸² AL-khatib, B. (2006). P. 12-14.

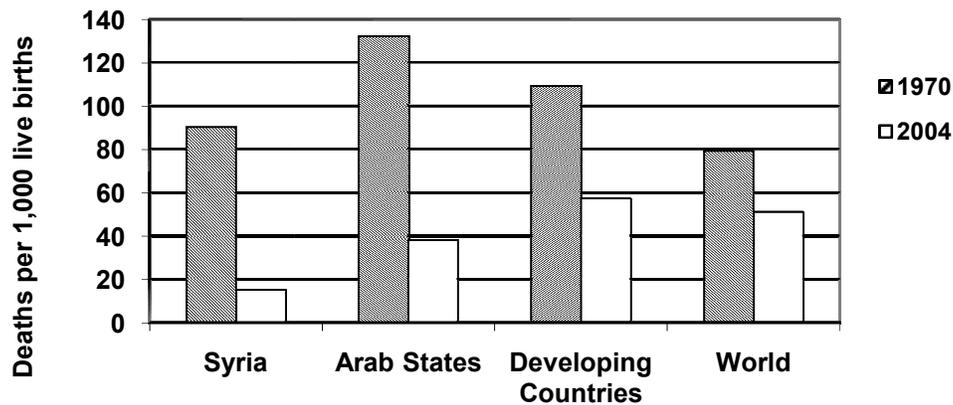
¹⁸³ Vetter, N. & Matthews, I. (1999). P. 19.

¹⁸⁴ Shi, L. & Stevens, G.D. (2005). P. 264.

¹⁸⁵ UNDP (2006). P. 285-286.

the rates of coverage with immunization in Syria, which will be analyzed in the section (3.2.5.1).

Figure 3-4: Trends in the Infant Mortality Rates (1970-2004)



Source: UNDP (2006)

3.1.3.2 Under-Five Mortality Rate

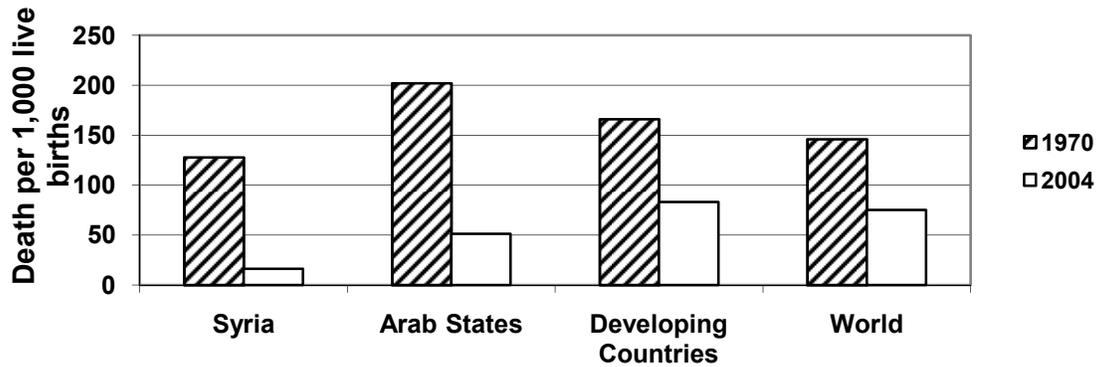
The Under-Five Mortality Rate (U5MR) is defined as “the probability that a newborn baby will die before reaching age of five, if subject to current age-specific mortality rates. The probability is expressed as a rate per 1,000”.¹⁸⁶

Figure 3-5 shows the trends in U5MR in Syria, Arab States, developing countries and the world in the years 1970 and 2004. It shows that globally, there is a downward trend in U5MR during the last half of the previous century, the U5MR declined from 146 to 75 deaths per 1,000 live births during the same period. In Syria, the risk of a child dying before reaching the age of five years has declined from 128 to 16 deaths per 1,000 live births during 1970-2004. Additionally, the figure 3-5 shows that the decline in U5MR is higher in Syria than on average in the Arab states, average developing countries, or on

¹⁸⁶ World Bank (2006). P. 37.

average worldwide. This decline reflects the improvement of the maternal health in Syria, adequate prenatal care and improvements in access to health care service.¹⁸⁷

Figure 3-5: Trends in Under-Five Mortality Rate (1970-2004)



Source: UNDP (2006)

3.1.3.3 Maternal Mortality

Maternal mortality Rate (MMR) is difficult to measure, especially in the developing countries where the system of recording vital events, including maternal deaths, is deficient. The MMR is “the number of women who die from pregnancy and childbirth, per 100,000 live births”.¹⁸⁸ Globally, it was estimated that 410 maternal deaths per 100,000 live births occurred in the year 2000. In comparison with neighbouring countries, MMR in Syria, with estimated 160 maternal deaths per 100,000 live births, is higher than the death rates of Jordan (41) Lebanon (150) and Egypt (84).¹⁸⁹ The high rate of the maternal mortality was confirmed in a study aimed to describe the biomedical and other causes of maternal death in Syria. The results showed that the poor clinical skills and competency were main reasons of 54% of maternal deaths, as well as, 91% of maternal deaths were

¹⁸⁷ UNDP (2006). P. 285-286.

¹⁸⁸ World Bank (2006) P. 27.

¹⁸⁹ World Bank (2006) P. 108-110.

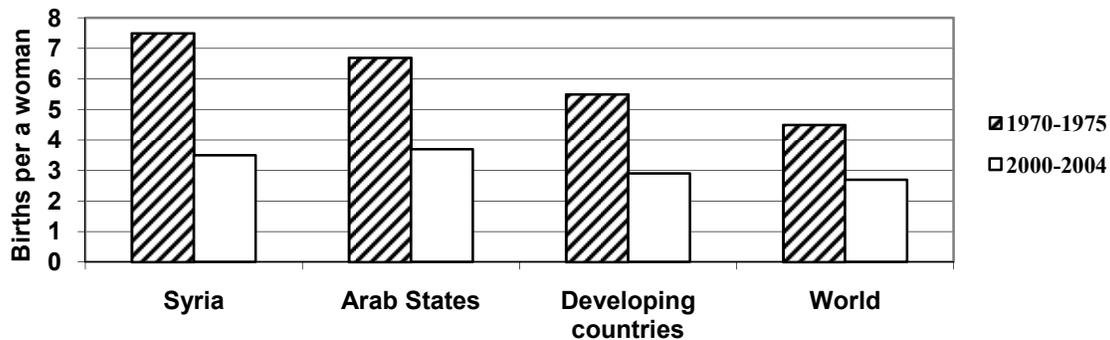
preventable.¹⁹⁰ Based on this study, the high rate of maternal death in Syria reflects serious defects in the quality of maternal care.

3.1.3.4 Fertility

Fertility Rate (total) is defined as “the number of children born, on average, to each woman if she were to live to the end other childbearing years and bear children at each age in accordance with prevailing age-specific fertility rates”.¹⁹¹

Figure 3-6 shows the trends in Fertility Rate in Syria in comparison with Arab states, developing countries and the world during 1970-1975 and 2000-2005. It shows that a remarkable decline in fertility rate has been observed in Syria, from 7.5 births per woman during 1970-1975 to 3.5 births per woman during 2000-2005. Globally, the fertility rate declined from 4.5 births per woman during 1970-1975 to 2.7 births per woman during 2000-2005.¹⁹²

Figure 3-6: Total Fertility Rate



Source: UNDP (2006)

3.1.3.5 Leading Causes of Morbidity and Mortality

The Global Burden of Disease (GBD) studied, assessed and ranked the individual diseases into three groups of diseases and conditions. The first group included the communi-

¹⁹⁰ Bashour, H., Abdulsalam, A., Jabr, A., Cheikha, S., Tabbaa, M., Lahham, M., Dihman, R., Khadra M., & Campbell O.M.R. (2009). P. 1122–1127.

¹⁹¹ UNDP (2006). P. 406.

¹⁹² UNDP (2006). P. 299-300.

cable diseases, maternal conditions and nutritional deficiencies, while the Non-communicable conditions, such as ischemic heart diseases, unipolar major depression and cerebrovascular diseases were categorized in the second group. The third group included international and unintentional injuries.¹⁹³

Communicable Diseases

Communicable diseases are “a group of diseases caused by specific infective agents (organisms or microorganisms) and the signs and symptoms (clinical image) are structure of the particular disease”.¹⁹⁴ Although the number of cases of some communicable diseases has decreased a lot, some still play a dominant role in the disease spectrum of Syria. Parasitic diseases are still the leading cause of morbidity, brucellosis, coetaneous leishmaniasis, and diarrhoeal diseases continue to be major disease conditions in this group. In 2005, there were 26739 cases of brucellosis, 21950 cases of coetaneous leishmaniasis, and 160545 cases of diarrheal. The successful implementation of the expanded programme on immunization in the past few decades in Syria has been instrumental in the impressive reduction in incidences of childhood diseases. In 2005, there were no cases of poliomyelitis- the most crippling childhood diseases, no cases of cholera, malaria, or diphtheria. The incidence of German measles is less than 1 case per 200,000 of population. There were 4382 of reported cases of tuberculosis, no cases of adult tetanus, 5 cases of neonatal tetanus, 559 cases of bacterial meningitis, and 624 cases of measles (Table 3-1).¹⁹⁵

¹⁹³ WHO (2008). P. 8.

¹⁹⁴ Van den Berg, R.H. & Viljoen, M.J. (1999). P. 3.

¹⁹⁵ MoH-Syria (2005a). P. 110.

Table 3-1: Communicable Diseases in Syria (2000-2005)

Disease (2005)	Number of Cases	Disease (2005)	Number of Cases
Poliomyelitis	0	German Measles	31
Acute Flaccid Paralysis	156	Mumps	441
Neonatal tetanus	5	Adult Tetanus	0
Bacterial meningitis	559	Coetaneous Leishmaniasis	21950
Summery Epidemic Diarrheal	0	Visceral Leishmaniasis	17
Malaria	0	Schistosomiasis	5
Tuberculosis	4382	Brucellosis	26739
Measles	624	Typhoid Fever	4789
Pertusis	262	Rabies	5
Diphtheria	0	Non-bloody Diarrheal	146907
Viral Hepatitis	3315	Bloody Diarrheal	13638

Source: MoH Syria, (2005)

Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome: The Acquired Immunodeficiency Syndrome (AIDS), which is caused by the Human Immunodeficiency Virus (HIV), is also a communicable disease that is hard to catch. It is more common in adults than in children. According to the Joint United Nations Programme on HIV/AIDS (UNAIDS), in 2007, less than 0.2% of Syrian adults population aged in between 15 up to 49 years were HIV positive and a proportion of 9% of sufferers were receiving anti-retroviral treatment.¹⁹⁶

Non-communicable Diseases

Non-communicable diseases are considered some of the most important health problems, which the world faces today. These include malignant neoplasm, cardiovascular diseases, chronic respiratory diseases, digestive, musculoskeletal and genitourinary conditions, as well as mental disorders and neurological conditions.¹⁹⁷ These diseases require long-term care and more health care. The burden of chronic non-communicable disease is rising rapidly and has become a major challenge to global development. Non-communicable diseases mortality in developing countries accounted for almost 47% in 1990 and it is

¹⁹⁶ UNAIDS (2008). P. 230.

¹⁹⁷ Lopez, A.D., Mathers, C.D., Ezzati, M., Jamison, D.T., Murray, C.J.L. (2006). P. 466.

estimated to be 69% in 2020.¹⁹⁸ In Syria, the burden of disease has shifted towards non-communicable diseases.¹⁹⁹ The incidence of cardiovascular disease, cancer, and diabetes are increasing. In 2005, 55% of the causes of deaths in Syria were caused by two of non-communicable diseases, cardiovascular diseases, and cancer.²⁰⁰

Injuries

Injuries are categorized into two groups, the unintentional injuries, which include such as road traffic accidents, poisonings, fall, and fires, and the intentional injuries, which included self-inflicted injuries, violence and war.²⁰¹ Estimates suggest that road traffic injuries, in particular cost low and middle-income countries 1% to 1.5% of their GNP annually. Further, these estimates do not include the hidden costs for effected families and neighbourhoods.²⁰²

Currently, Injury became the leading cause of death of young people in Syria, and is responsible for 10.1% of the ten most frequent diseases in 2005.²⁰³ A study about the injuries that required medical attention in Aleppo city in Syria has been carried out in 2004. The results showed that the total rate of injuries among adults was 77.3‰; around 30% of all injuries are common among adults in Syria. Main types of injuries identified were traffic, falls, and food poisoning. Among men, traffic injuries were most common 30.6‰, followed by poisoning (food) 28.2‰, and falls 24.2‰, whereas in women poisoning (food) was most prevalent 24.2‰, followed by falls 20.2‰, and traffic injuries 19.2‰.²⁰⁴

3.2 Health Care System

This section provides an analytical description of the health care system in Syria. It seeks to provide information in detail about different approaches of the organization, financing and delivery of health services; and to describe the process, content and implementation of health care reform programmes.

¹⁹⁸ WHO (2008). P. 47.

¹⁹⁹ UNCT in Syria (2005).

²⁰⁰ MoH-Syria (2005a). P. 106.

²⁰¹ Jacobsen, K.H. (2008). P. 24-25; WHO (2002b). P. 2.

²⁰² Nantulya, V.M. & Reich, M.R. (2003). P.10.13-20.

²⁰³ MoH-Syria (2005a). P.109.

²⁰⁴ Maziak, W., Ward, K.D., & Rastam. S. (2006). P. 5.

3.2.1 Structure

The health care system is characterized as a centralized and fragmented system simultaneously. Therefore, decision-making and implementation bodies vary in structure, objectives, and achievements. Table 3-2 shows the agencies directly and indirectly involved in health care according to whether they formulate policy, have administrative jurisdiction over the delivery of health care, provide it or finance it. It shows that, the health policies formulation is one of the functions of the Syrian Parliament, State Planning Commission, MoH and Ministry of Higher Education (MoHE). The health care is provided by public and private providers. Public providers include hospitals which are run by MoH, MoHE, Ministry of Local Administration (MoLA), Ministry of Defence (MoD), Ministry of Interior (MoI), and MoSAL. Private providers include private hospitals, clinic, pharmacists, & others. In addition, health care is provided by philanthropic organizations such as Syrian Arab Red Crescent (SARC). In addition, the table shows that the government, donors, household out-of-pocket payments and others finance the health care system in Syria.

Table 3-2: Organizations Involved in the Health Care System

Role	Organization
Policy formulation	Syrian parliament, State planning commission, MoH & MoHE
Public Providers	Hospitals and health care centres belong to MoH, MoHE, MoLA, MoD, MoI, MoSAL, & Others
Private providers	Private hospitals, clinics, pharmacists, & Others
Philanthropic providers	SARC, Associations, & others Organization
Health care financing	General government budget, Households, Health insurance or Benefit schemes, & External sources of financing

Source: Own

3.2.2 Management

Health policy-making in Syria is fragmented and unevenly distributed among different official institutions. The overall responsibility for planning, coordinating, financially supporting and developing health institutions is divided among the MoH, State Planning Commission, MoHE, parliamentary commissions and others.

The Syrian Parliament is the country's ultimate legislative body and regulates the policy of the health care sector as well as all other aspects of governmental policies. It is responsible for approving the five-year development plans submitted by the State Planning commission, which, in turn, reports directly to the office of the Prime Minister. The health strategies are included in the five-year development plans. The MoH has some responsibility for setting policy objectives for the health sector or for planning the delivery of health care; it is primarily concerned with administering the health services provided under its auspices.

The MoH administers the public health programme. In 1990, the governorates' health system was introduced in order to decentralize health care delivery. The public health centres belonging to each of the country's 14 governorates report to a main governorate health centre. Each governorate is allocating its own budget, and each director of health is given enough authority and flexibility to implement programmes within the present development strategy.²⁰⁵ The MoHE is responsible for university hospitals, which do not belong to MoH or MoLA.

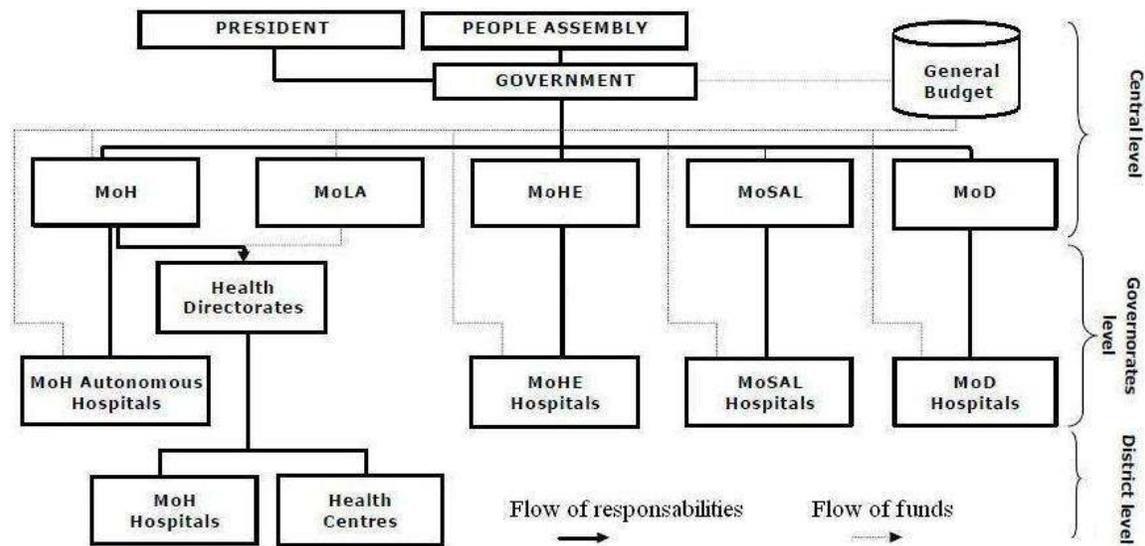
3.2.2.1 Government Involvement

According to the European Media Research Organisations (EMRO) the main involvement of the Syrian government in the health care sector comes from the MoH, although the other ministries, which run some public hospitals, have important functions.²⁰⁶ Figure 3-7 shows the different governmental bodies, which involve in managing and financing the Syrian health care system.

²⁰⁵ Galdo, A. (2004). P. 7.

²⁰⁶ EMRO (2006). P. 18.

Figure 3-7: Government Involvement in the Health Care System



Source: EMRO. (2006).

Ministry of Health: It is the major provider of primary and secondary health care and the only provider of preventive health services in Syria.²⁰⁷ It is headed by the minister of health, supported by a group of offices such as the office of complaints and the office of public relations. Three vice-ministers supported by the vice minister for administrative affairs, vice minister for food and drugs affairs, and vice minister for financial affairs. Every vice minister heads a group of directorates, which report to him directly. Some directorates directly relate to the minister, for instance, the planning directorate.²⁰⁸ The minister of health heads the health care commission, which studies all the new developments and changes and oversees the health situation in the country in times of crisis. It comprises five directorates: the directorate of primary health care, the directorate of communicable diseases, the directorate of planning, the directorate of laboratories and the directorate of training.²⁰⁹

The general directorates are responsible for many functions. They are in charge of the strategic and operational management of health centres, health posts. They are also responsible for controlling communicable diseases, for instance through immunization pro-

²⁰⁷ MoH-Syria (2005a). P. 25-27.

²⁰⁸ EMRO. (2006). P. 16.

²⁰⁹ Galdo A. (2004). P. 7.

grammes and in charge of MoH hospitals and for the development of programmes for non-communicable diseases and for the implementation of programmes for maternity, family planning and childhood problems. They are responsible for regulating drugs and the department of administrative and financial affairs.

The provincial health directorates administer the health services provided by the MoH at the provincial level. Each of the 14 governorates has a health directorate led by a director who is responsible to the governor of the governorate and to the MoH. The MoH appoints provincial health directorate personnel with the approval of the provincial governor. The facilities that provide health care at the provincial level consist of hospitals, health centres, medical points, specialization centres, and comprehensive clinics.²¹⁰ While all of these facilities are affiliated to the MoH, their budgets remain outside the ministry, they finance through governorate budget, which is budgeted from the budget of the MoLA.

Ministry of Higher Education: The MoHE is responsible for university hospitals. In Syria, there are four public universities having medical, dental and nursing faculties. These universities have 12 teaching hospitals (3888 beds).²¹¹ They are financed by the MoHE via the universities.

Ministry of Local Administration: The health care in governorates is administrated by the health directorates, which report to the MoLA and are responsible for health care towards the MoH. The health care facilities in each governorate are financed from a share of health directorates in the governorates budgets from the MoLA budget.²¹²

Ministry of Finance (MoF): The general state budget administered by the MoF is the main source of financing for health care services provided by the ministries and the public institutions in Syria.²¹³

Police Health Care: The MoD has its own health care facilities: 5 hospitals. One of these hospitals is the Military Hospital the biggest and best hospital in Syria. The number of

²¹⁰ Galdo A. (2004). P. 6.

²¹¹ MoH-Syria (2005a). P. 64.

²¹² Al-Mahayni, M.Kh. (2005). P. 32.

²¹³ Al-Mahayni, M.Kh. (2005). P. 33.

beds in the MoD and MoI hospitals is unknown and there is no available information about them.²¹⁴

Ministry of Social Affairs and Labour: The MoSAL runs the institution of Social Insurance, which provides some health services to workers in the public and private sectors.²¹⁵ In addition to that, in 2003, the MoH established one general hospital with 526 beds under the authority of MoSAL, which also provides some health care services at rural community development centres throughout Syria. Furthermore, it manages other programmes for adults and those with disability.²¹⁶

Others: Most ministries and public companies provide health benefits to their employees with or without their families. The Ministry of Education (MoE) runs a preventive medical and dentistry programme (School health programme) for pupils and students.²¹⁷

3.2.2.2 Private Providers

The private sector covers an important part of the provision of health services through private hospitals, clinics, and pharmacies. Most private hospitals in Syria are small and located in big cities. They suffer from the weakness of proper control from the MoH. The number of private hospitals has clearly increased in recent years. In 2000, there were about 325 private hospitals (with 5852 beds), whereas in 2005 there were about 373 hospitals (with 7396 beds).²¹⁸ Some of these hospitals are very small with a minimum number of beds, not more than 10 beds as in the “Soued Hospital” in Lattakia. Some hospitals are relatively big with more than 100 beds as the St. Louis Hospital in Damascus. Many of these new hospitals offer integrated diagnostic and outpatient services and luxurious inpatient hotel facilities to attract self-paying, fee-for-service patients.²¹⁹ A recent development in the last years has been the establishment of private universities and private medical schools. They have been allowed to have their own private hospitals.²²⁰ For in-

²¹⁴ Schwefel, D. (2003a). P. 9.

²¹⁵ Government of Syria (2001a).

²¹⁶ Schwefel, D. (2003a). P. 9.

²¹⁷ Galdo A. (2004). P. 6.

²¹⁸ Office of Prime Minister-Syria (2006). P. 442.

²¹⁹ MoH-Syria (2005a). P. 125-128.

²²⁰ Government of Syria (2001b).

stance, Al-Andalus University for medical sciences has been established and started to build a teaching hospital in order to educate university students.²²¹

In addition to the private hospitals, there are the private clinics, which are founded by physicians, dentists or midwives, whose must be licensed in order to have acceptance of profession, be registered in the MoH, and be members of the appropriate syndicate or union.²²² Private clinic spread all over Syria, due to the decree of practicing the medical professions, which stipulated physicians and pharmacists to work for a period in the countryside before moving to work in city centres.²²³ On the other hand, specialist clinics are rarely found outside of city centres. Patients visiting private practitioners have to pay for services out of pocket. One phenomenon can be noted in the Syrian health sector is that most physicians are working in their own private clinics as well as in the public hospitals. Some of them work in both public and private hospitals, in addition to possessing special clinics, which is due to the reason that the public sector salaries are low and patients think that they can obtain better service from private practitioners.²²⁴

Drugs, which are distributed in Syria through pharmacies, which can be found in cities and large villages. The pharmacists usually dispense the drugs depending on physician's prescription and without physician's prescription in certain cases when it is allowed and safe. Public and private hospitals' pharmacies provide inpatient drugs. Health centres also provide drugs for specific programmes and for areas without private pharmacies.

Furthermore, there are many other private institutes, which provide health services such as centres of medical image, outpatient clinics and medical and diagnostic centres and laboratories.

3.2.2.3 Philanthropic Providers

Syrian Arab Red Crescent: The SARC was founded in 1946. The head quarter is in Damascus and there are 14 local branches all over the country. The branches are finan-

²²¹ Government of Syria (2001c).

²²² MoH-Syria (1981).

²²³ Government of Syria (1970).

²²⁴ Syrian Medical Association (2006).

cially and administratively independent, and are entitled to establish health centres. The main function of SARC is to provide Health services to citizens through its clinics, medical cadres, and volunteers. It runs the children's hospital in Aleppo, and provides mother-and-child care services and launches vaccination campaigns in cooperation with the MoH and the United Nations Children's Fund (UNICEF). It participates with other governmental and nongovernmental sources to raise the healthy awareness on mother-and-child care and family planning through its distributed lectures all over the country. It also provides health care through its dispensaries. Certain branches operate mobile clinics to serve scattered residential groups in the edges of Syrian Desert. SARC devoted to activities such as financial donations, disaster relief, international action and first aid.²²⁵

Associations: Associations are traditional entities and exist in Syria since many years ago. New laws and the lack of the social role of government encouraged establishing many more associations of nongovernmental organizations to provide social services, including health care associations. Some of the health care associations in Syria deal with public health problems, particularly health care issues related to the poor. There is also a number of independent private foundations, which work on specific diseases such as the autism association in Lattakia. Statistically, in 2005 there were 42 social health associations as well as 6 associations for the blind, 6 for the deaf and dumb and 17 for the elderly and disabled.²²⁶

Other Organizations: There are many medical associations, which organize many conferences and invite physicians from other countries to participate, for instance, Syrian Cardiovascular Association and Syrian American Medical Association. They aim to develop medical services in Syria and to access those who are new in this medical side, through the implementation of many new surgical operations in the conference, which are usually free of duty.

²²⁵ SARC (2003).

²²⁶ Office of Prime Minister-Syria (2006). P. 473.

3.2.3 Financing

Syria has many sources of health care financing. They include all of the general government budget, Out-of-pocket payments, public and PHI or benefit schemes, and external sources of financing.

3.2.3.1 General Government Budget

The general government budget is funded by government revenues and prepared by the cabinet. It is discussed and amended by the Syrian Parliament and administered by the MoF. It is the main source of financing for the health services provided by the MoH, MoLA through the provincial health directorates, MoHE, MoSAL, MoD, and MoI.²²⁷

The share of the MoLA is the biggest part of funds, which are allocated by the MoF for health care with 9,547,000 US\$.²²⁸ The MoH directly funded five hospitals, which are Ibn-Kaldoun psychiatric hospital in the Governorate of Aleppo (500 beds), Damascus General Hospital (350 beds), Albassel Centre for heart diseases and surgery (170 beds), Ibn-Sina in the Governorate of Idlep (123 beds), and Mamdoh-Abasa in the Governorate of Quneitra (120 beds). The other hospitals of the MoH and the health directorates in 14 Governorates are financed out of the budget of the MoLA (Table 3-3).²²⁹

Table 3-3: Public Spending for Health Care (2003)

Ministries	Estimated values in Million US\$	% of all public spending for health care
MoH (Central Administration)	137.72	25.71
MoLA	192.86	36
MoHE (for 11 teaching hospitals)	103.84	19.39
MoSAL (1 general Hospital)	5.03	0.94
Ministry of Defence (5 hospitals)	18.89	3.53
MoI (police health care)	11.11	2.07
Other public institutions	66.16	12.35
Totals	535.61	100

Source: Dashash, Kaderi, Fadda, & Schwefel (2003a)

²²⁷ Al-Mahayni, M.Kh. (2005). P. 77.

²²⁸ Dashash, M., Kaderi R., Fadda M. H., & Schwefel D. (2006). P. 1.

²²⁹ Dashash, M., Kaderi R., Fadda M. H., & Schwefel D. (2006). P. 2.

The original data is in Syrian Pounds (SYP): (1U.S. \$=49.5 SYP in 2003)

3.2.3.2 Households

Out-of-pocket payments might be the same amount as direct payments in private hospitals, premiums paid for PHI, or co-payments for drugs and services. In Syria, the Out-of-pocket payment is estimated to be almost 51% of total expenditure on health care in 2003.²³⁰ Syrian citizens prefer private to public health care, regardless of their income, due to a lack of confidence in public health services and a belief that private health care is of better quality.²³¹

3.2.3.3 Public and Private Health Benefit Plans

Many ministries and public institutions have plans to provide special health benefits to those working in the public sector (ministries and public institutions) and private sector in Syria. These plans cover about 15% of the total population.²³² They are quite diverse in terms of coverage, cost structure, management and benefits; for instance, the public electricity company in Damascus provides an insurance plan for about 2.700 workers.²³³ The general institution for social insurance is an integrated institution that insures and provides health services for the private and public sector employees. Its different branches cover risks of old age, pensions, disability, death, occupational diseases and injuries. The work injuries related benefits estimated at 15639180 US\$ in the year 2001. There are additional health benefits in other branches of this insurance, which estimate an overall value of about 20 US\$ million per year.²³⁴

There is a teachers' syndicate of Syria with a mutual fund for health for 280.000 teachers. They run health units in schools and pharmacies owned by the syndicate and contract physicians. In addition to that, there are PHI schemes for certain professions like physi-

²³⁰ World Bank (2006). P. 102.

²³¹ Galdo A. (2004). P.7.

²³² Schwefel, D. (2003a). P. 11.

²³³ Schwefel, D. (2003a). P. 11.

²³⁴ Schwefel, D. (2003a). P. 11.

cians, lawyers and engineers. One example is the health insurance scheme of the Syrian Medical Association with its 20.000 members.²³⁵

3.2.3.4 Voluntary Health Insurance

Private insurance companies provide all voluntary health insurance schemes in Syria. They were not well developed until the last years, as a result to a legislative decree in 2005 about arranging insurance in Syria, which allowed private companies to work in the Syrian insurance market, including health insurance companies.²³⁶ Health insurance schemes in Syria will be discussed in detail the section (3.3).

3.2.3.5 External Sources of Financing

Many governmental and international agencies provide funds to develop the health care sector in Syria. Some international organizations are active in Syria, such as the WHO, UNDP, UNICEF, United Nations Fund for Population Activities (UNFPA) and Nations' High Commission for Refugees. The European Community supports considerably the Health Sector Modernization Programme (HSMP) with up to 30 Million Euro for a period of 5 years. In addition, The European Investment Bank gave 100 million Euros as a soft-loan for medical equipment. Many countries support the Syrian health sector. Japan contributes to hospital buildings and equipments. Spain supports equipment for several hospitals. Canada supports Syrian cancer registry. Non-governmental international organizations are also active, like the Physicians without Frontiers. This external sources of financing the health sector is estimated at least 10 Million US\$ per year.²³⁷

3.2.4 Health Care Expenditure

3.2.4.1 Total Health Care Expenditure

The total health care expenditure is the sum of public and private health expenditure. It covers the provision of health services; family planning activities, nutrition, and emergency aid designated for health, but they do not include provision of water and sanita-

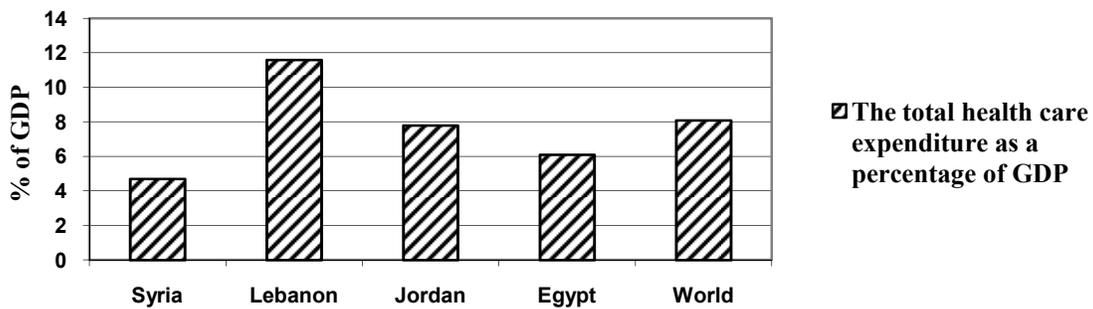
²³⁵ Schwefel, D. (2003a). P. 11.

²³⁶ Government of Syria (2005).

²³⁷ Schwefel, D. (2003a). P. 11.

tion.²³⁸ In 2004 the total health care was estimated at 4.7 % of GDP about 1.128 US\$ billion (4.7%* 24 US\$ billion)²³⁹, while the global average was estimated at 8.7 %. In comparison with some neighbouring Arab countries, the total health expenditure in Syria was projected lower than Lebanon (11.6 %), Jordan (7.8%) and Egypt (6.1% of GDP) (figure 3-8).²⁴⁰

Figure 3-8: Total Health Care Expenditure as a Percentage of Gross Domestic Products for Selected Countries (2004)



Source: WHO (2005)

3.2.4.2 Health Care Expenditure Per Capita

Health expenditure per capita is total health expenditure divided by the population in the country.²⁴¹ According to the World Development Indicators 2006, the health care expenditure per capita in Syria was estimated at 59 US\$, while the global average was estimated at 588 US\$ in 2003. In comparison with some neighbouring Arab countries, the health expenditure per capita in Syria was projected lower than Lebanon (573 US\$), Jordan (177 US\$) and Egypt (64 US\$ in the same year) (figure 3-9).²⁴²

²³⁸ World Bank, (2006). P. 102.

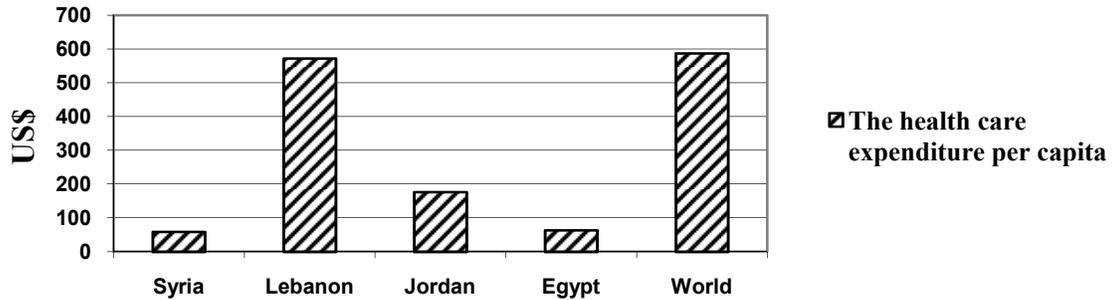
²³⁹ UNDP (2006). P. 333.

²⁴⁰ WHO (2007). P. 64-72.

²⁴¹ World Bank (2006) P. 102.

²⁴² World Bank (2006) P. 100-102.

Figure 3-9: Health Care Expenditure per Capita for Selected Countries (2000)



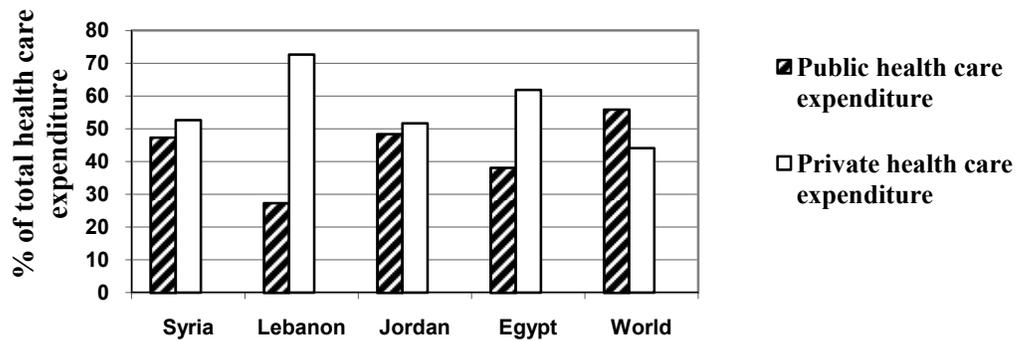
Source: World Bank (2006)

3.2.4.3 Health Care Expenditure Resources

Figure 3-10 shows that, the public and private health care expenditure in 2004 are estimated at 47.4 % and 52.2 % of the total health care expenditure in Syria, respectively. Globally, the public and private health care expenditure are estimated at 55.9% and 44.1% of total health care expenditure, respectively. In comparison with some neighbouring Arab countries, the private health care expenditure in Syria is projected lower than Lebanon 72.6% and Egypt 61.80 %, nearly as Jordan 52 % of total health care expenditure. These high percentages of sharing of private health care in the health expenditure in the neighbouring Arab countries compared with Syria could be interpreted due existence the SHI in these countries at different rates.²⁴³

²⁴³ WHO (2007). P.64-72; World Bank (2006) P. 100-103.

Figure 3-10: Health Care Expenditure Resources in Selected Countries (2004)



Source: WHO (2007)

3.2.4.4 Ministry of Health and Health Directorates Budgets

The budget of the MoH and health directorates represents an indicator of the volume of expenditure on health, since they are the main provider of health care in Syria. Table 3-4 shows that, the budget of the MoH and health directorates in 2005 was 392 Mio US\$, which forms about 4% of the total state budget. It shows although, that in 2003 the total of the budget of the MoH and health directorates had increased approximately by 28% in 2003 compared to 2002. On the other hand, it is worth mentioning that although the budget of the MoH and health directorates had annually increased as an amount compared to the previous year, but the percentage related to the total state budget had been remained relatively constant. It ranged between 3.21% and 4.32% in 1999 and 2002 respectively.²⁴⁴

²⁴⁴ MoH-Syria (2005a). P. 119.

Table 3-4: Ministry of Health and Health Directorates' Budgets (1996-2005)

Year	Total budget of the MoH and health directorates, in thousands US\$	% of annual change	% of the total state budget
1997	141,830	-3.12	3.33
1998	154,823	9.16	3.23
1999	165,351	6.80	3.21
2000	180,218	8.99	3.24
2001	231,283	28.33	3.56
2002	246,023	6.37	3.42
2003	321,099	30.51	4.32
2004	338,089	5.29	3.72
2005	392,096	15.97	4.22

Source: MoH (2005)

3.2.5 Health Care Delivery System

3.2.5.1 Primary Health Care

Primary health care services are provided through a network of more than 1,546 health centres in 2005.²⁴⁵ The health centres provide preventative and curative health services to no more than 3000 people". This depends on the concept of primary health care, and its programmes approved in the country according to the actual needs of the population and cooperation with the communities and within the health sector and as well as outside of it. Each health centre has a number of sub-health centres, and medical points.

At the governorates level, health centres are staffed with specialized physicians, dentists and nurses; while at village level, there are rural health centres and health units. The rural health centres have dentists and pharmacists who do have own university degrees and do not intend to specialize, for at least two years. The governorate's director of health care was provided with authority and flexibility to implement programmes within the development strategy.²⁴⁶

²⁴⁵ Office of Prime Minister-Syria (2006). P. 444.

²⁴⁶ Galdo A. (2004). P. 6.

The primary health care services in Syria include for example: vaccination, family planning, care for mother and baby, treatment of communicable and endemic diseases, oral hygiene and treatment, environmental prevention, and health education.²⁴⁷ The number of services provided by the health centres has reached 16,585,855 services in 2005, while it was 722,210 in 1970. Family planning methods have increased from 30% in 1993 to 46% in 2002. The prenatal care rate has increased from 50% in 1993 to 70.9 % in 2001. The childbirth under trained supervision has increased from 45% in 1993 to 73% in 2001. In addition, the rate of childbirth at home has decreased from 65% in 1993 to 45% in 2001.²⁴⁸

In the same context, Syria has achieved high rates in the coverage with immunization. According to the MoH, the coverage with immunization in 2005 was 100% of Tuberculo-ses, 98% of Measles Vaccine, 98% of pregnant women given Tetanus, 99% of Paralysis, and 99% of Triple immunization (Diphtheria, Pertussis and Tetanus).²⁴⁹

3.2.5.2 Secondary and Tertiary Health Care

Public and private hospitals, which are spread throughout the country, provide the secondary and tertiary health care. Table 3-5 shows that the number of hospitals in Syria was 458 hospitals with 23,789 beds in 2005. 373 hospitals were private with 7,396 beds and 85 public hospitals with 16,402 beds. The majority of private hospitals are small with an average of 19.83 beds per hospital. This is due to a lack of big corporations and the hospitals being owned by one or a few doctors only. On the other hand, the public hospitals have an average of 192.96 beds per hospital. The Syrian population in the same year was estimated to be 18,269 Million.²⁵⁰

²⁴⁷ MoH-Syria (2005b).

²⁴⁸ MoH-Syria (2005b).

²⁴⁹ MoH-Syria (2005a). P. 32.

²⁵⁰ Office of Prime Minister-Syria (2006). P. 442.

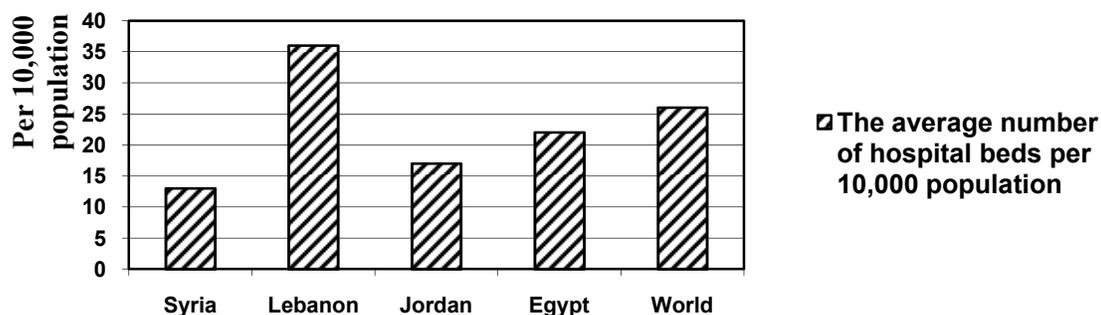
Table 3-5: Number of Hospitals and Hospital Beds (2000–2005)

Years	Public Hos-pitals		Private Hospitals		Total		Total popula-tion in Syria In Mio	Hospitals beds per 10000 of population
	No.	Beds	No.	Beds	No.	Beds		
2000	65	12518	325	5852	390	18370	16320	11.3
2001	67	12418	336	6003	403	18421	16720	11
2002	66	14311	343	6343	409	20654	17130	12
2003	76	15227	364	6590	440	21817	17550	12.4
2004	78	15487	376	6795	454	22282	17921	12.4
2005	85	16402	373	7396	458	23789	18269	13

Source: SAR, Office of Prime Minister (2006)

According to WHO (2007), globally, the average number of hospital beds per population is estimated to be 26 beds per 10,000 population in 2005. In Syria, it is estimated to be 13 beds per 10,000 population, which is low compared to other neighbouring Arab countries. The number of beds in Syria is lower than in the Lebanon (36 beds), Egypt (3-11 beds), and Jordan (17 beds per 10,000 population).²⁵¹

Figure 3-11: Average Number of Hospital Beds per 10,000 Population for Selected Countries (2005)



Source: WHO (2007)

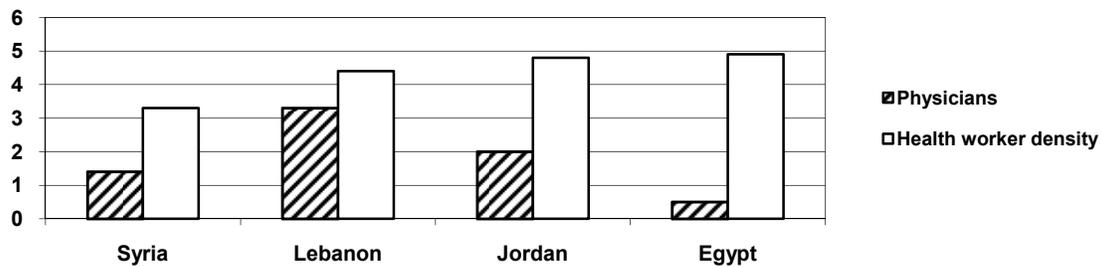
3.2.5.3 Human Resources

Human resources for health care are a vital component of health services. Figure 3-12 shows the numbers of physicians and health workers per 1000 population in Syria and

²⁵¹ WHO (2007). P. 64-73.

some of the selected countries in 2004. The health workers include all of the physicians, nurses, and midwives.

Figure 3-12: Number of Physicians and Health Workers per 1000 Population in Selected Countries (2004)



Source: World Bank (2006)

The figure 3-12 shows that the number of physicians was estimated at 1.4 physicians per 1,000 people in Syria. These are relatively few physicians compared to other neighbouring Arab countries: it is lower than Lebanon (3.3), Jordan (2.0), and more than Egypt (0.5), but similar to the world average (1.5 physicians per 1,000 people). On the other hand, the number of health worker density was estimated to be 3.3 per 1,000 people. This is lower than Egypt (4.9), Jordan (4.8), and Lebanon (4.4 per 1,000 people).²⁵²

The geographical distribution of physicians in Syria is very unequal. The number of physicians in Damascus is estimated to be 3.5 physicians per 1,000 people, and it is lower in Lattakia (2.5), Aleppo (1.3), and Al-Raqqa governorate (0.9 physicians per 1,000 people).²⁵³

Medical training in Syria is not good enough due to many reasons. The study curricula are relatively old. The quality of training is weak. The trainees' salary is comparably low.

²⁵² World Bank (2006) P. 102.

²⁵³ Office of Prime Minister-Syria (2006). P. 439.

The education policy focuses more on the increase of the number of graduates than on the quality.²⁵⁴

3.2.5.4 Pharmaceuticals

Syria obtains pharmaceuticals through domestic production and through importing them. In 2005, the need of Syria's market for drugs was estimated to be between 550 and 600 million US\$, 90% of drugs were manufactured locally and 10% were imported including raw materials. In the Syrian pharmaceutical industry, 54 local medicine drug producers work to produce 5218 different kinds of drugs covering all specialties, and export medicine to 44 different countries. However, two main groups of medication are still not manufactured locally and these are the insulin group and the chemotherapy group.²⁵⁵

3.3 Social Health Insurance Project

3.3.1 Law Project

On November 2003, the MoH approved a new SHI law.²⁵⁶ This law aims to change the situation of people paying for health care out-of-pocket in case of illness. The population is asked to carry out small regular pre-payments in order to cover the whole population with health care according to one's need and not according to his/her ability to pay.²⁵⁷ Based on this law, a general organization with its own branches in all governorates will be established. It will have the financial and managerial autonomy. It will buy or provide the diagnostic health care, the health care treatment and the preventive individual service for the Syrian citizens. The organization can make contracts with the healthcare providers, build, or buy or rent the hospitals and clinics, which will lead to achieve the aim of the SHI according to essential elements, which are determined by the management council of the organization. The financing sources of the organization consist of the regular monthly subscriptions of the subscribers, who work in either public or private sector or who are retirees. These subscriptions should not exceed 3% of the salary. In addition, it

²⁵⁴ Al-Khatib, B. (2006). P. 33.

²⁵⁵ MoH-Syria (2005a). P. 89.

²⁵⁶ Schwefel, D. (2003b). P. 5.

²⁵⁷ Schwefel, D. (2003b). P. 5.

consists of a parallel share, which is paid by the government or employers with a volume of 6% of the salary. Subscriptions of individuals, employers or unemployed people are defined according to the management council of the organization. The government will support the health insurance budget in case of any deficit. Annex 1 presents the Syrian SHI law project.²⁵⁸

3.3.2 Health Sector Modernization Programme

The government of Syria has adopted the Health Sector Modernization Programme (HSMP) to improve the health sector. HSMP is financed by the European Union (EU) and executed in cooperation with the MoH and the European commission in Syria. It has started in 2004 and is still going on. The HSMP is aiming to improve the health status of the Syrian population. In addition, it seeks to ensure that more coherent health services are accessible to Syrians and to improve the performance at hospitals as well as the management of health care facilities. Furthermore, it aims to study and manage the implementation of SHI as a new framework to finance the health sector. The HSMP is coordinated by the MoH, which is supported by a team of technical experts. This is set up in a contract between the representatives of the European commission in Syria and a consortium of the German Development Cooperation (GTZ), EPOS and OPTIONS, which provide professional services.²⁵⁹

3.3.3 Expected Costs of the Social Health Insurance System

According to the law project of SHI, the HSMP provided a corresponding figure as a roadmap in order to clarify and summarise the most important steps towards a SHI system in Syria. Figure 3-13 shows this roadmap. It shows that it needed some studies and dialogs before knitting the SHI project. In addition, a centre for health insurance competence (CHIC) will be established in Damascus. It will support all activities towards designing and implementing the SHI in Syria. The centre shall be expanded into an independent and professional SHI organization later. It will support the teachers association and the already existing health benefits and insurance schemes in the public sector in or-

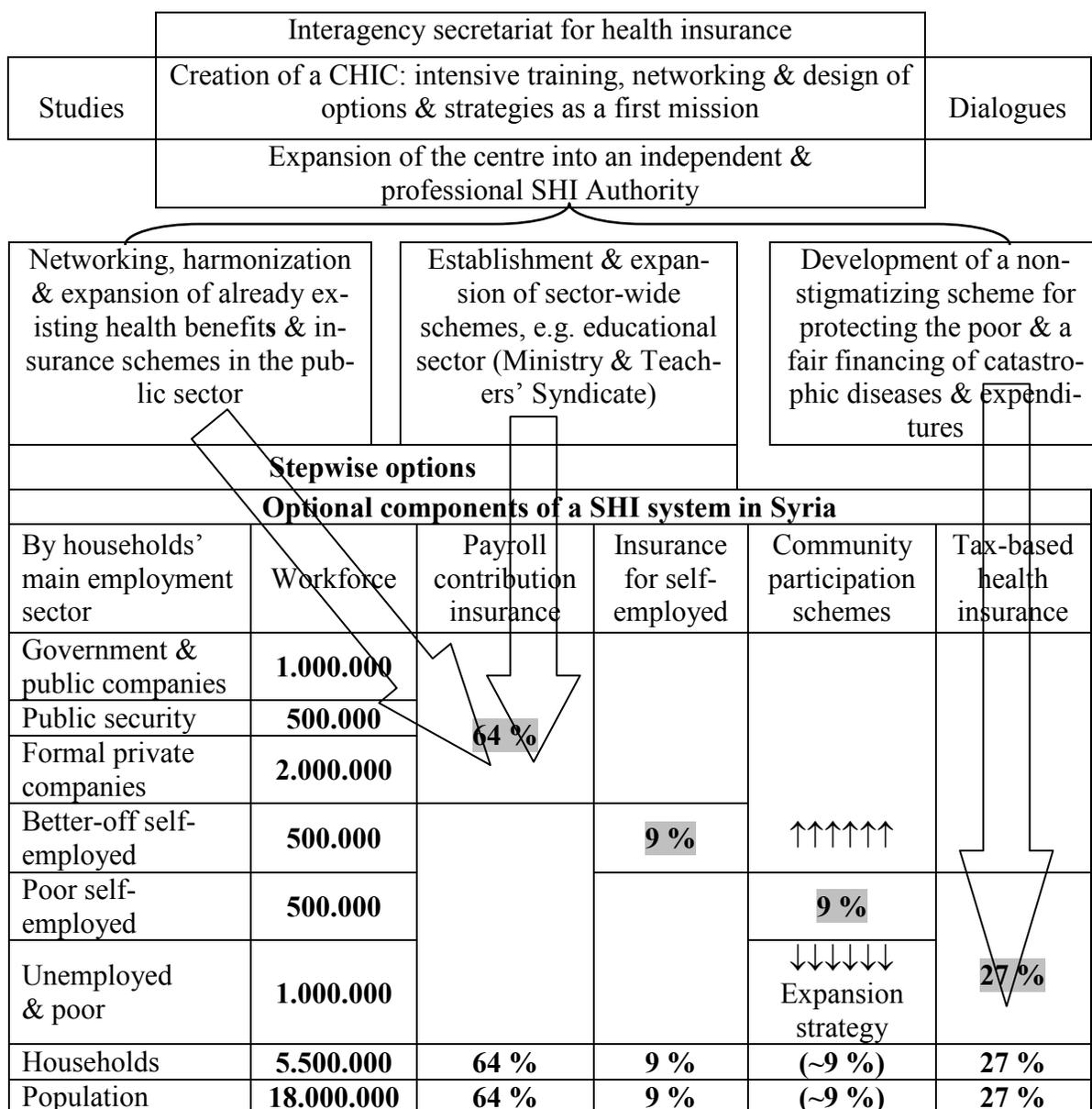
²⁵⁸ The law project is published in. Schwefel, D. (2008). P. 115.

²⁵⁹ Syrian Consultation Bureau (2006). P. 37.

der to expand health benefits and health insurance schemes as well as to join the SHI system. The figure 3-13 presents a framework for the SHI system in Syria. It shows, the SHI system will include the protection of the poor, networking of existing health benefits and insurance schemes in the public sector. In addition, the project will add about half a million persons who are employed in the security sector. This figure presents an option of expected revenues, which are needed for the implementation of the SHI system in Syria. This option could start with some employee groups in the formal public and the private sectors.²⁶⁰

²⁶⁰ Schwefel, D. (2007a). P. 18-19; Schwefel, D., Holst, J. (2007). P. 9.

Figure 3-13: Framework Table for Social Health Insurance System



Source: Schwefel & Holst (2007)

Table 3-6 shows the expected total contributions per year of the formal employed workforce in public and private sectors. It shows that the total number of formal employed workforce in the public and private sectors and in the public security sector is about 3.5 millions employees, who form about 64% of the total number of employed workforce in Syria. According to the project of a SHI law, the contribution shares of the employers shall be 6% of the salary and 3% for the employees. 529.2 million US\$ could be gener-

ated by a payroll tax according to the following simplified calculation. If SHI would not only cover the employee but also their families, more than 11.5 million Syrians could benefit from the SHI project.²⁶¹

Table 3-6: Expected Contributions of the Formal Employed Workforce per Year

Insured	Average salary per month (SYP)	Employer share 6% per month (SYP)	Employee's share 3% per month (SYP)	Total contribution per month (SYP)	Total contribution per year (SYP)	Total contribution per year (US\$)
1 only	7.000	420	210	630	7.560	150
Mio	7 Billion	420 Mio	210 Mio	630 Mio	7.6 Billion	150 Mio
3.5Mio	24.5 Billion	1.47 Billion	735 Mio	2205 Mio	26.460 Billion	529.2 Mio

Source: Schwefel & Holst (2007).

Table 3-7 shows the expected total contributions of the whole workforce and the poor in Syria per year. With about 5.5 million Syrian citizens who form the total number of employed workforce in public and private sectors and the poor, it is estimated that the total revenue adds up to about 525 million US\$ per year. It is assumed that the private smaller formal sector will need a subsidy of 50% by the government. With the employees and their families, SHI will cover the completely Syrian citizens.²⁶²

Table 3-7: Expected Contributions of the Whole Workforce and Poor per Year

Employment category	Insured in Mio.	Revenue assumption	Billion SYP	Million US\$
Public civilian sector	1	100 %	7.6	150
Public security sector	0.5	100 %	3.8	75
Private larger formal sector	1	100 %	7.6	150
Private smaller formal sector	1	50 %	3.8	75
Better-off self-employed	0.5	100 %	3.8	75
Poor self-employed	0.5	0 %	0	0
Unemployed and poor	1	0 %	0	0
Totals	5.5	-	26.6	525

Source: Schwefel (2006)

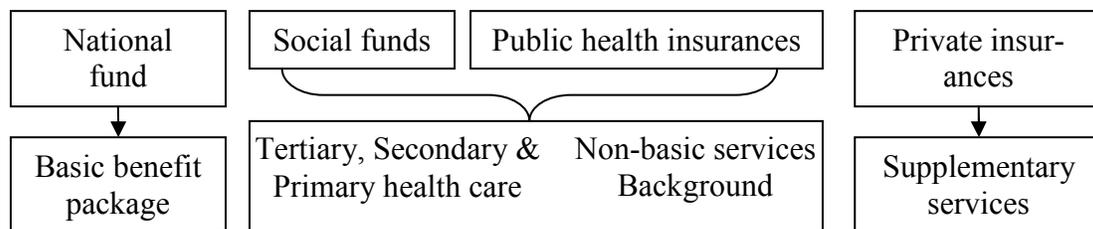
²⁶¹ Schwefel, D., & Holst, J. (2007). P. 9.

²⁶² Schwefel, D. (2006). P. 33.

3.3.4 Multiple Health Insurance Fund

The Syrian SHI system will depend on a multiple fund system where each risk pool has its own financial fund and the financial operations for each risk pool flow through its fund. The following figure shows this fund, which includes the following funds. The national fund pays for basic services (such as environmental control, vaccinations, epidemics control, health education etc.), emergencies and catastrophic cases. Social funds pay for all non-basic services for the poor, which made up around 30% of the Syrian population. SHI funds will use the contributions, which are paid by the insured, to pay for the non-basic services. In addition, PHI institutes will be a part of the multiple fund system to pay for supplementary services.²⁶³

Figure 3-14: Multiple Health Insurance Fund System



Source: Schwefel (2007b)

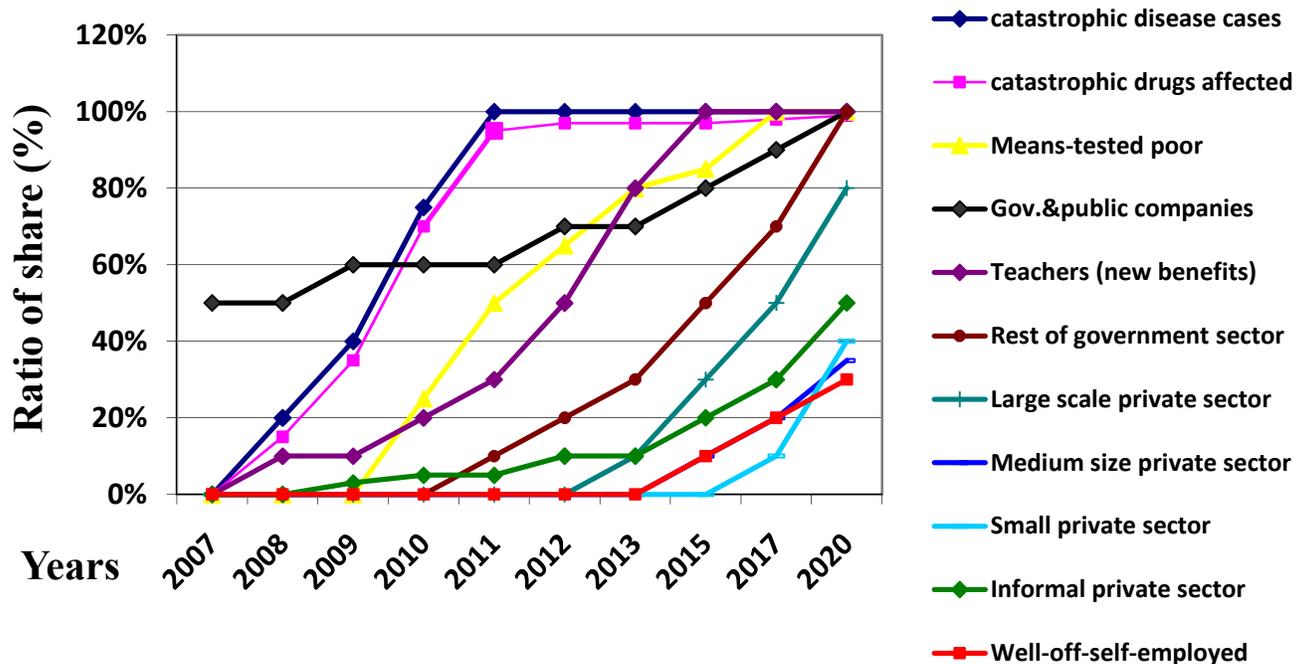
3.3.5 Work Plan

The HSMP has set up a tentative work plan for the implementation of the SHI system in Syria. In the plan, showed in the following figure, many various target groups have been distinguished among themselves according to the feasibility to be included into this system. Distinction has been also done inside the government sector among governmental companies, teachers' syndicate, and the rest of the government sector. Inside the private sector, distinction has been done among the following target groups, large, medium, small, informal private sector, as well as among the well-off-self-employed. In addition, the SHI system is assumed to address the poor people. Therefore, distinctions have been comprised between the poor that are living below a certain subsistence level and those

²⁶³ Schwefel, D. (2007b). P. 583-585; Government of Syria (2006). P. 752.

who might become poor due to catastrophic expenditure illness episodes, e.g., heart operations and continuous intake of expensive drugs.²⁶⁴

Figure 3-15: Prospective Development of Social Health Insurance System



Source: Schwefel (2007)

Figure 3-15 shows the prospective development of the SHI system in Syria within the next twenty years. It shows that the implementation of SHI has started in August 2007, as a pilot project for SHI in Al-Raqqa, Dara’a and Lattakia governorates. The pilot project will be evaluated before expanding the implementation to cover the other Syrian governorates.²⁶⁵ The implementation will start with the covering of catastrophic disease cases and catastrophic drugs affected. In addition, the CHIC will support the teachers’ syndicate, the workers union and other governmental companies in expanding their health benefits and health insurance schemes as well as in joining the SHI system. In the following stages of the implementation, the SHI system will cover the private sector and the poor people in different ratios. At the beginning of the year 2020, it is expected that

²⁶⁴ Schwefel, D. (2007a). P. 23.

²⁶⁵ Schwefel, D. (2008). P. 214.

100% of the public sector target groups, the catastrophic disease cases and catastrophic drugs affected, as well as the poor people will be covered by the SHI system. In addition, 80% of the large-scale private sector and about 40% of the other private sector target groups will be covered by the SHI system.²⁶⁶ The work plan will be presented in more details in the Annex 2.

3.3.6 Legal Framework of Proposed Insurance Plans

The Syrian SHI will possibly start the implementation with the help of the best prepared and selected government sectors, for instance, with the educational sector in Latakia and Daraa' governorates. This is going to be the first step before the implementation is widened to cover all Syrian governorates. A legal framework has been developed to implement the proposed insurance plans. It includes the following points. SHI shall make contracts with accredited public and private health hospitals. Services shall be provided by a full-time state-run medical staff, which is not allowed to work elsewhere. Patients are not entitled to choose their doctors. In case they want to be treated by a specific doctor, they will have to pay an additional 20% of total treatment costs if they are insured and 50%, if they do not (are not). If public sector services are temporarily unavailable, the patient will be sent to a private hospital. In this case, the Health Insurance Fund will cover the costs according to special agreements. If the service is not available at all, annual contracts shall be made to rent beds at private hospitals providing these services. Medicine costs shall be covered at tender prices plus 20% to the sum, which should not exceed 16 US\$. According to an incentive law passed by the MoH, 20% of fees collected from insured patients and 80% collected from uninsured patients shall be distributed as incentives to health sector workers. 60% of the total amount of the incentives will be distributed to doctors, 20% to technicians and nurses, 10% to quality unit staff and 10% to others. The government will bear the monthly subscription fees for poor patients in addition to the parallel sum. Patients are commonly defined as being in poverty when having a monthly salary of less than 60 US\$. The SHI could make contracts with private clinics in remote

²⁶⁶ Schwefel, D. (2007a). P. 23.

areas where no public health care centres are available. The MoH is going to set up a list of the critical conditions in which uninsured patients shall be exempted from paying.²⁶⁷

3.3.7 Performance Improvement of Public Hospitals

Currently, each public hospital receives an annual balanced budget from the Syrian government. These hospitals are not getting any income from co-payments. According to HSMP, public hospitals will receive co-payments as well as national and social funds after the implementation of the SHI system in Syria. One third of the income from co-payments will be used to finance the improvement of services. Another third will be used to subsidize services for emergencies, catastrophic cases and for the poor. The remaining third of the income will be used to improve the performance by providing incentives to staff.²⁶⁸

3.3.8 Organization Location

There are many options to choose from where to house the SHI organization. The first option is the MoH. At the beginning of the implementation of the SHI project, it is probably acceptable for the organization to be housed in the MoH because of its vast experience in providing health care, although, it has no experience in managing insurance funds. Another option could be the MoSAL. It has a huge database including information on the entire workers in Syria and has a long experience in managing social insurances provided by some public institutions. The SHI organization could also be kept under supervision of the prime minister. In this situation, the SHI will be under control of the government and the political authority. Nevertheless, it is very difficult to achieve a systematic control on the SHI. Another choice would be an independent SHI organization. It ensures avoidance of rivalries among ministries and other stakeholders, as well as it achieves the independency from lobbyists and powerful stakeholders. Despite all these advantages, the implementation of an independent SHI organization requires an establishment of a completely new infrastructure and organization.²⁶⁹

²⁶⁷ Schwefel, D. (2008). P. 311.

²⁶⁸ Schwefel, D. (2007b). P. 586.

²⁶⁹ Schwefel, D., Holst, J. (2007). P. 5.

With this analysing for the health care system in Syria, the feasibility study can be started.

Chapter 4

Feasibility Study

4 Feasibility Study

The feasibility Study Chapter includes four primary sections. In sections 4.1, the hypotheses are provided. Section 4.2 presents the methodological perspectives of this research. The strategies adopted in this research are discussed in detail. The issues of how to develop the research questionnaire and how to conduct the questionnaire survey are described in this chapter. Section 4.3 presents the study results about the expected impact of the introduction of Syrian SHI on the surveyed public hospitals management. The results are discussed in the section 4.4.

4.1 Hypothesis

Public hospitals management could be improved by creating proper incentives with the payment method. The payment methods create the incentive structure that affects health services, their quality and quantity, and the production process.²⁷⁰ If the public hospital is paid a fixed-budget and is responsible for hospital services, an increase of the quantity of services provided means an increase in loss. If the hospital is being switched to be reimbursed based on case payment or fee for services, an increase of the quantity of services provided means higher funds in the hospital and possibly an increase in profitability.²⁷¹

Many developing countries, which implemented the SHI into their health care system, switched to other payment methods, such as fee-for-service in the Philippines, a mix of capitation and fee-for-service methods in Colombia, and a capitation payment method in Thailand. They were able to improve the efficiency of their health care delivery system.²⁷²

On the other hand, the higher funds lead to increase the quantity of hospital services and to improve the quality of management.²⁷³ This fact can be interpreted depending on that the highest funding because of increased demand will encourage health care providers to increase the production and the reducing the long of stay in the hospitals. In addition, the

²⁷⁰ Hsaio, W.C, (2007). P. 38.

²⁷¹ Liu, X. & Mills, A. (2007a). P. 214.

²⁷² Hsaio, W.C, (2007). P. 38.

²⁷³ Fleßa, S. (2007b). P. 147-149.

higher funds help to increase the salaries of hospital staff, which in turn would help to increase the quantity of services provided and improve the QM. Furthermore, hospitals are related to the health insurance companies/ agency or patients under a contract or agreement, which includes a qualitative description of the service. Therefore, hospitals must be committed to an acceptable level of the QM.²⁷⁴ QM can be improved by an increase of the level of independence and autonomy of the hospital from Government, which help the administration to improve all of the leadership, processes, policy & strategy, staff, patients' satisfaction and society results.

The improvement of the QM increases the production and is reducing the length of stay that could affect the patients' satisfaction positively. A better level of patient's satisfaction coupled with a sufficient purchasing power and the possibility of the increase of quantity of services will increase the demand for hospital services.²⁷⁵ The increase of the demand for public hospitals services coupled with the switch to a case payment or Fee-for-Service system will in turn lead to higher funds of hospitals and increase the quantity of hospitals services.²⁷⁶ Consequently, improvement in the financing of public hospitals and on an increase of the level of independence of the management will help to improve each of the quantity of services provided, QM, patients' satisfaction, and the demand for hospital management.

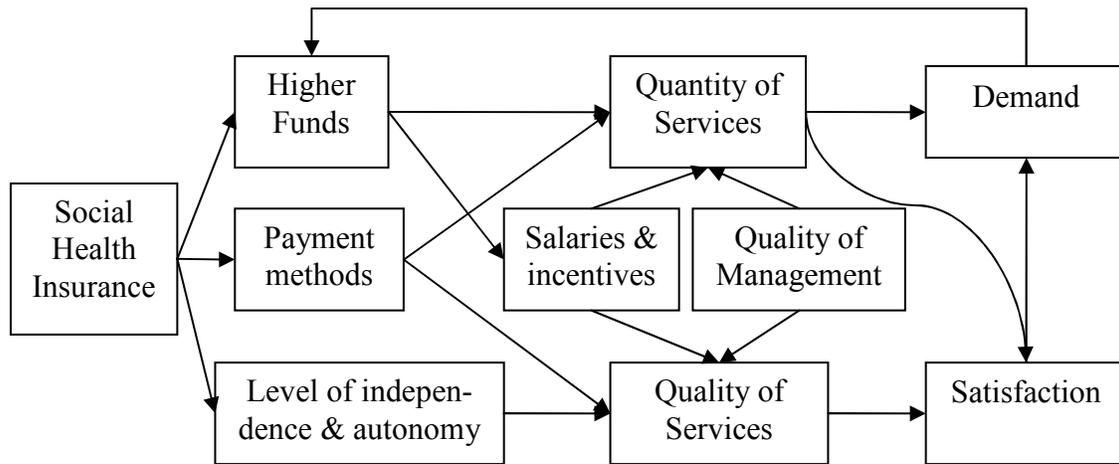
The SHI as a system to finance the health care can effectively lead to an improvement of the financing of the Syrian public hospital via a flow of higher funds for the services provided and a switch of the public hospitals from providing free services to the Fee-for-Service system. In addition, it contributes to an achievement of greater independence of hospitals from Government. The following figure shows the expected impact of the introduction of SHI on the public hospitals in Syria.

²⁷⁴ Fleßa, S. (2007a). P. 260.

²⁷⁵ Flessa, S. (2009). P. 19.

²⁷⁶ Cohn., S.M. (2007). P. 171.

Figure 4-1: Expected impact of the SHI on the public hospitals in Syria



Source: Own.

Based on the previous analysis, four basic hypotheses and nine assistant hypotheses were developed to achieve objectives of the research.

Hypothesis 1: According to the respondents' answers, the quantity of public hospitals services would be increased after the introduction of SHI compared with the current situation.

Hypothesis 2: According to the respondents' answers, the QM in the public hospitals would be improved after the introduction of SHI compared with the current situation.

In this hypothesis, nine assistant hypotheses are tested.

Hypothesis 2-1: According to the respondents' answers, the quality of leadership in management of public hospitals would be improved after the introduction of SHI compared with the current situation.

Hypothesis 2-2: According to the respondents' answers, the quality of policies and strategies in management of public hospitals would be improved after the introduction of SHI compared with the current situation.

Hypothesis 2-3: According to the respondents' answers, the quality of management of people in public hospitals would be improved after the introduction of SHI compared with the current situation.

Hypothesis 2-4: According to the respondents' answers, the quality of management of partnerships and resources in public hospitals would be improved after the introduction of SHI compared with the current situation.

Hypothesis 2-5: According to the respondents' answers, the quality of management of processes in public hospitals would be improved after the introduction of SHI compared with the current situation.

Hypothesis 2-6: According to the respondents' answers, the quality of management of patients' results in public hospitals would be improved after the introduction of SHI compared with the current situation.

Hypothesis 2-7: According to the respondents' answers, the quality of management of staff results in public hospitals would be improved after the introduction of SHI compared with the current situation.

Hypothesis 2-8: According to the respondents' answers, the quality of management of society results in public hospitals would be improved after the introduction of SHI compared with the current situation.

Hypothesis 2-9: According to the respondents' answers, the quality of management of key performance results in public hospitals would be improved after the introduction of SHI compared with the current situation.

Hypothesis 3: According to the respondents' answers, patients' satisfaction with the public hospitals services would be improved after the introduction of SHI compared with the current situation.

Hypothesis 4: According to the respondents' answers, the demand for public hospitals services would be increased after the introduction of SHI compared with the current situation.

4.2 Data Collection and Methods of Research

This section discusses the methods of data collection and analysis that was used in this study. The method refers to procedures or techniques for collecting data.²⁷⁷ This section begins with a selection of an appropriate research strategy. Having established the comparative survey as a feasible strategy, the following section will discuss issues such as the population and the sample of the survey. In this context, a questionnaire is used as a research instrument. The section will conclude with an introduction of the scheme of analyses, which is necessary for the testing of hypotheses.

4.2.1 Study Methods and Research Strategy

For conducting an empirical research, there are two methods of data collection: qualitative and quantitative.²⁷⁸ These two methods have advantages and disadvantages. The qualitative method enables researchers to study selected issues in greater depth and in more detail. Approaching fieldwork without being constrained by predetermined categories of analysis contributes to the depth, openness and detail of the qualitative inquiry. It aims to processing and interpreting for verbal and non-numeric data. The quantitative method, on the other hand, requires the use of standardized instruments so that the varying perspectives and experiences of people can fit into a limited number of predetermined response categories to which numbers are assigned. The advantage of a quantitative method is that it is possible to measure the reactions of a large number of people to a limited set of questions, thus it facilitates the comparison and the statistical aggregation/ accumulation of the data. By contrast, a qualitative method typically produces a great amount of detailed information about a much smaller number of people and cases. This increases the understanding of the cases studied but reduces generalization.²⁷⁹ Ultimately, despite the difference between the qualitative and quantitative approaches, the results of qualitative and quantitative researches are often combined and complemented each other.²⁸⁰

²⁷⁷ Nilsen, A. (2008). P. 82.

²⁷⁸ Nilsen, A. (2008). P.82; Strauss, A.L. (1994). P. 26.

²⁷⁹ Bortz, J. & Döring, N. (2002). P. 298-299; Mayring, P. (2003). P. 16-19.

²⁸⁰ Flick, U. (2007). P. 40.

In this study, the quantitative methods are used mainly. The method selection was based on the following considerations. The study of the different expectations from a variety of the respondents who are working in public hospitals, as well as to a sample of patients would be difficult through qualitative methods. The quantitative methods are advantageous in standardization of data collection. The standardization makes the comparing of the data to each other possible in an economical way.²⁸¹ On the other hand, it is a common practice in social science to use the quantitative research method. Researchers use different approaches in quantitative research studies. They may collect data by observing and counting overt acts of behaviour, or they may use questionnaires, which are the most popular instrument to gather primary data, to generate responses to specific questions, including questions about opinions, knowledge, demographic, and many more categories of data.²⁸² Therefore, the quantitative research method is used.

There are many advantages of using questionnaires, which is an appropriate instrument when the needed sample sizes and geographic areas are large. Data from questionnaires are easy to enter, tabulate and analyze by many computer software packages. In addition, questionnaires reduce bias, where the researcher's own opinion will not influence the respondent to answer in a certain manner. On the other hand, there are also some disadvantages of using questionnaire-based surveys. Sometimes questionnaires are not designed very well; in this case, the results will be unreliable. In addition, the questionnaires need an adequate number of respondents. If this specific number is not given, the results will be unreliable. Furthermore, the questionnaires require a lot of time and money, and they are not useful for obtaining qualitative information.²⁸³

In this study, a questionnaire survey was used to examine the respondents' opinions about the expected impact of the introduction of SHI on the management of Syrian hospitals.

²⁸¹ Witt, H. (2001). P. 2.

²⁸² McNabb, D.E. (2004). P. 149-150.

²⁸³ Koshy, V. (2010). P. 84; Sittig, D.F. (1993). P. 176.

4.2.2 Study Samples

The study intends to examine the expected impact of the introduction of SHI on public hospitals in Syria. This implies that respondents belong to the people who work or receive treatment in public hospitals, since the other groups have not sufficient knowledge about public hospitals management.

The study includes three samples: members of the top management, patients, and hospitals' staff. The first sample includes members of the top management in the public hospitals. This sample should have sufficient knowledge and experience with all the details of public hospital management. It is supposed, that it can answer the entire questionnaire. In the second study sample, there are physicians, nurses, and management staff. This sample will answer all the questions except that shall relate the expected impact of the SHI on the quality management. The third sample includes patients who receive a treatment in public hospitals. It shared with the other samples in answering the questions about the patients' satisfaction. The other parts should be answered by other samples, which have more knowledge.

The samples were randomly drawn from public hospitals in the Lattakia Governorate. The public hospitals in the Lattakia Governorate were selected for investigation due to the province's position as one of the most important districts in Syria, as well as for reasons of practicality and convenience perceived by the researcher. Several years ago, the researcher was living in the Lattakia Governorate and has a good contact with people who are living in that governorate. It was relatively easy for the researcher to obtain sufficient information, which can be used for this study.

4.2.3 Questionnaire Survey

4.2.3.1 Questionnaire Development

A questionnaire was designed so that is able to study the expected impact of the introduction of SHI on public hospitals management in Syria. A good design is often structured by adjectives like appropriate, flexible, efficient, and economical. It should yield maximal information, maximise the reliability and minimise bias of the data collected and

analysed.²⁸⁴ Therefore, the researcher tried to be fair with these issues. In the following, there is a description for the main methodological steps to design the questionnaire and for its substantive components.

The relevant questions in the questionnaire were classified into five sections. To enable a good atmosphere in interviews, the questionnaire was designed to be placed at the beginning of so-called "Ice-breaker Questions", which can be simply answered by the respondents and without thinking long.²⁸⁵ Therefore, the first section of the questionnaire included the following questions "What is your position?" and "Hospital name?".

In the second section, questionnaire was designed to include questions about the current situation of the quantity of hospital services and the expected impact of the introduction of SHI on it. These questions were designed to be answered by members of the top management, physicians, nurses, and management staff. The patients were excluded, because this group of questions could only be answered by specialists. The third section included questions about the current situation of the hospital's QM and the expected impact of the introduction of SHI on it. These questions were designed to be answered only by members of the top management in the surveyed public hospitals. They were based on the EFQM model, which has been adopted to assess QM in the surveyed public hospitals as shown in the chapter two. The fourth section, which was designed to be answered by all the study samples, included questions about the current situation of patient's satisfaction with hospital services and the expected impact of the introduction of SHI on it. The fifth section included questions about the current situation of the demand for hospital services and the expected impact of the introduction of SHI on it. It was designed to be answered by members of the top management, physicians, nurses, and management staff. The patients were excluded, because the questions should be answer by specialists. Furthermore, the questionnaire had the possibility to allow the respondents, especially members of the top management to write down their opinions about the expected impact of the introduction of SHI and to add some comments and suggestions.

²⁸⁴ Kothari, C.R. (2004). P. 33.

²⁸⁵ Raithel, J. (2006). P. 72.

The questionnaire was actually used for collecting information in Syria, although, it was written in English first. Therefore, the English version was translated into Arabic (the native language in Syria). Translating the questionnaire was specifically carried out to increase both the quality and quantity of responses.²⁸⁶ This translation might have biased the original design of the questionnaire. A number of questionnaire terms could not be precisely translated into Arabic terms. Various measures were taken in order to minimize these potential problems. The English version was translated into Arabic by the researcher himself. Some English items were translated into Arabic by providing additional explanations so that respondents could understand them better.

After the translation, the Arabic version of the questionnaire was mailed to two of the professors who are working in the departments of statistics and management in Tishreen University (the state university in Lattakia Governorate). They were asked whether: (1) The items were precise and unambiguous, (2) there were biased wordings, and (3) they could answer these questions. They returned the questionnaires with some comments and some alterations were carried out according to their suggestions.

In the next step after achieving the draft questionnaire, the literature recommends to pre-test the questionnaire.²⁸⁷ According to this test, the clarity of the questions, the average needed time, and any alternative formulations of questions should be reviewed.²⁸⁸ Therefore, the Arabic version of the questionnaire was formally tested on a small sample of 15 persons out of the given questionnaire's sample (i.e. some of each group of physicians, nurses, management staff and patients). The researcher interviewed these people and asked them to give a feedback about the comprehensibility of the questionnaire and the specific items as well as to give suggestions for a possible change and additional items, etc. Their suggestions were carefully evaluated by the researcher and the Arabic version of the questionnaire was modified.

²⁸⁶ Pickel, S., Pickel, G., Lauth, H.J., & Jahn D. (2009). P. 509.

²⁸⁷ Atteslander, P., Cromm, J., Grabow, B., Maurer, A., & Siegert, G. (2008). P. 277.

²⁸⁸ Kühn, R., Kreuzer, M. (2006). P. 154.

Finally, the questionnaire should be back-translated into the original language of the study.²⁸⁹ The researcher retranslated the Arabic version into English according to the last changes. The Annexes 3 and 4 show the English and the Arabic version of the questionnaire.

4.2.3.2 Evaluation of the Questionnaire

The relevant questions in the questionnaire were classified into five sections as discussed above. In the first part, the researcher asked about general descriptive structures of the respondents.

In the second and fifth parts (questions 3 to 7 and questions 56 to 66) participants have the choice to give their opinion about the current situation by giving answers according to a five-point Likert scale as semantic differential scale, where 1 = Very small, 2 = Small, 3 = Neither small nor large, 4 = Great, and 5 = Very great. Semantic differential scales presume that the respondents' understanding of a specific entity lies in a multi-dimensional space. A given entity can be measured by scaling a number of dimensions.²⁹⁰ In addition, they analyzed the status after the introduction of SHI by using the same statements and scales.

In the third part (questions 8 to 39) participants have the choice to give their opinion about the current situation by giving answers according to a five-point Likert scale, where 1 = Strongly disagree, 2 = Disagree, 3 = Somewhat agree, 4 = Agree, and 5 = Strongly agree. In addition to that, they reported the expected situation by using the same statements and scale.

In the fourth part (questions 40 to 55) participants have the choice to give their opinion about the current situation by giving answers according to a five-point Likert scale, where 1 = Very bad, 2 = Bad, 3 = Neither bad nor good, 4 = Good and 5 = Very good. In addition to that, they reported the expected situation by using the same statements and scale.

²⁸⁹ Brace, I. (2008): P. 217.

²⁹⁰ Osgood, C., Suci, G. J., & Tannenbaum, P.H. (1957). P. 78-79.

4.2.3.3 Ensuring the Cooperation

Before leaving for Syria, the researcher had sent letters to the ministries of health and the higher education via the Syrian Embassy in Berlin to allow him to conduct the survey and the field visit in public hospitals in Syria (Annex 5). In this situation, it is appreciated that relevant Syrian hospitals could cooperate with him.

4.2.3.4 Procedure

The questionnaire was distributed in public hospitals in Latakia Governorate in the period between the middle of April and the end of June. Five public hospitals are existed in Latakia Governorate. One of these hospitals belonged to the MoD where it was not allowed to distribute the questionnaire. Three of the other hospitals belonged to the MoH and one to the MoHE. One of the hospitals of the MoH had a reconstruction and redeveloped its devices. Therefore, the questionnaire was distributed in three hospitals.

375 questionnaires were distributed at different locations in all three hospitals of Latakia Governorate. 246 respondents returned a completed questionnaire (65.6% of all distributed questionnaires). 107 were patients, 55 physicians, 36 nurses, 14 administration staff and 34 members of the top management. With regard to the questionnaires that were distributed to patients, it was sometimes very difficult to make them fill out the questionnaire. To resolve this problem the questionnaire could also be filled out by the accompanying person.

4.2.3.5 Statistical Methods

Several statistical methods were used in this study to analyze data. All analyses were performed using the statistical package for the social sciences (SPSS) version 16.0 for Windows. For testing the theoretical model, the measurement instruments should be reliable.²⁹¹ Thus, they should be evaluated for reliability. When evaluating measurement instruments, reliability analysis should be.

²⁹¹ Hall, R. (2008). P. 173.

Analyzing the data is started with the application of descriptive procedures.²⁹² In addition, the descriptive statistics require quantifiable measurements or observations. Therefore, the raw data of different survey participants is presented in the form of tables and graphics at the beginning of the analysis section.

24 variables were concluded by measuring the average of the respondents' answers on each of the questionnaire's parts. 12 variables reflect the current situation of the hospital management and the other 12 variables reflect the expected situation of the hospital management after the introduction of SHI.

Analyses of variance and multiple comparisons of the groups were used to compare the subgroups and the differences in opinions of the individuals according to their different functional positions. These included the Two Related Samples Test (Non-parametric Wilcoxon signed ranks test), and a one-way repeated measure analysis of variance (ANOVA test). Wilcoxon's signed ranks test ranks the absolute value of the differences and then calculates the sum of the ranks within the group of pairs that originally presented positive or negative differences.²⁹³ In this study, the samples sizes were at least 30; therefore, Z-test is used.²⁹⁴ Box-plots graphics was used to show the differences of the respondents. The objective of using box-plots is to portray not only the information of the statistical tests, but also other descriptive information that explain more the group differences.²⁹⁵ A significance level of 0.01 was predefined in all cases. A value of $P \leq 0.01$ (2-sided) was used as the nominal level of statistical significance.

4.3 Results

In this section, the results of the study are presented. They are the outcomes of the questionnaire, where the data have been collected as indicated in the section (4.2). These results are used to answer the study's hypotheses.

²⁹² Raithel, Y. (2006). P. 29.

²⁹³ Landau, S. & Everitt, B.S. (2004). P. 49.

²⁹⁴ Clark-Carter, D. (2010). P. 430.

²⁹⁵ Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (2008). P. 124.

4.3.1 Reliability

Reliability is “the reproducibility of results or the consistency of measurements”.²⁹⁶ It refers to the possibility of getting the same answer by using the same measuring instrument more than once.²⁹⁷ Reliability is “a statistical measure of how reproducible the survey instrument’s data are”.²⁹⁸ There are four methods commonly used for assessing reliability, namely, (1) the test-retest method, (2) the alternate-form method, (3) the split-halves method, and (4) the internal consistency method.²⁹⁹

The internal consistency method was used in evaluating the reliability of the survey instruments in this thesis, because the other methods have some limitations, particularly for field studies. These limitations include, for example, requiring two alternate forms of the measuring instrument. In contrast, the internal consistency method does not require either the splitting or repeating of items. Instead, it requires only a single test administration and provides a unique estimation of reliability for the given test administration. It is the most general form of reliability estimation.³⁰⁰ The most commonly used statistic to measure the internal consistency reliability is Cronbach's coefficient Alpha, which its values range from 0 to 1, with lower values indicating lesser reliability.³⁰¹ Generally, a value greater than 0.50 is considered acceptable, a value greater than 0.7 indicates good reliability.³⁰²

After all data were entered into a computer, the SPSS 16.0 reliability program was performed separately for the items of each scale. Table 4-1 lists Cronbach’s Alpha for different scales in this instrument. This table shows that the reliability coefficients ranged from 0.52 to 0.909, indicating that some scales were more reliable than others. Accordingly, the instrument developed for measuring the constructs of the different parts of the questionnaire was judged reliable.

²⁹⁶ Le, T. & Halvorson, E.E. (2010). P. 120.

²⁹⁷ Bernard, H.R. (2006). P. 54.

²⁹⁸ Litwin M.S. (1995). P. 6.

²⁹⁹ Carmines, E.G. & Zeller, R.A. (1979). P. 37.

³⁰⁰ Carmines, E.G. & Zeller, R.A. (1979). P. 44.

³⁰¹ Pallant, J. (2007). P. 6.

³⁰² Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (2008). P. 137.

Table 4-1 Internal Consistency Analysis for Study Scales

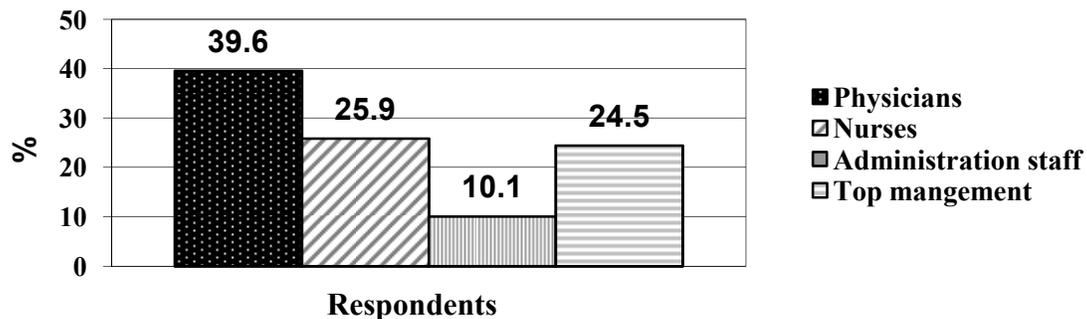
Scale		Current situation		Expected situation after the introduction of SHI	
		Number of items	Cronbach's Alpha	Number of items	Cronbach's Alpha
Quantity of hospital services		5	0.565	5	0.520
Quality of management	Leadership	5	0.680	5	0.859
	Policies & strategies	4	0.886	4	0.909
	Staff	5	0.670	5	0.745
	Partnerships & resources	5	0.610	5	0.631
	Processes	5	0.649	5	0.694
	Patients results	2	0.596	2	0.749
	Staff results	2	0.542	2	0.693
	Society results	2	0.732	2	0.613
Key performance results		2	0.560	2	0.752
Satisfaction with hospital services		16	0.851	16	0.859
Demand for hospital services		11	0.832	11	0.792

Source: Own

4.3.2 Respondents' Structures

After the general questions in the first part of the questionnaire, the second and fifth sections included questions about the current situation of the quantity of- and the demand for hospital services. 139 people responded in these parts, 40.6% of them were physicians, 25.9% nurses, 10.1% were administration staff, and about 24.5% were members of the top management. The Figure 4-2 shows the respondents structures on the quantity and the demand parts.

Figure 4-2: Respondents' Structure on the Quantity and Demand Parts

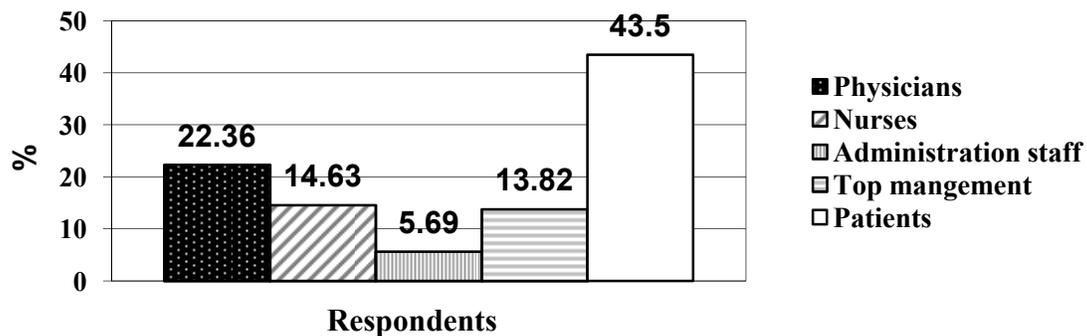


Source: Own

The third part, which included questions about the quality of management, was answered by only 34 members of the top management of the hospital.

The fourth part of the questionnaire included questions about the patients' satisfaction with the hospital services and the expected impact of the introduction of SHI. 246 people responded in this section. 43.5% of them were patients, 22.4% were physicians, 14.3% were nurses, 5.7% were administration staff, and about 13.8% were members of the top management. The Figure 4-3 shows the respondent structure on the patients' satisfaction part of the questionnaire.

Figure 4-3: Respondents' Structure on the Patients' Satisfaction Part



Source: Own

4.3.3 Quantity of Hospital Services

This part presents the results of respondents' answers on the current situation of the quantity of hospital services and the expected impact of the introduction of SHI on it. The descriptive statistics of the average of 139 respondents' answers in the current situation and the situation after the introduction of SHI are presented in the Annex 6. The statistics presented that the minimum value was 1.8, the maximum value was 3.8, and the mean value was 2.9, which is nearly "neither small nor large" in the current situation. The statistics show that the respondents expected that the quantity of hospital services would be improved after the introduction of SHI. Where the minimum value was 3, the maximum value was 4.8, and the mean value was 3.8, which is nearly to the "large".

Wilcoxon test was used to test the differences between the respondents' answers on the quantity of hospital services in the current situation and after the introduction of SHI. The test results show that of 139 respondents, only one expected that the quantity of hospital services would be worse after the introduction of SHI. In addition, 2 respondents expected that the quantity would not change, whilst, the majority of respondents (136 of 139) expected that the quantity would be improved after the introduction of SHI. Consequently, the positive differences form most mean ranks from the 246 respondents. Consistent with the paired-samples the Z-test shows that the (Z) value was (-10.176), while p-value asymptotic significance (2-tailed) was (0.000), which is less than the significance level (0.01). Therefore, the results confirm the hypothesis that the respondents expected that the quantity of hospital services would be increased after the introduction of SHI compared with the current situation.

Respondent's Differences

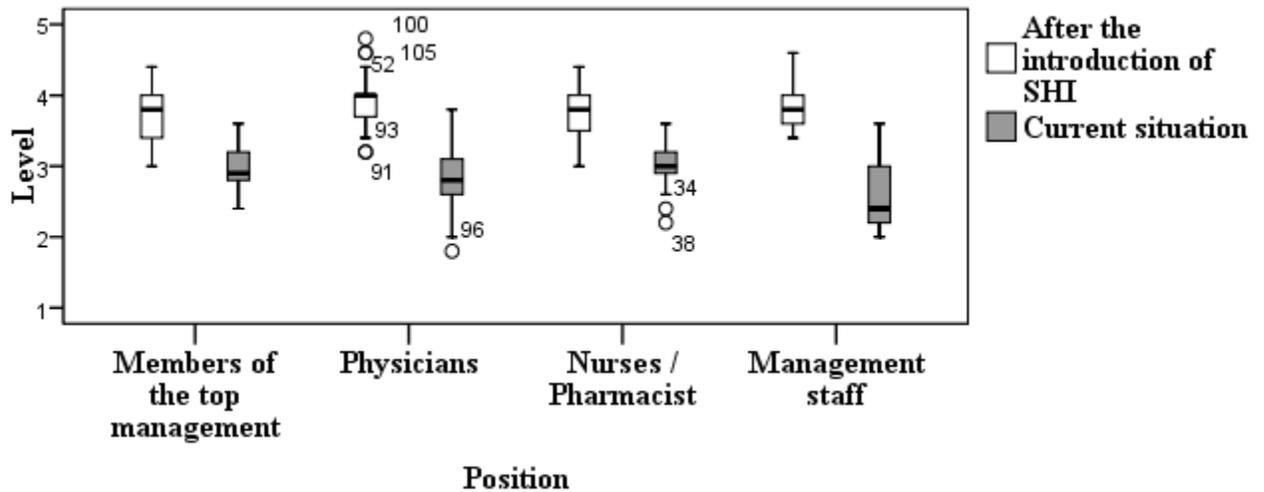
Figure 4-4 shows the differences of the respondents' answers on the quantity of hospital services. This type of graphic, which is called Box-plot, represents statistical values by presenting the median, quartiles, and extreme values for the category or variable. The boundary of the box closest from bottom indicates the 25th percentile, the line within the box marks the median, and the boundary of the box farthest from bottom of the figure indicates the 75th percentile. The ends above and below the box indicate the 90th and 10th percentiles respectively. Box plots can be done with a single box plot for each variable or with many plots on the variables axis.³⁰³

The figure shows that four groups of respondents answered this section, which included members of the top management, physicians, nurses/pharmacists, and management staff groups. In addition, it shows that the levels of the respondents' answers on the quality of leadership were higher in the situation after the introduction of SHI than the current situation. On the other hand, it shows that the physicians group has more dispersion of the answers than the other groups in the current situation. In addition, the small circles beyond the higher and lower whiskers are called outliers. They indicate to outside values

³⁰³ Leech, N.L., Barrett, K., & Morgan, G.A. (2005). P. 189; Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (2008). P. 124.

with unusually answers. The levels of the answers ranged within 1 as strongly disagree and 5 as strongly agree.

Figure 4-4: Respondents’ Differences about the Quantity of Hospital Services



Source: Own

A one-way ANOVA test was used to find the differences between the respondents according to their position. The results present that P-value = asymptotic significance was (0.02) in the current situation and (0.024) in the situation after the introduction of SHI, which they are bigger than the significance level (0.01). Therefore, the results confirm that there are similarities between the means of respondents’ answers about the quantity of hospital services.

4.3.4 Quality of Management

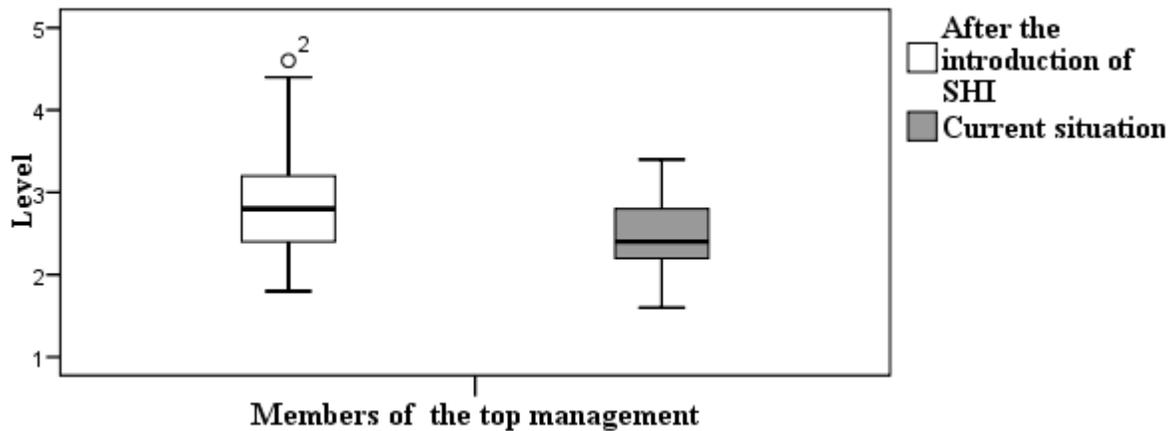
4.3.4.1 Leadership

This part presents the results of respondents’ answers on the current situation of the quality of leadership in the management of the hospital and the expected impact of the introduction of SHI on the quality of leadership. The descriptive statistics of the average of 34 respondents’ answers of members of the top management in the current situation and the situation after the introduction of SHI are presented in the Annex 6. The statistics presented that the minimum, maximum, and mean values were 1.6, 3.4, and 2.42 in the cur-

rent situation respectively. The statistics presented that the respondents expected that the quality of leadership would be improved after the introduction of SHI, where the minimum, maximum, and mean values were 1.8, 4.6 and 2.9 respectively.

Figure 4-5 shows that the levels of the respondents' answers on the quality of leadership were higher in the situation after the introduction of SHI than the current situation, where the 90th, 75th, 25th and 10th percentiles, and the median were lower in the current situation compared with the situation after the introduction of SHI. It shows that respondents' answers on the current situation have substantially less dispersion, which presents its difference from the situation after the introduction of SHI. In addition, there is an outlier in the situation after the introduction of SHI. It indicates to an outside value with unusually high answer. The levels of the answers ranged within 1 as strongly disagree and 5 as strongly agree.

Figure 4-5: Respondents' Answers on the Quality of Leadership



Source: Own

The results of the Wilcoxon test demonstrate that 6 respondents from 34 in total expected that the quality of leadership will not change after the introduction of SHI compared with the current situation. In addition, 28 respondents expected that the quality of leadership would be improved after the introduction of SHI. No respondent expected that the quality of leadership would become worse. The results of the Z-test show that the (Z) value was (-4.661), while the p-value asymptotic significance (2-tailed) was (0.000), which is less than the significance level 0.01. Therefore, the results confirm the study's hypothesis that

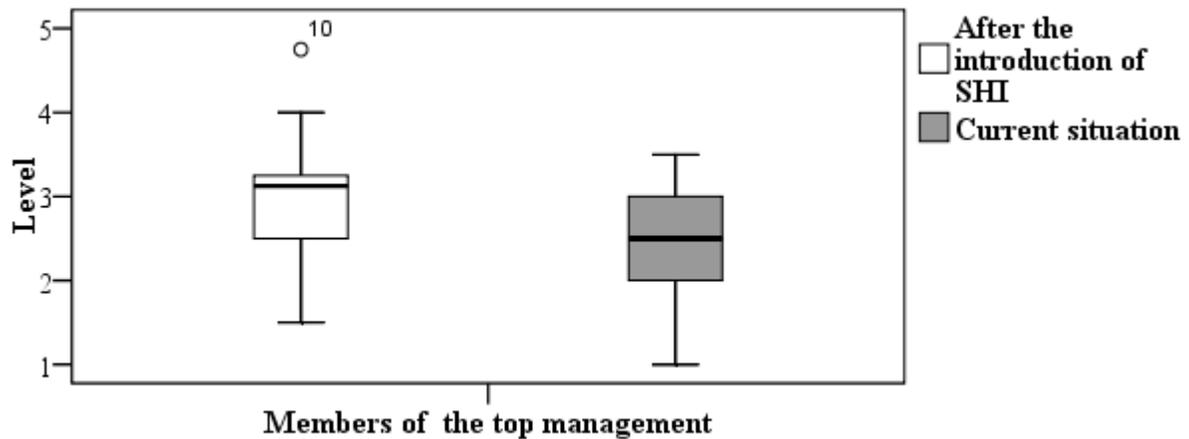
the respondents expected that the quality of leadership in the management of the hospitals would be better after the introduction of SHI compared with the current situation.

4.3.4.2 Policies and Strategies

This part presents the results of respondents' answers on the quality of policies and strategies in the management of hospitals in the current situation and after the introduction of SHI. The descriptive statistics of the average of 34 respondents' answers of members of the top management in the current situation and the situation after the introduction of SHI are presented in the Annex 6. The statistics presented that the minimum, maximum, and mean values were 1, 3.5, and 2.39 in the current situation respectively. The statistics presented that the respondents expected that the quality of policies and strategies would be improved after the introduction of SHI, where the minimum, maximum, and mean values were 1.5, 4.75, and 2.95 respectively.

Figure 4-6 shows the respondents' answers on the current situation of quality of policies and strategies in the management of hospitals and the expected impact of the introduction of SHI on it. It shows that the 90th, 75th, 25th and 10th percentiles, and the median were higher in the situation after the introduction of SHI compared with the current situation. In addition, it shows that the median line is close to the 75th percentile in the situation after the introduction of SHI, which indicate to skewness in the curve of answers to the higher values.

Figure 4-6: Respondents' Answers on the Quality of Policies and Strategies



Source: Own.

The results of the Wilcoxon test indicate that 5 respondents of 34 expected that the quality of policies and strategies would not change after the introduction of SHI. 29 respondents expected that the quality of policies and strategies would be improved after the introduction of SHI. No respondent expected that the situation would become worse. Consequently, the positive differences form most mean ranks of these 34 respondents. The results of the Z-test show that the (Z) value was (-4.747), while the p-value Asymptotic significance (2-tailed) was (0.000), which is less than the significance, level 0.01. Therefore, the results confirm the study's hypothesis that the respondents expected that the quality of policies and strategies in the management of hospitals would be better after the introduction of SHI compared with the current situation.

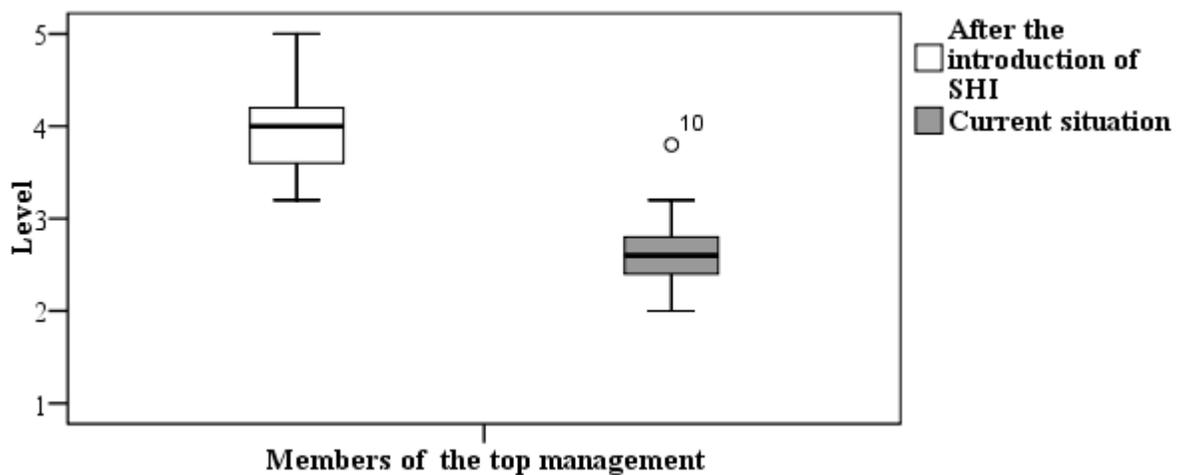
4.3.4.3 People

This part presents the results of respondents' answers of the quality of staff in the hospitals and the expected impact of the introduction of SHI. The descriptive statistics of the average of 34 respondents' answers of members of the top management in the current situation and the situation after the introduction of SHI are presented in the Annex 6. The statistics presented that the minimum, maximum, and mean values of the quality of staff were 1, 3.8, and 2.59 in the current situation respectively. The results show that the respondents expected that the quality of staff would be improved after the introduction of

SHI, where the minimum, maximum, and mean values of their answers were 3, 5, and 4 respectively.

Figure 4-7 clearly shows that the respondents' answers about the quality of people were higher in the situation after the introduction of SHI than in the current situation. In addition, the dispersion of the respondents' answers in current situation after the introduction of SHI is higher.

Figure 4-7: Respondents' Answers on the Quality of Staff



Source: Own.

The results of the Wilcoxon test indicate that all the 34 respondents expected that the quality of staff would be improved after the introduction of SHI compared with the current situation. Consequently, the positive differences form all mean ranks from these 34 respondents. The results of the Z-test show that the (Z) value was (-5.103), while the p-value asymptotic significance (2-tailed) was (0.000), which is less than the significance level 0.01. Therefore, the results confirm the study's hypothesis that the respondents expected that the quality of staff in hospitals would be better after the introduction of SHI compared with the current situation.

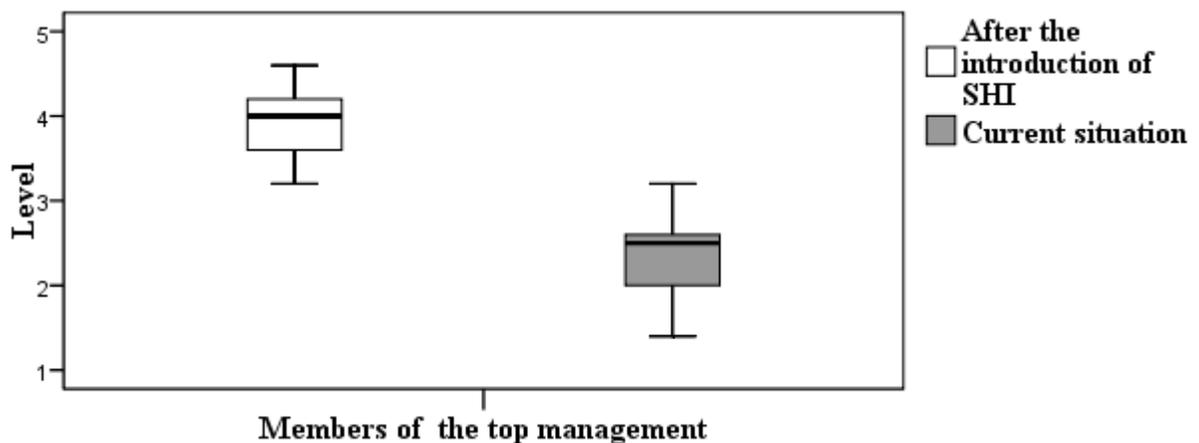
4.3.4.4 Partnerships

This part presents the results of respondents' answers about the current situation of the quality of partnerships in the management of hospitals and the expected impact of the

introduction of SHI. The descriptive statistics of the average of 34 respondents' answers of members of the top management in the current situation and the situation after the introduction of SHI are presented in the Annex 6. The statistics presented that the minimum, maximum, and mean values were 1, 3.2, and 2.4 in the current situation respectively. The statistics presented that the respondents expected that the quality of leadership would be improved after the introduction of SHI, where the minimum, maximum, and mean values were 3, 4.6 and 3.88 respectively.

Figure 4-8 clearly shows that the respondents' answers on the quality of partnerships were higher in the situation after the introduction of SHI than in the current situation.

Figure 4-8: Respondents' Answers on the Quality of Partnerships



Source: Own

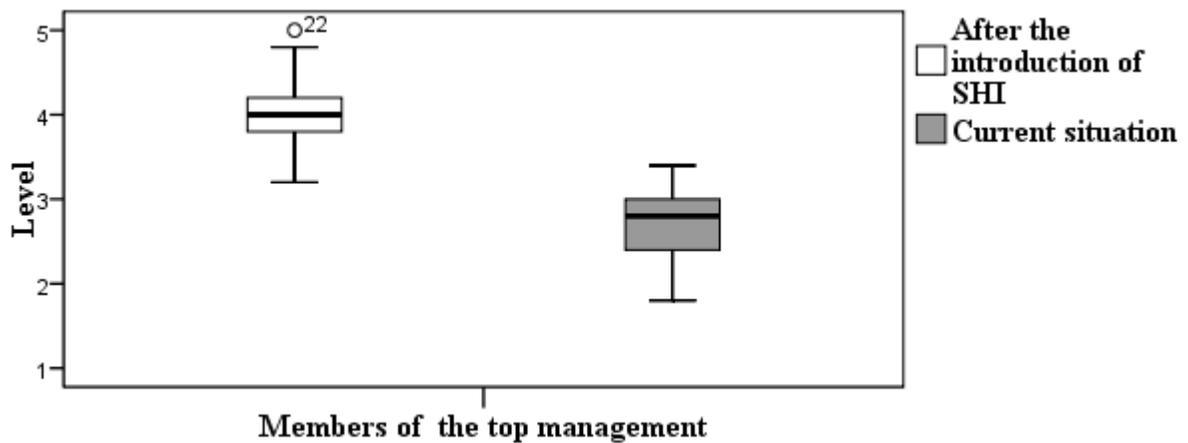
Wilcoxon test results indicate that all the 34 respondents expected that the quality of partnerships of the hospitals would be improved after the introduction of SHI compared with the current situation. The results of the Z-test show that the (Z) value was (-5.097), while the p-value Asymptotic significance (2-tailed) was (0.000), which is less than the significance level 0.01. Therefore, the results confirm the study's hypothesis that the respondents expected that the quality of partnerships in hospitals would be improved after the introduction of SHI compared with the current situation.

4.3.4.5 Processes

This part presents the results of respondents' answers on the current situation of the quality of processes in the management of hospitals and the expected impact of the introduction of SHI. The descriptive statistics of the average of 34 respondents' answers of members of the top management in the current situation and the situation after the introduction of SHI are presented in the Annex 6. The statistics presented that the minimum, maximum, and mean values were 2, 3.4, and 2.68 in the current situation respectively. The statistics show that the respondents expected that the quality of processes would be improved after the introduction of SHI, where the minimum, maximum, and mean values were 3, 5 and 4 respectively.

Figure 4-9 clearly shows that the respondents' answers about the quality of processes were higher in the situation after the introduction of SHI than in the current situation.

Figure 4-9: Respondents' Answers on the Quality of Processes



Source: Own

The results of the Wilcoxon test indicate that all of the 34 respondents expected that the situation of the quality of processes would be improved after the introduction of SHI compared with the current situation. Consequently, all mean ranks from these 34 respondents were positive differences. The results of the Z-test show that the (Z) value was (-5.096), while the p-value Asymptotic significance (2-tailed) was (0.000), which is less than the significance level 0.01. Therefore, the results confirm the study's hypothesis that

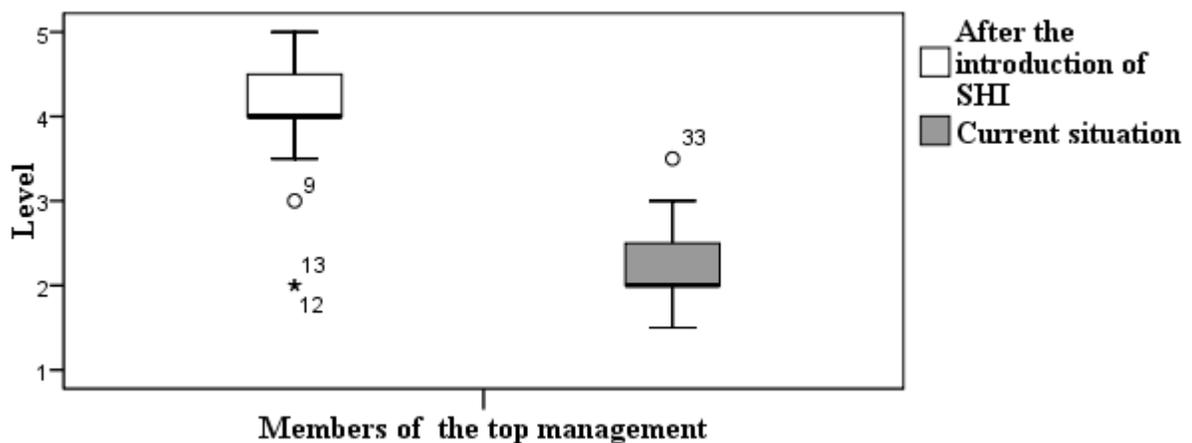
the respondents expected that the quality of processes in the hospitals would be improved after the introduction of SHI compared with the current situation.

4.3.4.6 Patients' Results

This part presents the results of respondents' answers on the current situation of quality of patient's results in the management of hospital and the expected impact of the introduction of SHI on the quality of patient's results. The descriptive statistics of the average of 34 respondents' answers of members of the top management in the current situation and the situation after the introduction of SHI are presented in the Annex 6. The statistics presented that the minimum, maximum, and mean values were 2, 3.5, and 2.26 in the current situation respectively. The statistics presented that the respondents expected that the quality of patients' results would be improved after the introduction of SHI, where the minimum, maximum, and mean values were 2, 5, and 3.96 respectively.

Figure 4-10 shows that the respondents expected that the quality of patients' results would be improved after the introduction of SHI compared with the current situation. In addition, it shows that the median line conforms to the 25th percentile in both situations, which indicate to skewness in the curve of answers to the lower values.

Figure 4-10: Respondents' Answers on the Quality of Patients Results



Source: Own

The results of the Wilcoxon test indicate that 2 respondents from 34 in total expected that the quality of patient results would not change after the introduction of SHI compared

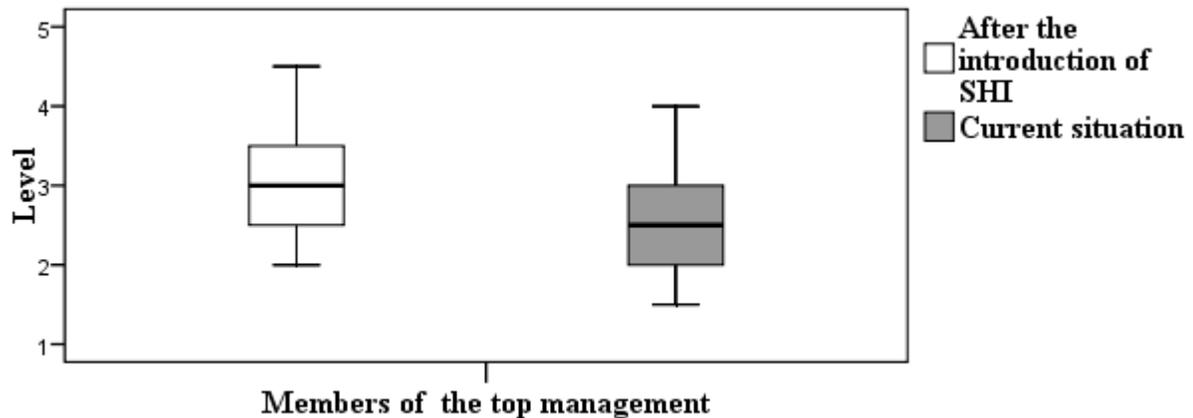
with the current situation. 32 respondents expected that the quality of patients' results would be improved after the introduction of SHI. No respondents expected that the situation would become worse. The results of the Z-test show that the (Z) value was (-4.996), while the p-value asymptotic significance (2-tailed) was (0.000), which is less than the significance level 0.01. Therefore, the results confirm the study's hypothesis that the respondents expected that the quality of patient's results in the hospitals would be improved after the introduction of SHI compared with the current situation.

4.3.4.7 Staff Results

This part presents the results of respondents' answers on the current situation of the quality of staff results in the management of hospital and the expected impact of the introduction of SHI on the quality of staff results. The descriptive statistics of the average of 34 respondents' answers of members of the top management in the current situation and the situation after the introduction of SHI are presented in the Annex 6. The statistics presented that the minimum, maximum, and mean values were 2, 4, and 2.47 respectively in the current situation. The descriptive statistics presented that the respondents expected that the quality of staff results would be improved after the introduction of SHI, where the minimum, maximum, and mean values were 2, 4.5, and 3 respectively.

Figure 4-6 reflects the improvement in the respondents' answers on the quality of staff's results in the management of hospitals after the introduction of SHI, where the 90th, 75th, 25th and 10th percentiles, and the median were higher in the situation after the introduction of SHI compared with the current situation.

Figure 4-11: Respondents' Answers on the Quality of Staff Results



Source: Own

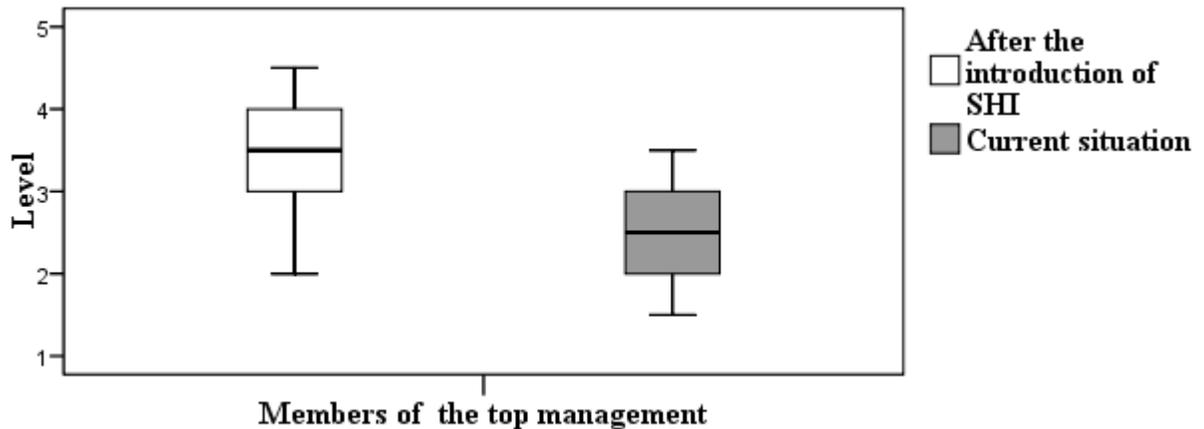
The results of the Wilcoxon test indicate that 2 respondents from 34 in total expected that the quality of staff results would be worse after the introduction of SHI compared with the current situation. 12 respondents expected that the situation would not change. 20 respondents expected that the quality of staff result would be improved after the introduction of SHI compared with the current situation. The results of the Z-test show that the (Z) value was (-3.247), while the p-value asymptotic significance (2-tailed) was (0.01), which is equal to the significance level 0.01. Therefore, the results confirm the study's hypothesis that the respondents expected that the quality of staff's results in the hospitals would be improved after the introduction of SHI compared with the current situation.

4.3.4.8 Society Results

This part presents the results of respondents' answers on the current situation of the quality of society results in the management of hospital and the expected impact of the introduction of SHI on the quality of society results. The descriptive statistics of the average of 34 respondents' answers of members of the top management in the current situation and the situation after the introduction of SHI are presented in the Annex 6. The statistics presented that the minimum, maximum, and mean values were 2, 3.5, and 2.4 in the current situation respectively. The statistics presented that the respondents expected that the quality of society results would be improved after the introduction of SHI, where the minimum, maximum, and mean values were 2, 4.5, and 3.5 respectively.

Figure 4-13 shows that the respondents' answers on the quality of society results are higher in the situation after the introduction of SHI compared with the current situation. In addition, the situation after introduction of SHI has more dispersion.

Figure 4-12: Respondents' Answers on the Quality of Society



Source: Own

The results of the Wilcoxon test indicate that no respondent expected that the situation would become worse after the introduction of SHI compared with the current situation. 3 respondents expected that the quality of society results would not change after the introduction of SHI. 31 respondents expected that the quality of society results would be improved after the introduction of SHI. The results of the Z-test show that the (Z) value was (-4.913), while the p-value asymptotic significance (2-tailed) was (0.000), which is less than the significance level 0.01. Therefore, the results confirm the study's hypothesis that the respondents expected that the quality of society results would be improved after the introduction of SHI compared with the current situation.

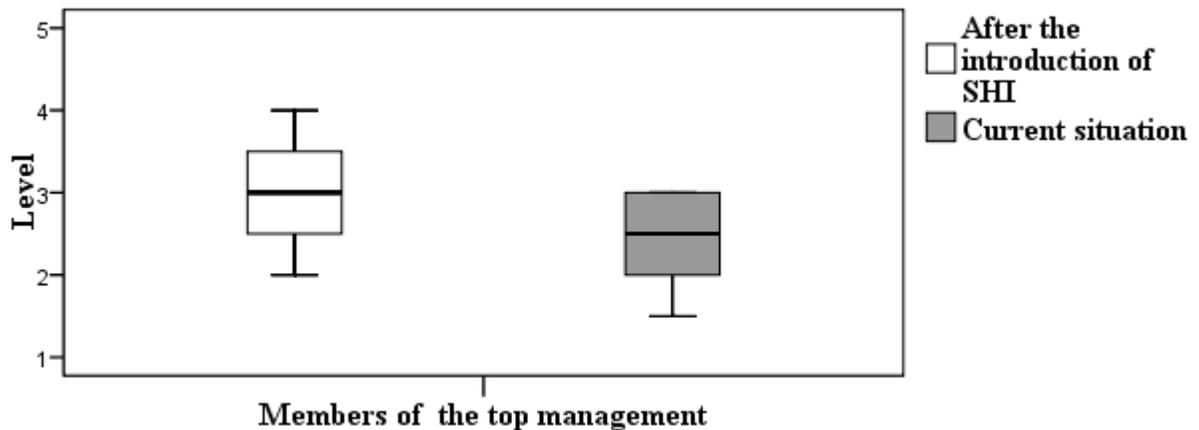
4.3.4.9 Key Performance Results

This part presents the results of respondents' answers on the current situation of the quality of key performance results in the management of hospital and the expected impact of the introduction of SHI on the quality of key performance results. The descriptive statistics of the average of 34 respondents' answers of members of the top management in the current situation and the situation after the introduction of SHI are presented in the Annex

6. The statistics presented that the minimum, maximum, and mean values were 2, 3, and 2.4 in the current situation respectively. The statistics presented that the respondents expected that the quality of key performance results would be improved after the introduction of SHI, where the minimum, maximum, and mean values were 2, 4, and 3 respectively.

Figure 4-13 shows that the respondents' answers on the quality of key performance results were higher in the situation after the introduction of SHI than in the current situation.

Figure 4-13: Respondents' Answers on the Quality of Key Performance Results



Source: Own

The results of the Wilcoxon test indicate that 10 respondents from 34 in total expected that the quality of key performance results would not change after the introduction of SHI compared with the current situation. 24 respondents expected that the quality of key performance results would be improved after the introduction of SHI. No respondent expected that the situation would become worse. The results of the Z-test show that the (Z) value was (-4.445), while the p-value asymptotic significance (2-tailed) was (0.000), which is less than the significance level 0.01. Therefore, the results confirm the study's hypothesis that the respondents expected that the quality of key performance results would be improved after the introduction of SHI compared with the current situation.

4.3.5 Patients' Satisfaction with Hospital's Services

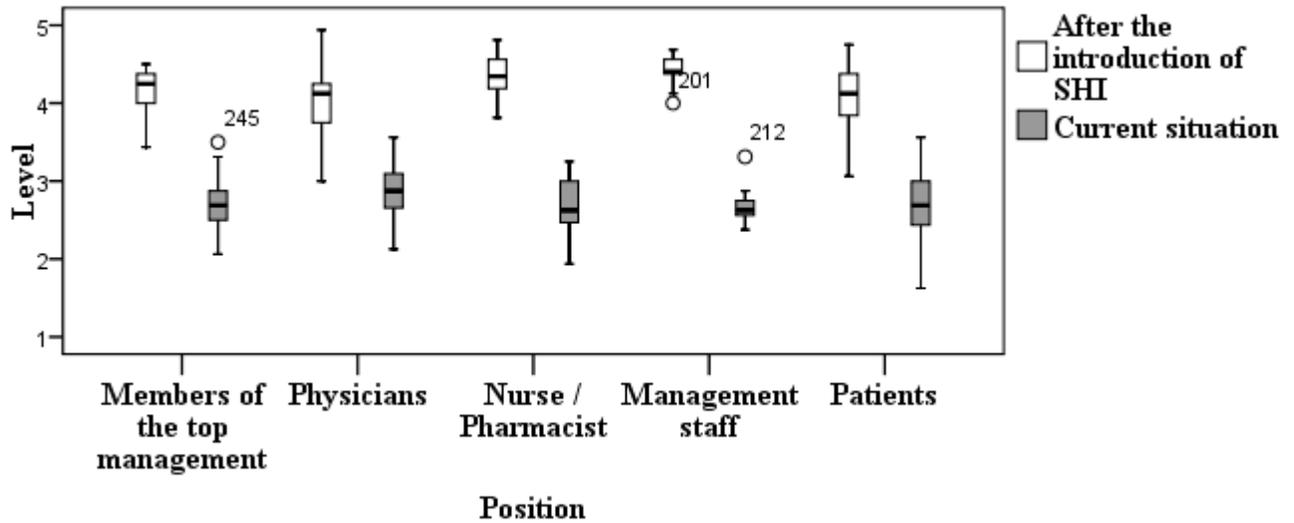
This part presents the results of respondents' answers on the current situation of the patients' satisfaction with the hospital services and the expected impact of the introduction of SHI on the patients' satisfaction. The descriptive statistics of the average of 246 respondents' answers in the current situation and the situation after the introduction of SHI are presented in the Annex 6. The statistics presented that the minimum, maximum, and mean values were 1.6, 3.5, and 2.73 in the current situation respectively. They present that the respondents expected that the patient's satisfaction with the hospital services would be higher after the introduction of SHI, where the minimum, maximum, and mean values were 3, 5, and 4.13 respectively in the situation after the introduction of SHI.

The results of the Wilcoxon test appears that all the 246 respondents expected that the patients' satisfaction would be improved after the introduction of SHI compared with the current situation. The Z-test results show that the (Z) value was (-13.602), while the p-value asymptotic significance (2-tailed) was (0.000), which is less than the significance level 0.01. Therefore, the results confirm the study's hypothesis that the respondents expected that the patient's satisfaction with the hospital services would be improved after the introduction of SHI compared with the current situation.

Respondent's Differences

Figure 4-14 shows that four groups of respondents answered on this section, which included members of the top management, physicians, nurses/pharmacists, and management staff groups. The figure shows that the respondents' answers on the patient's satisfaction with the hospital services of all the surveyed groups were higher in the situation after the introduction of SHI than in the current situation. In addition, it shows that in both study situations the patients and physicians' answers have substantially more dispersion than the other groups, while, the management staff's answers have the less dispersion. The levels of the respondents' answers ranged within 1 as very bad and 5 as very good.

Figure 4-14: Respondents' Differences about the Patient's Satisfaction



Source: Own

A one-way ANOVA test was used to find the differences between the respondents according to their position. The results present that p-value = asymptotic significance in the current situation was (0.127) which is higher than the significance level (0.01). Therefore, the results confirm that all the data are sampled from respondents with the same mean in the current situation. On the other hand, P-value = asymptotic significance in the situation after the introduction of SHI was (0.00) which is smaller than the significance level (0.01). Therefore, the results confirm that there are differences between the respondents in the situation after the introduction of SHI.

4.3.6 Demand

This part presents the results of respondents' answers on the current situation of the demand for hospital services and the expected impact of the introduction of SHI on the demand. The descriptive statistics of the average of 139 respondents' answers of members of the top management in the current situation and the situation after the introduction of SHI are presented in the Annex 6. The statistics presented that the minimum, maximum, and mean values were 2.6, 5, and 4.12 in the current situation respectively. The statistics presented that the respondents expected that the demand for hospital services would be

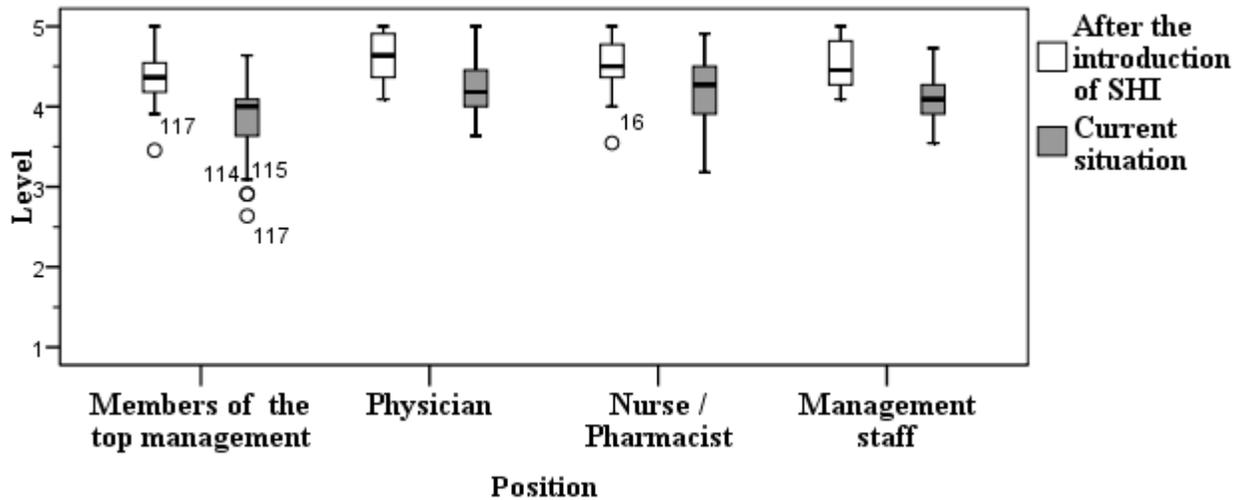
improved after the introduction of SHI, where the minimum, maximum, and mean values were 3.4, 5 and 4.53 respectively.

The results of the Wilcoxon test indicate that 7 respondents of 139 in total expected that the demand for hospital services would be worse after the introduction of SHI compared with the current situation. In addition, 11 respondents expected that the demand for hospital services would not change, while, 121 respondents expected that the demand would be improved after the introduction of SHI compared with the current situation. Consequently, the positive differences form most mean ranks from the 246 respondents. The results of the Z-test shows that (Z) value was (-9.424), while the p-value asymptotic significance (2-tailed) was (0.000), which is less than the significance level 0.01. Therefore, the results confirm the study's hypothesis that the respondents expected that the demand for hospital services would be increased after the introduction of SHI compared with the size in the current situation.

Respondent's Differences

Figure 4-15 shows that five groups of respondents answered this section, which included members of the top management, physicians, nurses/pharmacists, management staff, and patients groups. The figure shows that the levels of surveyed groups' answers about the demand for hospital services were high in both study situations, although they were higher in the situation after the introduction of SHI. In addition, it shows that all the groups have a little dispersion of answers in the situation after the introduction of SHI, where the levels of their answers about the demand for hospital services ranged between 4 as a good and 5 as a very good. On the other hand, the answers of the nurse/ pharmacist and the members of the top management groups have more dispersion than the other groups in the current situation. The levels of the respondents' answers ranged within 1 as very small and 5 as very large.

Figure 4-15: Respondents' Differences about the Demand for Hospital Services



Source: Own

A one-way ANOVA test was used to find the differences between the respondent according to their position. The results present that P-values = asymptotic significance were (0.001) in the current situation and (0.01) in the situation after the introduction of SHI, which they are smaller than- and equal to the significance level (0.01) respectively. Therefore, the results confirm that there are differences between the respondents about the demand for hospital services.

4.4 Discussion

The results of this study show that the participants expect that the current situation of hospital management would be improved after the introduction of SHI. Furthermore, the participants show some difference in their evaluation of the current situation. In this section, these results are discussed, and relevant studies based on extensive research of databases are identified, covering published articles in medical, health services research, and social sciences journals and related researches.

4.4.1 Quantity of Provided Services

According to the results of this research, participants expect that the quantity of services would be increased in the surveyed public hospitals after the introduction of SHI in Syria.

The quantity of public hospitals' services is not large enough to meet the needs of patients in Syria. Based on interviews with senior management members and the comments of some other participants, the surveyed public hospitals suffer from many problems that affect their ability to increase the quantity of their production. Many of these problems could be attributed to financial reasons. Public hospitals depend largely on the state budget to finance their expenditures, which are usually static, and do not have the required sensitivity to meet the health sector needs and the flexibility to allow for the management of the hospital to take important decisions.

In addition, employees face many challenges and problems in public hospitals as their salaries are low compared to the salaries in private hospitals. Therefore, many of them (especially the physicians) choose to work for private hospitals or abroad. This phenomenon affects the medical staff's efficiency, and that in turn is reflected in the quantity and quality of production achieved in the hospital. Medical equipment is old and operates at maximum capacity due to their low number compared to the number of patients. The administration does not have the financial means or the ability to make a decision for the investment or development. Furthermore, most public hospitals' buildings were buildings for other government departments and were transformed to become hospitals' buildings; therefore, they need a lot of modernization and renovation to meet the legal, structural and architectural requirements, as well as to support the primary functions of a hospital. This inefficient situation of public hospitals has affected their ability to increase the quantity of services.

A few studies have highlighted the current situation of public hospitals in Syria and they all agreed on the fact that the current situation is inefficient. Al-Rifai, Amer and Deeb (2006) have carried out a study on the progress of the health service indicators in Syria.³⁰⁴ They found that public hospitals are providing poor health care services in comparison with private hospitals, which receive a high tariff for their health services. There are no motivating financial and material incentives for medical staff or a good control policy, which makes many medical staff in public hospitals opt to work for the private sector.

³⁰⁴ Al-Rifai, A., Amer, W., & Deeb, S. (2006). P. 217-235.

Dayoub and Atieh (2005) analyzed in their study some of the indicators that could be associated with the results of this study.³⁰⁵ They carried out their study in two of the big public hospitals in Syria. The studied hospitals provide free of charge services for their patients. The occupancy rates of the hospitals reached to approximately 65% in the first hospital and 98% in the second hospital in the studied period. Many services are not available in these hospitals. The budgets of the studied hospitals were limited to operational matters. The investment decision is not of the direct functions of the management team, which makes them unable to buy and develop the medical equipment in the hospital.

Two other studies have considered the current situation of public hospitals in Syria. The first study focused on the quantity of public hospitals services in three Syrian governorates.³⁰⁶ The results showed that hospitals are unable to provide acceptable level of health services due to many reasons. There are high rates of wasted hospital resources because the services are free of charge. Clear management and financial structures as well as maintenance workshops did not exist in the studied hospitals. In addition, there are not computerized nets at hospitals. The second study aimed at comparing private and public hospitals in Al-Raqqa governorate.³⁰⁷ The associated results showed that the number of patients per room in the internal section of public hospitals was rather high (7 in the intensive care department, 10 in the cardiology department, 6 in the "dialysis" department), but the numbers did not exceed two patients per room in private hospitals. Some sections are nonexistent in the both private and public hospitals, such as heart surgery. Some are existent only in the public hospitals such as dialysis. Public hospitals' capacity and number of rooms is much larger than that of private hospitals especially when it comes to the internal and surgery departments. The highest salary in the administrative department in private hospitals has reached about US\$ 1,500 whereas it is about US\$ 450 in public hospitals. This difference explains the gap in the level of administration of public hospitals. Salaries of doctors have reached nearly US\$ 400 in public hospi-

³⁰⁵ Dayoub, M.A., & Atieh, H. (2005). P. 109-130.

³⁰⁶ Nasco. (2006). P. 3-35.

³⁰⁷ Sukkar, R. (2006). P. 209-254.

tals and about US\$ 1.200 in private hospitals. Physicians in private hospitals are more experienced and have higher academic credentials than physicians in public hospitals.

The positive anticipated impact of the introduction of SHI on the ability of public hospitals to increase their services will depend on how hospitals respond to changes after the introduction of SHI. Theoretically, not all the increased demand caused by insurance would be accommodated. In addition, in the face of capacity constraints, more time and investments are required in order to improve the quantity of the provided services.

In the case of Syria, after the introduction of SHI, the free or minimum fees for public hospitals services will change to become paid services. It is supposed that transition will lead to increased demand for paid hospital services and will eliminate the hospital's financial restrictions. In addition, it will create financial incentives for hospitals to increase the quantity of the health services and to incur the fixed costs of adopting new practice styles or of entering the market of some new services. For instance, if the administrative system in public hospitals could be able to improve staff wages and salaries in comparison with private hospitals and to offer attractive incentives, the satisfaction of medical staff would be improved and they may choose to stay. This new situation would increase the numbers of medical staff with high expertise and efficiency, something that would improve their productivity and have a positive impact on the quantity of the health services provided.

The expected impact of health insurance on the quantity of hospital services is consistent with many studies, which found that financial incentives under health insurance schemes based on fee-for-service or out-of-pocket systems encourage health care providers to admit and provide more services to insured patients. Al-Khatib (2006) explained in his study about the health profile of Syria that, if the SHI system is implemented in Syria, hospitals will care for more patients, receive more income and expand to provide more services.³⁰⁸

³⁰⁸ Al-Khatib, B. (2007). P.30.

Card, Dobkin and Maestas (2005) focused on admissions to Accident and Emergency (A&E) for patients aged 65 who have serious medical conditions.³⁰⁹ A&E have similar weekend and weekday admission rates. In addition, the decision to present at A&E for these patients with serious medical conditions is unlikely to depend on health insurance status. In addition, the number of procedures performed in hospital and total list charges increase at age 65. Their analysis showed that insurance coverage has a significant causal effect on treatment intensity, case disposition, and health outcomes. By examining three measures of treatment intensity: length of stay, number of procedures performed, and hospital list charges, they found that uninsured patients received less intensive treatment and are more likely to be discharged home in an unhealthy condition rather than transferred to another hospital or unit within the same hospital for continued care. They concluded that healthcare providers increase their services for patients when their insurance coverage is available, and that these additional hospital services appear to produce better health outcomes.

Another study that attempts to measure the causal effects of health insurance on in-hospital treatment intensity is Doyle (2005).³¹⁰ This study was based on the random nature of severe automobile accident victims who were hospitalized because of their injuries; therefore, it eliminates many of the biases in conventional observational studies of health insurance effects on the provided health care. Doyle (2005) found that crash victims without health insurance have about 15% shorter hospital stays and facility charges, and 40% higher mortality rates than those with private insurance. According to these results, health insurance causes very large increases in the intensity and quality of care.

Sepehri, Simpson, and Sarma (2006) assessed the influence of the SHI in Vietnam on the length of stay in hospitals.³¹¹ They found that compulsory health insurance and health insurance for the poor has increased the expected length of stay, while voluntary health insurance had minimal effect on the length of stay. In addition, the positive influence of the compulsory health insurance scheme on the length of stay was larger for middle-income individuals than the highest income individuals.

³⁰⁹ Card, D., Dobkin, C., & Maestas, N. (2005). P. 2.

³¹⁰ Doyle, J. (2005). P. 256–270.

³¹¹ Sepehri, A., Simpson, W., & Sarma, S. (2006). P. 1767.

Mawajdeh, Hayajneh, and Al-Qutob (1997) examined the effects of the type of hospital and health insurance status on hospital length of stay in Irbid, the largest city in North Jordan, where 65% have comprehensive insurance coverage. They found that insured patients had significantly longer hospital length of stay than the uninsured patients (3.3 versus 3.0 days).³¹²

Other studies have focused on the impact of the public health insurance schemes (Medicaid and Medicare) on the health care providers in USA. Currie and Gruber (2001) used vital statistics data on every birth in the USA over the period 1987–1992 to study the effect of Medicaid eligibility on caesarean sections and other childbirth-related procedures. They found that Medicaid coverage might increase treatment intensity for previously uninsured women but reduce intensity for women who dropped private coverage to enrol in Medicaid.³¹³

Buchmueller, Grumbach, Kronick, and Kahn (2005) reviewed the literature associated with extending health insurance coverage and its impact on the utilization of medical care.³¹⁴ They concluded that extending insurance coverage to currently uninsured Americans would result in significant increases in all types of providing the health care.

Finkelstein (2007) studied the impact of Medicare on the hospital sector.³¹⁵ He focused on six hospital outcomes: total expenditures, payroll expenditures, employment, beds, admissions, and patient days. He investigated the differences in the hospital sector before and after the introduction of Medicare in 1965 by using 26 years of data from the annual surveys of the American Hospital Association, which covered the years from 1948 to 1975 (with the exception of 1954). Medicare provided universal public health insurance coverage for the elderly. It covered hospital and physician expenses: the services covered and the reimbursement rates were very generous for the time. The data showed that the real hospital expenditures grew by 63 percent between 1965 and 1970, compared to only 41 percent over the previous five years. He hypothesised that the effect of the increase in the demand for health care service after the introduction of Medicare has created the in-

³¹² Mawajdeh, S., Hayajneh, Y., & Al-Qutob, R. (1997). P. 166-172.

³¹³ Currie, J., & Gruber, J. (2001). P. 63-89.

³¹⁴ Buchmueller, T.C., Grumbach, K., Kronick, R., & Kahn, J.G. (2005). P. 3-30.

³¹⁵ Finkelstein, A. (2007). P. 1-37.

centives for hospitals to incur the fixed costs of entering the market or of adopting new practice styles. Therefore, he investigated the impact of Medicare on the adoption of new cardiac technologies: the open-heart surgery facility and the cardiac intensive care unit. He found that Medicare had an important impact on cardiac technology adoption. He concluded that the introduction of Medicare was associated with a 37 percent increase in real hospital expenditures (for all ages) between 1965 and 1970. About half of the impact of Medicare on spending appears due to growth in existing hospitals, while the rest is due to the induced entry of new hospitals.

4.4.2 Quality of Management

4.4.2.1 Leadership

According to the EFQM Model, “excellent leaders develop and facilitate the achievement of the mission and vision, develop values required for long-term success and implement these via appropriate actions and behaviours, and are personally involved in ensuring that the organisation's management system is developed and implemented. Such leaders are able to change the direction of the organisation and inspire others to follow.”³¹⁶

The results showed that the respondents perceived that the current situation of the quality of leadership in the public hospital was not good enough. According to the senior members of the management team who had responded to the questionnaire, the current situation of the hospital leadership faces many problems and constraints, which are incompatible with the leadership quality requirements and have a negative impact on the ability of leaders to take appropriate decisions.

The surveyed public hospitals have the same mission, vision, values and ethics, which were developed by the MoH without any role of the senior management or leaders in these hospitals. All senior members in management did not practice or conduct any training in the management of the hospitals or in the TQM before or after they had these positions, and they did not have any previous experiences in the management process. Most management decisions are not based on quantitative methods in management and deci-

³¹⁶ Hakes, C. (2007). P. 18.

sion support systems. The needed resources and investments to support change and many activities, which are encouraged by leaders, are not available. The staff appraisal system, which is adopted in all public sector institutions and companies is not effective enough and is unable to recognize staff in public hospitals. In addition, it is not possible to change it according to the opinions of the senior management to fit the requirements of the appraisal in public hospitals. Leaders could not actively stimulate and encourage collaboration and partnership working within the hospital, due to financial constraints and lack of management authority to grant incentives and sanctions. Senior management salaries in public hospitals are not high compared with private hospitals, therefore most physicians in senior management carry out some operations in private hospitals or have private clinics.

The relation between the poor level of administration and the low salaries in public hospitals was confirmed by Sukkar (2006) in his study.³¹⁷ He found that the highest salary in the administrations of public hospitals is only about 400 US\$, whereas it is about 1,500\$ in private hospitals. The difference explains the gap in the level of administration of public hospitals.

The results showed the respondents expected that the situation of the quality of leadership in the hospital would be improved after the introduction of SHI compared with the insufficient current situation.

This improvement of the quality of the leadership in public hospitals could be attributed to the additional earned income generated by providing more health services. This income will encourage those who are in charge of the health sector in Syria to improve salaries for senior managers and to contract with expert leaders and administrative staff, who are able to focus on managing the hospital and achieving its objectives and mission in providing the best health service for patients in terms of quantity and quality. The needed financial resources will be available to support the many changes and activities that aim to improve the environment and the hospital contribution to the local community and the wider society, which are encouraged by leaders. In addition, these resources will

³¹⁷ Sukkar, R. (2006). P. 209-254.

be available to stimulate and encourage collaboration and partnership working within the hospital. However, the administrative constraints, routine, difficulties of delegation of authority and empowerment of the senior management require additional governmental decisions.

4.4.2.2 Policy and Strategy

The second enabler criterion concerns “excellent hospitals implement their mission and vision by developing a stakeholder- focused strategy that takes account of the market and sector in which it operates. Policies, plans, objectives and processes are developed and deployed to deliver strategy.”³¹⁸

The results showed that the current situation of the policy and strategy in the surveyed hospitals is inadequate. This unsatisfactory current situation of the policy and strategy in public hospitals was reflected in the opinions of the members of the top management and their comments in the interviews. In addition, they provided logical reasons for this negative assessment. Their evaluation for the unsatisfactory current situation could be summarized in the following points. The surveyed public hospitals had an annual planning initiative, which started with an annual budget, but there are many financial constraints, which have had a major role in the deadlock of the budget from year to year. Plans of hospitals addressed some expected risks limitedly, via the increase of the primary health care services. The management of surveyed hospitals realize some present and future opportunities for development in many working conditions, but they do not have the power to finance these improvements. Public hospitals depend in their policies and strategies significantly on the guidance of MoH, rather than on the following points: annual regional epidemiological survey; patient and staff satisfaction surveys; needs and expectations of patients, staff and the local community; economic and demographic indicators and information; and the effectiveness of products and services through their life cycle. In addition, the hospitals did not have marketing management, strategies and competitor analysis, as well as there are not any innovation strategy to encourage and stimulate the research, understanding and utilisation of new technologies and/or new ideas.

³¹⁸ Hakes, C. (2007). P. 18.

Dayoub and Atieh (2005) confirm the previous analysis in their study.³¹⁹ They found that the marketing management, whose important functions are knowledge of the needs of patients and the supply of necessary information for management, is not in the administrative structure of the surveyed public hospitals. In addition, the surveyed public hospitals are suffering from the financing of their plans and processes, due to the free services, which they provide, and the lack of hospital's budget to meet necessary policies and strategies of the hospitals.

The results showed the respondents expected that the situation of the quality of the policy and strategy in the public hospital would improve after the introduction of SHI in comparison with the current situation.

This result for the expected impact of the introduction of SHI on the quality of the policy and strategy in public hospital can be explained by the following points. After the introduction of SHI, public hospitals could be in a good financial position, which affect the hospital's plans and strategies positively, but the impact of SHI will be relatively limited regarding the required funding to finance the hospital's new plans and strategies. The development of the quality of the planning and strategies in public hospitals requires many administrative changes more than a new funding system. It requires development of the department of statistics and planning, and adding a marketing department to the administrative structure at public hospitals. Administrative staff need to have training and re-training. In addition, hospital management requires more independence and authorization from the related ministry to provide new medical services and/or to stop providing some services, as well as to take the investment decisions and carrying out surveys about patients and staff satisfaction.

4.4.2.3 People

According to the EFQM model, “excellent hospitals manage, develop and release the full potential of their staff at an individual, team-based and hospital-wide level”.³²⁰

³¹⁹ Dayoub, M.A. & Atieh, H. (2005). P. 109-130.

³²⁰ Hakes, C. (2007). P. 19.

The results showed that the current situation of the personal management in the surveyed hospitals is poor. In addition, participants expected that the situation of the quality of the personal management in public hospitals would be improved after the introduction of SHI.

The current situation of the personal management in public hospitals was reflected in the opinions of the members of senior management and their comments in the interviews. Their evaluation of the insufficient current situation could be summarized in the following points: interchanges of ideas among physicians in different hospitals are rare and often occur in the case of a patient who requires services that are not available in the hospital. There is a high level of bureaucracy that negatively affects the decision-making process and delegation of responsibilities.

The surveyed public hospitals provide the learning services to large numbers of students from the Faculty of Medicine at the University of Tishreen, but the assistant physicians, who are training in the hospital, receive very low salaries and face a lot of the pressure and the prejudice exercised by senior doctors. On the other hand, there are few medical conferences, which could improve the medical skills of physicians in Syria. There is no clear policy to maintain highly qualified physicians. There is a plan for internal communication and dialogue, particularly with the medical staff and among them, but does not elevate to the importance and the need of dialogue in the work of hospital. Notice board is used, but no regular internal newsletters are produced about the hospital. Access to the internet is limited to senior management in hospitals. There is no intranet - hospital-wide staff site, and E-mail is not used in communications. External involvement to ensure staff rights are maintained is in the form of the general union of Syrian workers and doctors syndicates. The salaries are low in the public hospitals. The bonus scheme is not equitable, and it is beyond the powers of management. According to the common workers' law, which regulates the conditions of workers in all the public sector, workers gets their bonuses once every two years regardless of any other considerations such as efficiency at work. Long service is recognized, but the decision of the timing or the award itself of this long service is beyond the powers of management. The hospital building is old and not satisfactory to ensure the staff safety, as well as there are not training programs for health

and safety for staff. There is a policy to prevent smoking in public hospitals, but few people comply with this rule (the researcher noted that situation, when he was distributing the questionnaire, especially in the rooms of the nurses and doctors). There are no financial potentials to provide sports and leisure facilities (internal or external) for staff.

This current situation of the personal management in the surveyed public hospitals is in line with a study that has been carried out by Barhoom, Zaher, and Alsoliman, (2007) on University public hospitals in Syria.³²¹ They have studied the effect of training on improving the quality of health services in university's hospital. They found that the training process faces many problems. Mainly, the number of trainees is very large compared to the number of trainers who in many cases lack sufficient experience. The training process was not characterized by continuity, as the evaluation of its results is incomplete. The hospital lacked many of the necessary medical specialties. There is a lack of scientific conditions, necessary equipment and rules of occupational safety in places of training. In addition, they found there is a lack of innovation and development in activities and methods of training.

On the other hand, the current situation of the quality of the people in public hospitals could lead to an increase in medical errors. Al-Khatib (2006) focused in his study on the health sector in Syria and found an increase in medical errors and malpractices in public hospitals.³²² He attributed that increase to the following factors: lack of experience of some physicians or those who practice beyond their scope. The majority of doctors have to treat patients with the minimum investigations required, or by none, due to costs or unavailability. There is almost no existence of malpractice litigation. In addition to the lack of education of the general population as almost 15% of the population is illiterate.

Hassan (2007) evaluated the reality and application of the TQM in a public hospital in Syria.³²³ She found that encouraging innovation and collaborative culture do not exist in the surveyed hospital. The current training does not measure up to the training requirements in the case of implementation of the TQM.

³²¹ Barhoom, A., Zaher, B., & Alsoliman, W. (2007). P. 203-225.

³²² Al-Khatib, B. (2006). P. 59-60.

³²³ Hassan, M. (2007). P. 25.

The anticipated positive impact of the introduction of SHI on the quality of staff can be explained due to the following points. After the introduction of SHI, the expected improvement of the public hospital income will help the administrative system to increase salaries in the hospital, which in turn will help to keep highly qualified physicians as well as support the assistant physicians and reduce the prejudice of the older doctors with them. There will be an opportunity to improve the training and to finance medical conferences and occupational safety programs. The financial potential to provide sports and leisure facilities (internal or external) for staff will be largely available. On the other hand, it is supposed that the insurance agency will not allow an increase in medical errors, especially those errors that are caused by physicians who practice beyond their scope or because of carrying out minimum or no investigations when treating patients due to costs or unavailability. In addition to the availability of the financial resources, some improvements in the quality of staff in public hospitals require reducing the high level of bureaucracy and improving the decision-making process and delegation of authority in public hospital.

4.4.2.4 Partnerships and Resources

According to the EFQM Model, “excellent hospitals plan and manage internal and external partnerships, suppliers and internal resources in order to support their policy and strategy and the effective operation of their processes. During planning and whilst managing partnerships and resources, they balance the current and future needs of the hospital, the community and the environment.”³²⁴

The results showed that the current situation of the quality of partnerships and resources in the surveyed hospitals is not sufficient. Actually, public hospitals have many problems regarding their partnerships and resources. A public hospital in Syria is generally "a public body with legal personality. Financially, it is an accounting unit that has financial and administrative autonomy, directly linked with the Syrian general budget according to the value of the difference between its whole income and expenditure".³²⁵ Therefore, public hospitals depend largely on the state budget to finance their expenditures, which are usu-

³²⁴ Hakes, C. (2007). P. 19.

³²⁵ MoH-Syria (1977). P. 577.

ally static and do not have the required sensitivity to meet the needs of the health sector and the flexibility and financial means to allow hospital management to take important decisions. In addition, planning for investment or development is outside of the administration's power.

Based on interviews with members of the senior management and their comments, quality of partnership and resources management in public hospitals face many problems. Medical equipment is old and operates at maximum capacity due to their low number compared to the number of patients, e.g. equipment of the dialysis departments. Public hospitals' buildings are old and do not guarantee the safety requirements adequately. They also need a lot of modernization and renovation to meet the legal, structural and architectural requirements and to support the primary functions of a hospital. There are no measures or procedures to manage adverse effects of the hospital's assets on staff, patients, community etc. The surveyed hospitals did not adopt any system for energy saving, e.g., lighting, water etc.

On the other hand, the surveyed public hospital has good partnership relationships with other public hospitals, particularly with hospitals of the same governorate. It exchanges physicians and some resources with other public hospitals and transfers patients to or from them. In this context, medical conferences, which were carried out in the surveyed hospitals, were very rare.

Hospital-wide management information systems and database/intranet sites to store, retrieve and interrogate data do not exist. Electronic record management systems for internally and externally generated data/information are not available. E-mail system is not accessible by all and used to transfer information in a timely way.

The previous analysis of the current situation of the quality of managing the partnerships and resources in the surveyed public hospitals is in line with the related findings of Barhoom, Zaher, and Alsoliman (2007) in their study in Syria.³²⁶ They found that there is a lack of new medical equipment. There is noise and difficulty in accessing the surveyed

³²⁶ Barhoom, A., Zaher, B., & Alsoliman, W. (2007). P. 203-225.

hospitals due to their location in the centre of the cities. The requirements of occupational safety are not fully available in the hospitals.

In addition to the current situation, the results showed the respondents expected that the situation of the quality of the people in the public hospital would be improved after the introduction of SHI. The improvement of the quality of partnerships and resources in public hospitals could be explained by the following factors: after the introduction of SHI, gradually public hospitals will have more financial autonomy from the state budget in financing their expenditures, because of receiving fees for provided services. They will have more flexibility to meet the medical requirements of the community. The management of individual hospitals will be able to adopt programs for energy saving and occupational safety. The required financial means to develop the medical equipments and to renovate the hospital's building will be available, but more independence in decision-making is required. After the introduction of SHI, public hospitals will be better able to fund medical conferences, creating database, Internet and E-mail systems in hospitals.

4.4.2.5 Processes

According to the EFQM Model, “excellent hospitals design, manage and improve processes in order to support its policy and strategy, fully satisfy, and generate increasing value for staff, patients and other stakeholders.”³²⁷

The results showed that the participants thought that the surveyed public hospitals did not design, manage and improve their processes effectively and efficiently. In addition, they considered that the introduction of the SHI would improve the quality of the processes in the surveyed hospitals.

There are many negatives in the quality of the current public hospital's processes. Systems standards, such as QM are not applied in process management, while standards, such as health and safety, environmental and occupational health, are applied in process management in a way far from the quality requirements. The effectiveness of the processes framework was not reviewed in terms of its effectiveness in delivering the hospital's

³²⁷ Hakes, C. (2007). P. 20.

policies and strategies. Most hospital processes are static and are not improved. The improvement of hospitals' processes follow a top-bottom approach as they follow plans of the MoH rather than senior management team something which isolates the creative, innovative and talented staff and patients from this process.

There are no studies to discover opportunities of hospitals' processes although there is a possibility of improvement in many aspects of hospital such as adopting a TQM system, transition to adoption of electronic patient record and automation of the hospital's processes, as well as providing new services. On the other hand, medical hospital services are not based on patients' needs and expectations as the case in the Lattakia Governorate where many necessary medical services are not available in the surveyed hospitals such as treatment of tumours, organs transplantation, open-heart surgery. There has been no market research, or any patient surveys or other forms of feedback that can be used to determine the needs and expectations of patients both now and in the future, and establish their current perceptions. There are no life-cycle studies for the provided medical services that can be used as a framework to assess current and future requirements.

Al-Khatib (2006) found in his study that the economic efficiency is low in public hospitals in Syria, and he attributed that to the following reasons: there is a lack of autonomy to run public hospitals. There is a lack of competition among the public and private hospitals or among the public hospitals themselves. New methods of technology and communications are not used to improve hospital processes such as using electronic medical records.

After the introduction of SHI, one of the requirements of the processes of communication and transfer of information to SHI agency and to the relevant government agencies will be necessary. In their quest to improve its processes, public hospital should automate the hospital's processes and move to the electronic patient record systems. The electronic patient record system characterize that it can be easily divided, sorted, processed and presented appropriately with a lesser errors, as well as it can be available to many users at the same time and different locations.³²⁸ It is helpful for physicians in diagnosis and

³²⁸ Fleba, S. (2008). P. 203.

treatment, reduce the number of errors, and improve the quality of healthcare audit and research.³²⁹ On the other hand, patients, who pay regular insurance premiums, will demand high quality services within the closest geographical area. Public hospitals will seek to increase their services as much as possible in order to receive a larger income. This change in the public hospitals' processes will encourage competition between hospitals in the same community, which will in turn have a positive impact on improving the quality and quantity of services in public hospitals. In addition, after the introduction of SHI, it would be economical to measure the life cycle of provided medical services and carry out market research and patient surveys.

4.4.2.6 Patients' Results

The next enabler criterion of the EFQM model concerns patients' results. According to the EFQM Model, “excellent hospitals comprehensively measure and achieve outstanding results with respect to their patients and other commercial customers.”³³⁰

The results showed that participants expected that the introduction of social health service would improve the assessment and achievement of outstanding results with respect to their patients as compared with the current situation. In addition, the current situation of measuring and achieving of patient's results in public hospitals was reflected in the opinions of the members of the senior management and their comments in interviews with them. Their evaluation of the current situation could be summarized in the following points: hospital staff are not courteous and understanding enough when dealing with patients. There is pressure on hospital services but hospitals and staff are not flexible and responsive enough to meet patient needs. It is not easy to gain information from the hospital and the most practical method is the dial-up to department of information.

No patient perception surveys have been carried out in the last year. Many participants said that patients are not satisfied with the quality of hospital services. They emphasized that hospitals tend to provide as many services as possible at the expense of quality. There are many medical errors in the surveyed hospitals, mostly due to the inexperience

³²⁹ House of Commons Health Committee. (2007). P. 4.

³³⁰ Hakes, C. (2007). P. 20.

of medical staff or to the low degree of sterilization and hygiene in the hospital. There is no department for treatment of cancer in any of the hospitals surveyed, and many patients leave the public hospital to have their operations in private hospitals or in public hospitals in the capital. The surveyed hospitals do not have database management and they do not carry out systematic analysis and evaluations of the numbers of deaths in hospital, medical errors, and complaints that have been received and handled.

Hassan (2007) evaluated in her study the reality of the patient satisfaction in public hospitals in Syria.³³¹ She found that patients' satisfaction and the focus on their need and requirements are not at the centre of attention of the medical and administrative staff at the surveyed hospital. In addition, she found that the surveyed hospital did not carry out any field survey or questionnaire to measure patient satisfaction or to identify the deficiencies in hospital services from the perspective of the patient.

The positive anticipated impact of the introduction of SHI on the quality of patient's results can be explained due to the following points. After the introduction of SHI, it is supposed that the situation of the relationship of patients with public hospitals will change from receiving free medical services to receiving medical services after paying the regular premiums to a third body (SHI Agency). On the other hand, the relationship between public hospitals and patients will change also from providing free services to paid services, whereas the SHI agency will pay for these services. This change in the relationship between patients and public hospitals will be responsible for the anticipated improvement in the quality of patients' results in public hospitals. After the introduction of SHI, public hospitals will try to provide more services in order to receive more income. They will provide higher salaries and additional incentives and improve their medical equipments and working conditions, because of the additional income.

The rise in the public hospital income, the salaries and the improvement in working conditions will enable public hospitals to recruit experienced medical staff and to provide better services and treatments for patients. In addition, it will encourage those responsible for the health sector in Syria to employ expert leaders and administrative staff who are

³³¹ Hassan, M. (2007). P. 26.

able to manage the hospital and to achieve its objective and mission in providing the best health service for patients in terms of quantity and quality. Based on that, the improvement of the quality of patients' results after the introduction of SHI can be confirmed.

4.4.2.7 People Satisfaction

According to the EFQM Model, “excellent hospitals comprehensively measure and achieve outstanding results with respect to their people.”³³²

The results showed that participants believed that the introduction of SHI would improve the current situation of measuring and achieving outstanding results with respect to their people. Additionally, the current situation of measuring and achieving of people's satisfaction in public hospitals was reflected in the opinions of the members of the senior management and their comments in interviews with them. They said that the management of hospital did not carry out any surveys of staff perception for a long time, although, all information about their staff satisfaction is obtained from personal interviews and semi-regular meetings of doctors syndicates. Their staff were not satisfied with many issues at work, which their treatment and mitigation of their consequences larger than the current administration authorities. Participants reflected in their comments a low work satisfaction and weak commitment of the majority of the staff. They confirmed that the staff are not satisfied with the low salaries in public hospitals as compared with private hospitals. The same thing can be applied to medical equipment, which is limited and outdated. Furthermore, there is a lack of satisfaction with the training, retraining and education processes particularly by physicians, due to the scarcity of the important operations, the large number of trainees compared with the trainers in the surveyed hospital, the lack of some medical specialties, and the inability of the surveyed public hospitals to cover the high costs of training. Barhoom, Zaher, and Alsoliman (2007) have confirmed the dissatisfaction with the training, retraining and education processes in their study on public hospitals in Syria.³³³

³³² Hakes, C. (2007). P. 20.

³³³ Barhoom, A., Zaher, B., & Alsoliman, W. (2007). P. 203-225.

A potential benefit of the introduction of SHI is the improvement in the quality of staff's results, which can be explained by the following points. After the introduction of SHI, in its quest to improve the production and increase the income of a public hospital, the management should consider its staff and carry out surveys to evaluate staff satisfaction. On the other hand, the expected improvement of public hospitals income will help them to work with expert leaders, to increase salaries, to improve working conditions, to renew medical equipment, and to support training programs in public hospitals. This expected change will lead to an improvement in the quality of measuring, assessment and achievement of staff satisfaction.

4.4.2.8 Society Satisfaction

According to the EFQM Model, “excellent hospitals comprehensively measure and achieve outstanding results with respect to local, national and international society.”³³⁴

The results showed that participants believed that SHI would enable hospitals to improve their ability to achieve and measure outstanding results with respect to local, national and international society in comparison with the current situation. In addition, the current situation of society satisfaction with public hospitals reflects the current relationship between the hospital and the local community. According to the opinions of the members of senior management and their comments in interviews with them, there has not been any society survey for many years to establish the impression of society's appreciation of the hospitals' achievements. The surveyed hospitals use data and statistics supplied by government about the local community that receives their services, and they do not have any private databases. Two of the hospitals surveyed are located in the centre of the city, which raises the issue of traffic congestion especially in rush hour and restricts the movement of ambulances, which also causes a lot of noise due to location of hospitals. Furthermore, air ambulance service is not provided in any of the hospitals.

There is not any assessment of the environmental and ecological impact for activities of the hospitals, and the respondents said that there are many complaints received from the local community about the hospital waste. The surveyed hospitals do not have a periodi-

³³⁴ Hakes, C. (2007). P. 21.

cal newsletter to encourage information flow about them to the community, but there are non-periodical publications of some non- and communicable diseases and methods of prevention. On the other hand, the surveyed hospitals provide free services or close to free to the community and its relationships with local authorities are very strong, as well as most human labour in these hospitals is from Lattakia Governorate.

Abasi and Wahbi (2007) have studied the medical waste management at public hospitals in Syria.³³⁵ The results confirm that the public are not satisfied with quality in public hospitals in Syria. They found that there are many problems in the medical waste management process in the surveyed hospitals. There are no special places for storage of hazardous medical waste in hospitals, pending their deportation and processing. There is a level of pollution caused by the old hospitals' incinerators and their location within the hospital campus, whereas they burn some waste with a relatively low temperature and a high amount of untreated emitted smoke.

The introduction of SHI will enable hospitals to carry out regular assessment of the environmental and ecological impact of their activities. It would be unacceptable and illogical that the SHI pays for treatments of some diseases caused by the mismanagement of hospital waste and disposal methods. It would also be expected that communication methods and ambulance services would be improved, as the required funding will be provided, something, which will help increase the public satisfaction, which will in turn increase hospitals' income.

4.4.2.9 Key Performance Results

According to the EFQM Model for QM, “excellent hospitals comprehensively measure and achieve outstanding results with respect to the key elements of their policy and strategy and planned performance.”³³⁶

The results showed that the quality of the key performance results is insufficient in the current situation of the surveyed hospitals. Actually, the current situation of quality of

³³⁵ Abasi, S. & Wahbi, H. (2006). P. 65-84.

³³⁶ Hakes, C. (2007). P. 21.

key performance results in the surveyed public hospitals is poor. Many of the requirements of quality of key performance results were not present in the current situation. Based on the opinions of the members of senior management and their comments in the interviews with them, public hospitals are far from meeting the requirements of the quality of key performance results. The surveyed public hospitals do not carry out any self-assessment excellence. They do not measure the efficiency of their staff and medical equipment, their patients and staff satisfaction, mean length of waiting time of patients for each service, success rates of operations, death and medical errors rates in the hospital, number of patients' enquiries and complaints, and the hospital share of the total demand size of medical services market. The surveyed public hospitals do not have key indicators of the performance of their entire main and sub-processes, maintenance costs, asset management, assessment of depreciation of capital and services, adoption or stopping providing some services, supplier performance, and information technology improvements in productivity and efficiency. Furthermore, they do not have electronic patient records and databases as necessary conditions to facilitate measuring results and adoption the indicators.

These results confirm the findings of Barhoom, Zaher, and Alsoliman (2007) and Dayoub and Atieh (2005) in their studies on public hospitals in Syria.³³⁷ They confirmed that the surveyed hospital in their studies did not carry out any self-assessment excellence and did not measure efficiency of their staff and medical equipments. Barhoom, Zaher, and Alsoliman (2007) concluded that the surveyed hospitals did not have key performance indicators in their training processes, which in themselves lack good and valid evaluation.

The results also showed that participants expected that the quality of key performance results in the surveyed public hospitals would be improved after the introduction of SHI comparing with the current situation. Actually, some of the required changes to improve the quality of key performance results might become very necessary after the introduction of SHI such as the transition to electronic patient record to achieve the process of communication with the SHI agency. Nevertheless, the improvement of the quality of key

³³⁷ Barhoom, A., Zaher, B., & Alsoliman, W. (2007). P. 203-225; Dayoub, M.A. & Atieh, H.(2005). P. 109-130.

performance results requires more than the introduction of SHI, which will not have much effect on measuring the efficiency of hospitals, adoption of key performance indicators, and adoption of the TQM Model. In addition to the funding process which could be improved by the introduction of the SHI, these changes need administration decisions, experienced staff, compliance with rules and laws, possession of a database and many other requirements.

4.4.3 Satisfaction

According to the results section, participants expected that the satisfaction of patients with the provided services in public hospitals would be good compared with the current situation, which could be attributed to many reasons. Many medicines are not available in public hospitals, which mean that patients will need to buy them from sources outside the hospital to complete the treatment. Waiting times to receive the treatment or to make an operation are relatively long, specifically for advanced technologies. The number of patients per room in the internal section is very high up to a level unsatisfactory (e.g. 7 in the intensive care department, 10 in the cardiology department).³³⁸ Public hospitals are not clean enough and there is a lot of noise.

The negative evaluation of the respondents about the current situation of patients' satisfaction with public hospital is fully consistent with the findings of Sukkar (2006).³³⁹ Sukkar (2006) has evaluated the satisfaction of patients in the Syrian hospitals in Al-Raqqa governorate. The results showed that one of the most common complaints, which have dissatisfied patients in public hospitals, were treatments of nurses, lack of trained doctors, the length of waiting time to receive treatment, the level of hygiene at the reception and inpatient rooms and the presence of insects and the quality of food served. He concluded that the reasons for these results were the low income of public hospital and the free services, the lack of training programs, low salaries of staff and the inability of the hospital administration to motivate their staff.

³³⁸ Sukkar, R. (2006). P. 209-254.

³³⁹ Sukkar, R. (2006). P. 209-254.

Combined with the negative evaluation of the current situation, the results showed that the respondents expected the satisfaction of patients would improve after the introduction of SHI. After the introduction of SHI, the management of public hospitals will have to some extent an adequate financial means, which will enable it to motivate medical staff and to provide more services. On the other hand, it is supposed that the SHI agency, which will be established in the early stage after the introduction of SHI, will monitor the delivery of health services.

There are not studies turning to the relationship between the SHI and the satisfaction of patient with the supplied services. Thompson, Knapp, Saliba, Giunta, Shenkman, and Nackashi (2009) had results about the close relation between the improvement of the satisfaction and the health insurance.³⁴⁰ They examined the satisfaction of children with special health care needs with the provided health care in USA. Their results showed that those with insurance have higher satisfaction than those without. Findings from this study add that even for those with insurance, there are differences in satisfaction between them, because having private insurance also predicted incrementally higher levels of care than other types of insurance. In addition, they found that satisfaction increased by 20% in states with higher public insurance (Medicaid) spending per child and decreased in states with lesser Medicaid spending per child. On the other hand, this study is carried out in the United States, which has a rather unique set of health care institutions; a generalization of its findings to Syria must be done with great caution.

4.4.4 Demand

The results showed that respondents expected that the introduction of SHI will increase the demand for hospital services compared to the current situation although they point out the demand is already at preset. This is a logical result of the fact that public hospitals provide free services taking into consideration the low GDP per capita and poverty in Syria compared with the costs of the treatment in private hospitals.

³⁴⁰ Thompson, L.A., Knapp, C.A., Saliba, H., Giunta, N., Shenkman, E.A., & Nackashi, J. (2009). P. 420-427.

According to the UNDP (2009), the GDP per capita is estimated to be 4,511 US\$ in 2007 which is less than the Arab States average (8,202 US\$) and the global average (9.972 US\$).³⁴¹ On the other hand, the ratio of poverty in Syria rose to 30.1 % of the population in 2003-2004, representing almost 5.3 million individuals.³⁴² The low GDP per capita and the high incidence of poverty encourage citizens to seek free health care services in public hospitals instead of private hospitals and that explains why participants pointed out the large demand for services in public hospitals.

Although medical services are free or very low in cost in public hospitals, there are some additional payments associated with receiving those services by patients as, for example, in the case of organ transplants where they need to buy some medication, which is not available in the hospital. In addition, the cost of transportation to reach a hospital is relatively high because public hospitals are located in the centres of cities and in big governorates. This situation makes many poor people find it is difficult to access medical treatment. A study on households' expenditure has been carried out in the Syrian governorate "Al-Raqqqa".³⁴³ This study shows that 8% of the surveyed families suffer from chronic diseases or have disabilities, 12% suffer from sudden diseases, whereas 69% of families had diagnosed their diseases themselves. The ratio of medical centres and hospital beds to the population in that area is very low. 81% of the surveyed families had difficulties in getting the money for a medical treatment. In addition, the study shows that because of the high treatment cost, more than 38% of the families were unable to pay for a treatment of a family member within the last year. Only 30% of the families were able to pay for the treatment of their family members. These facts could support and explain the result that the SHI could contribute to an increase in the demand for medical services in public hospitals, although the current demand for medical services in public hospitals is high.

The increase of the demand for services public hospitals after the introduction of SHI could be explained based on the following reasons. After the introduction of SHI, public hospitals will start to transit from providing the free or close of free services to paid ser-

³⁴¹ UNDP (2009). P. 172, 174.

³⁴² El-Laithy, H. & Abu-Ismail, K. (2005). P. 1-2.

³⁴³ HSMP (2006). P. 107-130.

vices. It is supposed that this transition will eliminate the hospital's financial restrictions. In addition, it will create financial incentives for hospitals to increase the quantity and quality of the health services. This new situation will lead to improve patients' satisfaction on the provided services, which in turn will lead to increase of demand for public hospitals services.³⁴⁴ At the same time, the insured patients who do not have to pay for the services might demand more services than necessary (moral hazard).³⁴⁵

This result of the expected impact of the SHI is consistent with several studies, which have investigated the impact of the SHI on demand for hospital services. For the most part, no large differences were found across studies using different methods.

Chen, Yip, Chang, Lin, Lee, Chiu, and Lin (2007) evaluated the impact of Taiwan's NHI program on improving the access to health care.³⁴⁶ Before 1995, about 57% of the population was insured through three separate programs. In 1995, Taiwan introduced the NHI program and extended insurance coverage to all its citizens with an equal and comprehensive benefits package. By the end of 1995, 97% of the population had enrolled in the NHI, and the coverage rate reached almost 99% in 1997. The authors compared differences in health care utilization before the introduction of the NHI, in 1996, and in 1999, for the previously insured and uninsured samples.

Their results showed that Taiwan's NHI has significantly increased the demand for both outpatient and in-patient care among the elderly, and such effects were more salient for people in the low- or middle-income groups. The introduction of the NHI caused a 14.18% increase and an 8.52% increase in use of outpatient services in 1996 and 1999, respectively. The increases in use of in-patient services due to the NHI were 9.05 and 7.88% for 1996 and 1999, respectively. In addition to that, after the introduction of NHI, the rate of outpatient care utilization increased among the high-income group by 8.87% in 1996 and only 0.44% in 1999, but the increases for the low-income group were much higher, at 16.28% in 1996 and 16.40% in 1999. For in-patient care use, the NHI increased

³⁴⁴ Fleßa, S. (2009). P. 18-22.

³⁴⁵ Scheil-Adlung, X., Carrin, G., Jütting, J., & Xu, K. (2006). P. 132-146.

³⁴⁶ Chen, L., Yip, W., Chang, M.C., Lin, H.S., Lee, S.D., Chiu Y.L., & Lin, Y.H. (2007). P. 223-242.

use by 6.05% in 1996 and 8.07% in 1999 for the high-income group, and 10.69% in 1996 and 7.80% in 1999 for the low-income group.

Hidayat, Thabrany, Dong, and Sauerborn (2004) examined the effects of mandatory health insurance on access to public and private outpatient care in Indonesia. They found that the mandatory insurance scheme for civil servants and private employees had a positive impact on the demand for public outpatient care. The greatest effects of the mandatory insurance scheme were observed among individuals in the lowest income groups. An important policy implication of this study is that expanding health insurance would increase access to health care.³⁴⁷

Another study that attempted to measure the causal effects of health insurance on the demand for health care is Trujillo (2003).³⁴⁸ Trujillo (2003) studied the empirical relationship between SHI and medical use. He found a positive and statistically significant relationship between enforcing participation in the SHI and increase in medical care use. Thus, participating in the SHI increases the likelihood of using outpatient care, preventive care, and hospital use. In addition, enforcing universal coverage of the SHI would have a large effect on the average medical care use, especially, for the use of outpatient care and hospital services.

An increase in the demand for medical services by those who will have health insurance coverage will happen due to the moral hazard problems in the health insurance market. Trujillo (2003) discussed the increase of medical care consumption of the individuals who are in the Colombian SHI schemes compared with those in the safety net. Medical services are free or at very low cost in the safety net (similar to the current situation of the free or low cost in medical services in Syrian public hospitals). He explained that according to the following reasons: waiting time in the safety net might be very high; the quality of services in SHI is usually higher than the quality in the safety net; and public providers in the safety net charge some user fees.³⁴⁹

³⁴⁷ Hidayat, B., Thabrany, H., Dong, H., & Sauerborn, R. (2004). P. 332-233.

³⁴⁸ Trujillo, A.J. (2003). P. 231-246.

³⁴⁹ Trujillo, A.J. (2003). P. 231-246.

Scheil-Adlung, Carrin, Jütting, and Xu (2006) measured in three African countries, namely Kenya, Senegal and South Africa the impact of membership in a health insurance scheme. They found that the insured are more likely to get health care in cases of need than the non-insured, and less likely to forego seeking care due to health care costs. In addition, they expected that the demand for health care services would probably increase after extending the introduction of social protection schemes. At the same time, the insured might use more services than necessary after the introduction of SHI (moral hazard).³⁵⁰

The impact of SHI is in line with a study that has been carried out by Yip and Berman (2001) in Egypt, a similar socioeconomic situation as in Syria. They found that the expansion of health insurance system to cover schoolchildren in Egypt has significantly improved access for those enrolled under the programme by increasing the probability of visit and reducing the financial burden of use.³⁵¹

Jowett, Deolalikar, and Martinsson (2004) studied the different impact of the Vietnamese health insurance according to the finance situation of the individuals. They found that the poorer insured people had greater demand for inpatient facilities and public providers more than poorer uninsured people do. In addition, at higher income levels, there was no discernable difference in the pattern of treatment seeking behaviour of insured and uninsured individuals. They explained this finding according to the fact that the price elasticity of demand is greater at lower income levels, so that the reduction in the price of health services due to insurance coverage increases utilization to a greater extent among poorer than among richer individuals.³⁵²

The result of the impact of SHI on increasing the demand for hospital services is not in line with a study in Taiwan by Yip and Berman (1998).³⁵³ They found that there is no statistically significant difference in the size of the demand for emergency department services, which was found before the introduction of NHI and after the introduction of the NHI in Taiwan. They suggested that the copayment could explain and contribute to

³⁵⁰ Scheil-Adlung, X., Carrin, G., Jütting, J., & Xu, K. (2006). P. 132-146.

³⁵¹ Yip, W., & Berman, P. (2001). P. 207-220.

³⁵² Jowett, M., Deolalikar, A. & Martinsson, P. (2004). P. 855.

³⁵³ Lin, Y.L., Hsiao, C.K., Ma, H.M., Hsu, H.Y., Wang, S.M., & Tseng, Y.Z. (1998). P. 92-94.

this result. With the copayment system in the NHI in Taiwan, each patient has to pay an amount of up to 15 US\$ for an emergency department visit. They analysed many studies and concluded that a big amount of copayment has a clearly negative effect on the use of all medical services. Based on this study, it can be concluded that, if the co-payment would be high in the SHI project in Syria, it would have a negative impact on increasing the demand for- and the quantity of the public hospitals services provided after the introduction of SHI.

Chapter 5

Conclusion

5 Conclusion

In this chapter, the conclusions and implications of the study are explained. Section 6.1 provides policy and practical implications. Section 6.2 focuses on a research evaluation, such as research limitations and avenues for future research. Section 6.3 concludes with final thoughts.

5.1 Implications

This study contributes to increasing the existing empirical and theoretical knowledge on the expected effects of SHI on hospitals management.

Policy Implications

The main theoretical objective of the thesis was to study the expected impact of the introduction of SHI on public hospital management by measuring expectations about the demand for services, quantity of services provided, quality of management, and patient satisfaction. This included three important issues. First, it intended to shed light on the current situation of public hospital management. Second, it was important to measure the respondents' expectation compared to the current situation. Third, it used the interviews and additional comments to discuss the study results. In general terms, this study contributes to the existing literature by expanding the whole notion of the effects of the SHI towards its possible role in improving the public hospitals management in Syria and developing countries.

Another addition is the fact that this study pays special attention to the managerial requirements by which it explains how the expected impact of the introduction of SHI could happen. In this way, this research shows how practical studies are expanded with new points, which could enrich the theoretical basis. In addition, this research widens the geographical focus of the impact, since the effects of SHI were studied in developed countries more than the developing countries.

In addition, this study reveals the interaction between the organizational change at the macro level and institutional change and gives the opportunity to strengthen the under-

standing of the interaction between public hospitals and their environment. Combining the SHI theory and hospital management theory, it generates a more dynamic approach to institutional change by taking into account the potential for change. Thus, it advances our understanding of institutional influences on other research.

Practical Implications

More practical contributions of this study target decision makers in the health care sector and public hospitals in Syria. To decision makers in the health care sector, this study showed how important it is to give more autonomy to public hospitals for managing their processes. On the other hand, the principal recommendation to control the potential impact of the health insurance programs on the demand for public hospital services, which derived from this study's results and the experiments in others countries, is that co-payment should be controlled. A big co-payment will have a negative impact on the demand for hospital services. Therefore, it is suggested that in the early stages of the introduction of SHI, the co-payment should be flexible until increase of the numbers of health care providers and the total number population per bed, to avoid pressure on health care providers.

To public hospitals, these study's results give a strong and deep understanding about the weaknesses in the current situation of public hospital management. Moreover, these results can help the managers working within public hospitals in understanding the potential impact of the introduction of SHI. It can also help managers in developing appropriate business and training strategies to carry out the required steps to achieve benefits of the introduction of SHI. On the other hand, the practicability study reveals that the questionnaire developed in this study is applicable in practice. This questionnaire can be used by the managements of the Syrian public hospitals to self-assess their current situation and to meet the requirements of the introduction of SHI in order to achieve the expected results, and measure their progress over time. Through using this model, hospitals can quickly identify which areas urgently need improvement. Thus, the financial resources resulting from the introduction of SHI can be allocated more wisely and more effective improvement plans can be formulated.

5.2 Study Limitations and Avenues for Further Research

Limitations of the study can be described in relation to four main issues. First, concerning the introduction of SHI, the SHI still unimplemented in Syria. Therefore, it would be important if future studies would examine the impact of the SHI on the public hospital management after its implementation.

Second, concerning generalizability, the samples were drawn from one governorate in Syria "Lattakia", and cannot therefore speak of the potential impact on all Syrian hospitals. Therefore, it would be wise, if future studies would draw the samples from many of the Syrian governorates.

The third constraint to this study concerns the quantitative method in this study. The small and medium sizes of the study's samples may have affected the generalization of the results. The thesis's questionnaire and statistical analysis could also be a target of objection. These limitations may encourage future research to be based more on the qualitative method via achieving qualitative questionnaires with decision-makers in the MoH, and administrations of hospitals and health insurance companies.

The fourth constraint to this study, which is more difficult to address, concerns the data and information systems in Syria. The lack of health management information systems posed a great limitation to verification of data and accuracy of information. Most data from Syria is unpublished and/or undated and up to two years old. In addition, there is a lack of published studies on the health care management in Syria.

On the other hand, the results showed that there is a positive impact of the introduction of SHI on public hospitals management. Nevertheless, it is not clear if this is because people who responded to the questionnaire might suffer more than others might from the current poor situation of public hospitals or because the introduction of SHI would really improve the hospital management and increase the demand. Dealing with endogeneity in the context of health care management is an important topic for future research.

Another venue for future research that would be an addition for the work of this thesis concerns private hospitals. It would be interesting to study the potential impact of the

introduction of SHI on private hospitals management in Syria. The current poor situation of public hospitals might create the appropriate environment to achieve the improvement after the introduction of SHI, but the current situation of private hospital management is completely different from that in public hospitals.

5.3 Final Thoughts

The results of this study show that patients, staff and management of public hospitals in Syria are strongly dissatisfied with the current situation of the public hospital management. Management is perceived as a problem. However, all respondents answering the questionnaire strongly indicate that they would expect that almost everything would be better after the introducing of the SHI. The expectations are tremendously high. In addition, it is very likely that the introduction of the SHI cannot fulfil these expectations.

Thus, disappointment is due to come unless precautions are taken today. Firstly, the population and in particular hospital managers and other staff must be educated on the concepts, perspectives, chances and risks of a SHI. It must be made clear to them that a SHI is not a "silver bullet" which will solve all hospital problems. Consequently, the introduction of the SHI must be accompanied by broad awareness-building.

Secondly, an insurance scheme is primarily a financing instrument, so that positive consequences for the management, quantity and quality of a hospital are not "natural". Instead, managers must have the adequate training and work hard to take advantage of the potential chances of the SHI. Consequently, it must be stressed again that the staff and managers of public hospitals have to be trained now.

Thirdly, even with a broad awareness-building process and good hospital management training, some of the expectations will not be met and some people will be disappointed as in some health care facilities the scarcity of resources is so severe that even an increase of funds from a SHI will ease the situation only marginally. Consequently, the Government of Syria must provide budgets for buildings, equipment and staffing.

The key respondents of the public hospitals of Syria expect much from the potential introduction of the SHI. Although it might still take some time until this insurance becomes

a reality in Syria, it could be already now prepared so that its implementation becomes a success. Knowing the expectations is a good starting point!

6 References

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7 Annexes

7.1 Annex 1: Project of the Syrian Health Insurance Law

Syrian Arab Republic
Republic president
Based on the constitution decisions

Law NO/ /

Issues the following

Article /1/:

In implementing this law, each expression has its own definition next to it:

Minister: Minister of Health
Organization: General organization of health insurance.
Council: Management council of the general health insurance organization.
General Director: The general director of the health insurance organization.
Branch: The branch of the general health insurance organization.
Subscriber: The contracted party or person in the health insurance system and the family member whom he/she supports legally.

Article /2/:

A-A general organization to be created, called the general organization of health insurance, its location is Damascus, it has the legal personality, the financial and managerial autonomy and it is linked with the minister.

B-Branches to be created in the governorates by a decision from the minister

Article /3/:

The organization aims to achieve the health insurance for the Syrian Arab Republic citizens, and those who are considered Syrians, or the residents who wish, according to the plan, which is suggested by the council and approved by the prime minister.

Article /4/:

The health insurance, which is stated in the law, means the diagnostic health care curative, surgical health care and the preventive individual services for the subscriber.

Article /5/:

The organization has the following authorities in order to achieve its tasks:

A-Making contract with the diagnosis, curative and rehabilitation establishments, the general physicians, dentists, the specialists and others, which will lead to achieve the goal of the health insurance according to the essentials (basics), which are determined by management council.

B-Building or buying or renting the hospitals and clinics, according to the council's suggestion and the agreement of the prime minister.

C-Awarding incentives for the workers and contractors in the light of the actual incomings from the subscribers, according to basics set up by the council and issued by a decision from the prime minister.

Article /6/:

A-The organization management is operated by management council and general director.

B-The management council is formed as follows:

1. Minister of health –president.
2. The specialized deputy minister.

3. General Director of the organization.
4. General Director of the social insurances.
5. A representative from the general union of the workers 'syndicates, nominated by the executive bureau.
6. A representative from the teachers' syndicate, nominated by the executive bureau.
7. Director of the secondary and third health care.
8. Two members nominated by the prime minister, based on a suggestion from the minister of health according to standards set up in the executive list.

Article /7/

The general director is nominated by a decree based on the minister of health suggestion; he/she should have an academic degree in one of the following fields (Medical, Administration, Economic or law), graduated since ten years at least and have a managerial experience for five years at least.

Article /8/:

The organization management council is the responsible authority for its affairs, and managing its matters, it has the authority to take the suitable decisions, in order to achieve the goals, for which the organization was established, and that should be within the limits of the decided plan and it has particularly the following:

A-

1. Suggesting the work plan of the organization.
2. Adopting the required decisions for executing the health insurance plan.
3. Suggesting the systems related to the organization, specially the projects of the bylaw, the employment law, the incentives, the awards, the financial and accounting system and the contracts in the organization, it should be issued according to the valid laws and regulations.
4. Suggesting the "Malakat" of the organization and its branches, it should be issued according to the valid regulations.
5. Laying out the detailed plan and the executive programmes, for enabling the organization to carry out its tasks and develop its work.
6. Suggesting the required token coast rates, which are paid by the subscribers, for the offered services by the health insurance. A decision for that should be issued by the prime minister.
7. Discussing the organization budget project and presenting it to the authorized parties to approve it.

B-The council has the right to form, from among its members, committees that can carry out some of its specializations or specified works.

C-The council has the right to seek the help of the suitable experts and specialists.

Article /9/:

The general director of the organization has the following authorities:

1. Executing the council decisions.
2. Practicing the authorities and specialties, which he acquired by law.
3. Supervising the works of the organization branches.
4. Nominating the workers in the organization, as well as promoting, transferring and sending (delegating) them within the limits of the determined allocations in the budget, and imposing the behavioural (occupational) penalties within the limits of the given authorities to him /her.

5. Granting the compensations and the awards to the nominated workers according to the decided system, which is approved by the prime minister
6. Authorizing the branches' directors of some of his/her specialties after getting the council approval.
7. Representing the organization in its relations with others, and before the courts.
8. Preparing the budget project and presenting it before the council

Article /10/:

The branch management is carried out by a management director, nominated by the minister according to the laws and regulations and six members they are:

1. Health director.
2. Representative from the secondary governorate labour union.
3. Representative from the secondary branch of the teachers' syndicate.
4. The head of the secondary and third care department.
5. Social insurance director.
6. The 6th member is nominated by the minister himself with a reference to the mayor suggestion.

Article /11/:

The incomings of the organization consist of:

1. The regular monthly subscriptions of the subscribers, who work in the public, or private, or joint sector, or popular organizations, or occupational syndicates or retirees, according to the decided rates, in the executed list and it shouldn't exceed (3%) of the salary or the fixed salary or the pension or the identified transferred salary according to the valid laws and regulations.
2. Subscriptions of individuals or employers or residents in Syrian Arab Republic, or unemployed people according to the basics and decided rates in the executive list and which is adopted by the management council, and they should be approved by the cabinet.
3. The parallel share:

A-The parallel share, which is paid by the government or employers with a volume of (6%) from the salary or the identified fixed salary according to the valid laws and regulations;

B-The parallel share of the beneficiaries of those who have pensions, transferred salary, salary of natural disability and the disability of injury, according to the valid laws and regulations, especially the social insurance law NO/92/ of the year 1959, and its amendments, all of that is according to the revenue principle.

4. Aids, donations, gifts, offers and testaments which the council decides its acceptance.
5. Fees and services' charges, which are defined in the executive list, paid by the subscribers in return to the medical services, offered to them.
6. The government supports any deficit of the health insurance budget.

Article /12/:

1. The movables and immovable of the organization are not subject to any taxes or fees, as well as its imported tools and equipment are exempted from the customs duties.
1. The projects and works which are carried by the organization, are considered of public interest, in the field of appropriation.
2. The organization funds are considered public funds, in the fields of implementing the valid laws and regulations.

Article /13/:

The treatment of the sick subscribers is performed at the organization expense, according to the executive list system.

Article /14/:

- A. The social insurances establishment is considered one of the channels, to execute the health insurance in Syria, especially what is related to its subscribers and retirees, including the occupational diseases. It coordinates with the insurance and salaries establishment for what is related to the former subscribers and retirees, since the social insurances law is the only reference, after it was amended by the law NO/78/for the year 2001.
- B. The social insurances establishment has the right to contract with the organization, in order to treat work injuries, occupational diseases and the regular tests.
- C. The social insurances establishment and according to the valid laws and regulations in the establishment has the authority to take the decision for all legal causes and compensations which came out as a result of work injuries and occupational diseases.

Article /15/:

With maintaining the most effective penalties, which are stated in the valid laws, every one misbehave in implementing the executive instructions for a materialistic interest would be punished with a fine (from 5000 S.P up to 25000 S.P).

Article/16/:

The collection of incomings and subscriptions, which is stated in the article /11/ starts from the effective determined date for each contract.

Article /17/:

The organization will offer everything contracted for, to all groups of health insurance subscribers according to the article /11/, which fulfilled all financial and administrative obligations that are clearly stated in the executive list.

Article/18/:

The law NO /1/ for the year 1979 is to be cancelled.

Article /19/:

The minister will issue the required instructions to execute the decisions of this law.

Article /20/:

This law is to be published in the official paper.

Damascus in / /1424 H AND / /2003 A.C

Republic President

7.2 Annex 2: Coverage and Main Work Plan

Coverage and main work plan towards the SHI in Syria (Draft 08.02.2007)

Prerequisites	Target groups											
	Public health insurance plan	Catastrophic disease cases	Catastrophic drugs affected	Means-tested poor	Gov. & public companies	Teachers (new benefits)	Rest of government sector	Large scale private sector	Medium sized private sector	Small private sector	Informal private sector	Well-off self-employed
<p>Ongoing activities</p> <p>Legal prerequisites</p> <p>SHI law, Law for CHIC, Law for SHI Authority, Law for Catastrophic Health Fund, Providers Quality Assurance Law, Restructuring Laws for participating ministries, etc.</p>	<p>2007</p> <p>Task force established Training & pilot-testing started Framework law approved Fund for catastrophic cases designed Evidence basis strengthened Policy dialogues with all stakeholders Salary implications discussed with MoF</p>	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%
	<p>2008</p> <p>Fund for catastrophic cases in place Centre for HI Competence designed Quality of providers checked (10%) Teachers & public comp. schemes expansion pilot-tested Identification / targeting of the poor tested Informal sector scheme designed</p>	20%	13%	0%	50%	10%	0%	0%	0%	0%	0%	0%
	<p>2009</p> <p>Catastrophic fund fully operational Centre for HI Competence is working Revenue collection plan tested Benefit packages costed & selected Contractual arrangements designed Tertiary care hospitals in good condition Pro-poor approaches ready to implement Informal sector plans drafted</p>	40%	35%	0%	60%	10%	0%	0%	0%	0%	2%	0%
	<p>2010</p> <p>Health Insurance Authority designed MIS designed, started & tested partially Sufficient cadre trained for HIA Plan for covering government sector done International auditing of catastrophic fund Provider purchasing plan finalized Pilot-tests evaluated (e.g. Teachers Ass.) Performance based payments in place</p>	75%	70%	25%	60%	20%	0%	0%	0%	0%	5%	0%
	<p>2011</p> <p>Health Insurance Authority in place Quality of 50% of providers checked Contractual arrangements accepted Actuarial studies done Providers distribution improved</p>	100%	95%	50%	60%	30%	10%	0%	0%	0%	5%	0%
	<p>2012</p> <p>Quality of 90% of providers checked International auditing done Plan for private formal sector approved International evaluation Plan for farmers involvement</p>	100%	100%	65%	70%	50%	20%	0%	0%	0%	10%	0%
	<p>2013</p> <p>Large companies participation ready Master-plan for private sector done</p>	100%	100%	80%	70%	80%	30%	10%	0%	0%	10%	0%
	<p>2015</p> <p>International auditing done Quality of sample of providers checked Start with medium sized private sector</p>	100%	100%	90%	80%	100%	50%	30%	10%	0%	20%	10%
	<p>2017</p> <p>International evaluation Start with small size private sector</p>	100%	100%	100%	90%	100%	70%	50%	20%	10%	30%	20%
	<p>2020</p> <p>Review of health insurance system Modernisation of health insurance</p>	100%	100%	100%	100%	100%	100%	80%	35%	40%	50%	30%

7.3 Annex 3: English Version of the Questionnaire



Questionnaire of the Expected Impact of the Introduction of Social Health Insurance on Management of the Public Hospital in Syria

Dear Madam/ Sir,

The healthcare reform in Syria, which includes the introduction of social health insurance (SHI), will bring significant changes to the health system. SHI will change the current semi-free medical care in the public hospitals to be paid care by SHI project. In addition, the project will receive regular payments from the citizens. These payments are determined by agreement between representatives of each of the government, the hospitals and SHI Project.

Based on this, the researcher (Rawan Hatem, a PhD student at the University of Greifswald, school of law and economics; doing his doctorate programme in the department of health care management under the supervision of the Prof. Dr. Steffen Fleßa) carry out a questionnaire at public hospitals in Lattakia governorate.

The purpose of this questionnaire is to study the expected impact of the introduction of SHI on the management of the public hospitals. The survey comprises the whole hospital sector and this questionnaire should be filled by samples from each of the members of the top management, the physicians, the nurses, the management staff and the patients.

Your experience and opinions are very important for us to know the expected impact of the introduction of SHI and to make suggestions for further policy changes. Therefore, the researcher asks for some of your precious time to answer the questions below and return the questionnaire back to us at the earliest opportunity.

The interview is voluntary and anonymous and the organizer of this survey will ensure the protection and confidentiality of the data. The gathered data and results from the study will be used only in depersonalized and aggregated form. There will be no indication to single forms. You have the right not to participate in the survey. In such case, we would like you to return the questionnaire unanswered with the remark.

Please read the questions carefully and if possible answer all questions. If you are not sure what to choose, please mark only the most suitable answer per question. For marking the preferred answer tick (☑) on the proper symbol, as well as in case you make a mistake do not worry, simply cross it out and tick (☑) on the symbol.

Part 1: Background Information

1. What is your position?

Member of the top management	①	Physician	②
Nurse / Pharmacist	③	Management staffs	④
Patient	⑤		

2. Hospital name: _____

Part 2: (Ask all except patients)

The following statements relate to your opinion about the current situation of the quantity of hospital services and the expected impact of the introduction of SHI. Please give us your opinion about that according to the following issues:

①: Very small	②: Small	③: Neither small nor large	④: Great	⑤: Very great
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• Quantity of the Hospital Services:	Current situation	After the SHI
3. The hospital means of production (Medical devices, Material, hospital beds...) are	①②③④⑤	①②③④⑤
4. The hospital human resources are	①②③④⑤	①②③④⑤
5. Intensive treatment in the hospital is	①②③④⑤	①②③④⑤
6. The length of stay in the hospital is	①②③④⑤	①②③④⑤
7. The length of waiting time to receive the treatment is	①②③④⑤	①②③④⑤

Part 3: (Ask a sample of the members of the top management)

The following statements relate to your opinion about the current situation of the quality management of the hospital and the expected impact of the introduction of SHI on it. Please give us your opinion about that according to the following issues:

①: Strongly disagree	②: Disagree	③: Somewhat agree	④: Agree	⑤: Strongly agree
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• Leadership	Current situation	After the SHI
8. The management develops the hospital's mission, vision, values and ethics.	①②③④⑤	①②③④⑤
9. The management involves in the review, development, implementation and continuous improvement of the hospital's management systems.	①②③④⑤	①②③④⑤
10. The management involves with patients, partners and other representatives of society.	①②③④⑤	①②③④⑤
11. The hospital management uses a culture of quality to motivate, support and recognize the staff.	①②③④⑤	①②③④⑤
12. The hospital management implement, manage and assess changes.	①②③④⑤	①②③④⑤

• Policies and Strategies	Current situation	After the SHI
13. The policies and strategies meet the present and future needs and expectations of government.	①②③④⑤	①②③④⑤
14. The policies and strategies are based on information from performance measurements, research, and creativity related activities.	①②③④⑤	①②③④⑤
15. The hospital's policies and strategies are developed, reviewed and updated.	①②③④⑤	①②③④⑤
16. The policies and strategies are communicated and deployed	①②③④⑤	①②③④⑤

through a framework of key processes.		
• Staff		
17. The human resources are planned, managed and improved. This may include, career development and using innovative hospital methodologies to improve the way of working.	①②③④⑤	①②③④⑤
18. The hospital management develops staff's knowledge and competency.	①②③④⑤	①②③④⑤
19. The hospital management improves the involvement and empowerment for the staff.	①②③④⑤	①②③④⑤
20. There is a continued dialogue between the management and the staff.	①②③④⑤	①②③④⑤
21. The management rewards and recognizes the staff.	①②③④⑤	①②③④⑤
• Partnerships and Resources		
22. External partnerships are well managed.	①②③④⑤	①②③④⑤
23. The hospital's finances are well managed	①②③④⑤	①②③④⑤
24. Hospital's buildings, equipments and materials are well managed.	①②③④⑤	①②③④⑤
25. Technology is well managed.	①②③④⑤	①②③④⑤
26. Information is well managed.	①②③④⑤	①②③④⑤
• Processes		
27. Hospital processes are systematically designed and managed.	①②③④⑤	①②③④⑤
28. Processes are improved, as needed, in order to satisfy patients and generate increasing economic value for government.	①②③④⑤	①②③④⑤
29. Hospital services are designed and developed based on patients' needs and expectations.	①②③④⑤	①②③④⑤
30. Hospital services are well produced and delivered.	①②③④⑤	①②③④⑤
31. The management manages and enhances the patient relationships. This may include using regular surveys, in order to determine and enhance patient satisfaction levels.	①②③④⑤	①②③④⑤
• Patients Results		
32. The hospital management uses criteria to measure the patients' perceptions, e.g., patients' surveys.	①②③④⑤	①②③④⑤
33. The management uses indicators to monitor, expect and improve the team performance to achieve patient satisfaction. These indicators may include medical errors rate.	①②③④⑤	①②③④⑤
• Staff Results		
34. The hospital management measures the staff's perceptions (obtained from surveys, interviews...).	①②③④⑤	①②③④⑤
35. The management uses results of the hospital's processes to improve the staff's performance. This may include measuring physicians' productivity.	①②③④⑤	①②③④⑤
• Society Results		
36. The management has a policy for measuring society's perceptions of the hospital, obtained from surveys, press articles.	①②③④⑤	①②③④⑤
37. The hospital has an environmental policy and is able to	①②③④⑤	①②③④⑤

measure its impact; this may include waste disposal methods.		
• Key Performance Results		
38. The management measures, assess, and improve key outcomes for its policies and strategies; this may include assessing the new services.	①②③④⑤	①②③④⑤
39. The management uses key performance indicators to measure, assess and improve application of the business plan, this may include, the number of the hospital admissions.	①②③④⑤	①②③④⑤

Part 4: (Ask all)

The following statements relate to your opinion about the current situation of patient's satisfaction with hospital services and the expected impact of the introduction of SHI on it, Please give us your opinion about that according to the following issues:

①: Very bad	②: Bad	③: Neither bad nor good	④: Good	⑤: Very good
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Patient's Satisfaction	Current situation	After the SHI
40. The satisfaction of the hospital patients with the physicians' professional treatment is	①②③④⑤	①②③④⑤
41. The satisfaction of the hospital patients with the physicians' friendly language is	①②③④⑤	①②③④⑤
42. The satisfaction of patients with the number of the hospital physicians is	①②③④⑤	①②③④⑤
43. The satisfaction of the hospital patients with the nurses' professional treatment is	①②③④⑤	①②③④⑤
44. The satisfaction of the hospital patients with the nurse friendly language is	①②③④⑤	①②③④⑤
45. The satisfaction of patients with the number of the hospital nurses is	①②③④⑤	①②③④⑤
46. The satisfaction of patients with the level of the hospital equipments	①②③④⑤	①②③④⑤
47. The satisfaction of patients with the hospital performance level is	①②③④⑤	①②③④⑤
48. The satisfaction of patients with the hospital radiography services is	①②③④⑤	①②③④⑤
49. The satisfaction of patients with the hospital laboratory services is	①②③④⑤	①②③④⑤
50. The satisfaction of patients with the hospital pharmacy services is	①②③④⑤	①②③④⑤
51. The satisfaction of patients with the hospital services in the level of food served is	①②③④⑤	①②③④⑤
52. The satisfaction of patients with the performance in hospital's inpatient rooms is	①②③④⑤	①②③④⑤
53. The satisfaction of the hospital patients with the regulations	①②③④⑤	①②③④⑤

in reception is		
54. The satisfaction of patients with the hospital cleanliness in reception is	①②③④⑤	①②③④⑤
55. The satisfaction of patients with the hospital-orienting system is	①②③④⑤	①②③④⑤

Part 5: (Ask all except patients)

The following statements relate to your opinion about the current situation of the demand for hospital services and the expected impact of the introduction of SHI. Please give us your opinion about that according to the following issues:

①: Very small	②: Small	③: Neither small nor large	④: Great	⑤: Very great
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	Current situation	After the SHI
• Demand for Hospital Services:		
56. The number of the hospital admissions is:	①②③④⑤	①②③④⑤
57. The demand for inpatient care is:	①②③④⑤	①②③④⑤
58. The demand for internal medical services is:	①②③④⑤	①②③④⑤
59. The demand for internal medical services and surgery services is:	①②③④⑤	①②③④⑤
60. The demand for obstetrics, gynecology and pediatrics services is:	①②③④⑤	①②③④⑤
61. The demand for otolaryngology services is	①②③④⑤	①②③④⑤
62. The demand for radiology and laboratory services is	①②③④⑤	①②③④⑤
63. The demand for nursing services is	①②③④⑤	①②③④⑤
64. The demand for pharmacy services is	①②③④⑤	①②③④⑤
65. The demand for outpatient care is	①②③④⑤	①②③④⑤
66. The demand for emergency services is	①②③④⑤	①②③④⑤

67. Additional comments and suggestions on the questionnaire:

Thank you for your assistance in completing this survey

7.4 Annex 4: Arabic Version of the Questionnaire



استبيان حول التأثيرات المتوقعة لتطبيق التأمين الصحي الاجتماعي على إدارة المستشفيات العامة في سورية السيد المحترم/ السيدة المحترمة،

إن إصلاح الرعاية الصحية في سوريا، و الذي يَنْصَحُ تطبيقَ التأمينِ الصحي، سَيَجْلِبُ تغييرات هامة إلى نظام الصحة. كما أن تطبيق التأمين الصحي سيحول الرعاية الطبية الشبه مجانية المقدمة من قبل المستشفيات الحكومية إلى رعاية مأجورة، يتولى برنامج التأمين الصحي الاجتماعي تغطية تكاليفها، بينما يدفع المواطنون أقساط دورية وفق شرائح محددة للبرنامج، وذلك تحت إشراف الحكومة.

اعتماداً على ذلك، يقوم الباحث روان حاتم (طالب دكتوراه في جامعة غرايفسالد، كلية الاقتصاد والحقوق. يتابع برنامج الدكتوراه تحت إشراف الأستاذ الدكتور شتيفن فليس، في قسمه إدارة الرعاية الصحية) بإجراء مسح ميداني في مشافي محافظة اللاذقية العامة. الغرض من هذا المسح دراسة التأثيرات المتوقعة لتطبيق التأمين الصحي على إدارة المستشفيات العامة. يَشْمَلُ المسح قطاع المستشفى وهذا الاستبيان يجب أن يُمَلَأَ بعينَ من كُلِّ من أعضاء الإدارة العليا، الأطباء، الممرضات، الموظفون الإداريون والمرضى في المشفى.

تجربتك وآرائك مهمة جداً لنا لكي نملك القدرة على تحديد الآثار المتوقعة لتطبيق التأمين الصحي ولعمل اقتراحات لتغيير السياسات الحالية. لذلك نحن نطلب القليل من وقتك الثمين للإجابة عن الأسئلة التالية و أن تُرجع الاستبيان إلينا في أقرب فرصة.

إنّ المقابلة طوعية ومنظم هذا المسح سيضمن الحماية وسرية البيانات. إن البيانات والنتائج المُتَجَمَّعة من الدراسة سيستخدمان بعد إكمال جمع الاستبيانات بشكل متكامل. بدون الإشارة إلى الشخص الذي ملأ الاستبيان بالإضافة إلى عدم طلب ذكر الأسماء. ثَمَتُكَ أيضاً الحق في أن لا تُشارك في المسح وفي مثل هذه الحالة؛ نحن نتمنى عليك أيضاً أن تعيد الاستبيان الغير مجاوب عليه مع ذكر بعض الملاحظات عليه.

الرجاء، قراءة الأسئلة بعناية و الإجابة قدر الإمكان على كل الأسئلة. كما أنه في حالة عدم قدرتك على الاختيار الإيجابية الصحية من ضمن الخيارات المطروحة، الرجاء أشر فقط إلى الجواب الأكثر احتمالية لكل سؤال. لاختيار الإجابة المُفضَّلة ضع إشارة (☑) على الرقم الصحيح، بالإضافة إلى ذلك، في حالة إجابتك بشكل خاطئ، ببساطة ضع إشارة (☒) على الإجابة الخاطئة ثم اختر الإجابة المفضلة.

القسم الأول: المعلومات الأولية:

1. ماهو موقعك الوظيفي في المستشفى؟

②	طبيب	①	الإدارة العليا للمستشفى
④	موظف إداري	③	ممرضة/ ممرض
		⑤	مريض

2. المستشفى الذي تعمل به (أو تتلقى العلاج به)

<input type="checkbox"/>	مستشفى الأسد الجامعي	<input type="checkbox"/>	المستشفى الوطني باللاذقية
<input type="checkbox"/>	غير ذلك (حدد)	<input type="checkbox"/>	مستشفى جبلة

القسم الثاني : (الجميع باستثناء عينة المرضى)

الطلب: المجموعتين التاليتين من العبارات تتعلق بالوضع الحالي لكمية الخدمات المقدمة من قبل المستشفى والتأثيرات المتوقعة لمقدمة التأمين الصحي عليها. رجاء أبدى رأيك بالعبارات التالية وذلك وفقاً للقضايا والبيانات التالية:

① قليل جداً	② قليل	③ لا قليل ولا كبير	④ كبير	⑤ كبير جداً
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الوضع الحالي	الوضع بعد التأمين الصحي	• كمية الخدمات الصحية المقدمة في المستشفى
⑤④③②①	⑤④③②①	3. وسائل الإنتاج المستخدمة (المواد والأجهزة الطبية، أسرة...)
⑤④③②①	⑤④③②①	4. الموارد البشرية المستخدمة في نشاطات المستشفى
⑤④③②①	⑤④③②①	5. كثافة معالجة المرضى
⑤④③②①	⑤④③②①	6. متوسط طول مدة إقامة المريض في المستشفى
⑤④③②①	⑤④③②①	7. زمن الانتظار لتلقي الخدمة الطبية

القسم الثالث : (فقط لأعضاء الإدارة العليا في المستشفى)
المجموعة التالية من العبارات تتعلق بالوضع الحالي للجودة في إدارة المستشفى والتأثيرات المتوقعة لمقدمة التأمين الصحي عليها. رجاءً أدي رأيك بالعبارات التالية وذلك وفقاً للقضايا والبيانات التالية:

① لا أوافق على الإطلاق	② لا أوافق	③ نوعاً ما أوافق	④ أوافق	⑤ أوافق بشدة
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الوضع الحالي	الوضع بعد التأمين الصحي	■ جودة القيادة في المستشفى:
⑤④③②①	⑤④③②①	8. تطوّر إدارة المستشفى المهام وقيم وأخلاقيات العمل
⑤④③②①	⑤④③②①	9. تُشارك إدارة المستشفى في مراجعة و تطوير و تحسين أنظمة الإدارة بشكل مستمر
⑤④③②①	⑤④③②①	10. تُرتبط إدارة المستشفى بالمرضى، شركاء وممثلون آخرون من المجتمع
⑤④③②①	⑤④③②①	11. تُستعمل الإدارة ثقافة النوعية لتمييز و تحفيز و دعم موظفي المستشفى
⑤④③②①	⑤④③②①	12. تُنفذ الإدارة وتُدير وتُقيم التغييرات في المستشفى
⑤④③②①	⑤④③②①	■ جودة سياسات وإستراتيجيات المستشفى
⑤④③②①	⑤④③②①	13. تُلَبّي سياسات وإستراتيجيات المستشفى الحاجات الحالية والمستقبلية وتوقعات الحكومة
⑤④③②①	⑤④③②①	14. إن سياسات وإستراتيجيات المستشفى مستندة على المعلومات حول مقاييس الأداء والبحوث والأنشطة ذات العلاقة
⑤④③②①	⑤④③②①	15. تطوّر سياسات وإستراتيجيات المستشفى وتراجع وتحديث
⑤④③②①	⑤④③②①	16. تتكامل سياسات وإستراتيجيات المستشفى وتطبق بشكل فعلي ضمن النشاطات الرئيسية

الوضع الحالي	الوضع بعد التأمين الصحي	■ الجودة في إدارة موظفي المستشفى
⑤④③②①	⑤④③②①	17. إن الموارد البشرية مداره بشكل جيد. وهذا قد يتضمّن تطوير المهام واستعمال منهجيات المستشفى لتحسين طرق العمل
⑤④③②①	⑤④③②①	18. تسعى الإدارة إلى تطوير معرفة وكفاءة الموظفين
⑤④③②①	⑤④③②①	19. تحسّن الإدارة تفويض السلطة للموظفين
⑤④③②①	⑤④③②①	20. هناك حوار وتبادل مستمر للآراء بين الإدارة والموظفين
⑤④③②①	⑤④③②①	21. يتم تمييز ومكافأة الموظفين من قبل إدارة المستشفى

الوضع الحالي	الوضع بعد التأمين الصحي	■ الجودة في إدارة الموارد و الشراكات الخارجية للمستشفى
⑤④③②①	⑤④③②①	22. إن علاقات وشراكات المستشفى مداره بشكل جيد
⑤④③②①	⑤④③②①	23. إن مصادر المستشفى المالية مداره بشكل جيد
⑤④③②①	⑤④③②①	24. إن مباني وتجهيزات المستشفى وأدوات العمل مداره بشكل جيد
⑤④③②①	⑤④③②①	25. تتابع الناحية التكنولوجية لأدوات العمل المستخدمة بشكل مستمر
⑤④③②①	⑤④③②①	26. إن المعلومات المستخدمة في نشاط المستشفى مُدارة بشكل جيد

■ الجودة في إدارة العمليات الإنتاجية للمستشفى

⑤④③②①	⑤④③②①	27. نشاطات المستشفى مصممة ومدارة بشكل منظم
⑤④③②①	⑤④③②①	28. تحسن عمليات المستشفى وفق الحاجة وبشكل يحقق منفعة اقتصادية أكبر
⑤④③②①	⑤④③②①	29. تصمم خدمات المستشفى وتطور على قاعدة حاجات المرضى وتوقعاتهم
⑤④③②①	⑤④③②①	30. تنتج خدمات المستشفى وتسلم بشكل جيد
⑤④③②①	⑤④③②①	31. تُدير الإدارة وتحسّن العلاقة مع المرضى، وهذه قد يتضمّن القيام باستطلاعات منتظمة، لمعرفة وتحسين رضى المرضى.
■ الجودة في إدارة النتائج حول مرضى المستشفى		
⑤④③②①	⑤④③②①	32. تستعمل الإدارة معايير مناسبة لقياس آراء مرضى المستشفى
⑤④③②①	⑤④③②①	33. تستخدم الإدارة مؤشرات لمراقبة وفهم وتحسين أداء الفريق لتحقيق رضى المرضى. هذه قد تشمل تحديد نسبة الخطأ الطبي
■ الجودة في إدارة النتائج حول موظفي المستشفى		
⑤④③②①	⑤④③②①	34. تُقيس الإدارة آراء موظفي المستشفى، وذلك من خلال، الاستطلاعات، مقابلات مع الموظفين.
⑤④③②①	⑤④③②①	35. تُستعمل الإدارة نتائج نشاطات المستشفى لتحسين أداء الموظفين، هذا قد يتضمن قياس إنتاجية أطباء المستشفى.
■ جودة النتائج حول المجتمع المحيط بالمستشفى		
⑤④③②①	⑤④③②①	36. تملك الإدارة السياسات لقياس تصوّرات مجتمع المستشفى (يُحصل عليها من الاستطلاعات، مقالات صحفية...)
⑤④③②①	⑤④③②①	37. يملك المستشفى سياسة بيئية وهو قادر على قياس أثاره، هذا قد يتضمن أساليب التخلص من النفايات الطبية.
■ الجودة في نتائج مؤشرات الأداء		
⑤④③②①	⑤④③②①	38. تقيس الإدارة وتقيم وتحسن النتائج الرئيسية من سياساتها وإستراتيجياتها. هذا قد يتضمّن، دراسة وضع الخدمات الجديدة.
⑤④③②①	⑤④③②①	39. تستخدم الإدارة مؤشرات أداء رئيسية لقياس و تقيم وتحسين تطبيق خطط العمل، على سبيل المثال عدد قبولات المستشفى.

القسم الرابع : (الجميع)

رجاءً أبدى رأيك بالعبارات التالية المتعلقة بالوضع الحالي لرضى المرضى عن خدمات المستشفى المقدمة والتأثيرات المتوقعة لمقدمة التأمين الصحي عليها، وذلك وفقاً للقضايا والبيانات التالية:

① سيء جداً	② سيء	③ لا سيء ولا جيد	④ جيد	⑤ جيد جداً
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الوضع بعد التأمين الصحي	الوضع الحالي	رضى المرضى عن مستوى خدمات المستشفى الأساسية
⑤④③②①	⑤④③②①	40. رضى المرضى عن مستوى أداء الأطباء
⑤④③②①	⑤④③②①	41. رضى المرضى عن أسلوب التعامل من قبل الأطباء
⑤④③②①	⑤④③②①	42. رضى المرضى عن عدد الأطباء في المستشفى
⑤④③②①	⑤④③②①	43. رضى المرضى عن مستوى أداء الممرضات
⑤④③②①	⑤④③②①	44. رضى المرضى عن أسلوب التعامل من قبل الممرضات
⑤④③②①	⑤④③②①	45. رضى المرضى عن عدد الممرضات في المستشفى
⑤④③②①	⑤④③②①	46. رضى المرضى عن مستوى الأجهزة في المستشفى
⑤④③②①	⑤④③②①	47. رضى المرضى عن مستوى الأداء في المستشفى
⑤④③②①	⑤④③②①	48. رضى المرضى عن خدمات قسم الأشعة
⑤④③②①	⑤④③②①	49. رضى المرضى عن خدمات مخبر المستشفى
⑤④③②①	⑤④③②①	50. رضى المرضى عن الخدمات الصيدلانية في المستشفى
⑤④③②①	⑤④③②①	51. رضى المرضى عن مستوى الطعام المقدم في المستشفى

7.5 Annex 5: Letter of Ensuring Cooperation

Wi55en lockt.
550 Jahre Universität Greifswald



Ernst-Moritz-Armdt-Universität Greifswald
Prof. Dr. Steffen Fleßa • 17487 Greifswald

Department of
Health Care Management
Prof. Dr. Steffen Fleßa

To whom it may concern

• 12.10.2006

Research Project of Mr. Rawan Hatem

Dear Sirs,

I herewith confirm that Mr. Rawan Hatem has been accepted as PhD student at the University of Greifswald, School of Economics and Law. He is doing his doctorate programme in my department of health care management and is requested to write his PhD-thesis on the impact of the introduction of a health insurance on hospital management in Syria.

For this purpose Mr. Rawan Hatem will have to conduct a survey as essential element of his research. He will have to prepare questionnaires and do field visits in order to retrieve the essential data for a thorough analysis. I will supervise the preparation of the questionnaires, guide his field visits and control the data analysis. I will safeguard that all data is kept confidential and analysis and presentation are done according to internationally accepted standards of professional ethics in research.

I herewith ask for your support and a research permit for Mr. Rawan Hatem.

Greifswald, 11th October 2006

Prof. Dr. Steffen Fleßa
Head of Department

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7.6 Annex 6: Descriptive Statistics of the Study Variables

Variables	N	Mean	Minimum	Maximum
Quantity of hospital services (a)	139	2.9	2	3.8
Quantity of hospital services (b)	139	3.8	3	4.8
Quality of Leadership (a)	34	2.42	2	3.4
Quality of Leadership (b)	34	2.9	2	4.6
Quality of Policy & strategy (a)	34	2.39	1	3.5
Quality of Policy & strategy (b)	34	2.95	2	4.7
Quality of People (a)	34	2.59	2	3.8
Quality of People (b)	34	4	3	5
Quality of Partnerships & resources (a)	34	2.4	1	3.2
Quality of Partnerships & resources (b)	34	3.88	3	4.6
Quality of Processes (a)	34	2.68	2	3.4
Quality of Processes (b)	34	4	3	5
Quality of Patients results (a)	34	2.26	2	3.5
Quality of Patients results (b)	34	3.96	2	5
Quality of People results (a)	34	2.47	2	4
Quality of People results (b)	34	3	2	4.5
Quality of Society results (a)	34	2.4	2	3.5
Quality of Society results (b)	34	3.5	2	4.5
Quality of Key performance results (a)	34	2.4	2	3
Quality of Key performance results (b)	34	3	2	4
Satisfaction with hospital services (a)	246	2.73	1.6	3.5
Satisfaction with hospital services (b)	246	4.13	3	5
Demand for hospital services (a)	139	4.12	2.6	5
Demand for hospital services (b)	139	4.53	3.4	5

Note: (a) means the current situation;
(b) means the situation after the introduction of SHI

Source: Own

Eidesstattliche Erklärung

Die Dissertation habe ich selbständig angefertigt. Alle Hilfsmittel und Hilfen habe ich angegeben, insbesondere habe ich die wörtlich oder dem Sinne nach anderen Veröffentlichungen entnommenen Stellen kenntlich gemacht.

Einer Doktorprüfung habe ich mich bisher nicht unterzogen. Die Dissertation hat bisher weder in der gegenwärtigen noch in einer anderen Fassung weder der Rechts- und Staatswissenschaftlichen Fakultät der Ernst-Moritz-Arndt-Universität Greifswald noch einer anderen Fakultät oder einem anderen Fachbereich oder einem ihrer bzw. seiner Mitglieder vorgelegen.

Greifswald, . 18.03. 2011 .

Rawan Hatem

Lebenslauf

Rwan Hatem

Persönliches

Geburtsdatum: 13. Dezember 1978

Geburtsort: Latakia, Syrien

E-Mail: rawan-hatem@hotmail.com

Schulbildung

1985-1999: Besuch der Grundschule, der Mittelschule und der Oberschule in Latakia (Syrien).

Universitätsstudium

1999-2002: Studium der Wirtschaftswissenschaft an der der Tischrin Universität Im Anschluss: Absolvierung des Studiums "Licence" für Wirtschaft, Beurteilung: mit dem Prädikat „Gut“.

2002-2003: Diplom der Postgraduiertenstudien „Wirtschaftswissenschaft, Abteilung Ökonomie und Planung, Fachbereich „ Internationale Beziehungen“ mit dem Prädikat „Sehr Gut“.

Berufstätigkeiten

Seit Februar - 2006 Doktorandin an der Universität Greifswald, Rechts- und Staatswissenschaftliche Fakultät, Lehrstuhl für Allgemeine Betriebswirtschaftslehre und Gesundheitsmanagement.