

# THE UNIVERSITY OF HULL

The Impact of Health Insurance Programme on the Quality of the Private Hospital's Services in the Kingdom of Saudi Arabia.

Being a Project submitted in partial fulfillment of the requirements for the Degree of Doctorate in Business Administration in the University of Hull

By

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February, 2007

**IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL.**

**"BE THANKFUL TO ME, AND TO YOUR PARENTS"**

**( LUQMAN 31:14)**

***TO MY PARENTS***

**"MY LORD! BESTOW ON THEM YOUR MERCY AS THEY DID**

**BRING ME UP WHEN I WAS YOUNG"**

**(Al-Isra' 17: 24)**

## ABSTRACT

Title : “The Impact of Health Insurance Programme on the Quality of the Private Hospital Services in the Kingdom of Saudi Arabia”.

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Date : February 2007.

For : DBA Research Project, University of Hull, U.K.

This study is a first step in the exploration of the impact of the implementation of health insurance programmes on the quality of service within private hospitals in the Kingdom of Saudi Arabia.

The Kingdom of Saudi Arabia (KSA) has a population of 22.7 million (2002 Census), and is situated between the Red Sea and the Arabian Gulf. It has a land area of 2.2 million square miles that consists of vast deserts, the date palm oases of legend, as well as steep mountains and cool green valleys.

The history, economic, social and political development of KSA is dominated by the culture of Islam, which permeates every aspect of a Muslim’s life, and also permeates every aspect of the Saudi Arabian state. The basis of government is Shariah law, and within this legal system there are different views among Shariah scholars on the subject of “Insurance.” At the time of writing whether insurance is ‘legal’ is still a subject for debate.

The Ministry of Health (MOH) is the agency with the overall responsibility for health care in KSA. But there are 16 other health care providers that provide health care mainly for their own staff, for example, the Ministry of Defense and Aviation. Within the health service sector the private health sector has grown very quickly in recent years. In 2002 there were 101 private hospitals with the capacity of 9834 beds, which constituted 19.35% of the total number of beds in the Kingdom.



Within this sector the Al-Hammadi Hospital has been chosen as the context of the study, firstly because it is one of the largest general hospitals in the Kingdom, and secondly for the practical reasons that it was the only hospital of those approached that agreed to the research project being carried out in the hospital.

In private hospitals the patient treatment model that used has been the cash model that has two members, a physician who provides the services and a patient who pays directly. The introduction of a health insurance programme changes the patient treatment model, and introduces a third member, the insurance agent. The duties of this third member are firstly, to make sure that services provided are essential and included in the agreed insurance policy coverage. Secondly to pay the expenses according to the amount of money paid by patient in advance. The investigation starts from the premise that the introduction of third member will affect the whole system of providing medical care.

The development of methodology started with the development of a new metaphor rooted in the Islamic culture of KSA. The “JAR” metaphor has three components Jassad (Body), Aql (Mind) and Rouh (Soul) which derive from the concept of worship in Islam and Shariah Law. This metaphor was subsequently used in the development of the project methodology and the development of a ‘Quality Model’ which was used to analyze the health care process.

The ‘Quality Model’ is based on the ‘Quality Cube’ model developed by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) which introduced a process of accreditation for healthcare organizations based on their model. By using the JAR metaphor a new quality model was developed composed of 33 quality elements grouped into three groups, performance dimensions, care dimensions, and organizational dimensions. This model was then used as the basis of an investigation into changes in health quality due to the change from a cash funded health system to an insurance funded health system. A survey was selected as the most suitable instrument to conduct the study where the target populations of the survey are the doctors, outpatients, and inpatients.



Two questionnaire data collection instruments were designed which were validated by firstly by a group of jurors, and secondly reliability was tested using a pilot study. These were found to have an acceptable level of reliability. Samples of doctors and patients from the populations within the Al Hammadi Hospital were selected. The return responses from the survey process were 66.7% for doctors, 84% for inpatients, and 70% for outpatients. The results were compiled and analysed.

The main result of the data analysis was that there is significant agreement among the study groups that the impact on private hospitals due to the change of funding model is positive. This result can be converted to the JCAHO Accreditation grid score of 2 which corresponds to 'significant compliance to our quality model standards'. The coefficient analysis results shows that 50% of the influence on quality can be attributed to the combination of 'medical technology', 'patient respect and caring', and 'nutrition care'. It is therefore concluded that private hospitals and insurance companies should give more attention to these particular factors.

This positive result was not expected since Saudi culture appears to be un-supportive of insurance implementation, therefore some concern may be directed to Islamic issues in the implementation process and warrants further research. The use of the JAR metaphor in the quality model and the selection of appropriate research methods, shows that the metaphor has potential of introducing a new model into system thinking which is also an area for further studies and research. Finally, introducing an instrument that can be used in Kingdom of Saudi Arabia for identifying quality compliance to standards as well as evaluating the impact of some issues on quality such as health insurance is one of main contributions of the study.

## ACKNOWLEDGMENTS

I am extremely grateful to all those who have helped and supported me during my DBA courses and in the development and production of my research study. I wish to express my thanks to the following people. Firstly, I would like to thank Dr. Robin Asby and Dr. Peter Murray of Hull University, who advised me and guided my study from start to finish. I really learned much from them. Secondly, I would like to thank my family who supported me and gave me the time to complete this project, time which I should have spent with them. Thirdly I would like to thank all my relatives and friends who were always asking me about my study and were praying for me to finish. Last but not least I would like to thank those who helped me in typing and reviewing this dissertation.

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# Chapter 1: INTRODUCTION

The purpose of this chapter is first to describe the context of this study. The discussion includes general information about Saudi Arabia, the Saudi Health System, and the Al-Hammadi Hospital, where the study was conducted. Second, the chapter goes on to describe the aim and contribution of the research, and the content of this dissertation.

## 1.1 Saudi Arabia

Saudi Arabia is situated between the Red Sea and the Arabian Gulf, the biggest country on the Arabian Peninsula. Its land area is 2,240,000 sq. km. There are vast deserts and date palm oases of legend, as well as steep mountains and cool green valleys.

The Western Province (Al Hejaz), along the Red Sea, has the major port city of Jeddah, and the holy cities of Mecca and Medina. The Central Province (Najd) is the home of the capital Riyadh. It is also the largest province, extending from the great Nafud desert bordering Jordan and Iraq to the vast Empty Quarter (Rub Al Khali) in the south, bordering the United Arab Emirates (UAE) and Oman. To the south, the Southwestern Province has the cooler, mountainous area known as the Asir. The Eastern Province (Al Hasa) is the center of the oil industry, with numerous production fields and one of the largest refineries in the world, on the Arabian Gulf at Ras Tanura north of Dammam.

Based on the 2002 census, Saudi Arabia has a total population of more than 22.67 million people. Six million of these are expatriates; the majority of these are men from all over Asia working on single status contracts. Since 1938 when oil was discovered in its Eastern Province, the country has developed at an astonishing rate. From being a land of nomadic Bedouin tribes, and isolated trading and oasis settlements, Saudi Arabia of the 1990s boasts modern cities connected by super-highways, hospitals offering high-tech health care and a universal education system.



Its immediate neighbors are Jordan, Iraq, Kuwait, Yemen, the United Arab Emirates, Oman, Bahrain and Qatar. The climate in Saudi Arabia is hot and arid. From April to October temperatures are over 35° daily throughout most of the country, while during July, August and early September they are often 40 to 45° or even more.

Historically a remote and reclusive country, Saudi Arabia's geographical position in the Middle East, as well as its huge oil resources, have caused it to feature prominently in the headlines many times over the past thirty years.

### 1.1.1 A Brief History

#### a) From 570 AD to 632:

Perhaps the greatest influence on the development of Saudi Arabia was the birth of Islam, as taught by the Prophet Mohammed, peace be upon him, who was born in Mecca in 570. In 610, the Prophet Mohammed, peace be upon him, began teaching after a divine revelation. While in 622, due to the opposition to his teaching he fled to neighboring Medina. The date of his flight was counted as the beginning of the Islamic, or *Hejira*, calendar which operates throughout the Arab world. In 632, the Prophet Mohammed, peace be upon him, died in Medina, but his message of submission to Allah proved to be a powerful uniting force among the Arabs. His followers spread his teaching far and wide through North Africa, the Middle East, Asia and Indonesia.

#### b) From 632 to 1700s:

Despite being the birthplace of a dynamic new religion, the interior of the Arabian Peninsula remained undeveloped, nominally ruled by powers from Egypt, Syria and from the 15<sup>th</sup> century onward, the Ottoman Turks. In practice the people of what is now Saudi Arabia owed their allegiance to tribal leaders or *Sheikhs*. Tribes throughout the region fought each other constantly, competed for scarce resources in this harsh desert environment.

c) From 1745 to 1932:

The Saud family first rose to prominence when Imam Mohammed Ibn Saud allied himself with Sheikh Mohammed Ibn Abdul Wahhab, a religious leader in the town of Dir'iyah in the central Najd region. In 1745, Sheikh Mohammed Ibn Abdul Wahhab advocated a fervent 'back to basics' form of Islam. Their combined forces seized and ruled the city of Mecca for several years before being crushed by the Ottomans. Nevertheless, the teaching's resulting from the alliance between the House of Saud and the followers of Sheikh Mohammed Ibn Abdul Wahhab's endure to this day.

The present Kingdom owes its existence to King Abdul Aziz Ibn Abdul Rahman Al Saud. In the first three decades of this century King Abdul Aziz swept across the country, conquered and won the allegiance of scattered tribes during 1902 to 1926. King Abdul Aziz Ibn Abdul Rahman Al Saud consolidated his position as Emir of the Najd and King of the Hejaz, to found the Kingdom of Saudi Arabia during 1926 to 1932

d) From 1933 to 1953:

King Abdul Aziz granted the first oil concession to Standard Oil of California (SOCAL) in 1933, while in 1938 oil was found in the Eastern Province near Dhahran. In 1944, SOCAL, Texas Oil Co. (TEXACO), Standard Oil of New Jersey (EXXON) and Socony Vacuum (MOBIL), formed the Arabian American Oil Co. (ARAMCO). King Abdul Aziz died, leaving forty-three sons. He was succeeded by his son Saud in 1953.

e) From 1964 to 1982:

King Saud was replaced by his brother Faisal. King Faisal put great emphasis on planning the country's infrastructure and development, in 1964. But in 1975, King Faisal was assassinated. He was succeeded by his brother Khalid. And in 1982, King Khalid died and is succeeded by his brother Fahd.

f) From 1982 to date:

ARAMCO was nationalized in 1988. In 1990, Iraq invaded neighboring Kuwait, and King Fahd invited US and other allied forces into the



Kingdom to fight the Iraqi threat. In 1992, King Fahd founded a consultative council, *Majlis-ash-Shura*. But in August, 2005, King Fahad passed away and is succeeded by his brother, Abdullah.

Rosalie Rayburn and Kathleen Bush (1997) stated the following:

“The Saud family, under King Abdul Aziz Ibn Saud, depended heavily on certain religious sectors for critical support during its rise to power. The royal family still depends on that support. Over the past fifty years the various kings have had to play a delicate balancing act, as they try to boost the country’s economy by developing the oil industry while attempting to preserve the essential nature of Saudi Arabian society.

As oil wealth has enabled rural Bedouins to settle and work in the towns, Saudi Arabia has become dependent on expertise and technology from the West to build the necessary infrastructure to sustain this changing way of life. Yet the king, who is significantly always referred to as The Custodian of the Two Holy Mosques, must not be seen to be overly accepting of Western values which are in conflict with the moral code of Islam. There is constant ebb and flow between the two forces, which is reflected in numerous subtle ways throughout the Kingdom.” (p. 17)

## 1.2 Saudi Health System

The Ministry of Health (MOH) is the agency with the overall responsibility for health care in KSA. There are other 16 health care providers which provide health care mainly for their staff, for example, Ministry of Defense and Aviation, and the Ministry of Interior (MOP, 1990. p. 31).

The health system serves a population which was 22.67 million in 2002 over an area of 2,240,000 sq. km. which represents an average population density of 10 persons/sq. km (MOH, 2003, p. 29). The majority of Saudi population is concentrated in settlements of various sizes, 45% in large settlements of towns and cities with a



population of 30,000 or more, while the rest is distributed in 20,000 smaller hamlets, villages or Hijras. 5-10% is nomadic. (Mazrou, Y, 1999, p. 7)

The Saudi population can be considered as a young population, because in 2002, 44.39% of the population was less than 15 years old, while only 3.5% of the population was 60 or more years old. The life expectancy at birth in 2002 was 71.4 years whereas in 1960 it was just 38 years. In 1960, the Crude Birth Rate (CBR) was 49 per 1000 population and Crude Death Rate (CDR) was 23 per 1000 population. While in 2002 the figures had changed to 31 for CBR and 2.5 for CDR. The Infant Mortality Rate (IMR) was 19.1 per 1000 live births in 2002, while in 1960 it had been 70 per 1000 live births. (MOH, 2003, pp. 29-32), (W.B. 1993, p. 21)

### 1.2.1 Historical Landmarks

- In 1926, the late King Abdul Aziz established the 'Health Da'airah' in Makkah to provide health services for pilgrims.
- In 1927, the name 'Health Da'airah' was changed to "Public Health and Succor Directorate." It was linked to the General Deputy of Al-Hijaze Region Divan.
- In 1931, the Public Health and Succor Directorate was linked to the Ministry of Interior. In 1934, it was linked directly to the Agents Council Divan and it consisted of seven health regions.
- In 1950, six hospitals were established in Makkah, Madina, Jeddah, Taif, Riyadh and Al-Hasa.
- In 1951, The Ministry of Health was established (MOH, 1990, p. 7)

Now there are 13 health affairs directorates in Makkah, Madinah, Riyadh, Assier, Al Baha, Najran, Jazan, Al Qassim, Hail, Tabouk, Al Juof and Northern borders. (MOH, 2000, p. 33)

### 1.2.2 Preventive Health Services

Within the Ministry of Health there is a special department for preventive health activities, which includes:

- Controlling communicable diseases, such as Malaria, Leshmania, Balharisaa, and other infectious diseases and chest diseases. In 1992,

there were 77 communicable disease control centers in addition to 23 health centers that have the purpose of controlling and isolating the communicable and infections disease cases which come to the Kingdom with passengers and goods. (MOH, 1993, P. 236-298).

- Investigation into environmental health issues such as drinking water, food, and workers accommodation.
- Evaluation of occupational health concerns such as the working environments and workers health, together with medical surveys.
- Health Education through Primary health Care centers (P.H.C) centers, the national and local media, and schools. (MOH, 1990, p. 39-44)

### 1.2.3 Primary Health Care

The ministerial Decree No. 257/1459/50 dated 17/08/1400 H led to the establishment of the health centers as a result of Alma Ata Declaration (1978) which stated that the primary health care is the key to attain the goal of “ Health for All by the Year 2000.” (Mazrou Y, 1990, p. 31-34)

In 2002 there were 1804 PHC centers, 42% of which were equipped with dental clinics, 23% were equipped with X-ray facilities, and 59% were equipped with laboratories (MOH, 2003, p. 125). And the total attendances to PHC centers were 53,500,000 visits, 3.2% of which were referred to the hospitals. (MOH, 2003, p. 231)

### 1.2.4 Curative Health Services

General and specialist hospitals are the second and third level of the Saudi Health System. In 2002 there were 336 hospitals, 195 of which were MOH hospitals. The total number of beds provided was 47,960, giving 2.11 beds per 1000 of the population (MOH, 2003, p. 210). 60% of this provision was provided by the MOH. The total attendances at outpatient clinics was 98,000,000, 2,219,461 of which were admitted to hospital. (MOH, 2003, p. 232-241)



### 1.2.5 Other Governmental Health Agencies

As stated above other governmental agencies participate in the provision of health services. In 2002 there were 9576 hospital beds provided by government agencies other than the Ministry of Health, representing 19.9% of the total bed provision in KSA (MOH, 2003 p. 167). This provision was made in 40 hospitals (MOH, 2003 p. 210).

### 1.2.6 Health Manpower

The total number of doctors was 33,678, 49% of whom were employed in the MOH, 28% in private sector, and 23% in other governmental agencies, of the total 21% were Saudi nationals (MOH, 2003 p. 214). There were therefore in 2002 14.9 doctors per 10,000 people in 2002 (MOH, 2003 p. 30). During the period 1988-92 there were 2.3 nurses per doctor (MOH, 1993, p. 4). While in 2002, this ratio fell to 2.1 and the total number of nurses then was 68,844, 18.6% of which were Saudi nationals. The total number of para-medical providers and health technicians together was 38347, 57% of them in MOH, 27% in other governmental agencies, and 16% in the private health sector. Of these 34.2% were Saudi nationals (MOH, 2003, pp. 210-15). Table 1.1 shows the health manpower distribution in KSA.

**TABLE 1.1: HEALTH MANPOWER DISTRIBUTED BY HEALTH SECTORS, KSA, 2002**

HEALTH MANPOWER	MOH	OTHER GOVT. HOSPITALS	PRIVATE	TOTAL
DOCTORS	16645	7588	9445	33678
NURSES	37918	17664	13262	68844
PARA MEDICAL	22408	9867	6397	38672
TOTAL	77636	35119	29104	141194

Source: MOH, 2003, p. 214

### 1.2.7 Health System Finance

The government finances the Saudi health system mainly from its general revenues because government policy is that maintaining the health of all



citizens is one of its responsibilities, health services are a right for all citizens, and should be a service that is free of charge. (MOH. 1993. p. 6)

In 1990, health expenditure per capita was US\$ 322 and as a percentage of GDP was 4.8%, 3.1% of which was publicly funded and 1.7% privately funded (W.B. 1993, p. 24). Whilst in 2002 the MOH Budget was 6.8% percent of the Governmental Budget and the MOH expenditure per capita was US\$ 171 (MOH, 2003, p. 30).

### 1.3 Al-Hammadi Hospital

The private health sector had grown very quickly within the recent years,. In 2002 there were 101 private hospitals with a capacity of 9834 beds, which constituted 19.35% of the total number of beds in the Kingdom. 74% of these hospitals were concentrated in Riyadh, Jeddah and the Eastern region. Besides that there were 744 private health centers and 794 private clinics. (MOH, 2003, p. 281)

The Al-Hammadi Hospital is an example of the private hospital services existing at the present time in KSA. It has been chosen as the context of the study firstly because it is one of the largest general hospitals in the Kingdom. Secondly, the management of the Al-Hammadi hospital cooperated fully with the study described herein from the beginning by providing all the necessary data. In addition it was the only hospital of those approached that agreed to co-operate in this way.

The Al-Hammadi Hospital is situated in Riyadh and was established in 1984, by Saleh Al-Hammadi, the owner; it is one of the largest private hospitals in the Kingdom, serving both private patients and Health Care Insurance companies. The patient profile is drawn from the local community, and the expatriate worker community.

The Hospital has bed strength of 352 (on an area 35,000 sq. m.) made up from private suites, specialty care rooms, and semi suite rooms. It features a 6-bedded surgical intensive care unit (ICU); an 8-bedded intensive care cardiac unit (ICCU); and

a separate 15 bed neo-natal care unit. In addition to that it has a 60-bed nursery, 12 Operating Theaters, and a delivery suite of 11 rooms.

In common with other private hospitals it has an Outpatient Treatment Department and a 24 hour Emergency Department.

The Outpatient Department is one of the most comprehensive in the Kingdom, managed by Saudi national and expatriate consultants, technicians and nurses. It is a thriving busy department, which offers the best care available.

With the vision used to create this hospital, the owner is developing the scope of its clinics, expanding the facilities and continually looking for new technological and medical development of health care.

The Mission Statement of Al-Hammadi Hospital is to provide attentive, personal, and compassionate care while affording the more professional and technologically advanced medical treatment possible. While, the vision of the hospital is to be a world-class model of excellence by providing high quality health care.

The Organizational Structure (Figure 1.1) can be described where under the General Manager; the hospital is divided into three main sections:

Firstly, the Medical Section which is headed by the medical director who is responsible for the following departments:

- a. The Department of Medicine which comprises: Internal Medicine, General Medicine, Gastroenterology, Pediatric, Respiratory Therapy and Psychiatry.
- b. The Department of Surgery which comprises: General surgery, Obstetrics and Gynecology, Otorhinolaryngology, Ophthalmology, Urology, Anesthesiology, Orthopedics and Physical therapy.
- c. The Nursing Department including Clinical nursing service, Clinic and health care service and Central material services.
- d. The Department of Primary Care and Community Medicine, which comprises: General outpatient services, Emergency medical services, Dental services, Optometry services and Preventive medicine.



- e. The Ancillary services, which comprises: Diagnostic radiology, Pathology Pharmacy.

Secondly, the Administrative section which is headed by the Administrative Manager who is responsible for the following:

- a. The Patient Services department which comprises: Medical records, Admitting and Discharging.
- b. The Material services department, which comprises: Purchasing materials, Equipments and drugs, Warehouse.
- c. The Human resources department which comprises: Recruitment, Training, Transportation, Housing and Recreation.
- d. The Maintenance Department which includes: Medical maintenance, Non-medical Maintenance.
- e. The Room Services Department which comprises: Communication, Catering, Laundry, Security and Tailoring.
- f. The Hospital Information System.

Thirdly, The Financial Section, which includes; The Patient accounts department, Payroll Department, Cost control and budget department, Data processing department.

The Al-Hammadi Hospital has also the most advanced therapeutic units equipped with the latest technology including Lithotripsy (the destruction of kidney stones and gallstones by shock waves), a laser unit for ophthalmology, a laser unit for dermatology, a cardiac intensive care unit, permanent and temporary pacemaker implantation, a surgical intensive care unit, a paedia intensive care unit, a neonate intensive care unit, an haemodialysis unit, an electroencephalogram (EEG) unit, a portable electrocardiogram unit, a colored echo doppler unit, a cardiac scintigraphy unit, a fluorescent electrocardiogram unit, an exertion electrocardiogram unit, and a latest technology fully equipped in-vitro fertilization (IVF) department, with intra cytoplasmic sperm injection (ICSI) facilities using micromanipulation techniques.

The Al-Hammadi Hospital is keeping pace with and continually investing in the latest modern medical equipment, a clear example that illustrates this is that it has fibro-optic endoscopy, lower & upper-GI endoscopy, bronchoscopy, arthroscopy, laparoscopy, thoracospy, mediastinoscopy, cystoscopy, ureteroscopy, sigmoidoscopy and colonoscopy facilities. Further, operations such as appendectomy and cholecystectomy can be done by laparoscope without surgical incisions following the most modern of techniques.

Some special departments and support services have been given special attention by the hospital administration, simply because such services play an important role in assisting doctors to get earlier diagnoses. These departments include laboratories, physiotherapy and radiology, and an imaging department.

The Laboratory department (11 divisions) covers all investigations including biochemical, blood chemistry, cytology, histopathology, serology, immunology, hematology, blood bank, microbiological, special serum chemistry, clinical microscopy, toxicological, electrophoresis, obstetric/gynecological testing, dental laboratory and special studies.

The Physiotherapy Department occupying an area of 1600 square meters is fully equipped with modern medical and sport equipment.

The Radiodiagnostic and Medical Imaging Department includes magnetic resonance imaging (MRI), whole body CT Scan (Helical/Spiral), radio active imaging nuclear medicine, arteriography, angiography, routine radiography, mammography, all ultra sound studies and colour doppler ultrasound.

The Pharmacy Department supplies all kinds of drugs available in the markets to all departments of the hospital for the treatment of all diseases.



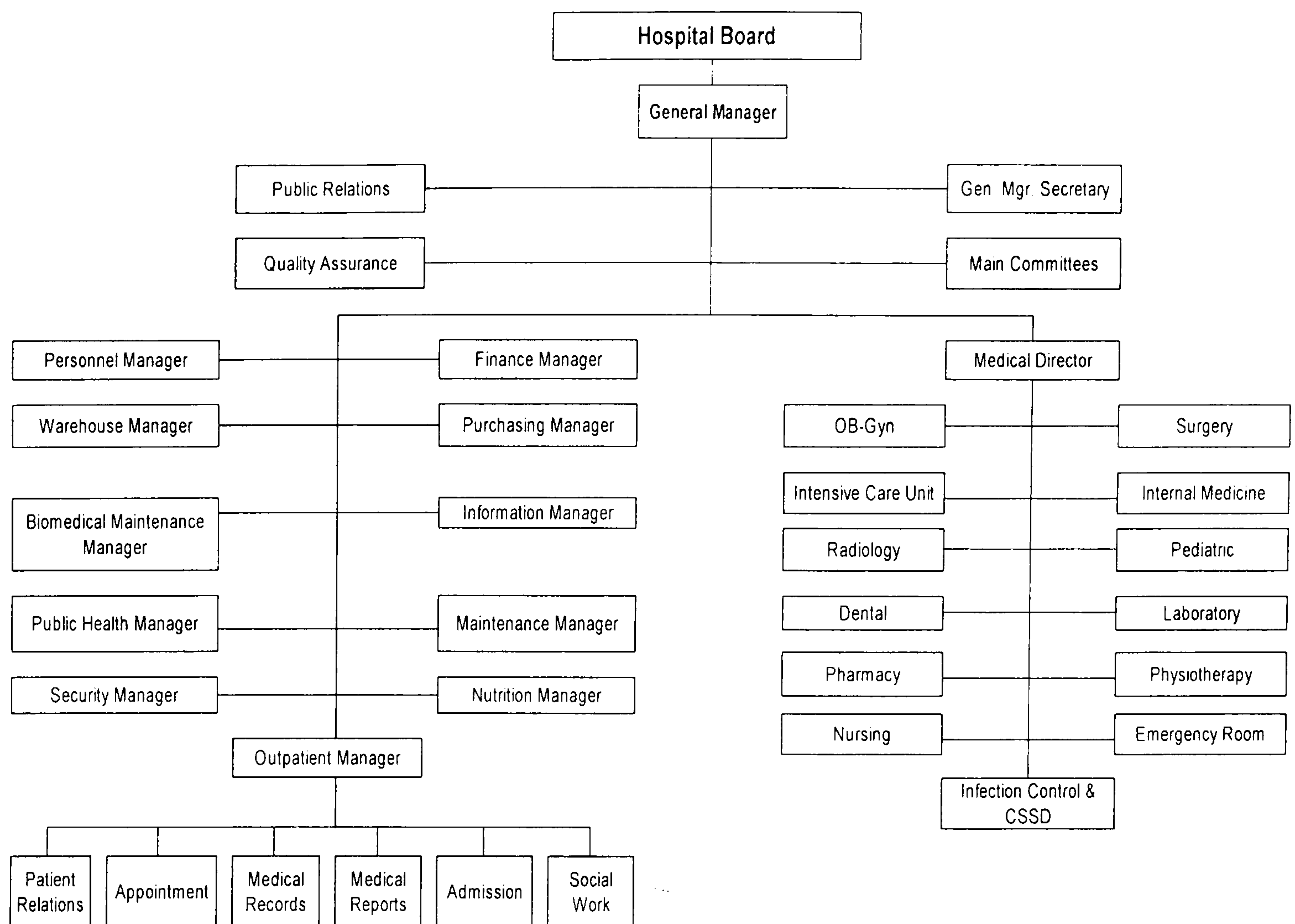


Figure 1.1 Al-Hammadi Hospital Organizational Chart

Tables 1.2 and 1.3 show some outcomes statistics of the Al-Hammadi Hospital for the year 2002.

**Table 1.2: Patient admissions and visits for the year 2002 at Al-Hammadi Hospital**

VISITS	*COMPANY PATIENTS		CASH PATIENTS		TOTAL
	NO.	%	NO.	%	
ADMISSION	14256	65	7704	35	21960
OUTPATIENT VISITS	171972	69	75888	31	247860
ER ATTENDANCE	30480	66	15780	34	46260

\*Company patients include direct companies and insurance companies.

**Table 1.3: Statistics for the year 2002 at Al-Hammadi Hospital**

L&D DELIVERIES	4632
OR-OPERATIONS	7368
IVF UNIT	60
AKU VISITS	876
PHYSIOTHERAPY	10668
LABORATORY TEST	327864
ECG, ECHO, ECHO WITH DOPPLER	840
ECG VISITS	6648
EEG VISITS	252
EPS VISITS	192
X-RAY VISITS	41184

#### 1.4 The Aim and Contribution of the Study

One of the goals of the Sixth Development Plan (1995-2000) of the Kingdom of Saudi Arabia was to establish a system that will ensure a comprehensive health security delivery to its citizenry. This plan also encourages the expansion of the private sector involvement in the provision of health services. This necessitates the creation of appropriate financing methods for health services. One generally accepted and approved method of providing additional financial resources in Saudi Arabia for the health sector is through 'Insurance'.

The Government in the Kingdom of Saudi Arabia has officially approved the application of a National Co-operative Health Insurance Programme. However, the establishment of an insurance system for this purpose and the eventual implementation of the programme involves an enormous amount of work. As of now, there has not been any practical and systematic study of the effects of the implementation of health insurance that has been carried out in the Kingdom. Therefore, this study will be a pioneer study and an important step for the implementation of national health insurance



in the Kingdom, as well as, a step in the development of the health system and services in the Kingdom of Saudi Arabia.

The problem to be investigated can be summarized by the question “HOW MIGHT THE IMPLEMENTATION OF THE HEALTH INSURANCE PROGRAMME AFFECT THE QUALITY OF THE PRIVATE HEALTH SERVICES IN THE KINGDOM OF SAUDI ARABIA.”

The study reported in this dissertation developed from this question. The aim of the study is “TO DEVELOP A MULTIPLE PERSPECTIVE MODEL OF HEALTH QUALITY SUITABLE FOR USE IN SAUDI ARABIA. AND TO INVESTIGATE CHANGES IN HEALTH QUALITY DUE TO THE CHANGE FROM CASH FUNDED HEALTH SYSTEM TO AN INSURANCE FUNDED HEALTH SYSTEM.”

Thus whilst the introduction of a new program for the Saudi health system may affect the other components of the system, such as, the system organization, the system finance, and the manpower structure, the important question is whether it will affect the quality of the services.

The study makes four contributions, three of which flow from the first, the development of a new metaphor derived from the cultures of Islam, the “JAR” model.

The “JAR” model is a metaphor based upon the way in which a human being is seen as consisting of three elements which take into account the environment and time. The acronym ‘JAR’ is derived from the Arabic ‘jassad’, ‘aqel’, and ‘rouh’ meaning ‘body’, ‘mind’, and ‘soul’ respectively in English.

Secondly, this model is then used to develop a modified definition of quality which takes into account the dynamic balance between the individual’s and organization’s requirements (physically, mentally, and spiritually) on the one hand, and fitness for use of the services or products it produces, and fitness with the environment on the other. Thus, the environment is considered to be not only the customers of the organization but to include all the aspects of natural environment as well.

Thirdly, this model is used to develop a modified quality cube model suitable to use in Kingdom of Saudi Arabia by analyzing the treatment process compared with the “JACHOS” quality cube model developed by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO, 1995, p. xi).

Fourthly, the “JAR” model is used in selecting the proposed research methods of the study’s problem.

Finally, the introduction of the study questionnaire to the accreditation survey process is an essential contribution of the study where this process currently does not have such a questionnaire. The quality model and questionnaire was designed especially to evaluate and analyze the impact of the change to health insurance on the quality dimensions and criteria.

The new multiple prospective model of health quality is then used to investigate changes in health quality due to the change from cash funded health system to insurance funded health system.

## 1.5 The Content of the Study

This study will try to provide a picture of “THE IMPACT OF THE IMPLEMENTATION OF HEALTH INSURANCE PROGRAMME ON THE QUALITY OF PRIVATE HOSPITALS’ SERVICES IN K.S.A.”. The dissertation is set out in eight chapters.

Chapter 1 “INTRODUCTION”, this chapter, describes the context, aim, contribution, and content of the study. Firstly, the chapter sets out some contextual information about Saudi Arabia, its health system, and the Al-Hammadi Hospital where the study was conducted. This chapter then goes on to describe the aim and contribution of the study, the content of the study and conclusion.

Chapter 2 describes the development of the new “JAR” metaphor. It starts by discussing the foundations in Saudi culture and Shariah Law, and the concept of



worship in Islam. Secondly it discusses the use of metaphor in management, and goes on to describe the characteristics of the “JAR” metaphor.

Chapter 3 develops the concept of quality starting with a general definition, developing a definition of quality in health care, and describing the role of the Joint Commission of Hospital Accreditation Organization in the USA in quality management in developing its ‘Quality Cube’ as a model for assessing the quality of the health care. From this a modified new quality cube model for health care based on "JAR" metaphor is developed which is the basis for the scored performance areas, and the evaluation of the Quality of Care in K.S.A. set out in the later chapters.

Chapter 4 discusses the health insurance aspect of the situation under study. The discussions here include Insurance in Shariah Law, the historical background of health insurance, and the current position of the discussion of the legality of health insurance. The purpose of the health insurance is discussed and a health insurance definition developed, which is then applied to health insurance in the K.S.A. The Chapter concludes with a discussion of the modified quality cube model picking out those dimensions of quality which may be affected by the change in the system of funding.

Chapter 5 describes the methodology of the data gathering project including the context of the project, and the development of methodology based on the "JAR" metaphor. The chapter concludes with the construction of a questionnaire based upon the new quality model, and a discussion of the validity and reliability of the resulting data. The chapter also describes the implementation of survey questionnaire, its related sampling process, and the description of the sample.

Chapter 6 describes the data analysis and results of the survey questionnaire. The discussion is divided into three areas according to the performance dimensions, the care dimensions, and the organizational dimensions of quality, established by the quality cube model.

Chapter 7 summarizes the various aspects of the study and develops the conclusions of the study.

The study sets out to add important contributions to existing knowledge, in exploring the links between the three important fields of healthcare, insurance, and quality management which come together in the situation under investigation in this project and to make recommendations for improving healthcare.

## 1.6 Conclusion

Since the study has been conducted in Saudi Arabia, it is essential to give a clear picture of components of the Saudi health system such as the demographic data of Saudi Arabia's population, and related information in the health sector to place the project in its context.

The target organizations of the study were the private hospitals of the Saudi health system. However, due to practical circumstances a description of one of them was taken as an example (The Al-Hammadi Hospital) which will shed light into the set up of private hospitals in Saudi Arabia. The chapter, therefore, gives firstly, information about Saudi Arabia; secondly, the context of the Saudi Health System; and thirdly, the example of the target organization – an example of a private hospital.

Secondly the chapter sets out the aim of the study, that is to develop a multiple perspective model of health quality suitable for use in Saudi Arabia, and use it to investigate changes in health quality due to the change from cash funded health system to an insurance funded health system. This together with the setting out of a description of the contribution, conclusion, and content, it is hoped will give the reader an overview of the project to better understand the detail in the following chapters.



## Chapter 2: THE “JAR” METAPHOR

Chapter two will outline firstly, the Saudi culture as the basis of the proposed metaphor. Secondly, the use of metaphors in management is explored; and then thirdly, the “JAR” metaphor is described, together with its uses in the study.

### 2.1 Saudi Culture and Shariah Law

To understand the history of the Kingdom of Saudi Arabia, its political, economic and social development, it is necessary to realize that Islam, which permeates every aspect of a Muslim’s life, also permeates every aspect of the Saudi Arabian state. The Kingdom of Saudi Arabia is the Source of Islam and includes the two Holy Masjed in Makkah and Madienah where all Muslims direct to during prayer, and where annually millions of them come for pilgrimage. Therefore, Saudi culture is mainly an Islamic culture, since the Saudi native population is 100% Muslim and the basis of the government is Shariah law. Rosalie Rayburn and Kathleen Bush describe this situation stating;

"Islam, which means, submission to the will of God (Allah), is often described as a way of life. All Muslims learn the Qur’an from an early stage. The Qur’an contains comprehensive guidelines on every aspect of daily life. Certainly it is the way of life in Saudi Arabia. Islam governs the political, legal, and social life of everyone in the country. Anyone who will be visiting, working or living in Saudi Arabia should read as much as possible about Islam in order to understand the motivation behind the attitudes and values of the country" (1997, p. 22).

Islam provides guidance to its adherents in all phases and activities of life, whether material or spiritual. its basic teaching with regard to economics and social life is mentioned in several passages of the holy Qur’an. Islam seeks to establish a world community, with complete equality among people, without distinction of race, class or country. It seeks to convert by persuasion, allowing no compulsion in religious beliefs.



every individual being personally responsible to God. To Islam, Government signifies a trust, services, in which the functionaries are the servants of the people. According to Islam, it is the duty of every individual to make a constant effort for spreading good and preventing evil, and God judges according to our acts and intentions. Even as Islam seeks to develop individuality in man, it seeks also social collectivity. This could be seen in all its prescriptions (e.g. the five daily prayers, or the pilgrimage). If everyone is to think of none but his single self, society will be more and more in danger, for the simple reason that there are always a very few rich and a very many poor (Hamidullah, M, 1977, p. 47). The Islamic conception on this subject envisages the constant redistribution and circulation of the national wealth.

The holy Qur'an repeats many times "establish worship and pay Zakat-Tax." What can be a better manifestation of this unity of the body and soul than the fact that the worship of the one God and the payment of the duty towards society are commanded in one and the same breath. Among Muslims, The holy Qur'an, which is a book in Arabic language, is the word of God, a Divine revelation received by the Prophet Mohammed, peace be upon him, and destined for his adherents. Moreover, in his quality of being the messenger of God, Mohammed of the holy memory, has explained the sacred text, and given further directions, and these are recommended in the Hadith, or the collection of the reports of the sayings and doings of the Prophet Mohammed.

Shariah Law began as a law of a ruling community and its influence grew in dimension and now extends from the Atlantic Ocean to the Pacific. It had an inherent capacity to develop and to adapt to the exigencies of particular culture and circumstances. It has not lost its dynamism even today; the discussion of the insurance in Shariah law, which has not existed in the past within Islamic culture, is an example of its dynamism and adaptability.

As of one of the major oil producing countries, Kingdom of Saudi Arabia is a rich country where many other nationalities come to work. Saudi culture has been affected by other cultures, especially western cultures, in some way. But Islam has still the biggest impact and influence on Saudi people.



## 2.2 The Concept of Worship in Islam

Shaikh Al-Islam Ahmed bin Abd al-halim bin Taymiyah (1263-1328 G) was asked about the words of God, in the Qur'an, "O mankind! I' budu, serve your Lord" (2:21). What is the meaning of "ubudiyah", servanthship? Ibn Taymiyah was requested to answer. He replied:

"Ibadah is a comprehensive term. It refers to all that God loves and approves of: the words that we say, and the acts that we do, internally in our hearts, or externally with our organs: prayer (salah), compulsory charity (zakat), fasting, pilgrimage, telling the truth, discharging the trusts, serving parents, doing good to kin, fulfilling promises, bidding the good, forbidding evil..etc " (Ansari, M.A., 2001, p. 19).

Ibn Taymiyah has discusses the "Ibadah", servanthship, the highest worshipful stage of man in this life and the next, in the light of the Qur'an and Hadith. This stage is characterized by the coming together of three things that are what we say, what we do internally, and what we do externally. Mohammed bin Abibaker (Ibn Al Gayyme), 1293-1351 G: the student of Ibn Taymiyah discussed in detail, and at length in his book "Al Rouh" the relationship between the three components of a human being that are "Jassad", the body; "Aqel", the mind; and "Rouh", the soul. He concluded that the specific characteristics and needs of each of these components and all human acts result from the interactions of these three components (1988, p. 359).

The concepts of the mind "Aqel", and the Soul "Rouh", in Islam refer to the inner self which is called the "Heart". The 'Heart' in the Qur'anic vocabulary, is not merely the piece of flesh in the human body, but the center of all human feelings, emotions, motives, drives, aspirations, remembrance and attention. It is the "heart" which is softened (al-Zumar, 39:23), or hardened and becomes stony (at-Baqarah, 2:74). It is the "heart" which goes blind and refuses to recognize the truth (al-Hajj 22:46) for it is its function to reason and understand. (al-A'raf 7:179; al-Hajj 22:46: Qaf 50:37). In "hearts" lie the roots of all outward diseases (al-Ma'idah 5:52): they are the seat of all inner ills (al Baqarah 2:10): "hearts" are the abode of "Iman", faith (al-Madinah 5:41) and hypocrisy (al-Tawbah 9:77). It is the "hearts", again, which are the center of every good and bad thing, whether it be contentment and peace (al-Ra'd 13:28), the strength to



face afflictions (al-Taghabun 64:11), mercy (al-Hadid 57:27), brotherly love (al-Anfal 8:63), "taqwa" (al-Hajurat 49:3: al-Hajj 22:32) or, doubt and hesitation (al-Tawbah 9:15). Finally it is, in reality the "ways of the heart" for which mankind shall be accountable, and only the one who brings before his God a sound and whole "heart" will deserve to be saved (al-Baqarah 2:225; al-Shuara 26:88-9).

When I read the Noble Qur'an, I consider the three components of the human: that are the body "Jassad", the mind "Aqel", and Soul "Rouh". I have noticed that Allah describes in many surahs believers and/or the way that they behave by selecting a combination of characteristics of these three components. The combinations include body's efforts and movements, the minds efforts to learn and/or teach, and recommend the soul's efforts to believe. For example read surah, Al-Asr 103 (The Time), surah, Al-Furqan 25:63-4, 70-1, and surah, Al-Isra 17:18-20.

a. In surah Al-Asr, Allah says:

"1. By Al-Asr (the time).

2. Verily, man is in loss,

3. Except those who believe (in Islamic Monotheism) and do righteous good deeds, and recommended one another to the truth, and recommended one another to patience".

b. In Surah Al-Furqan, Allah Says:

"63. And the (faithful) slaves of the most gracious (Allah) are those who walk on the earth in humility and sedateness, and when the foolish address them (with bad words) they reply back with mild words of gentleness.

64. And those who spend the night in worship of their Lord, prostrate and standing".

"70. Except those who repent and believe (in Islamic Monotheism), and do righteous deeds; for those, Allah will change their sins in to good deeds, and Allah is Oft-Forgiving, Most merciful.

71. And whosoever repents and does righteous good deeds; then verily, he repents towards Allah with true repentance".

c. In Surah Al-Isra, Allah says:

"18, whoever desires the quick-passing (transitory enjoyment of this world), we readily grant him what we will for whom we like. Then, afterwards, we



have appointed for him Hell: he will burn there in disgrace and rejected (-far away from Allah's mercy).

19. And whoever desires the hereafter and strives for it, with the necessary effort due for it (i.e. does righteous deeds of Allah's obedience) while he is a believer (in the Oneness of Allah) then such are the ones whose striving shall be appreciated, (thanked and rewarded by Allah)."

The mind and the soul get more importance and caring in the Holy Qur'an and the Prophet Mohammad's (peace be upon Him) sayings. Therefore, more than a thousand times the Almighty Allah asks the people to use their minds to think about themselves and nature in the Holy Qur'an. For example Allah in Surah Al-Anbiyaa 21, says: "Certainly We have revealed to you a Book in which is your good remembrance; what! do you not then understand?". In surah Al-Mu'minun 80, it is said that: "It is He Who gives life and death, and to Him [is due] the alternation of Night and Day: will ye not then understand?", and in surah An-Nisaa 82: "Will they not then ponder on the Qur'an? If it had been from other than God they would have found therein much incongruity." While Almighty Allah says about the soul in surah Al-Isra 85: "And they ask you [O Muhammad] concerning the soul; Say: 'The soul is one of the things, the knowledge of which is only with my Lord. And of knowledge, you (mankind) have been given only a little.'" Further in surah Az-Zumar Allah says: "It is God that takes the souls at death, and those that die not during their sleep. He keeps that (soul) for which He hath ordained death and dismisseth the rest till an appointed term. Verily in this are signs for those who reflect.". The Prophet Muhammad (peace be upon Him) discussed the relationship between the human beings according to the soul's relations, when He said: "the souls are soldiers directed by the Almighty Allah, if each knows the other they will like one another, but when each differ from the other they will dislike each other."

It is important to know here that what we do externally, by tongue and limbs, interacts with what we are internally. It is possible that words and deeds may be false witnesses to the state of inner self. Allah in surah Al-Saff 61, says:

"2. O you who believe! Why do you say that which you do not do?"

3. Most hateful it is with Allah that you say that which you do not do."



Concluding this discussion, I can say that the structure of Islam is erected on two principles: first - that we should not worship and serve anyone except God, and second that we should not serve God except in the way He has prescribed for our whole person - Body (Jassad), Mind (Aqel), and Soul (Rouh).

### 2.3 Metaphor in Management

Gareth Morgan (1997) in his book "Images of Organization" discussed eight metaphors that can be used to understand organization and management. By these metaphors an organization can be understood in terms of machines, organisms, brains, cultures, political systems, psychic prisons, flux and transformation, or instruments of domination. Further that it is useful for a manager to explicitly explore the consequences of thinking of his organization in each of these terms.

Some of the metaphors describe explicitly the manager's usual ways of thinking; others develop new insights and perspectives. Collectively, the explicit consideration of these metaphors demonstrates how we can use metaphor to generate a range of complementary and competing insights and learn to build on the strengths of different points of view.

The first metaphor is that a manager can think of his organization as a machine. When managers think of organizations as machines they tend to manage and design them as machines made up of interconnecting non-thinking parts, each employee one of those parts. Each part plays a clearly defined role in the functioning of the whole. (p. 13). This metaphor gave rise to the development of bureaucratic organization, an idea originally developed to overcome promotion and preferment for reasons other than competence i.e. 'wasta' (Weber 1947). One of the most basic problems of modern management is that this metaphor is now standard as the only conception underpinning the idea of organization and many problems arise from this, since an organization is not a machine.

The second metaphor is the idea that organizations can be thought of as organisms. This metaphor focuses the manager's attention on the relationship of the



organization to its environment and its requirements in order that it survives. Different types of organization can be viewed as belonging to different species of organism, and the bureaucratic machine type is just one. Just as in the natural world then different species are suited to different environments, and adapt to changing circumstances. In terms of this metaphor it can be understood how organizations are born, grow, develop, decline, and die and how relations between species and the evolutionary patterns found in the broader ecology affect them. (p. 39) This metaphor enables a second different perspective which contributes much more to understanding organizations and has contributed a great deal to the theory of modern management. (e.g. Wren 1994)

Morgan's third metaphor views organizations as brains, and focuses on the importance of information processing, learning, and intelligence. This provides a frame of reference for managers to understand and assess organizations in these terms. It also provides a set of principles for creating "learning organizations." (Morgan 1997 p. 40)

The fourth metaphor is the idea that organizations are cultures. Whilst not strictly a metaphor, this leads managers to focus upon the values, ideas, beliefs, norms, rituals, and other patterns of shared meaning that guide organizational life. Writers on corporate culture have paid a great deal of attention to this over the past few years (e.g. Hofstede 1994) because it gives another way of managing and designing organizations. (Morgan 1997 p. 121)

The fifth metaphor, again not strictly a metaphor, is to focus on the different sets of interests, conflicts, and power plays that shape organizational activities. The metaphor explores organizations from the perspective of governance, and the detailed factors shaping the politics of organizational life. (Morgan 1997 p. 155)

The sixth metaphor is the idea that organizations are "psychic prisons" where people become trapped by their own thoughts, ideas, and beliefs or by their unconscious mind. The image of a psychic prison invites managers to examine themselves and their organizational life to see if they have become trapped by conscious and unconscious processes of their own creation. This metaphor offers many important insights about the psychodynamic aspects of the problems in organizations, and the way that favored



modes of organizing e.g. bureaucratic organization, mentioned above leads to problems (Morgan 1997 p. 220)

The seventh metaphor is understanding organization as flux and transformation, focusing on the way that change shapes social life. The metaphor examines four ways in which this happens, which may be viewed as four different metaphors for studying change. The first of these, focuses the managers attention on the way in which organizations are self-producing systems, that is they continually create themselves from the image that the people who work in them have of them (e.g. Mingers 1995). The second metaphoric approach draws on insights from the study of chaos and complexity theory (e.g. Stacey 1994). The third views organization as the product of circular flows of positive and negative feedback (e.g. Senge 1990). The fourth explores how the features of modern organization are the product of a dialectical logic whereby every phenomenon generates its opposite. These metaphors aid a manager in understanding and managing organizational change and to appreciate some of the forces shaping the nature of organization at a societal level. (Morgan 1997 p. 262)

The eighth and final metaphor described by Morgan is that organizations are instruments of domination. The metaphor focuses attention on how organizations often use and exploit their employees, the communities in which they are based, and even the world environment and economy to achieve their own ends. This metaphor can be viewed as an extension of the political metaphor which helps managers understand negative aspects of labor-management relations and the impact of global corporations. This metaphor is particularly useful for understanding organizations from the perspective of exploited groups and for understanding how actions that are rational from one viewpoint can be exploitative from another. (Morgan 1997 p. 303)

Before I discuss this new metaphor, I would like to quote from Morgan (1997) his five key ideas for guiding management change:

- “Rethink what we mean by organization, especially the nature of hierarchy and control.
- Learn the art of managing and changing contexts.





- Learn how to use small changes to create large effects.
- Live with continues transformation and emergent order as a natural state of affairs.
- Be open to new-metaphors that can facilitate processes of self-organization.” (p. 266)

The systems approach uses many different kinds of metaphors and models to learn about and influence situations. Sometimes these are custom designed for a particular set of circumstances. At other times, the manager does not have to generate new metaphors or models but can use those already developed and generalized for use in different sorts of study such as Interactive Planning, Hiring System Theory, Operations Research, Socio-technical theory, Soft Systems theory, System Dynamics, Total Quality Management, and Viable Systems theory. These will all have a developed theoretical background and a framework of rules or guidelines of use.

#### 2.4 The “JAR” Metaphor

In Saudi hospitals of which I have experience, there are teams of 5 or 6 technicians in the laboratories, when one of them has problems or an emergency that prevents them coming to work; the other colleagues adapt themselves to overcome the shortage without informing the management. I asked myself, why they did so. The answer is very simple: because they love each other and they do their job as a team and as one whole body.

In our Arabic culture loving people or not is one activities of the “Rouh”(Soul) in ourselves as human beings. That means that the “Rouh” (Soul) is at the foundation of this adaptability.

In such situation, I remember that in his "Jame'a" Imam Mohammed Al-Bukhari (773-835 G) said as narrated by Abu Mussa:

“The prophet Mohammed (may peace and blessings be upon him) said. ‘A believer to another believer is like a building whose different parts enforce each other’. The Prophet then clasped his hands with the fingers interlaced.” Volume 8, Book 73, Number 55; p. 510).

Adapting a systems approach means putting the emphasis on "the big picture" or the whole and considering the functions of a system's parts based on their relations with one another and within the system's larger context. (Leonard, A. & Beer, S., 1994, p. 1). If we asked about the systems and its parts, the answer is that the system is the whole person or body of the human being and its parts are the components mentioned in 2.1.1, the "Jassad", Body, the "Aqel", Mind, and the "Rouh", Soul considering the relationship to the external environment and the time factor to be included.

The "Rouh", Soul part in the system was considered by the Prophet Mohammed to be the ultimate guide for the believers' relationships to each other. Imam Al-Bukahari said as narrated by Anas:

“The Prophet Mohammed said ‘None of you will have faith till he wishes for his (muslim) brother what he likes for himself.’” (Vol. 1, Book 2, No. 12: p. 3).

The "Aqel," mind part of the system was considered by the prophet Mohammed to contribute as well to the believers' relationship to each other. He gave a clear example to simplify the importance of the "Aqel" part where Imam Al-Bukhari said as narrated by An-Nu'man Bin Bashir:

“The Prophet Mohammed Said, ‘the example of the person abiding by Allah's order and restrictions in comparison to those who violate them is like the example of those persons who are drawing lots for their seats in a boat. Some of them obtained seats in the upper part, and the others in the lower. When the latter needed water, they had to go up to bring water (and that troubled the



others). so they said. 'let us make a hole in our share of the ship (and get water) saving those who are above us from troubling them'. So, if the people in the upper part left the others do what they had suggested, all the people of the ship would be destroyed. but if they prevented them. both parties would be safe'. (Volume 3, Book 44, No. 673, p. 196).

The third part the "Jassad", body of the system was also discussed by the Prophet Muhammad. Imam Al-Bukhari said as narrated by An-Nu'man bin Bashir:

"Allah's Apostle Mohammad said, 'You see the believers as regards their being Merciful among themselves and showing love among themselves and being kind, resembling one body, so that, if any part of the body is not well then the whole body shares the sleeplessness (insomnia) and fever with it'. (Volume 8, Book 73, Number 40: p. 509).

Now let us try if we can identify the organization image by the same components of the living human being that are "Jassad" (Body), "Aqel" (Mind) and "Rouh" (Soul). By using this metaphor the living organization has "Jassad" (Body) which is composed of the bodies of the collection(s) of people and related infrastructure. The "Aqel" (Mind) of the living organization is the accumulative knowledge processing of the shared individuals knowledge within the organization. And "Rouh" (Soul) of the organizations is an accumulative set of believing processing of the shared belief of individuals within and outside the organization. (See figure 2.1.)

Figure 2.2 shows the relationship between Morgan's organizational images or metaphors and the specific related part of the "JAR" model. Where we can think about these metaphors as subsystems of the "JAR" model.

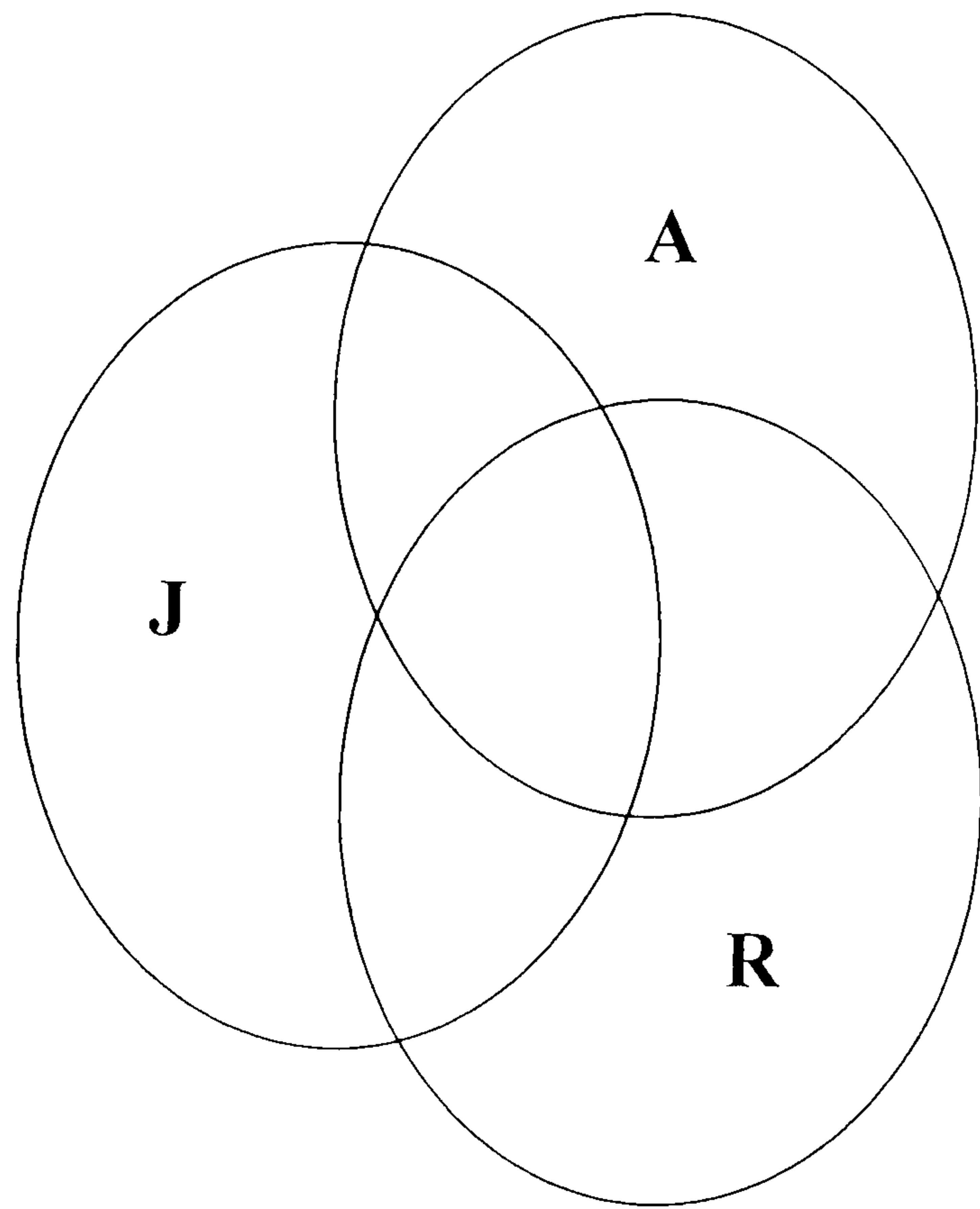
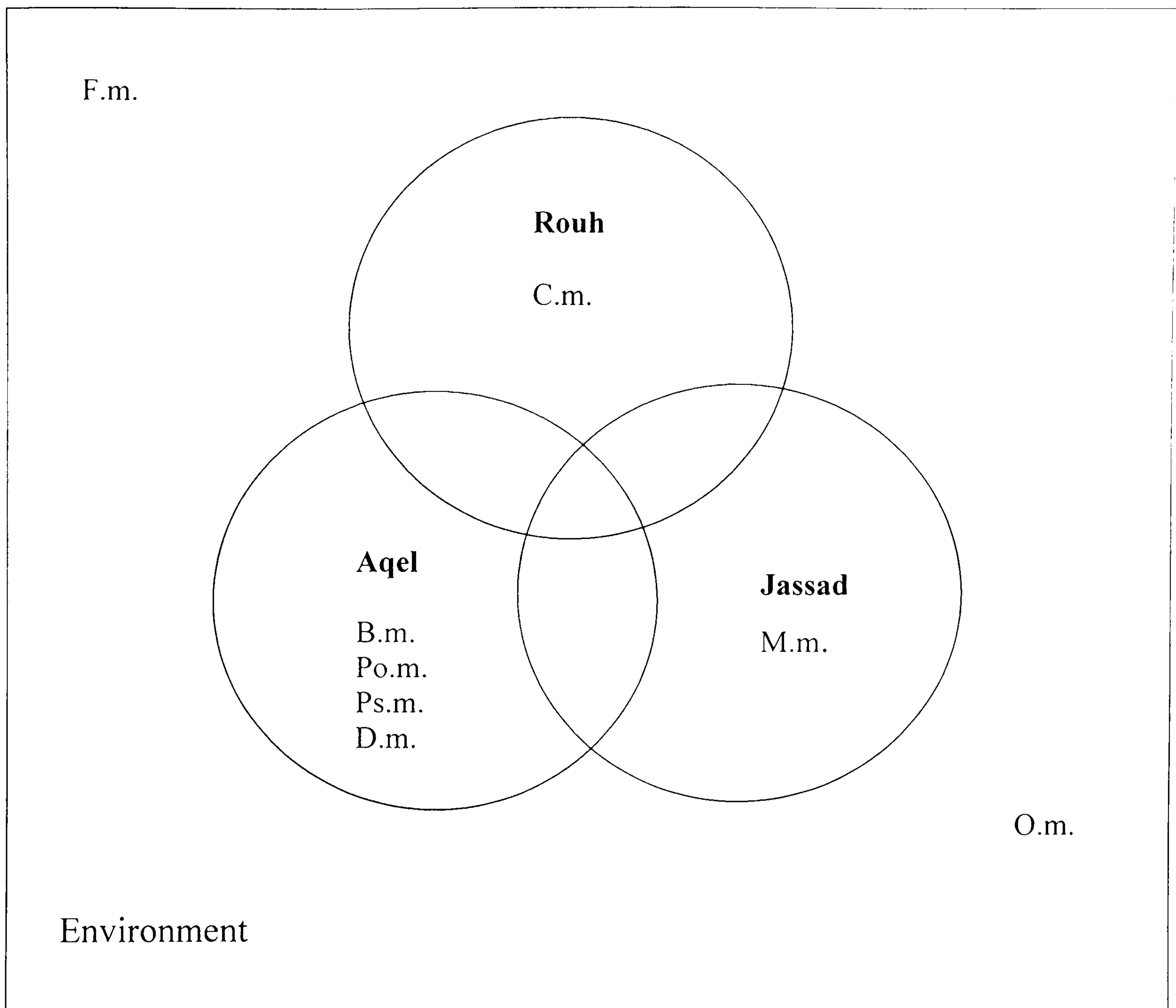


Figure 2.1: The Components of the whole person as a "JAR" Metaphor.





- M.m. = Machine metaphor
- O.m. = Organism metaphor
- B.m. = Brain metaphor
- C.m. = Culture metaphor
- Po. m. = Political Systems metaphor
- Ps. m. = Psychic prison metaphor
- F.m. = Flux and Transformation metaphor
- D.m. = Domination metaphor

Figure 2.2 Relationship between the “JAR” metaphor and Morgan’s ‘Organizational Images’ metaphors

## 2.5 Conclusion

Saudi culture is deeply rooted in Islamic Shariah and the experience of a rugged people who made their home in a desert environment. The concept of worship as Allah has decreed is spelt out in the Qur'an and I have made reference to the relevant verses. Scholars like Ibn Taymiyah and Ibn Al-Gayyime have elaborated further in their works relating worship concepts to the metaphor of body, mind, and soul. This provides the basis for the "JAR" model. The "JAR" model is therefore both rooted in Saudi culture, described in chapter 1, and derives its philosophy from the scholarly works of Ibn Taymiyah and Ibn Gayyime, both of which were derived from Qur'an and the sayings of the prophet. The contribution and usefulness of the 'JAR' model will be seen in the later chapters.



## Chapter 3: QUALITY OF CARE

The concept of quality is multi-dimensional; quality may mean a durable product or excellent service. In the modern world of commerce, industry and technology, concern with quality has occupied a prominent position. The concern ranges across a gamut of ideas extending from a simple notion to a sophisticated paradigm.

In the previous chapters, Saudi culture, the Saudi health system, and the "JAR" metaphor were discussed. We shall now proceed to examine different aspects of the concept of "Quality." We shall explore its different definitions as given by quality scholars such as Crosby, Deming, Juran, Oakland, Flood, and Beckford. However, the discussion will focus on the theories of Crosby, Deming, and Juran because the applications of their theories are firmly rooted in Saudi Arabia's hospitals. These quality applications were first initiated and introduced by the oil company "ARAMCO" to Saudi Arabia.

The chapter will examine the concept of quality vis-à-vis the health care industry. It should be noted that the health care industry has developed particular conceptual approaches of evaluating healthcare quality such as, hospital medical staff committees, tracer methodology, health accounting methods, and accreditation of healthcare organizations. Indeed, the accreditation concept will be the most important aspect of the study because it is in line with the compulsory health insurance scheme as well as the future strategies of the Saudi health system.

Since it was the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) that introduced accreditation, we cannot describe accreditation without mentioning its role in the accreditation process and assessing quality in healthcare. Moreover, this body has been engaged in accreditation exercises in some Saudi hospitals and its standards have been used up until now in many Saudi hospitals. In its accreditation process, the Joint Commission uses a methodology which uses and depends upon a model of quality which is expressed in terms of a quality cube model



and its characteristics. This will be discussed in detail in this chapter. This approach will form the basis of introducing a new quality model suitable for Saudi Arabia. To achieve this, the main objective of the study, the current hospital quality efforts in Saudi Arabia will be examined. Finally, the chapter will end by introducing a new quality model based on quality cube analysis using the "JAR" metaphor.

### 3.1 Quality Definition

In our normal life we use words such as a “top quality” product or service. John S. Oakland stated that “Quality is often used to signify ‘excellence’ of a product or service” (Oakland 1995, p. 4). But he also defines quality as ‘meeting the customer requirements’. (Oakland, J.S. 1999, p. 47) It is important to define quality in words that are useful in its management and study because nothing can be improved unless it has been clearly defined and can be measured. Three American quality experts have, in the past, advised industry throughout the world on how it should manage quality and introduced approaches to define and manage quality. These are the approaches of Philip B. Crosby, W. Edwards Deming, and Joseph M. Juran as follows.

3.1.1 Crosby (Crosby 1979) introduced four absolutes of quality, these are: - the quality definition is ‘conformance to requirements’, the quality system is ‘preventive’, the performance standard is ‘zero defects’, and the measurement to be made is ‘the price of non-conformance’. Crosby offers fourteen steps to management improvement:

- a. Make it clear that management is committed to quality.
- b. Form quality improvement teams with representatives from each department.
- c. Determine where correct and potential quality problems lie.
- d. Evaluate the cost of quality and explain its use as a management tool.
- e. Raise quality awareness and the personal concern of all employees.
- f. Take actions to correct problems identified through the previous steps.
- g. Establish a committee for the zero defects program.
- h. Train supervisors to actively carry out their part of the quality



improvement programme.

- i. Hold a 'zero defects day' to let all employees realize that there has been a change.
- j. Encourage individuals to establish improvement goals for themselves and their groups.
- k. Encourage employees to communicate to management the obstacles they face in attaining their improvement goals.
- l. Recognize and appreciate those who participate.
- m. Establish quality councils to communicate on a regular basis.
- n. Do it all over again to emphasize that the quality improvement programme never ends. (Oakland, J.S,1995, pp. 353-6; Motabakani, M.S, 2001, pp. 38-43).

3.1.2 Deming (Deming 1982) offers fourteen points for the management of quality which are the following:

- a. Create constancy of purpose towards improvement of product and service.
- b. Adopt the new philosophy. We can no longer live with commonly accepted levels of delays, mistakes, and defective workmanship.
- c. Cease dependence on mass inspection. Require, instead, statistical evidence that quality is built in.
- d. End the practice of awarding business on the basis of price tag.
- e. Find problems. It is management's job to work continually on the system.
- f. Institute modern methods of training on the job.
- g. Institute modern methods of supervision of production workers. The responsibility of foremen must be changed from numbers to quality.
- h. Drive out fear, so that everyone may work effectively for the company.
- i. Break down barriers between departments.
- j. Eliminate numerical goals, posters and slogans for the workforce asking for new levels of productivity without providing methods.
- k. Eliminate work standards that prescribe numerical quotas.

- l. Remove barriers that stand between the hourly worker and his right to pride of workmanship.
- m. Institute a vigorous programme of education and retraining.
- n. Create a structure in top management that will push every day on the above thirteen points. (Oakland, J.S. 1995, pp. 353-6; Motabakani, M.S. 2001, pp. 38-43; Geyndt, W.D., 1995, p. 19)

3.1.3 Juran (Juran 1989) offers ten steps to quality improvement that are the following:

- a. Build awareness of the need and opportunity for improvement.
- b. Set goals for improvement.
- c. Organize to reach the goals (establish a quality council, identify problems, select projects, appoint teams, designate facilitators).
- d. Provide training.
- e. Carry out projects to solve problems.
- f. Report progress.
- g. Give recognition.
- h. Communicate results.
- i. Keep score.
- j. Maintain momentum by making annual improvement part of the regular systems and processes of the company. (Oakland, J.S. 1995, pp. 353- 6; Motabakani, M.S. 2001, pp. 38-42)

### 3.1.4 Comparison

One way to directly compare the various approaches of the three American gurus is in tabular form. Table 3.1, shows the differences and similarities, classified under 12 different factors introduced by John S. Oakland (Oakland 1995, pp. 355-6)



Table 3.1 The American quality experts compared.

Criteria	Crosby	Deming	Juran
Definition of quality	Conformance to requirements	A predictable degree of uniformity and dependability at low cost and suited to the market.	Fitness for use
Degree of senior management responsibility	Responsible for quality	Responsible for 94% of quality problems	Less than 20% of quality problems are due to workers
Performance standard/ motivation	Zero defects	Quality has many scales. Use statistics to measure performance in all areas. Critical of zero defects.	Avoid campaigns to do perfect work
General approach	Prevention, not inspection	Reduce variability by continuous improvement. Cease mass inspection	General management approach to quality especially 'human' elements
Structure	Fourteen steps to quality improvement	Fourteen points for management.	Ten steps to quality improvement
Statistical process control (SPS)	Rejects statistically acceptable levels of quality	Statistical methods of quality control must be used	Recommends SPC but warns that it can lead to tool-driven approach

Table 3.1 The American quality experts compared (cont.).

Improvement basis	A 'process', not a programme. Improvement goals.	Continuous to reduce variation. Eliminate goals without methods	Project-by-project team approach. Set goals
Teamwork	Quality improvement teams. Quality councils.	Employee participation in decision-making. Break down barriers between departments.	Team and quality circle approach
Costs of quality	Cost of non-conformance. Quality is free.	No optimum-continuous improvement.	Quality is not free – there is an optimum
Purchasing and goods received	State requirements. Supplier is extension of business. Most faults due to purchasers themselves.	Inspection too late – allows defects to enter system through AQLs. Statistical evidence and control charts required	Problems are complex. Carry out formal surveys
Vendor rating	Yes and buyers. Quality audits useless	No-critical of most systems	Yes, but help supplier improve
Single sources of supply		Yes	No – can neglect to sharpen competitive edge.

(Source: Oakland 1995)



Deming first applied his ideas in Japan in 1950, though it was only four years after the end of World War II. Since then Japan has become a world economic leader and a top ranked industrial nation. As a further result of this intervention other experts e.g. Ishikawa, and Feigenbaum contributed to Japanese management. (Bin Saeed, K.S., 1997, p. 49)

Ironically, Japan adapted Deming's theory in 1950 while his native country, the United States of America, did not realize its effectiveness until 1980, after the NBC television network reported in the United States on Deming's philosophy and its impact on Japanese industry. It was then that the leading American industrial organizations began to implement his theory. (Saddique, A, 1995, p. X)

Deming has classified the activities of quality improvement as: - improving existing products and services, improving existing processes, creating new and better products and services and creating new and better processes. (Berwick, D.M, 1990, p. 247)

### 3.1.5 International Standardization Organization (ISO)

The International Standardization Organization is a worldwide federation of national standards bodies which, through the work of international technical committees comprising interested parties from all backgrounds, develops and publishes internationally harmonized standards for a wide range of products, services and systems. Standards published by ISO (and subsequently by national standards bodies such as ANSI (American National Standards Institution) in the USA represent "state of the art" in international consensus on a particular issue. (SGS, 1997, p. 6)

In the ISO's Quality Vocabulary: part 1, International Terms (ISO 8402, 1986), quality means "the totality of features and characteristics of a product or service that bears on the ability to satisfy stated or implied needs."

The later ISO 9000 series of standards was first produced internationally in 1987 and is now an extensive family of standards dealing with various quality system disciplines. Most ISO 9000 series documents provide guidance only; however, the three original documents, ISO 9001, ISO 9002, ISO 9003, are "requirements standards". They still form the heart of the series and generate the most interest.



These three standards, which define a minimum framework of requirements for the development and implementation of a quality system, are designed to be verifiable standards for a quality system in any industry sector. As such, they are generic to all quality (management) systems and are non-technical in nature. They do not specify performance (outcome) requirements or methods to be implemented to attain them. These requirements and methods must be ascertained by the organization in question and will be dependent on any customer, regulatory, or internally specified expectations.

Due to this inherent flexibility, quality systems developed to satisfy ISO 9001/9002/9003 would assist organizations to consistently meet their existing quality objectives. Conformance to one of the standards provides an “umbrella” tool for the management of all activities impacting quality. Such a system will support, and not in any way contravene, existing quality performance measures and quality improvement initiatives such as state mandated practices and/or JCAHO/NCQA standards and/or Juran/Deming/Crosby philosophies. (SGS, 1997, p. 6)

In late 2000, the revision to the ISO 9000 family of standards was adopted where all main requirements of 1994 version of ISO 9001 continue to be present, while structured into four headings; - management responsibility, resource management, process management, and measurement and analysis improvement. Thus the 1994 family of standards (ISO 9001, 9002, 9003, and 9004) was consolidated into ISO 9001:2000 with a new ISO 9004:2000 which is a set of guidelines for continuous improvement.

Thus, quality is a multidimensional and multifaceted concept. This partly explains the large number of definitions of the concept of quality, the many approaches to measure and assess it, and the variety of approaches to assure and improve it. John Beckford (2002) explains other issues through the discussion of three quality imperatives. First, the economic imperative for quality where the “gurus” promise that achieving quality will reduce costs and improve productivity. Therefore the imperative is survival for the individual organization and ultimately the total economy (Beckford 2002 p. 7). Second, he explains the social imperative for quality which stems from the responsibility of all managers to minimize waste of costly human resources and maximize



satisfaction through work for their colleagues in order to support social cohesion within their own sphere of influence (Beckford 2002 p. 9). Third is the environmental imperative for quality, by which the management have the additional responsibility of considering the total effectiveness of the organization in terms of its use of all resources and the environmental impact and implications of the organisation they manage. This may mean undertaking additional investments to reduce and avoid environmental damage. Finally, by considering the different quality definitions, the three quality imperatives, and the “JAR” model elements, I propose that quality for a product or service means.

“Conformance to physical, mental, and spiritual requirements of individuals and organizations, which leads to fitness with the environment and nature as well as fitness for use.”

Thus, organizational quality is not only determined by the fact that the organization produces a product or service which is fit for use, or conforms to customer requirements but also depends upon all of the aspects of the relationships that the organization makes with its environment.

### 3.2 Quality in Health Care

It is tempting to think that quality assurance activities began with the Joint Commission on Accreditation of Hospitals in the 1960s and 1970s when, in fact, the commitment to assessing and improving quality of care has existed throughout recorded medical history. Quality assurance dates to 2000 B.C. in the Code of King Hammurabi of Babylon. Inscribed on a block of diorite housed in the Louvre Museum in Paris are the earliest known documented penalties for incompetent practice. The Code of Hammurabi also contains the earliest known listing of charges for service, thereby incorporating the quality and cost of medical care. (Bittle, L. J, 1991, p. 128)

Discussions of quality management and its principles and the possible steps of implementation in manufacturing since that time have been numerous. But also there



has been a widespread acceptance of the need for quality management principles in healthcare where the cornerstone in providing quality services is in considering the patient (customer) and his/her satisfaction. In recent times there is experience in implementing strategies from this perspective. The application of Deming's principles is easier in health care than many other customer oriented services, because it deals directly with life or Quality of Life. (Saddique, A, 1995, p. 19)

Doctors pioneered the development of Quality Assurance. For example, seven decades ago, The American College of Surgeons recommended that all surgically removed tissues be routinely reviewed by peers, a tissue committee practice that continues in many hospitals. Another example is that clinical laboratories in hospitals have maintained accuracy controls for diagnostic tests for long time. (Skillicorn, SA, 1987, p. 90)

Quality in health care is more important today than ever before. In order to survive and remain competitive in today's business climate, the requirements and expectations of all interested parties must be identified and met. Additionally, health care organizations must provide consumers and other interested parties with assurance that products and services delivered will meet or exceed their expectations. (SGS, 1997, p. 9)

“Health care quality improvement focuses on the improvement of quality, increased productivity and a more competitive edge in the health care marketplace.” (Martin, C.A, 1990, p. 170)

The health care industry faces many challenges in the decades ahead that require organizations to respond quickly to the changes in the market and the changes in consumer needs. Many health care organizations struggle to respond to an aging population, the uninsured, a movement towards outpatient delivery, the changing role of government, technological and scientific advances, increased competition and pressure to be cost-effective. Each of these challenges places the health care industry under extreme pressure to absorb budgetary constraints and still achieve best practice at all levels. This leaves health care providers, suppliers, purchasing alliances, and consumers continuously striving for quality.



“Rapid changes in health care technology, competition and economic conditions clearly challenge providers and practitioners to manage change and maintain quality.”  
(Martin, C.A, 1990, P. 170)

At first quality was largely defined in terms of structural shortcomings (buildings, equipment, drugs and supplies, staffing). Therefore the design of projects to improve quality logically focused on supplying and increasing the quality of the inputs which by definition had caused poor quality of care. Inputs are quantifiable and poor quality inputs can be costly to end product or service quality. Therefore they fit neatly into a leading strategy. This approach may be appropriate for large capital-intensive infrastructure programs (roads, dams, and telecommunications). However it has little effect on human resource programs that are labor-intensive and deal with people that provide and receive a personal service. The process by which inputs are transformed into outcomes and the desirability of the outcomes are integral parts of the quality dimensions. (Geyndt, W.D., 1995, p. 9)

The measurement of quality has always struggled with a validity issue. Is it quality that is being measured? This first assumes that there is an agreement upon definition of quality care. Many definitions are available and much effort has already been spent on attacking and defending old definitions and on formulating new ones. More importantly, a definition almost always dictates the contents and the process of measuring care implicitly because it includes norms and value judgments and advocates the criteria to be used in evaluating care. Therefore, the criteria selected to assess the quality of care implicitly define quality operationally, because the measurement process measures the criteria that were selected at the outset to define quality. The following four examples of health care definitions illustrate the evolution of the thinking over the past sixty years:

“Good medical care is the kind of medicine practiced and taught by the recognized leaders of the medical profession at a given time or period of social, cultural, and professional development in a community or population group.”  
(Lee and Jones, 1933, p. 6)

“Standards of quality of care should be based on the degree to which care is available, acceptable, comprehensive, continuous, and documented, as well as on the extent to which adequate therapy is based on an accurate diagnosis and not on symptomatology.” (Esselstyne, 1958)

“Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired outcomes and are consistent with current professional knowledge.” (Institute of Medicine, 1990, p. 4)

“Total quality management is a management process of continuous improvement or a process of continuously striving to exceed customer expectations.” (Melum and Sinioris, 1992, p. 2; Geyndt, W.D., 1995, p. 2)

From these four examples of definitions of the quality of care, it should be clear that it is extremely difficult to arrive at a consensus as to what constitutes good quality care because of the implied values inherent in a definition. Medical care or health care is not a unitary concept and its multidimensionality partly explains the existence of the many definitions and the several approaches to measure it. (Geyndt, W.D., 1995, p. 2)

### 3.2.1 Conceptual Approaches for Evaluating Health Care Quality

Mindel Sheps' seminal paper (1955) on hospital care listed prerequisites for good quality care, defined the elements of satisfactory performance, and examined the effects of care. This work stimulated and influenced the later efforts at conceptualizing quality of care. However, alternative approaches were formulated by Donabedian (1966), Dror (1968) and De Geyndt (1970).

Quality Assurance Approaches are:

- a. The hospital medical staff committees.
- b. The tracer methodology.
- c. The health accounting method.
- d. The accreditation of healthcare organizations. (Geyndt, W.D., 1995, p. 11)



### 3.2.1.a The Hospital Medical Staff Committees

The role of these committees is to review and to assure that the Quality is maintained. Most common types of medical staff committees include:

- a. Medical Audit Committee.
- b. Tissue Committee.
- c. Utilization Review Committee.
- d. Medical Records Committee.
- e. Drug, Pharmacy or Therapeutic Committee.
- f. Medical Education Committee.
- g. Infection Control Committee.
- h. Credentialing Committee. (Geyndt, W.D., 1995, pp. 11-12 )

### 3.2.1.b The Tracer Methodology

A team of researchers at the Institute of Medicine (US National Academy of Sciences) led by Kessner developed in the early 1970s the tracer methodology to measure changes in the health status of a given population. In order to adjust and maintain the Quality of the services, a set of six tracers - middle ear infection and hearing loss, visual disorders, iron-deficiency anemia, hypertension, urinary tract infections, and cervical cancer – was selected according to the criteria. The tracers were used to measure the prevalence of these conditions in the community. (Geyndt, W.D., 1995, p. 13)

### 3.2.1.c The Health Accounting Method

The strategy developed by Williamson (1971), takes the patient as the unit of analysis. It is hospital and clinic-based, patient specific and focuses on diagnostic categories or specific clinical procedures. Standards are set consensually by physicians for physicians. The health accounting method contains four basic steps:

- a. Standards are set by physicians for their own patients or by external panels of experts for use in judging the result of others.
- b. Physicians specify the outcomes of optimum care for specified groups of patients (predicted outcomes).
- c. The actual outcomes are measured for a sample of patients by a paramedical person, and a health Accountant.
- d. The actual outcomes are compared with the predicted values. (Geyndt, W.D., 1995, p. 15)

#### 3.2.1.d Accreditation of Health Care Organizations

The relationship between units of costs and outcomes (the results of the care delivered) is difficult to ascertain and requires a broad, all-encompassing analysis of costs and benefits, both direct and indirect, over a long period of time. Additionally, the cost of care and the benefits of care vary from individual to individual, based on personality, social origins, culture, education and the like. These valuations are also influenced by public financing and or health insurance. (Bittle, L. J, 1991, p. 133)

The American College of Surgeons created the first set of minimum standards for hospitals in 1917 when it launched its National Hospital Standardization Program. In 1951, the nonprofit Joint Commission on Accreditation of Hospitals was founded bringing together major national organizations concerned with quality standards in providing medial care. Expansion of its voluntary hospital accreditation work to mental health, home care, nursing homes and ambulatory care settings made it appropriate to change its name in 1988 to Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Other countries have followed the US example, e.g., Canada incorporated the Canadian Council for Hospital Accreditation, and the Australian Council on Hospital Standards commenced in 1974 and accredited its first hospital in 1977. A hospital accreditation manual has



been developed for the Latin American and Caribbean region (Novaes, 1993). Some developing countries are considering setting up hospital accreditation programs. (Geyndt, W.D., 1995, p. 15)

JCAHO designed a 10 step monitoring and evaluation process to help health care organizations manage the quality of care that they provide. The process is a retrospective structured approach that intends to identify areas where deficiencies in care might occur by focusing on the outcomes of individual care providers. These steps include the following:

Step 1. Assign responsibility;

- a. Involve the organization leader.
- b. Design and foster the approach to continuous improvement of quality.
- c. Set priorities for assessment and improvement.

Step 2. Delineate the scope of care and service;

- a. Identify key functions and/or identify the procedures, treatments, and other activities performed in the organization.

Step 3. Identify important aspects of care and services;

- a. Determine the key functions, treatments, processes, and other aspects of care and service that warrant ongoing monitoring.
- b. Establish priorities among the important aspects of care and service chosen.

Step 4. Identify indicators;

- a. Identify teams to develop indicators for the important aspects of care and Service.
- b. Select indicators.

Step 5. Establish thresholds for evaluation

- a. Each team identifies thresholds for each indicator.
- b. Select thresholds.

Step 6. Collect and organize data;

- a. Each team identifies data sources and data-collection methods for the recommended indicator.

- b. The data-collection methodology is designed, and those responsible for collection, organization, and applying thresholds are identified.
- c. Collect data.
- d. Collect data from other sources including patient and staff surveys, comments, suggestions, and complaints.

Step 7. Initiate evaluation;

- a. Apply thresholds for evaluation to indicator data.
- b. Initiate evaluation of aspect of care or service if threshold is reached.
- c. Assess other feedback (for example, staff suggestion, patient satisfaction survey results) that may contribute to priority setting for evaluation.
- d. Set priorities for evaluation.
- e. Teams undertake intensive evaluation.

Step 8. Take actions to improve care and service;

Teams recommended and/or take actions.

Step 9. Assess the effectiveness of actions and maintain the gain;

- a. Assess to determine whether care and service have improved.
- b. If not, further action is determined.
- c. (a) and (b) are repeated until improvement is achieved and maintained.
- d. Monitoring is maintained and priorities for monitoring and the indicators are periodically reassessed.

Step 10. Communicate results to relevant individuals and groups;

- a. Teams forward conclusions, actions, and results to leaders and to relevant individuals, committees, departments and services.
  - b. Disseminate information as necessary.
  - c. Leaders and others receive and disseminate comments, reactions and information from involved individuals and groups.
- (Saddique. A, 1995, pp. 45- 46)



JCAHO submitted its mission, role and functions to an intensive scrutiny in the late 1980s partly as a result of structural and financing changes in the health care sector and partly to respond to new developments in quality assurance methodologies. It modernized the accreditation process and its agenda for change in the 1990s is based on the following principles:

- 1 Standards should emphasize actual organizational performance, not simply required structural and process characteristics.
- 2 The most appropriate context for Joint Commission promotion of improved performance is described by Continuous Quality Improvement (CQI) concepts;
- 3 The hospital survey process should incorporate the most sophisticated evaluation techniques available and, at the same time, offer useful and relevant technical assistance to organizations; and
- 4 Although internal organization motivation is essential to effective implementation of new quality assessment and improvement approaches, the Joint Commission should serve a major resource for new evaluation tools and techniques to support organizations efforts. (Geyndt, W.D., 1995, p. 16)

### 3.3 The Role of JCAHO in Assessing Quality

The Joint Commission on Accreditation of Hospitals (JCAHO) carries the prime responsibility in the final regulation of the health care industry in the United States of America. A system of voluntary hospital reviews was first implemented in 1912 by the American College of Surgeons. Since then, the JCAHO, which developed from the American College of Surgeons, has surveyed and evaluated approximately 85 percent of all hospitals with greater than 100 beds. At present, it is an integral part of JCAH policy to develop and set minimum standards to guide the hospital in monitoring the quality of patient care delivered. Meeting those standards is a fundamental requirement for any hospital seeking JCAHO accreditation. (Bittle, L. J, 1991, p. 130)



Over the years, QA has established itself as the controlling factor in health care, encompassing the entire spectrum of health care efforts. The recorded failures of past QA programs were due to their inability to focus on a holistic perspective of health care; however, stimulated by changes in governmental legislation and the JCAHO, the health care industry has become more aware of the impact of quality care delivery on utilization of resources, potential liability and the need to initiate and accept changes as the mandates themselves change. (Bittle, L. J, 1991, p. 130)

Quality Assurance is now a precondition for accreditation. The JCAHO Board Commissioners approved the Quality Assurance Standard on April 7, 1979. The intent of the standard was to assist hospitals in the implementation of an overall QA program that was designed to assure optimal quality of patient care. All committees, functions or review activities concerned with QA must be integrated or coordinated so duplication can be avoided and existing data are fully utilized for QA activities. The standard also required a problem-focused approach to QA activities. (Bittle, L. J., 1991, p. 130)

Today (JCAHO) Joint Commission for Accredited of Hospital Organization demands the application of the theory in the field of Medical Services. (Saddique, A, 1995). Before the implementation of the Quality Assurance Standards, the auditing method - a specific methodology developed by JCAHO was also used, and after July 1, 1976, audits were required based on the number of annual hospital admissions. However, the results of the audits were not translated into any specific programs as many times merely a “numbers game” was being performed. JCAH surveys indicated that this process was not demonstrating problem identification and resolution and did not document that patient care had improved during the audit process. Hence, after the years of the numerical requirements for audit, there was a support for the Quality Assurance Standard that was designed to support integration of all QA activities into one hospital-wide program.

JCAHO further required support services evaluations to be *ongoing* and deleted the numerical requirements to ensure continuous evaluation of service. New terminology replaced old. *Audits* became *problem-focused reviews*. (Bittle, L. J., 1991, p. 131)



Health care is considered to be a customer oriented service where patients are customers and their satisfaction by their receiving quality care is the main objective. The president of the Joint Commission for Hospital Accreditation Organization (JCAHO) Dennis O'Leary in 1991 has stated that CQI will progressively become the central theme of the new standards framework that is evolving as a major component of the (JCAHO) agenda for change. Currently the JCAHO recognized TQM as the main management system to be implemented in every health care facility. (Saddique, A, 1995 p. 19)

The requirement that each hospital maintain an active QA program that functions both as a monitoring system and as an evaluative yardstick of patient care represents a move toward reviewing the "system" of care delivery. That is, viewing improving quality as a multidisciplinary activity within a coordinated system designed to provide services to patients that involves physicians, nurses, and hospital departments. All aspects of the care delivery "system" are encompassed in a hospital-wide QA program. The program must provide the means for an active collection and evaluation of information that enables an institution to improve care and clinical performance. It must also be part of an organizational structure that ensures a communication flow through the medical staff, administration and to the Board of Trustees. (Bittle, L. J, 1991, p. 131).

The Joint Commission's draft standards place greater expectations on the leadership of the organization to direct the quality assessment and improvement process. (Bliersbach, C, 1991, p. 59).

The United States federal government is also involved in setting standards for QA through such federal programs as Medicaid and Medicare. These programs are noted as having two objectives: to improve quality through increased access to care and to implement cost-saving techniques. (Bittle, L. J., 1991, p. 131)

The advent of government-financed health care programs has placed emphasis on services that are "reasonable" and "necessary" and has mandated a review of the quality of care. In 1972, the United States Congress established a network of Professional



Standards Review Organizations (PSROs) charged with the responsibility of overseeing costs and the quality of health care provided by federally funded programs: Medicare, Medicaid and Maternal and Child Health. Assessments of the effectiveness of the PSROs were mixed, and in 1982 the health Care Financing Administration (HCFA) medical review policies, established through Peer Review Improvement Act, P.L. 97-248, and the Tax Equity and Fiscal Responsibility Act of 1982, created Title XI Part B of the Social Security Act and replaced PSROs with new systems of utilization and quality control peer review organizations (PROs). (Bittle, L. J., 1991, p. 131)

Additionally, HCFA modified Medicare Conditions of Participation for non-JCAH accredited hospitals to assess the quality of care through development of standards comparable with JCAH guidelines.

Another important factor that is directly correlated with the need for documented QA activity is the ever-growing public awareness of hospital and physician responsibility. Over the past few years, the number of malpractice suits has increased at an unprecedented rate. As a direct result of this broadening public awareness, governing authorities have been made increasingly responsible for the effective operation of their institutions, including their medical staff: it is the duty of the trustees to monitor all facets of health care. This increased public awareness puts pressure on the institution not only to provide competent quality care but also to have an ongoing awareness that it does what it does well and that it is doing the right things. (Bittle, L. J., 1991, p. 131)

One of the most important facets of the TQM system is the participation of every level of personnel within the company to the quality process and getting appropriate inputs from them. This process can be accelerated and improved by providing appropriate tools to all levels of personnel. While the rest of this discussion considers the importance of direct quality training, there are other aspects of training, such as cross training in other functional departments to ensure a better understanding of other related functions (Saddique, A, 1995, p. 10). The various types of training programs are leadership, strategic planning, supplier involvement, internal and external customer satisfaction, statistical analysis, cost of quality, continuous improvement, and employee involvement in a team environment. (Saddique, A., 1995, pp. 12-13)



### 3.4. Assessing Quality

“It is already evident that the Joint Commission is adopting a new vision of how the effectiveness of healthcare organizations can be defined”. (Appel. F., 1991, p. 27)

The Joint Commission on Accreditation of Healthcare Organizations in its 1990s agenda for change embraced continuous quality improvement as a paradigm to move from measuring structural and process characteristics to standards that emphasize actual organizational performance. Prior to launching its agenda for change, JCAHO trained its own staff in CQI principles and tools and improved its own internal performance as measured by shorter turnaround times for survey reports, reduced number of standards, improved ratings of surveyor performance, and increased satisfaction of the healthcare organizations receiving JCAHO services. (Geyndt, W.D., 1995, p. 20)

The JCAHO has redefined the concept of accreditation defining it now as a natural byproduct, rather than an objective, of ongoing quality improvement activities. Critical standards are formulated in terms of performance. Compliance with standards means using performance data to identify problems and opportunities for improvement, and taking concrete steps to improve performance. Performance indicators target important organization key functions, e.g. medication usage and infection control, and measure both process and outcome. Processes are measured because sound performance of a process is an acceptable proxy of a likely outcome and because they are of greatest interest to the performing organization, i.e. the internal customer, for monitoring its continuous efforts to improve performance of tasks and functions. Outcome measures are of greatest interest to the external customer especially to the purchaser of services. (Geyndt, W.D., 1995, p. 23)

#### 3.4.1. Patient-Focused Accreditation: Meaningful Evaluation in an Era of Reform

The Accreditation Manual for Hospitals, Volume I (AMH, Vol. I, 1995) completed the transition of hospital standards from those that focus on capability to those that focus on actual performance of those functions and processes -both clinical and organizational- that most significantly impact patient care.



As health care reform initiatives moved the health care field towards measuring and improving its performance, the AMH provided standards that could be used to assess and improve any hospital's performance. By helping it focus on "doing the right things well" in the context of the hospital as an interrelated system rather than a collection of discrete units or departments, the manual supported the ongoing performance improvement efforts, which is the key to enhancing the quality and value of health care services.

As a resource that provides a mechanism designed for ongoing, performance-based self assessment and improvement, the AMH reflects the three major initiatives of the Agenda for Change:

- 1 Reformulation of Joint Commission standards to emphasize actual organizational performance;
- 2 Redesign of the survey process; and
- 3 Development of the Indicator Measurement System (IMSystem), a national indicator-based performance-measurement system.

Each initiative is described in detail below, followed by a discussion of a framework for improving performance that was developed by the Joint Commission to describe a flexible approach to performance improvement in health care organizations. (JCAHO, 1995, p. vii)

### 3.4.2 Standards Revision

The standards revision process is based on the premise that health care organizations exist to maximize the health of the people they serve and use resources efficiently. Therefore, existing standards were revised and new standards developed to emphasize evaluation of hospital performance aimed at continuously improving the outcomes of patient care. This emphasis on performance led to identification of those functions and processes likely to have the most significant impact on patient care outcomes. Because carrying out these important functions and processes often requires multidisciplinary teamwork involving many hospital departments and services, standards were organized in a functional framework that envisioned the hospital as an integrated system rather



than as a collection of discrete, independent units. This meant some problems with the documentation. For example, standards relating to the process of gaining patient consent for treatment are found in four different chapters of the Manual: the rights of the patient are addressed in “Patient Rights and Organizational Ethics,” documentation of patient consent is addressed in “Management of Information;” the delivery of care, which implies consent, is addressed in “Care of Patients;” and patient responsibilities are covered in “Education.” (JCAHO, 1995, p. viii)

Because the aim of the standards revision process was to improve outcomes, less emphasis was placed on how to achieve the objectives of a given standard. Instead, the intention was to establish a set of consistent performance expectations that would challenge staff to achieve them creatively. Therefore, the standards that appear in the 1995 Manual were not meant to be prescriptive; instead, they are designed to encourage innovation and flexibility. Hospitals are free to develop strategies and approaches to performance improvement that best meet the organization’s unique needs and those of the patients. (JCAHO, 1995, p. viii)

The transition to performance-based, functionally organized standards began in 1992 with a significant reduction in the number and prescriptiveness of existing standards. Streamlining continued in 1993 with the regrouping of standards previously found in several departments-specific chapters into three new chapters: “Patient and Family Education;” “Orientation, Training, and Education of Staff;” and “Responsibilities of Department/Service Directors.” This reorganization helped ensure that these functions would be uniformly and consistently conducted and surveyed throughout the organization. The 1994 standards reflected a significant expansion of the move toward performance monitoring, with standards organized into three sections: Care of the Patient, Organizational Functions, and Structures with Important Functions. A fourth section contained a variety of department-and service specific standards whose revision and integration into the first three sections of the Manual was scheduled for completion the following year. Thus in 1995 AMH completed the revision, with the introduction of six new chapters:



- 1 “Patient Rights and Organizational Ethic;”
- 2 “Care of Patients” (includes care planning, Anesthesia care, medication use, nutrition care, operative and other invasive procedures, rehabilitation, and special treatment procedure);
- 3 “Continuum of Care” (includes entry to setting or service, continuity, coordination and discharge planning);
- 4 “Management of the Environment of Care;”
- 5 “Management of Human Resources;” and
- 6 “Surveillance, Prevention, and Control of Infection.” See Figure 3.1 (JCAHO, 1995, p. viii)

The 1995 AMH addressed eleven functional areas; standards addressing health promotion and disease prevention were later developed in 1996.

The shift to performance-based, functionally organized standards represented a substantial change in the way performance was evaluated. User guides that explain what hospital leaders and management staff need to know about the accreditation process were produced based on the 1995 standards. Whilst the Joint Commission recognized that adopting the new framework and implementing the new standards will take time.

### 3.5 The Performance Areas

In 1994, the Joint Commission implemented a new survey process to address requests from accredited organizations for a survey that is more individualized, consistent, and helpful in improving performance. It was designed to support the patient-centered, performance-focused, functional orientation set forth in the revised hospital accreditation standards. (JCAHO, 1995, p. ix)

The new survey process moved away from evaluation of specific departments and services. It focused on assessing, across an organization, performance of important patient-focused and organizational functions that support quality patient care, rather than evaluating activities that may have been conducted primarily to pass the survey. These areas were designated ‘Performance Areas’.



A performance area is an element of the accreditation decision grid that summarizes a standard or group of related standards. The Performance Reports outline 45 performance areas. The performance areas in the Performance Report correlate one-to-one with the performance areas found on the *1996 Comprehensive Accreditation Manual for Hospitals* accreditation decision grid. The hospital's score for each performance area is provided and compared to other hospital's scores for the same performance area. See Figure 3.1.

### 3.5.1 Patient Rights and Organization Ethics

The first section of the report addresses how the hospital helps improve patient outcomes by respecting each patient's right and conducting business relationship with the patients and the public in an ethical manner. Surveyors assess the following:

- a. *Patient Rights*. This area reflects an evaluation of the hospital's protection of patient rights and whether hospital staff members treat patients with dignity and respect. Surveyors evaluate whether;
  - Patients are treated as individuals with unique personal and health care needs;
  - Patients are encouraged to be actively involved in decisions about their care;
  - Patients are able to accept or refuse specific treatments or participation in clinical research;
  - The hospital protects the confidentiality of specific patient information; and
    - The hospital has procedures to communicate patient rights.
- b. *Organization Ethics*. This area reflects an evaluation of the hospital's development and implementation of a code of ethical behavior to guide its conduct with patients and the public. (JCAHO, 1996, p. PR -14 )

**JCAHO  
Hospital Accreditation Services  
Accreditation Decision Grid**

Organization: \_\_\_\_\_ Survey Date: \_\_\_\_\_

Location: \_\_\_\_\_ Survey Type: \_\_\_\_\_

PATIENT-FOCUSED FUNCTIONS	ORGANIZATION FUNCTIONS	ORGANIZATION FUNCTIONS CONTINUED																																																																																												
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Figure 3.1 A sample hospital accreditation service accreditation decision grid.



### 3.5.2. Assessment of Patients

This section of the report addresses how the hospital assesses a patient to determine the care required to meet the patient's initial needs, as well as the patient's needs as they change in response to care. Surveyors examine how effectively the hospital provides the following:

- a. *Initial Assessment Procedures.* This area reflects an evaluation of how the hospital performs initial assessment procedures to determine each patient's needs. These procedures include a physical examination and health history, appropriate diagnostic tests, screening for other needs such as nutritional support, and special assessments related to planned surgery or anesthesia.
- b. *Pathology and Clinical laboratory Services.* This area reflects an evaluation of such services and whether they are readily available and provided by trained and qualified staff with appropriate quality control checks.
- c. *Reassessment Procedures.* This area reflects an evaluation of reassessment procedures used by the hospital when a patient's condition or diagnosis changes and those used at regular intervals to determine each patient's response to care.
- d. *Process for Patient Care Decisions.* This area reflects an evaluation of processes used that are based on assessment information and that identify each patient's priority needs.
- e. *Relevant Policies.* This area reflects an evaluation of protocols, guidelines, and policies to ensure that physicians, nurses and other qualified, appropriate staff gather the right information to understand a patient's needs.

- f. *Needs Assessment for Specific Patient Populations.* This area reflects an evaluation of how the hospital identifies special assessment considerations due to a patient's age, disability, or condition. Included are assessment requirements for children, patients with emotional and behavioral disorders, patients treated for alcoholism or other drug dependencies, and possible victims of alleged or suspected abuse or neglect. (JCAHO, 1996, p. PR-14 )

### 3.5.3 Care of Patients

This section addresses the hospital's provision of individualized care in the best setting to meet the patient's needs. Surveyors assess the following:

- a. *Planning and Providing Care.* This area reflects an evaluation of the planning and providing of care, treatment, and rehabilitation, and how the hospital sets care goals for each patient and selects qualified personnel to provide and evaluate the care. It does not directly evaluate the care provided to an individual patient. Rather, the standards require the hospital to monitor the results of care processes.
- b. *Anesthesia Care.* This area reflects an evaluation of the careful planning and delivery of anesthesia. Issues include whether
  - 1 The patient's condition is assessed prior to anesthesia;
  - 2 A plan for anesthesia has been developed;
  - 3 Patients are informed of anesthesia risks and options; and
  - 4 Patients are carefully monitored during anesthesia.
- c. *Medication Use.* This area reflects an evaluation of the processes the hospital uses to prescribe, prepare, dispense, and administer medications. Specific issues include;
  - 1 The processes used to ensure that medications are prepared and dispensed in accordance with all laws and regulations;
  - 2 The processes used to ensure that the right medication is given to the right patient;



- 3 Whether emergency medications are available consistently; and
- 4 Whether your hospital has a system for identifying, handling, and minimizing medication errors and adverse drug reactions.

It does not evaluate whether medications prescribed for patients produce the desired results.

d. *Nutrition Care*. This area reflects an evaluation of whether

- 1 The hospital provides a plan for nutrition therapy to patients, when appropriate;
- 2 Food and nutrition products are prescribed by authorized staff and distributed in a safe, accurate, and timely manner; and
- 3 Each patient's response to nutrition care is monitored.

e. *Operative Procedures*. This area reflects an evaluation of how thoroughly a hospital determines that appropriate procedures (including surgery and other invasive procedures) are provided, and whether these procedures are performed safely and effectively. Surveyors evaluate:

- 1 Whether the hospital obtains patient's informed consent before procedures are performed; and
- 2 The hospital's processes for ensuring that patients receive appropriate preoperative preparation and monitoring during the procedure.

It does not evaluate the actual outcomes of various surgical procedures.

f. *Rehabilitation Care*. This area reflects an evaluation of whether

- 1 A written rehabilitation plan is available for each patient;
- 2 The hospital establishes measurable goals for assessing the patient's progress against the plan; and
- 3 Care or services are provided by qualified and competent professionals.

g. *Special Treatment Procedures*. This area reflects an evaluation of how the hospital ensures that special treatment procedures are safe and appropriate.

Such procedures include restraint, seclusion, convulsive therapy, psychosurgery, and behavior modification. Due to the risks inherent in these procedures surveyors evaluate whether clinicians have made extra efforts to ensure that;

- 1 The use of such procedures is warranted; and
- 2 Patient's rights, dignity, and well-being are protected during the procedures.

Surveyors also assess whether qualified staff evaluate the patient and approve the procedures. (JCAHO, 1996, p. PR-15)

#### 3.5.4 Education

This section of the report addresses how hospitals improve patient health outcomes by promoting healthy behavior and involving the patient in care and care decisions. Surveyors assess the following:

- 1 *Patient and Family Education.* This area reflects an evaluation of the degree to which the hospital supports patients and families in participating in their care and decisions about their care. Surveyors examine whether
- 2 Hospital staff members assess what patients need to know and their ability to learn this information;
- 3 Hospital staff members properly address the physical, mental, cultural, or language barriers to learning that patients may experience;
- 4 Hospital staff members help patients understand how to use medications and medical equipment; and
- 5 Patients understand when, where, and how to obtain further treatment when it is needed. (JCAHO, 1996, p. PR-16)

#### 3.5.5 Continuum of Care

This area of the report addresses how hospitals define, shape, and sequence the processes and activities to maximize coordination of care within the continuum of care. Surveyors assess the following:



- a. *Continuity of care.* This area reflects an evaluation of how the hospital facilitates the patient's access to
  - 1 The appropriate level of care;
  - 2 The right health care providers; and
  - 3 The correct setting and services to meet the patient's needs.

Surveyors evaluate

- 1 How well the hospital provides access to care;
- 2 How well services are coordinated to ensure that the patient receives appropriate care from entry through to discharge.
- 3 Whether the hospital helps the patient plan for care after discharge; and
- 4 Whether the hospital's decisions about continuing care, referral, transfer, and discharge are based on the patient's needs. (JCAHO, 1996, p. PR-16 )

### 3.5.6 Improving Organization Performance

This section of the report addresses the processes the hospital has in place to improve care and patient health outcomes. Surveyors assess how effectively the hospital performs the following:

- a. *Improvement Planning.* This area reflects an evaluation of the approach to planning, whether it is a coordinated, systematic, hospital wide approach that is collaborative and involves the right individuals.
- b. *Design of New Services.* This area reflects an evaluation of new facilities, systems, and services that meet patient and staff needs and expectations and that conform to national guidelines.
- c. *Measurement of processes and Outcomes.* This area reflects an evaluation of the hospital's effort to determine whether it performs care processes well and how well it collects, analyses and uses data about patient outcomes.
- d. *Assessment of Data.* This area reflects an evaluation of the hospital's identification of opportunities for improvement.
- e. *Improvement of performance.* This area reflects an evaluation of the

hospital's improvement of priority care processes and the determination of the effectiveness of these improvements. (JCAHO, 1996, p. PR-16 )

### 3.5.7 Leadership

This section of the report addresses the degree to which the hospital's leaders provide a framework for health care services that are responsive to patient needs. Leaders include governing body leaders, senior managers, and heads of the medical and nursing staffs. Surveyors assess how effectively the leaders provide for;

- a. *Strategic Planning.* This area reflects an evaluation of
  1. The mission, vision, and values of the hospital;
  2. Strategic and other plans for carrying out the hospital's mission;
  3. Patient care services that are responsive to the needs of the community.
  4. The allocation of human and other resources.
- b. *Department Leadership.* This area reflects an evaluation of how effectively the hospital's leaders help create an environment that enables the hospital to fulfill its mission. Surveyors assess how department directors carry out their responsibilities. These responsibilities include
  - 1 Ensuring a sufficient number of qualified and competent staff to provide care; and
  - 2 Improving the department's performance.
- c. *Integrating and Coordinating Services.* This area reflects an evaluation of the integration and coordination of services throughout the hospital. Leaders foster communication and collaboration within and among departments on patient care policies and procedures.
- d. *Leaders Role in Improving Performance.* This area reflects an evaluation of the activities performed by leaders to improve the quality of the hospital's governance, management, clinical and support activities. (JCAHO, 1996, pp. PR-16-17)



### 3.5.8 Management of the Environment of Care

This section examines the safety of the hospital's physical environment for patients, staff, and visitors.

Surveyors assess whether;

- 1 The hospital complies with important aspects for the fire and safety codes.
- 2 Emergency power systems are available and function properly.
- 3 The physical facility and medical equipment are properly maintained.
- 4 Fire drills are conducted regularly; and
- 5 The hospital has an ongoing safety management program addressing fire protection, building systems, and medical equipment.

The surveyors assess how effectively the hospital's leaders address the following:

- a. *Design of the Environment.* This area reflects an evaluation of the development of appropriate management plans to provide a safe, accessible, effective, and efficient environment of care.
- b. *Monitoring Safety Plans.* This area reflects an evaluation of the hospital's ability to collect and analyze information on all major components of the environment of care so that safety issues are prevented from arising or are resolved quickly.
- c. *Social Environment.* This area reflects an evaluation of how the social environment supports the hospital's mission, care settings, provided services, and populations served. Surveyors specially assess how space, furnishings, equipment, and even patient clothing contribute to positive patient self-image(s) that preserve patient dignity. (JCAHO, 1996, p. PR-17)

### 3.5.9 Management of Human Resources

This section addresses the hospital's planning for and provision of:

- 1 An adequate number of qualified and competent staff; and
- 2 Education and training for all personnel.

Surveyors evaluate the hospital's effectiveness in providing the following:

- a. *Human Resources Planning.* This area reflects an evaluation of how well leaders define the qualifications and duties of each job, provide an adequate number of qualified staff, and ensure the assessment and maintenance of staff competence.
- b. *Orienting, Training, and Educating Staff.* This area reflects an evaluation of how the hospital orients, trains, and educates staff members before they begin work and how well the hospital conducts ongoing staff education to maintain and improve competence.
- c. *Assessing Staff Competence.* This area reflects an evaluation of how the hospital assesses the competence of staff members to meet their job descriptions and job expectations.
- d. *Managing Staff Requests.* This area reflects an evaluation of how the hospital ensures that hospital approval of staff requests to not participate in any care activity are effectively managed so that patient care is not compromised. (JCAHO, 1996, p. PR-17)

### 3.5.10 Management of Information

This section addresses the extent to which the hospital ensures that the right information is provided to the right people at the right time. Surveyors specifically assess how effectively the hospital provides the following:

- a. *Information Management Planning.* This area reflects an evaluation of whether;
  1. The hospital ensures the accuracy of its information, especially information on individual patients;
  2. Information access is balanced with appropriate security and confidentiality safeguards;



3. Information supports continuity of care throughout the hospital and between the hospital and other providers; and
  4. The hospital's quality improvement activities have information management support.
- b. *Availability of Patient-Specific Information.* This area reflects an evaluation of how the hospital maintains this information in each patient's medical record on a timely basis to support and document the patient's care in all care settings.
  - c. *Data Collection and Analysis.* This area reflects an evaluation of how the hospital collects, analyzes and reports data to support patient care, decision making, management, analysis of trends, comparisons with other hospitals, and performance improvement activities.
  - d. *Literature to Support Decision Making.* This area reflects an evaluation of the hospital's provision of resource materials to support patient care, education, performance improvement, research, and management.
  - e. *Use of Comparative Information.* This area reflects an evaluation of how the hospital supports the exchange and comparison of clinical and management information with other health care organizations. (JCAHO, 1996, p. PR-18)

### 3.5.11 Infection Control

This area reflects an evaluation of whether

- 1 The hospital has a comprehensive organization wide program for the surveillance, prevention, and control of infection;
- 2 The surveillance program includes all patient care and support services;
- 3 The program uses the information it collects to prevent infections;
- 4 Infectious wastes are appropriately handled; and
- 5 Sterilization procedures are properly performed.

It does not assess the rates of infection that may occur at any given hospital. (JCAHO, 1996, p. PR-18)

### 3.5.12 Governance

This area reflects an evaluation of how well the hospital's governing body demonstrates accountability and responsibility for the patients served. Surveyors evaluate whether

- 1 The hospital has a functioning governing body;
- 2 The accountability of the governing body is clearly identified;
- 3 There are rules and regulations or bylaws governing the body's actions; and
- 4 There are records of the governing body's proceedings. (JCAHO, 1996, p. PR-18)

### 3.5.13 Management

This area reflects an evaluation of the chief executive officer's management functions. Surveyors assess whether a qualified chief executive officer manages the hospital's operations, and whether the chief executive officer;

- 1 Has taken steps to keep the hospital in compliance with applicable law and regulation;
- 2 Has established clear lines of responsibility and accountability within departments; and
- 3 Has established internal control to safeguard physical and financial information and human resources. (JCAHO, 1996, p. PR-18-9)

### 3.5.14 Medical Staff

This section of the report addresses the organization of the hospital's medical staff and how well the hospital evaluates the qualifications and competency of physicians and other licensed independent practitioners who seek to join the medical staff. Surveyors assess the following:

- a. *Organization Bylaws, Rules, and Regulations.* This area reflects an evaluation of the documents that govern the operation of an organized medical staff that is responsible for the quality of patient



care. The bylaws, rules, and regulations address medical staff self-governance and the operation of an effective credentialing and privileging process for physicians, dentists, and other licensed independent practitioners who wish to provide care in the hospital.

- b. *Credentialing*. This area reflects an evaluation of the medical staff members credentialing process and how the hospital ensures
- 1 That only qualified individuals are on the staff; and
  - 2 Assessment of the competence of medical staff members to provide specific services.

It does not evaluate the quality of care provided by individual medical staff members. (JCAHO, 1996, p. PR-19)

### 3.5.15 Nursing

This area reflects an evaluation of the nurse executive's oversight of nursing services. Surveyors assess whether

- 1 The hospital has designated an appropriately qualified nurse executive;
- 2 The nurse executive has the authority and responsibility for establishing the hospitals' standards of nursing practice;
- 3 Nursing standards and policies have been implemented; and
- 4 Nursing standards and policies were developed with input from nursing staff. (JCAHO, 1996, P. PR-19 )

## 3.6 Patient Classification

There are five phases in the development of the way in which patient classification is conducted. The first phase was the earliest attempts to classify diseases made by Sauvages (1706-1777), Linnaeus (1707-1778), and William Cullen (1710-1790). The second phase was begun by the adoption of an international list of causes of death in Vienna in 1891. The third phase was begun by the fifth decennial revision conference in Paris in 1938. In this conference an improved international list of diseases was adopted. The fourth phase was marked by the publication of the

provisional classifications of diseases and injuries in 1994, both in the United Kingdom and the United States of America for use in the tabulation of morbidity statistics. The fifth and last phase was marked by the continuing revision of the international list of diseases, injuries and causes of death.

The benefits of the patient's classification are to formulate standards for the treatment procedures and diagnoses, and to facilitate the medical information transactions and uses throughout the health service organizations. In Saudi Arabia the ICD ninth revision was adopted in many hospitals and health organizations, but there is ongoing a national program to shift to ICD tenth revision by the year 2006.

### 3.7 The Indicator Measurement System (IMSystem)

The third initiative of the Agenda for Change focused in developing the IMSystem, a national indicator based performance measurement system. The IMSystem provides information for health care organizations to use internally to improve performance and externally to meet the demands of patients, purchasers and others for health care quality data. The Joint Commission implemented this program of measurement of important patient outcomes and care processes in partnership with hundreds of hospitals and eventually with other types of health care organizations. (JCAHO, 1995, p. x)

The system operates to:

- 1 Continually collect performance data in each accredited health care organization;
- 2 Aggregate, risk adjust (as necessary), and analyze performance data;
- 3 Provide comparative performance data to accredited health care organizations for use in their internal performance-improvement activities; and
- 4 Identify trends and patterns in the performance of individual accredited health care organizations that may call for more focused attention by those organizations. (JCAHO, 1995, p. x)



An indicator is a valid and reliable quantitative outcome or process measure related to one or more dimensions of performance, such as appropriateness or effectiveness. An indicator may measure a specific process of an organization function or the cumulative effects of performed functions on the patient, that is, the outcomes. Indicators can be developed in relation to any dimension of patient care quality, such as appropriateness, efficiency, or availability. However, an indicator is usually not a direct measure of quality. Rather, it yields data that can be used in performance assessment and improvement activities.

The Joint Commission developed indicators in consultation with expert groups and initially tested them at 20 to 30 sites. The initial, or Alpha, test helped revise or eliminate indicators that do not have face validity or are not practical to collect. A broad-scale field test, known as a Beta test, was then conducted at 100 to 300 sites to assess the indicator's reliability and validity. These tests lead to selection or revision of appropriate indicators for inclusion in the IMSystem. (JCAHO, 1995, p. x)

In 1995, the IMSystem included 25 indicators addressing obstetrics, preoperative care, and trauma, oncology care, and cardio vascular care. Data derived from the use of these carefully tested indicators were collected by hospitals and periodically transmitted to the Joint Commission where reports comparing an organization's performance to that of other hospitals in the database were prepared and returned to each hospital.

In 1994, the IMSystem was introduced for optional participation by hospitals. The system continued to be refined and became an integral part of the accreditation process in 1996. (JCAHO, 1995, p. x) Over time, the IMSystem contributed to the Joint Commission's ability to base accreditation decisions in the organization's actual performance rather than on the capability to perform. The Joint Commission used the indicator data to identify performance issues that reflected standards compliance problems. Indicator rates themselves did not affect the final accreditation decision. Rather, trends and patterns in indicator data triggered a telephone call or a focused survey to assess how the organization used indicator data to improve performance or



compliance with standards in areas that relate to indicator rates. Specifically, the relationship of indicators to important functions was addressed. (JCAHO, 1995, p. x)

## 2.8 Framework for Improving Performance

These three dimensions 'Performance Area, Patient category, and Indicator Measurement form the three dimensions of the 'Quality Cube' which forms the frame for measurement of quality standard for an organization. The framework for improving performance offers a broad and inclusive perspective on organizational improvement and provides a foundation for the Agenda for Change initiatives previously discussed. This framework will apply both for self evaluation and for the accreditation process described later. The framework addresses three issues that must be considered by any organization dedicated to excellence.

The first issue is the organization's relationships with its external environment. Today, successful health care organizations must be able to anticipate, understand, and proactively and flexibly respond to changes in the dynamic health care environment.

The second issue is the organization's internal characteristics and functions. Excellence in patient care requires state-of-the-art professional knowledge; clinical, management, governance and support expertise; and competent technical skills integrated and coordinated organization wide to effectively and efficiently respond to patient and family needs.

The third issue is a methodology for systematically assessing and improving important functions and work processes and their outcomes. (JCAHO, 1995, p. xi)

The essential activities are common to a variety of improvement approaches and they offer considerable flexibility in designing and implementing an improvement process. They are described below.



# The Quality Cube

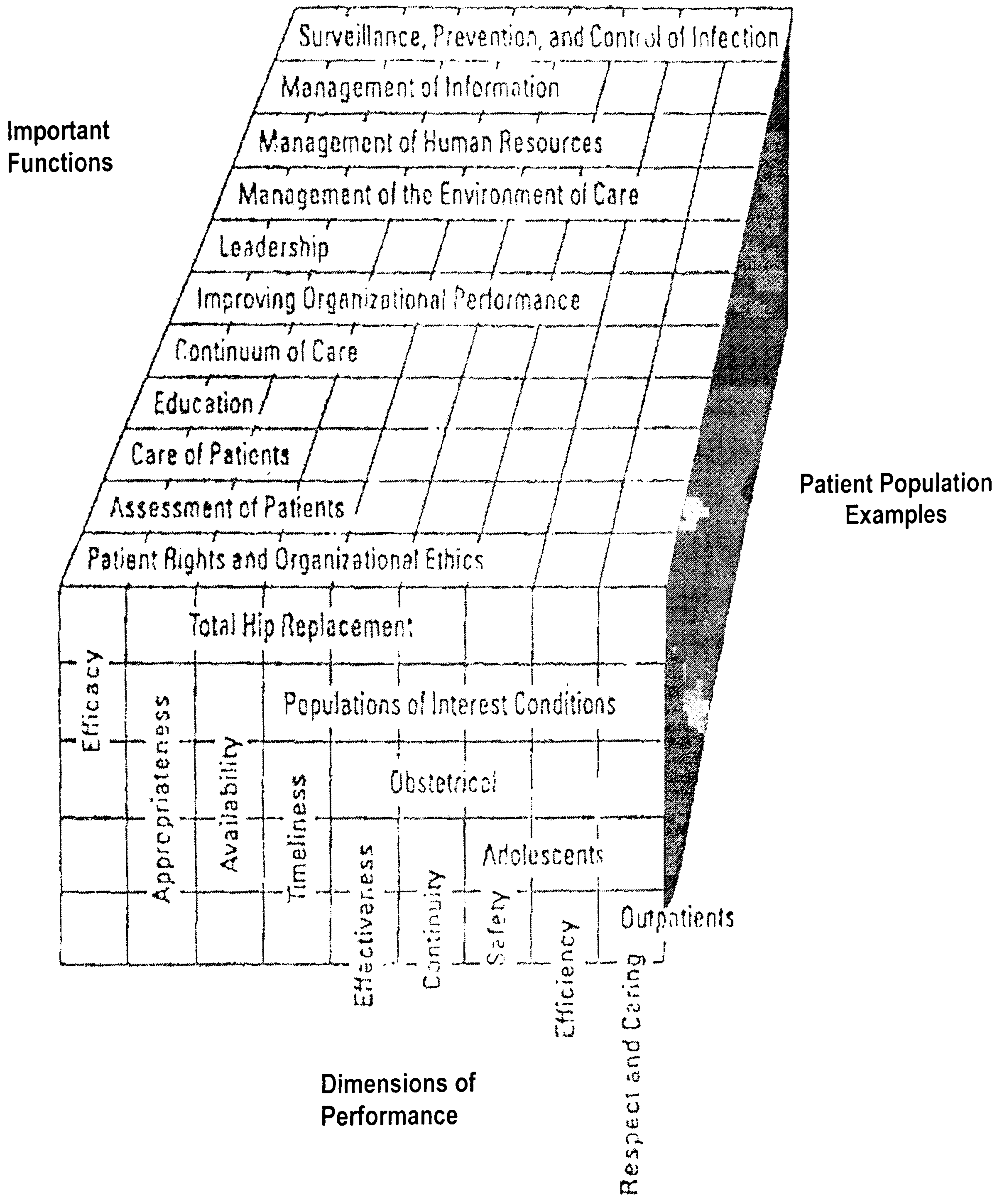


Figure 3.2 The Quality Cube, a model for assessing the quality of health care.



**Design** refers to the rational, deliberate process of creating quality service as viewed by those who receive it, and it provides opportunities to build into the service or product the dimensions of performance described above. (JCAHO, 1995, p. ix)

**Measurement** involves both routine, ongoing data collection from processes or functions performed by individuals or multidisciplinary teams or groups, as well as time-specific, focused data collection. A robust measurement system addresses important dimensions of performance; collects data about relevant processes, outcomes, resource consumption, and satisfaction levels; and taps into patient, practitioner, and employee perceptions of quality.

The quality cube in figure 3.2, presents a model for assessing quality that illustrates the relationship of dimensions of performance and important functions to a range of patient populations and services provided. The cube is a tool that can help stimulate thought about, and focus measurements related to, improvement priorities. It can be entered at any point and can be used for global or very specific analysis. For example, if patient satisfaction surveys conducted in an outpatient diabetic clinic showed a rising level of dissatisfaction with patient education, the cube can be used to help analyze the problem. A nurse manager can bring together appropriate staff, and using the cube, begin breaking out aspects of the problem starting with identification of the outpatient population. Then, the group can consider each dimension of performance to determine which might be affected by the problem. This multidimensional analysis can help to think broadly about problems, better understand their scope, and identify a wide range of improvement opportunities. (JCAHO, 1995, p. xii)

The convergence of the key functions and the dimensions of performance suggest the need for development of measures or indicators that can help assess both organizational performance and need for improvement. The indicators in the Joint Commission's IMSystem offer tested measures that can be useful in evaluating the organization's actual performance and patient outcomes



to help plan improvement and demonstrate quality and value to the public - a key requirement of many health care reform initiatives.

Once performance measurement yields performance data, **assessment** of the data helps to draw conclusions about current performance and decide whether to pursue an opportunity for improvement or resolution of a problem. Statistical analysis and other quality improvement tools are often useful in understanding performance variation and its causes. Often, comparative data, such as that from the IMSystem, can be used to assess the organization's performance data. (JCAHO, 1995, p. xii)

When opportunities for improvement have been prioritized in terms of their potential to enhance patient care, **improvement** activities can then be conducted. Successful processes usually involve planning an improvement, testing a new approach, collecting data about its effects, and then taking action to standardize the improvement or repeating the process if results are not satisfactory.

The outcome of improvement activities is an improvement based on the **redesign** of an existing function or process or an innovation based on the **design** of a new approach aimed at meeting or exceeding patient needs or expectations. (JCAHO, 1995, p. xii)

This improvement cycle is applicable at all levels of the organization, from the overall system level; to multidisciplinary functions, such as patient education or medication use; to the level of specific processes, such as pain assessment or personnel recruitment; to the level of discrete tasks, such as drawing arterial blood or scheduling patient appointments. The performance-improvement cycle has no beginning and no end. It is an ongoing process that may be entered at any point. Improvement activities can be begun at any point and several parts of the process may be conducted simultaneously. (JCAHO, 1995, p. xvi)

### 3.9 The Accreditation Decision Process

The accreditation decision is based on how well a hospital complies with the 578 standards in the manual. When the Joint Commission completes a survey, the hospital's standard-level scores are translated into a single accreditation decision. The Joint Commission's process for translating scores into an accreditation decision involves the use of aggregation rules and decision rules. These rules and the processes in which they operate provide for accreditation decisions that are fair, reliable, and consistent across organizations. (JCAHO, 1996, p. ADP-1)

The three interlocking processes that compose the accreditation decision process are the survey process, the aggregation process, and the decision process.

The accreditation decision process begins with standards. The standards in the manual are organized into three sections: "Patient-focused Functions," "Organization Functions," and "Structures with Functions" (Figure 3.1). Each section includes a group of important functions or structures with functions that support the provision of patient care. Every important function or structure with functions has its own chapter of performance-focused standards and scoring that relate to processes and activities associated with the function. The standards in each chapter are grouped into **performance areas**, as previously described, considered most critical to a hospital's overall performance.

The functional organization of the standards reflects a systems view of a hospital. Looking at the standards from a systems perspective can help the hospital move toward a holistic multidisciplinary approach to health care delivery. To carry out and continually improve processes that impact patient care, and indeed all other processes, all individuals within the hospital must work together. Thus when a hospital is surveyed, even when surveyed according to performance areas, surveyors can better assess how well the caregivers within the hospital collaborate in providing or supporting care. (JCAHO, 1996, p. ADP-2)



### 3.9.1 The Survey Process

Several key changes were made to the survey process in 1994 in developing a new survey process that was more individualized, consistent, and helpful in improving performance including:-

- 1 The establishment of an Organization Liaison Unit at the Joint Commission's central office to provide the organization with a personal contact to help them through the survey;
- 2 Better surveyor understanding of the organization through information review and on-site document review before the survey.
- 3 A more team-based and interactive approach to conducting the overall survey;
- 4 New protocols to help standardize the survey process and make it more consistent; and
- 5 Tailoring of the survey process to a specific organization's characteristics. (JCAHO, 1995, p. ix)

The survey process begins when an organization applies for an accreditation survey or is due for its triennial survey. If it is already accredited, it will be asked to update information on file at the Joint Commission to help in survey planning. Six weeks before the survey, the organization will be assigned a liaison at the Joint Commission who will be responsible for coordinating the Application for Survey/Annual Update, Planning, and finalizing an individualized on-site survey agenda. The organization liaison will also be available to answer questions throughout the survey cycle. (JCAHO, 1995, p. ix)

The survey team, composed of at least a physician, an administrator, and a nurse and often other specialist surveyors, receives a "pre-survey management report" packet to help orient them to the organization. The packet includes an overview of the organization, the customized survey agenda, a copy of the previous accreditation survey report, information regarding any complaints about the organization received by the Joint Commission, and survey documents. One surveyor is designated as the survey team leader to facilitate on-



site survey activities and to act as a first-line contact for the organization. (JCAHO, 1995, p. ix)

Following the opening conference, the survey team privately reviews the key documents the organization has been asked to make available. These include bylaws, policies, procedures, and rules and regulations. The initial document review helps the survey team become familiar with the organization's framework for providing patient care, begin to assess standards compliance, and prepare for the interactive survey that follows.

During the interactive part of the survey, the team interviews managers; direct care providers, including medical staff members; other hospital staff; and patients. The team may spend as much as half of their time visiting places where patients receive care and service to assess the consistency of performance with the expectations described in the policies and procedures, which will be reviewed prior to this part of the survey. Although each surveyor is still responsible for interviewing particular hospital leaders and staff, the team will integrate its findings and reach conclusions jointly about the entire organization. (JCAHO, 1995, p. ix)

On the last day of the survey, the team conducts a multidisciplinary patient care conference that focuses on patient care-related areas for improvement and offers advice for enhancing compliance with these standards. Pertinent hospital and medical staff will be invited to attend. The survey team then conducts an exit conference with the organization's leaders.

After the on-site survey, the organization's survey findings are analyzed and aggregated at the Joint Commission. These results are reviewed internally by professional staff, and decision rules are then applied to reach an accreditation decision and define any necessary follow-up requirements. Then, if the organization's accreditation decision falls within established parameters, it is directly notified of the accreditation decision. Accreditation findings that raise specific issues are reviewed by the Joint Commission's Accreditation Committee, which then reaches a final decision. (JCAHO, 1995, p. ix)

The information gathered during an on-site survey is the basis for the hospital's accreditation decision. A surveyor or team of surveyors evaluates the



hospital's level of compliance with the applicable standards. The basis on which standards are scored changed significantly in 1995. The functional standards in 1995 were related to scoring guidelines. Scoring standards emphasized performance, lower scores were given where evidence of performance was lacking. For example, if a hospital demonstrates good performance in a given area but does not have the essential policies and procedures in place to support this performance over time, it might receive a score 2 or 3, indicating the need to address this issue in the future and/or provide a written progress report (WPR) to the Joint Commission. On the other hand, if a hospital has adequate policies and procedures in place but performance does not measure up, a score 4 or 5 will be given, and the Joint Commission will return to check the progress toward compliance. (JCAHO, 1995, p. viii)

Surveyors assess standards compliance in a variety of ways; including interviews, observation, and documentation review, and determine the hospital's level of compliance with the standards based on a five-point scale. (JCAHO, 1996, p. ADP-2),

**Score 1**, Substantial compliance. The organization consistently meets all major provisions of the standard and intent.

**Score 2**, Significant compliance. The organization meets most of the provisions of the standard and intent.

**Score 3**, Partial compliance. The organization meets some provisions of the standard and intent.

**Score 4**, Minimal compliance. The organization meets few provisions of the standard and intent.

**Score 5**, Noncompliance. The organization fails to meet the provisions of the standard and intent.

For each standard scored 2, 3, 4, or 5, the surveyor must describe why the hospital received that score. These scores and the supporting documentation constitute the survey findings, the basis for the hospital's accreditation decision. (JCAHO, 1996, p. ADP-2)

### 3.9.2. The Aggregation Process

To turn standard-level scores into an accreditation decision, the scores must be summarized or consolidated. Such consolidation is achieved through the application of **aggregation rules**. Aggregation rules represent algorithms, or formulas, that are used to consolidate the scores of standards assigned to a performance area.

Performance area scores are transferred to an **accreditation decision grid** (see Figure 3). The accreditation decision grid displays the 45 performance areas in a single-page format. On the decision grid, performance areas are called **grid elements**. When scores are transferred to the decision grid, they are referred to as **grid element scores**. (JCAHO, 1996, p. ADP-2)

The organization of the decision grid corresponds to the organization of the standards. The decision grid is divided into the same three sections as the standards: Patient-Focused Functions, Organization Functions, and Structures with Functions. Each section of the decision grid is divided into subsections, referred to as **clusters**. Clusters correspond to the chapters within the sections. (JCAHO, 1996, p. ADP-4)

The aggregation process accounts for the fact that the standards are not of equal weight, and, therefore, it provides a consistent system for reconciling their differing impacts into a single accreditation decision. The system involves the use of **caps**.

Capping recognizes the differing weights standards can have and regulates the effect particular standards have on the grid element score and ultimately on the hospital's accreditation decision. Actual performance on a standard is still identified and captured by the surveyor, but the impact of the standard on the grid element score will be limited to the score identified by the cap. (JCAHO, 1996, p. ADP-4)



Determining the summary grid score involves the following four steps:

**Step 1** Convert each grid element score using the conversion table

**Step 2** Add the converted grid element scores.

**Step 3** Total the number of scored grid elements and multiply the result by four.

**Step 4** Divide the sum of the converted actual grid element scores by the total of the converted perfect grid element scores (divide the numerator by the denominator) and multiply the result by 100. The resulting number is the summary grid score. (JCAHO, 1996, p. ADP-5-6)

### 3.9.3 The summary grid score

The summary grid score represents the hospital's overall level of compliance with the standards under which it has been surveyed. To determine an accreditation decision from a completed decision grid, the decision rules in the "1997 Hospital Accreditation Decision Rules" chapter are considered, starting with the worst-case scenario (preliminary non accreditation) and ending with the best (accreditation with commendation). Thus, an accreditation decision and any follow-up monitoring required are determined through a process of elimination.

The accreditation decision process was purposefully designed to accommodate the conditions of follow-up monitoring and the need to conduct other types of surveys. (JCAHO, 1996, p. ADP-13)

## 3.10 Quality of Care in Saudi Arabia

Developing countries paid little or no attention to measuring, monitoring and improving quality before the 1980s. The consequences of poor quality patient care in terms of increased and unnecessary mortality and morbidity, and in terms of waste of scarce resources have not been calculated. Recent studies in developing countries and anecdotal evidence indicate the seriousness of this issue. Resource allocation decisions



of policy makers and of service providers favor increasing access to basic services by underserved populations and meeting the demand for medical care by the more affluent in urban areas. A justifiable concern for access to basic services has often eclipsed the issue of quality of health care. An indicator of this lack of attention to the quality of care is reflected in the fact that “out of 4068 titles found under the heading ‘quality assurance, health care’ in the database MEDLINE from 1980 to 1991, only six were related to developing countries.” (Forsberg et al, 1992) (Geyndt, W.D., 1995, p. 7)

A review of recent quality studies in developing countries showed that the most frequent units of analysis are the hospital and clinic settings, especially inpatient care of patients with specific diagnostic conditions, and also organized health care programs. (Geyndt, W.D., 1995, p. 11)

But Saudi Arabia is one of a few developing countries which have institutionalized a formal Quality Assurance Program applying a combination of the QA indicator approaches. More often the Medical Staff Committee approach is used in a leading hospital in KSA. This is an appropriate starting point as it creates awareness at the national level and in health care organizations of the importance of assuring the quality of health care. But developing countries have systematically applied the concepts and tools of quality improvement, although some are aware of its vast potential to reduce costs and improve quality, and are familiar with its use in some developed countries. (Geyndt, W.D., 1995, p. 24)

The provision of quality medical and health care in Saudi Arabian hospitals is affected by at least four factors which are particular to the Kingdom. These are the pace of construction and of opening of new hospitals, the staffing of Saudi Arabian hospitals by personnel trained in several different countries, the lack of long-term comprehensive medical care for most Saudi patients, and the difficulty in securing and maintaining adequate hospital supplies and equipment. (Dixon, N, 1982, p. 51)

Hospital development in Saudi Arabia is occurring on a fragmented, ‘as needed’ basis, similar to the pattern of hospital construction in the United States in the years following World War II. The Ministries of Defense and Aviation, the Interior, and the



National Guard are constructing and operating hospitals to provide health services for employees and their dependents; the Ministry of Health hospitals provide care for the general Saudi population; and the Ministry of Higher Education operates hospitals associated with schools of medicine.

In addition, private hospitals are also being constructed and operated. Most of the construction and equipping of these hospitals so far has been carried out under contract with various foreign companies, with each company generally applying to Saudi Arabia the standards of Western European countries, or of the contractor's own country. Thus, the structural and equipment component of Saudi Arabian hospitals may vary considerably. Although European standards for hospital construction and design may be very sound, they require modification in Saudi Arabia to account for the Kingdom's climate, energy sources and water supply, as well as for social customs. (Dixon, N, 1982, p. 51)

The need of a national QA program is especially appropriate for Saudi Arabia and its neighboring Gulf states because of the following unique characteristics of their health services:

- 1 Access to appropriate health care is considered a right of all residents;
- 2 Virtually all health care is provided in government-owned hospitals and health centers;
- 3 Universal, comprehensive health and hospital care has been available to all residents at no cost;
- 4 All health care personnel are salaried, are assigned to practice in one hospital at a time, and are recruited by the Central Ministry of Public Health;
- 5 Most of the health care work force consists of immigrant labor; and
- 6 Hospitals are budgeted and funded through general revenues. (Banoub, S.N, 1989, p. 68)

A few QA programs have been reported in some Gulf State hospitals.

Saudi Arabian hospitals are currently staffed primarily by non-Saudi nationals, a situation that will continue until a sufficient number of Saudi's are medically or professionally trained to operate the hospitals fully. This characteristic presents a number of problems for the long-term development of a hospital system of quality. The doctors, nurses and other health professionals presently working in the hospitals have been trained and qualified in various countries, which results in a variation in the standards of hospital medical practice applied by doctors and other health professionals.

This problem is compounded by the fact that many doctors, nurses and hospital staff, particularly those from UK and USA, work on short-term contracts, usually for only one or two years. The relatively rapid turnover of professional staff does not provide the continuity in experience which is necessary to develop professional standards. (Dixon, N, 1982, p. 51)

The Saudi Arabian medical profession is relatively new and has not yet had sufficient time to develop a professional tradition that supports peer evaluation and review. Indeed, a formal procedure for the licensure or registration of doctors and other health professionals has not as yet been developed in the Kingdom. In these circumstances, the level of hospital practice can be best maintained by the development of standards relating to the qualifications of doctors working in Saudi Arabian hospitals, and to the other structural, process and outcome components of patient care services provided in the hospital-in short, by the provision of a quality assurance program. (Dixon, N, 1982, p. 51)

Because hospital and health service development is so new in the Kingdom, the majority of Saudi Arabian patients have not had the benefit of long-term comprehensive medical care. Therefore medical practitioners themselves have little information on patterns of disease, or on normal values for standard laboratory test among the Saudi Arabian population. (Dixon, N, 1982, p. 51)



The implementation of formal quality assurance program should help the development of further studies and the benefit of such work to improving the quality of medical care in Saudi Arabia is obvious. (Dixon, N. 1982, p. 52)

Hospital supplies and equipment are occasionally delayed for considerable period of time, and the maintenance of sophisticated machinery is often difficult to guarantee. The implementation of a quality assurance program will call attention to these inadequacies and demonstrate their effect on patient care. Such information will assist hospital authorities in overcoming these problems. (Dixon, N, 1982, p. 52)

### 3.10.1 ARAMCO Efforts

The ARAMCO Medical Services Organization provides health care for the employees of the Arabian American Oil Company and their dependents in all of ARAMCO's major operational areas in the Kingdom of Saudi Arabia. Dhahran health Center, a 363-bed general hospital accredited by the Joint Commission on Accreditation of Hospitals, admits more than 16,000 patients per year. The current expansion of the Medical Services Organization will provide an additional 120 beds in Dhahran, 80 beds in Al Hasa, and 40 beds in Ras Tanura. Ambulatory care is provided during more than 1.3 million clinic visits per year.

The formal quality assurance (QA) program was established in 1982 and is designed to monitor and evaluate the quality and appropriateness of care provided in all ARAMCO health care facilities and to identify and resolve problems that have an impact on patient care and clinical performance. (Soltis, MF, 1986, p. 266)

The QA program consists of:

- a. A written QA master plan, with related administrative and operating policies and procedures that describe the program and all of its components;
- b. A centralized multidisciplinary QA committee whose members represent specialty medical services, ambulatory medicine, nursing, support services, and administration. The QA committee oversees

- and coordinates the comprehensive, integrated QA program; and
- c. A field wide ambulatory QA steering committee whose members represent ambulatory medical services from each of ARAMCO's major operational areas-specialty medical services, nursing, support services, and administration. This committee provides leadership and direction to the ambulatory QA program and an opportunity for ambulatory health care professionals from different facilities to meet on a monthly basis to discuss QA issues. (Soltis, MF, 1986, p. 266)

Each department/service is required to establish quality indicators that are monitored systematically on an ongoing basis. The departments/services also analyze data to identify and correct problems and report actions taken to correct or improve care and clinical performance.

The medical staff is required to continue data collection and analysis and to report findings in all areas of direct patient care, as well as to conduct antibiotic utilization review, other drug utilization review, blood utilization review, medical records review, surgical case review, infection control utilization review, and credentialing and privileging activities. (Soltis, MF, 1986, p. 266)

Focused studies are conducted when a need arises for in-depth review to identify the scope of problems. An evaluation of the effectiveness of the QA program is conducted annually.

The QA program's needed improvements include improved analysis of QA data by all services and monitoring committees and an effective mechanism for linking QA findings with the credentialing and privileging process. (Soltis, MF, 1986, p. 266)

A survey has been developed by Saudi Aramco Medical Services Organization (SAMSO). It is intended for hospitals in Saudi Arabia who wish to be considered by Saudi Aramco for contracting health care to Saudi Aramco



employees and beneficiaries. SAMSO utilizes the standards set forth by the Joint Commission on Accreditation of healthcare Organizations from the United States. (SAMSO, 1994, p. iii)

### 3.10.2 KFSH&RC Efforts

The Quality Assurance in Medicine was a title of a Symposium (sponsored by the Joint Board for Postgraduate Medical Education on 2-3 Safar 1407 (5-6 October 1986), at the King Faisal Specialist Hospital and Research Centre, Riyadh). It cautions against becoming involved in unproductive rituals for assessing patient care, a message that may be of particular interest to health professionals in developing countries where hospital quality assurance programs generally are still in an embryonic stage of development. ( Skillicorn, SA, 1987, p. 89)

KFSH&RC refers to the Joint Commission on Accreditation of Hospitals (1981), as the basis for the Quality Assurance Program in KFSH &RC.

### 3.10.3 KKESH Efforts

In December 1982, the King Khaled Eye Specialist Hospital (KKESH) opened and set as one of its major goals the development of a hospital-wide program that would ensure the necessity, quality and cost effectiveness of the patient care delivered at the hospital, and that would compare favorably with the standards of the Joint Commission on Hospital Accreditation. This program was called Quality Assurance.

The decision to attempt to meet JCAH standards was a requirement of the contract they had with the American managing company that ran the hospital. The effect of the agreement was two-fold:

- a. Since JCAH was a contractual requirement, it made it easier to start the quality assurance program.
- b. The company was willing to create a quality assurance department, which in today's health care industry can be seen as a luxury.

Some factors that affected the introduction of the QA programs and its ability to meet JCAH standards were as follows:

- 1 Nothing like KKESH had ever existed before. The new institution offered a unique service.
- 2 There were no standards for providing eye care on such large scale.
- 3 The undertaking was vital, considering the incidence of eye disease in the Kingdom.
- 4 The work force represented 28 different nationalities, professional preparation methods, and ideas about patient care.
- 5 Ophthalmologists were not accustomed to the quality assurance process.
- 6 Nurses were not used to providing specialist eye care.
- 7 There was no organized quality assurance department.
- 8 There were no set standards or measurements of performance.
- 9 The building was built to French specifications; JCAH uses American standards.
- 10 Attitude, motivation, and acceptance of quality assurance were, at best, questionable. (Carver, AM, 1985, p.185)

The practical advantage offered by the QA program was that it helped the hospital to establish, maintain, and improve the quality of the patient care delivered. At KKESH, this was of particular importance for two reasons:

1. There is a high incidence of eye disease in Saudi Arabia.
2. The delivery of eye care on such a large and sophisticated scale had never before been attempted. (Carver, AM, 1985, p. 185)

#### 3.10.4 MODA Efforts

The Saudi Arabian Ministry of Defense and Aviation (MODA) established an early precedent for hospital development in the Kingdom of Saudi Arabia operating its hospitals and clinics to the highest standard in order to provide quality medical care for eligible patients.



MODA established standards for MODA operated hospitals in Saudi Arabia on the basis of hospital standards published as the 'Accreditation Manual for Hospital's by the Joint Commission on Accreditation of Hospitals (1981).

This effort to establish and monitor implementation of hospital standards assured optimal quality of service for the beneficiaries of MODA hospitals and the results were of value to all Saudi Arabian hospitals. (Dixon. N., 1982, p. 52)

In 1991, Witikar Saudi Arabia Ltd. was in need of quality assurance officers to participate in the American Effort in Saudi Arabia in some hospitals such as King Abdul Aziz Airbase Hospital – Dhahran, King Fahd Military Medical Complex – Dhahran and North West Area Armed Forces Hospitals – Tabuk (JQA, 1991, p. 43)

#### 3.10.5 MOH Efforts

The Ministry of Health in Saudi Arabia did not pay much attention to a Comprehensive Quality Assurance program until it adopted the management by contract strategies to operate some of its hospitals such as King Fahad Specialist Hospital in Qassim, and King Fahad Hospital in Al-Baha. These hospitals were operated in 1980's by mainly American companies which referred to the Joint Commission standards or modified standards in respect of their operations.

In 1990 a project was undertaken between MOH and JCHAO, called "HOSAD", a project established mainly to help the MOH to form a comprehensive Q.A program based on Saudi National Standards. The project was conducted over seven years but it failed to achieve the main goal.

In 2000, A General Directorate of Quality Assurance was founded within the MOH but still to date no nationwide comprehensive Quality Standards have been established.

### 2.11 The Influence of The “JAR” Metaphor

In using the “JAR” metaphor to aid in the process of diagnosis of the Health Care Process we should first specify the three components of health care, the “Jassad” (Body), the “Aqel” (Mind) and the “Rouh” (Soul).

The way in which it will be used is to propose that the Soul of health care is the accumulative soul of the persons involved in it. By analogy it may be argued that it is manifest in the way it feels to those involved, where the cornerstone of that is the patient who can feel such kind of soul. Therefore the study of the quality of health care principally involves the patient, but the experience of the health system is also felt by all others involved.

The second part of the health care is the “Aqel” (Mind) which it may be argued reflects the accumulative shared knowledge of the persons involved in the treatment process. This principally involves the health professionals, who are the most important part of the mind involved. From this perspective, therefore, the study of the quality of health care must involve the health professionals to make a wider picture of the subject.

The last part of the metaphor is the “Jassad” (Body) of health care which reflects the treatment procedures and materials and can be measured by the quality assurance professionals by using any international approved clinical standards for specific treatment procedures of certain symptoms and diseases. The standards of the Joint Commission of Hospital Accreditation Organization in USA or the Royal College of physicians in Edinburgh in UK are the examples of these standards which can be used.

In 1995, the Joint Commission in USA introduced “the Quality Cube” model (Figure 3.2). Each important function or, dimension of performance or organizational dimension has specific rate and method for measuring in the accreditation standards manuals.

The comparison of the “JAR” metaphor and the Quality Cube model results in a very particular view. That is that the patient must be involved in the assessment of the emergent feel of the health care process, and secondly the knowledge base of the health



professionals must also be included in performance dimensions, and the important functions and organizational dimensions which should be compared with standards.

Thus, the study of the impact of the implementation of the health insurance programme on the performance dimensions, and the important dimensions of the Quality Cube should be assessed by the patients themselves, and the performance dimensions, the important functions and organizational dimensions should be assessed by the health professionals (doctors). Finally, the treatment procedure should be assessed by comparing them to the standard treatment.

### 3.12 Conclusion

Quality is a multidimensional and multifaceted concept, this partly explains the large number of definitions of the concept of quality, the many approaches to measure and assess it, and the variety of approaches to assure and improve it. Three American experts have, in the past, advised industry throughout the world on how it should manage quality, and have introduced approaches to define and manage quality. These are the approaches of Philip B. Crosby, W. Edwards Deming and Joseph M. Juran.

The ISO 9000 series of standards were first harmonized internationally in 1987 and are now an extensive family of standards dealing with various quality system disciplines. In 1988, D.A. Garvin discussed five approaches to define quality by various authors. First, the approach based on the "Excellence," the second based on "Product", the third based on "Customer" such as those of Deming and Juran. The fourth is based on "Manufacturing", and finally the fifth is based on "Value" or "Price." (Bin Saeed, K. S., 1997, p. 48) Conformance to one of the standards provides an "umbrella" tool for the management of all activities impacting quality. Such a system will support, and not in any way contravene, existing quality performance measures and quality improvement initiatives such as state mandated practices and/or JCAHO/NCQA standards and/or the Juran/Deming/Crosby philosophies.



In health care Quality Assurance dates back to 2000 B.C. and the Code of King Hammurabi of Babylon which produced the earliest known documented penalties for incompetent practice. Since then there have been many discussions of quality management and its principles and the possible steps of implementation. This has produced in the current time a widespread acceptance and experience in Implementing Quality Management principles in healthcare based upon the patient (customer) and his/her satisfaction. The application of the Deming principles is perhaps easier in health care than many other customer oriented services, because it deals directly with life or the Quality of Life.

The healthcare industry faces many challenges in the decades ahead that require organizations to respond quickly to changes in the market and changes in customer needs. The measurement of quality has always struggled with a validity issue. It is extremely difficult to arrive at a consensus as to what constitutes good quality care because of the implied values inherent in any definition.

Currently, there are two general methods being utilized to measure the quality of patient care in hospitals. One method might be called the 'scoreboard' system. It uses accumulated information pertaining to the outcomes of patient care. The other method used for the appraisal of quality might be called the 'internal show-and-tell' system which employs techniques that evaluate the process of patient care rather than gross outcomes.

Alternative approaches were formulated by Donabedian (1966), Dror (1968) and De Geyndt (1970). These alternative formulations were neatly summarized by Donabedian is the structure-process-outcome trilogy including the hospital medical staff committees, the tracer methodology, the health accounting method and the accreditation of healthcare organizations.

The American College of Surgeons created the first set of minimum standards for hospitals in 1917 when it launched its National Hospital Standardization Program. In 1951 the nonprofit Joint Commission on Accreditation of Hospitals was founded grouping their major national organizations concerned about quality standards in



providing medical care. Expansion of its voluntary hospital accreditation work to mental health, home care, nursing homes and ambulatory care settings made it appropriate to change its name in 1988 to Joint Commission on Accreditation of Healthcare Organizations (JCAHO). JCAHO designed a 10 step monitoring and evaluation process to help healthcare organizations manage the quality of care that they provide.

The Joint Commission on Accreditation of Healthcare Organizations in its 1990s agenda for change embraced continuous quality improvement as a paradigm to move from measuring structural and process characteristics to standards that emphasize actual organizational performance. *The Accreditation Manual for Hospitals, Volume I (AMH, Vol. I, 1995)* represents the achievement and a milestone in the Joint Commission's Agenda for Change initiative. The AMH provides standards that can be used today to assess and improve any hospital's performance. By helping it focus on "doing the right things well" in the context of the hospital as an interrelated system rather than a collection of discrete units or departments.

The AMH reflects the three major initiatives of the Agenda for Change: Reformulation of Joint Commissions standards to emphasize actual organizational performance; redesign of the survey process; and development of the Indicator Measurement System (IMSsystem), a national indicator-based performance-measurement system. The 1995 AMH completes the standards revision, with the introduction of six new chapters: "Patient Rights and Organizational Ethic," "Care of Patients," "Continuum of Care," "Management of the Environment of Care," "Management of Human Resources," and "Surveillance, Prevention and Control of Infection."

The functional standards in 1995s Manual have reflected scoring guidelines. Scoring of standards emphasizes performance, and lowers scores given where evidence of performance is lacking. The new survey process moves away from evaluation of specific departments and services. It focuses on assessing, across an organization, performance of important patient-focused and organizational functions that support quality patient care, rather than evaluation activities that may have been conducted primarily to pass the survey.

The third initiative of the Agenda for Change focused on developing the IMSystem, a national indicator based performance measurement system. The IMSystem provides information for healthcare organizations to use internally to improve performance and externally to meet the demands of patients, purchasers and other for healthcare quality data.

The quality cube presents a model for assessing quality that illustrates the relationship of dimensions of performance and important functions to a range of patient populations and services provided. It can be entered at any point and can be used for global or very specific analysis. Performance area scores are transferred to an accreditation decision grid. The accreditation decision grid displays the 45 performance areas in a single diagram format. The organization of the decision grid corresponds to the organization of the standards the decision grid is divided into the same three sections as the standards: Patient-Focused Functions, Organization Functions, and Structural Functions. The summary grid score represents the hospital's overall level of compliance with the standards under which surveyed.

Saudi Arabia is one of a few developing countries which have institutionalized a formal Quality Assurance Programme applying a combination of the Q.A. indicator approaches. More often the Medical Staff Committee approach is used in a leading hospital in KSA, such as KFSH&RC, ARAMCO, KKESH, MODA hospitals and some MOH hospitals. In 2000, a General Directorate of Quality Assurance was founded within the MOH but still up to date there is no national wide comprehensive quality standard.



## Chapter 4: HEALTH INSURANCE

Chapter four discusses the insurance aspect of the problem situation where the discussions focus on the detailed development of understanding of the particular Saudi and insurance context in which the quality model was used. The chapter first describes insurance in Shariah Law, and then moves on to the historical background of health insurance, a health insurance definition, the purpose of health insurance, topics related to previous western studies, health insurance in K.S.A., and concludes with the factors that influenced the quality model.

### 4.1 Insurance in Shariah Law

There are three different views among the Shariah scholars on the subject of “Insurance.” It has proved to be very difficult for the Islamic world to make a decision on this complex phenomenon. Such a decision should be made by an International Islamic Conference (Al Hokayl A, 1987, p. 97). In the Islamic world, at the time of writing of this dissertation there is still a hot debate around these three views.

#### 4.1.1 The Opponents Contentions

The main contentions of opponents who argue against the implementation of commercial insurance have been characterized by the following:

- 4.1.1.a commercial insurance challenges divine predestination particularly where life insurance policies are concerned.
- 4.1.1.b commercial insurance is gambling and wagering because it is conditional upon a risk, which may or may not materialize.
- 4.1.1.c commercial insurance involves risk and uncertainty in that none of the parties to the insurance contract know at the time of signing what they will take or give.
- 4.1.1.d commercial insurance carries injustice being a conditional aleatory contract.

- 4.1.1.e commercial insurance involves usury in that the insured pays a small premium and freely cashes in on a large compensation in the event of a materialized risk.

Also, some forms of commercial insurance involve interest payments. Moreover, the Insurance companies may use what they collect in prohibited usury transactions.

#### 4.1.2 The Absolute Supporters Contentions

The absolute supporters who argue for the implementation of commercial insurance reply to the aforementioned contentions as follows:

- 4.1.2.a Insurance is not a guarantee that the risk insured against will not materialize, and therefore it cannot be construed as a challenge to predestination. Insurance is merely a form of lessening and mending the effects of the materialized risk through a cooperative of insured parties. This is something dictated by Shariah Law.
- 4.1.2.b Gambling and wagering are games while insurance is a serious business. Wagering is pursuit of money through luck and coincidence while insurance is not. On the contrary, insurance is meant to safeguard, as much as possible, against misfortune and bad luck.
- 4.1.2.c Should insurance involve risk and uncertainty, this type of risk and uncertainty is permitted by Islamic law as are other forms of contracts as long as it does not lead to a conflict.
- 4.1.2.d Should insurance carry injustice in being a conditional aleatory contract, such injustice is forgiven because it is a form of injustice similar to that carried by other forms of legal contracts. The forbidden form of injustice is that where a gross disequilibrium occurs between what is given by each party and what that party takes consequently, enabling one of the parties to unjustly take advantage of the other. Insurance does not involve any such injustice. An insurance contract is that by which each party obtains some things for what he gives. It is



based on scientific methods and accurate calculations that remove any trace of injustice. The insured does not purchase insurance at random; he does so only after carrying out statistical studies using methods that are apt to ensure his gain. He is no more prone to loss or gain than any merchant or trader. In the event of a catastrophe the insured does not collect the insurance sum at random. The amount paid to him is merely a compensation of damage sustained. In the event the risk does not materialize, he does not lose the premiums paid, simply because such payments were a form of cooperation with other insured parties. Nevertheless, the absolute supporters of insurance state that if the insurance companies charge high premium payments, which are not at all in line with the probability of loss, injustice occurs and the contract may be severed.

4.1.2.e As for usury and the statement that the insured pays a small premium and collects a high compensation should a risk materialize, the reply is that insurance is a cumulative contract based on scientific methods and accurate calculations. As for interest payments that are given in some types of insurance, these are merely a distribution of a small part of the huge profits that are realized by commercial insurance companies through the investment of the savings of the insured. However, the absolute supporters of insurance, in order to eliminate this confusedness that it is not intrinsically related to insurance, but rather extrinsically added, state that the insured may be prohibited from collecting interest payments.

4.1.2.f The absolute supporters of insurance go beyond refuting the contentions of their opponents to citing some legal evidence to bolster their point of view vis-à-vis the legality of the insurance contract by way of analogy. They draw similarities between the

insurance contract and legal contracts, such as sleeping partnership contracts, sequestration contract for a fee, sponsorship contract for a fee, payment of wergild in culpable homicides, warranty of uncertainly and warranty of what must not be the validity of road insurance in the Hanafi Sect and the binding promise in the Malki Sect. The absolute supporters of insurance further add that even of the analogy is not accurate or acceptable, the insurance contract remains a new form of warranty contract which was not dealt with by any Islamic law and was not prohibited by any Islamic legislation. It is therefore allowed, and further more since it has become a common practice is evidence of it being accepted by Islamic Shariah. Moreover, it is dictated by need, a need that can almost be regarded as a necessity. (Rukun M, 1991, pp. 81-87)

#### 4.1.3. The Cooperative Insurance Supporters

Other Shariah scholars are of the view that commercial insurance should be forbidden as it could be replaced by a Cooperative Insurance which does not involve any wrong doing, the view is that, cooperative insurance serves the best interest in eliminating the role of the exploiting middle man or insurance broker. (Jamal A, 1980, p. 106)

The concept of Cooperative Insurance is based on the cooperation of the policy holders (the insured) contributing funds towards compensating those amongst them who are faced with accidental mishaps. The surplus resulting from insurance operations is returned back to the policy holders in a determined manner and time. The Saudi Council of Senior Ulema approved this form of insurance, as an Islamically accepted substitute for commercial insurance, in 1397 H. (Jamal A, 1980, p. 106) As well, the Council of Feqh collectivity, in Makkah Al Mokaramah in 1398H, accepted the Saudi Council's "Fatwa" about insurance that supports all the opponents' contentions about the commercial insurance and accepts cooperative insurance as an Islamic alternative. (Jamal A. 1980, p. 103)



## 4.2 What is Health Insurance?

### 4.2.1. Definition of Health Insurance

Health Insurance is a generic term, encompassing several types of insurance contracts, which, though related, are intended to protect against different risks. Until recently, there was little consistency in the terminology used in referring to health insurance. It was called “accident and health,” “accident and sickness,” “disability,” and a number of other terms all of which are gradually giving way in favour of the general term “Health Insurance.” (Elliot & Vaughan, 1972, p. 262)

Health Insurance deals with two principal types of losses. The first is the expense of medical treatment and the second is the income that an insured person would have earned but is unable to earn during a period of disability. (Crane F, 1980, p. 23)

### 4.2.2 Types of Health Insurance Coverage

There are three basic types of health insurance coverage that make health insurance able to handle both of the above risks. These types are the following:

#### 4.2.2.a Disability Income Insurance

Disability income insurance is an example of protection against loss because it replaces income that cannot be earned while a person is sick. It is a logical complement to life insurance designated either short or long-term policies depending on the length of protection offered. (I will not go into more details because this type of insurance is not included in this study.)

#### 4.2.2.b Medical Expense Insurance:

Medical expense insurance protects the insured from financial loss due to medical costs. With some policies the benefits are paid directly to the providers of the services after the medical bills are submitted by the hospital or doctor.

#### 4.2.2.c Major Medical Insurance

Major medical insurance policies are designed to provide protection for potentially large medical expenses. Major medical coverage continues protection after basic medical expenses insurance benefits have been exhausted. These insurance policies may add benefits for some particular services not covered by the basic coverage of medical bills. (Dorfman M, 1978, p. 282).

#### 4.2.3 Levels of Health Insurance Coverage

There are three levels of health insurance namely, individual, group, and national health insurance coverage.

##### 4.2.3.a Individual Health Insurance

Protection against the economic consequences of sickness and injury is of growing significance to individuals and their families. Loss of income through disability and the costs of medical care have become an increasingly heavy financial burden that, for most people, can be shifted in large part to insurance organizations. Individual health insurance policies, which cover one person or one family, are purchased by people not covered by group plans, or perhaps for some services not included in their group plans. (Gregg & Lucas, 1973, p. 275) (Crane F. 1980 p. 191)

##### 4.2.3.b Group Health Insurance Coverage

Most health insurance benefits are provided by group policies which are covering the employees of a business or other organization. Group coverage usually applies automatically to all persons employed by organizations having group policies in force. Group health insurance coverage is more economical than individual policies. (Crane F. 1980, p. 191)

Group health insurance continues to expand its relative importance within the insurance business. While the term nature of most group



insurance does not build insurance company assets like more permanent forms of coverage. group insurance is assuming a larger proportion of total insurance in force. because group marketing as an insurance distribution system possesses some significant advantages.

Since the risk is spread by group exposure, underwriting usually can be liberalized and the acceptance by the insurer is thus greater. Also the insurance company's unit expenses are reduced, resulting in lower cost. Sponsorship of group insurance by an employer tends to give the individuals insured an assurance that their coverage has been reviewed by professionals, and that the benefits and costs are trustworthy. Whilst each of the three types of health insurance (disability income, medical expense, major medical insurance), can be furnished by either group or individual policies. (Crane F, 1980, p. 191) (Gregg & Lucas, 1973, p. 494), the group health insurance approach will be the focus of this research project.

#### 4.2.3.c National Health Insurance

There is also a current discussion concerning the movement toward a national health insurance program. The Medical Care Recommendation, 1944 (NO.69), adopted by the International Labour Organization (ILO) called upon governments to meet the needs of the individual for care by members of the medical and allied professions. It also suggested that facilities should be provided at medical institutions with a view to restoring an individual's health, preventing the further development of disease, alleviating suffering when he is afflicted by ill-health, and with a view to protecting and improving his health.

The ILO recommendation gave expression to a new concept of comprehensive and universal protection in the field of health which many countries were applying at the time and others were later to develop. A major alternative was the launching of new universal health care insurance at the national level, which is National Health Insurance. This is usually known as National Health Services. (NHS) because the benefits are provided entirely by the state as a public service (rather than

as a social insurance programme) to all citizens. (Feldstein M, 1981, p. 11) (Ron A., 1990, p. 11)

The NHS have two key founding principles, first, the services are paid for largely through national taxation and are therefore free at the time of use, second, the services are equally available to everyone, irrespective of their means, on the basis of clinical need. From the insurance perspective this has the key advantage of spreading the insurance risks as widely as is possible, across the whole population of the country concerned. (Nichol D., 1994)

### 4.3 Health Insurance as a Social System

A social system is an organization of components which are interdependent and which develop orderly and systematic interactions with one another. The nature of each component and the amount and the type of interaction differentiate one social system from another. If we think of each health plan as a social system, each would be made up of three components.

- The health-insuring agency, which underwrites the program of insurance and processes the claims, sets eligibility terms, and determines premiums.
- The consumers, who are the subscribers to health insurance plans.
- The providers, who are the physicians and other medical professionals who provide services to consumers.

These components interact with one another according to formal rules peculiar to each plan and with role-expectations derived from participation in the larger system. Interactions may involve, for instance, enrollment, provision of medical care, billing, provision of insurance, payment of premiums and response to complaints. (Hetherington R., 1975, pp. 1-23)

From an understanding of systems theory, each particular way of structuring the interactions between the components of the system will give rise to different emergent effects. (Flood and Jackson, 1991, pp 6) This motivated



the researcher to consider what changes to the consumers' quality of experience might result from a change in the funding of health provision in KSA from government funded provision to funding through insurance.

#### 4.4 Why Health Insurance?

Insurance in general provides many benefits to society such as stability in families and businesses, easier completion of lending arrangements, removal of one advantage of monopolies or large-scale business versus small-scale operations, provision of capital to business and individual and active support of loss-prevention research. (Dorfman M., 1995 pp. 13-14)

In the Health Care Sector "Insurance" has a great influence which affects various aspects included within the health care subject. From a review of the literature it was found that there are about 21 aspects that are affected and influenced by health insurance.

Health insurance is mainly used as a cost containment strategy even by individuals or groups of consumers. (Rushing 1986, pp. 6-9) (Nyman J., 1991, pp. 106-112), (Fledstein p. 197, pp. 103-129), (Feldstein M., 1981, pp. 7-12), Lee F, 1987, pp. 4-518), (Arrow K., 1963, pp. 941-968), (Ron A., 1986, pp. 87-101), (Jarrett J., 1981, pp. 261-285), (Buchanan J., 1991, pp. 1067 -1090), (Green M., 1981, pp. 403-421)

Health Insurance plays a role in changing health care technology, or in other words it is the root cause of technological change since it increases the source of funds for health services. (Nyman J., 1991, pp. 106-112) (Rushing W., 1986, pp. 101-113) Health insurance increases the demand for health services, (Feldstein P., 1979, pp. 74-102), (Feldstein M., 1981, pp. 133-155), (Keeler E., 1977, pp. 641-655) therefore the health service utilization will increase as well. (Rushing W., 1986, pp. 118-121). (Hetherington R., 1975, pp. 83-140), (Feldstein M., 1971, pp. 1-20) That indicates that the quantity of the provided services correspondingly will increase. (Feldstein M., 1981, pp. 283-305), (Jarrett J., 1981, pp. 261-285) From an economic perspective, since the quantity of the provided services changes the price of the services must change as well.



(Feldstein M. 1981, pp. 283-305), (Greenspan N, 1982, pp. 39-57) When considering the competition among the health service providers (Arrow K. 1963, pp. 941-968) and whether doctors or hospitals for provide better quality care or services, the quality of health care in general will improve because it is influenced by the control methods of the health insurance system. (Feldstein M, 1981, pp. 133-155) (Hetherington R., 1975, pp. 140-196) At the national level, implementation of national health insurance will support equity (Jarrett J., 1981, pp. 261-285), since the range of the health services will increase (Hetherington R., 1975, pp. 141-196) which make the overall economic productivity increase (Rushing W, 1986 pp. 82-83), (Lee F., 1987, pp. 498-518) ending with a better national efficiency and distribution. (Rushing W., 1986 pp. 83-85)

Health insurance may include a disadvantage such as moral hazard (Rushing W, 1986 pp. 188-190; Hetherington R, 1975, p. 215; Pauly M, 1974, pp. 44-62) or it may cause a social conflict between classes or between generations (Rushing W, 1986 pp. 209-219), (Feldstein P, 1979, pp. 118-120). A welfare loss may result due to additional risk bearing that can be measured by the increase in the maximum premium that households would pay to avoid uncertain expenditure minus the corresponding increase in actuarial value. (Feldstein M., 1981, pp. 97-99) Finally health insurance works to stabilize the health planning process (Feldstein M, 1970, pp. 139-163) and is mainly affected by governmental regulation (Greenspan N, 1982, pp. 39-57) and the cultural values of the society (Rushing W, 1986 pp. 33-35).

#### 4.5 Previous Studies

In 'Medline' there were 50,063 articles related to 'health', 1,575 related to 'insurance' in general, 737 related to 'health insurance', 12,273 related to 'quality', and 27,737 related to 'services'. 79 studies were related to this study.

In the light of the quality cube dimensions and the Accreditation Decision Grid elements, I will highlight those studies that discuss the impact of health insurance on both dimensions and elements. (see Appendix IV)



Firstly, **Dimensions of performance**, where it was found that health insurance has an impact on the following elements:

- ❑ Accessing appropriate level of patient care. 26 of the previous studies discussed this aspect.
- ❑ Providing care on time. 3 of the previous studies discussed this aspect.
- ❑ The availability of services, if needed, where 8 of the previous studies discussed this aspect.
- ❑ Patients respect and caring, where 6 of the previous studies discussed this aspect.
- ❑ Inpatient length of stay, where 7 of the previous studies discussed this aspect.
- ❑ Quality of hospital services in general, where 27 of the previous studies discussed this aspect.
- ❑ Medical Technology, where 6 of the previous studies discussed this aspect.
- ❑ Medical staff behavior in providing services, where 9 of the previous studies discussed this aspect.
- ❑ Matching patient`s needs over an extended time, where 9 of the previous studies discussed this aspect.
- ❑ Providing care effectively with respect to cost, where 23 of the previous studies discussed this aspect.

Secondly, **Care Dimensions** where, it was found that health insurance has an impact on the following elements;

- ❑ Patients rights, in general, where 16 of the previous studies discussed this aspect.
- ❑ Hospital ethics, where 3 of the previous studies discussed this aspect.
- ❑ Patient`s assessment, where 6 of the previous studies discussed this aspect.
- ❑ Clinical investigations, where 4 of the previous studies discussed this aspect.
- ❑ Treatment decisions and plans, where 10 of the previous studies discussed this aspect.
- ❑ Medication use, where 1 of the previous studies discussed this aspect.
- ❑ Operations and related procedures, where 2 of the previous studies discussed this aspect.

- Physiotherapy and rehabilitation care, where 1 of the previous studies discussed this aspect.
- Nursing services, where 5 of the previous studies discussed this aspect.
- Patient, family education and responsibility, where 4 of the previous studies discussed this aspect.

Finally, **Organizational Dimensions** where, I found that the health insurance has an impact on the following elements:

- Hospital planning and organizational design, where 6 of the previous studies discussed this aspect.
- Social environment of care, where 4 of the previous studies discussed this aspect.
- Managing patient-specific data and information, where 6 of the previous studies discussed this aspect.
- Infection surveillance, prevention and control, where 1 of the previous studies discussed this aspect.
- Integration and coordination of hospital services, where 8 of the previous studies discussed this aspect.
- Hospital environmental management and design, where 1 of the previous studies discussed this aspect.
- Hospital staff management and planning, where 4 of the previous studies discussed this aspect.
- Hospital information systems, where 3 of the previous studies discussed this aspect.
- Hospital board activities and ownership style, and, where 3 of the previous studies discussed this aspect.
- Medical staff management and organization, where 2 of the previous studies discussed this aspect.

There were forty-nine studies which deal only with one or two elements of the dimensions of the Quality Cube, twenty six studies deal with three to six elements, while only four studies deal with seven or more elements. These four studies are:



- a. The study by Iris focuses on nursing practice but it discusses the impact of health insurance on nine quality dimensions namely: accessing appropriate level of patient care, patients respect and caring, quality of hospital services in general, medical technology, providing care effectively with respect to cost, nursing services, hospital planning and organizational design, medical staff behavior in providing services, and medical staff management and organization. (Iris, M., 1999)
- b. The study by Klinkman, Gorenflo, and Ritsema, specifies the impact of the health insurance on eight quality dimensions which are matching patient's needs over an extended time, patients assessment, clinical investigations, treatment decisions and plans, nursing services, patient family education and responsibility, managing patient-specific data and information, infection surveillance, prevention and control (Klinkman, M.S., Gorenflo, D.W., Ritsema, T.S., 1997)
- c. The study by Dranove, and White was focused on eight quality dimensions that are, the availability of services, inpatient length of stay, matching patients needs over an extended time, providing care effectively with respect of cost, hospital ethics, hospital planning and organizational design, integration and coordination of hospital services and hospital board activities and ownership style. (Dranove, D. and White W.D., 1998)
- d. The study by Curtin discusses the impact through seven dimensions related to quality, namely: accessing appropriate level of patient care, medical technology, providing care effectively with respect of cost, patient's rights, hospital ethics, hospital planning and organizational design and social environment of care. (Curtin, L.L, 2000)

These previous studies focus mainly on five quality dimensions: firstly, the accessibility of the care, twenty seven studies; secondly, the quality of hospital services in general, twenty four studies; thirdly, the efficiency of the care, twenty three studies

where this is one of the major study variables; fourthly, patient's rights, sixteen studies; and finally, the treatment decisions and plans, ten studies. On the other hand some quality dimensions are not included in any of these previous studies; for example, the safety of the care, intensive and anesthesia care, medical material use and nutrition care.

## 4.6 Health Insurance in the Kingdom of Saudi Arabia

Taking the view of health insurance as a social system, this section describes the components of Health Insurance in KSA: the health insuring agencies, the consumers, and the providers.

### 4.6.1 The Health Insuring Agencies

In KSA there are three kinds of organizations that are functioning and dealing with some kind of health insurance. These are: the General Organization for Social Insurance (GOSI), the Private Insurance Companies, and other Insurance Programmes.

#### 4.6.1.a The General Organization for Social Insurance(GOSI)

Social insurance law applies to wage earning workers in the cases of employment injuries and occupational diseases, which is a kind of health insurance, which also insures for invalidity, old age and death.

GOSI provides the following benefits in cases of employment injuries:

- Medical care and rehabilitation.
- Daily allowance if the injured person is temporarily unable to work, payable at the rate of 75% of his contributory wage when the injury was sustained, and reducible to 50% if he is hospitalized at the expense of GOSI.
- Monthly benefit for permanent total disability, payable to the respective injured person at the rate of 75% of his average monthly wage computed by taking one third of his total contributory wages for the last three months preceding the month in which the injury was sustained. The amount of this monthly benefit is increased by 50% if the injured person has permanent need of the help of others in



the performance of his everyday life activities, and by 20% if he supports three or more dependent family members, by 15% if he supports two family members, and by 10% if he supports one family member.

- Monthly benefit for permanent partial disability which equals or exceeds 30% but is less than 100%, to be computed by multiplying the amount of the permanent total disability benefit by the percentage of the partial disability.
- Lump sum compensation for permanent partial disability which equals or exceeds 10% but is less than 30 %, to be computed as 36 times the assumed benefit for partial disability.

The Employment injury includes:

- Any injury sustained by an insured person by reason of the work or as a result of performance thereof.
- Any injury sustained by the insured person on his way from his dwelling to his place of work and back, or on his way from his place of work to the place where he usually takes his meals and back, provided that he should not have deviated from his route nor stopped on the way for a purpose dictated by his personal interest or by an interest not related to his work.
- Any injury sustained by the insured person during the movements he makes on the instructions of the employer or during travel is paid for by the employer.
- Any occupational diseases contracted by the insured person by reason or as a result of handling any of the operations or materials set forth in the schedule of occupational diseases approved by the Council of Ministers.

The contribution for occupational hazards is fixed at 2% of the wages of the insured subject to contribution, and the employer, alone, is responsible for its payment. (GOSI 1985, pp. 26-35) GOSI is responsible for compulsory social insurance applied to all workers without discrimination as to nationality, sex or age, who work by virtue of a labour contract for the benefit of one or more employers regardless of the duration, nature or form of the contract, or of the amount or kind of wages paid, provided that their services are performed mainly within the Kingdom of Saudi Arabia. (GOSI 1985, p. 19)

A new social insurance scheme was approved recently by the Council of Ministers. The executive by-laws for the new scheme are being prepared by the General Organization for Social Insurance (GOSI).

Features of the new regulations include:

- Increase of total contributions in respect of Saudis from the current level of 13% (8% paid by employer and 5% by employee) to 18% (to be shared equally by the employee and the employer).

The increase in the employee's contribution will be phased over a three years period. The reason for this increase is to equate the contributions payable by the Saudis working in the private sector with those paid by employees in the Government sector and the Military.

- Freedom to retire voluntarily before the age of sixty (60), if the employee has put in service of twenty (20) years. Women will be able to retire at the age of fifty-five (55).
- Eligibility for disability benefit will be available if the employee has been in continuous employment for 12 months or interrupted service for 18 months.



Previously, the employee needed a minimum 10 years service to be entitled to this benefit.

- A pension will be given to the dependent(s) of the subscriber after his death.
- The new scheme will also cover craftsmen, self employed individuals and Saudis who are working abroad and not covered by any insurance scheme.
- The maximum monthly salary on which GOSI contributions are calculated has been fixed at SR 45,000/-
- The minimum monthly pension will be SR 1.500/-  
(Murray, W., 2001, pp.10-11 )

#### 4.6.1.b The Private Insurance Companies

In KSA there are more than 146 insurance companies of which 43 operate in the central region, 56 in the western region and 47 in the eastern region (Rukun M., 1991, p. 72). About 10% of these companies work mainly in Health insurance. Since there is no general insurance system or law in KSA, all of the private insurance companies are not licensed, but they are branches or sponsors of foreign companies, except the National Company for Cooperative Insurance (NCCI) which is licensed. For more information about NCCI see Appendix V.

In general, the premium of the private insurance company's programmes usually varies from SR 70 to SR 500 per person per month according to the type of the coverage demanded.

In some private hospitals the income from insurance company programmes represent about 25% of the total income of the hospital (Jaber A, 1995).

#### 4.6.1.c Other Insurance Programmes

Besides private insurance companies providing insurance there is another active element of competition within the health insurance market. This is the health insurance programmes that are provided by and affiliated to the private hospitals, clinics, and medical centers themselves. By these programs an employer contracts directly with specific private medical organization such as a hospital, clinic, or medical center for providing specified medical services for employees with a predetermined amount of fees (premium) per person per year or month.

In general, the premium of the private medical organizations insurance programmes usually varies, according to the type of coverage, from SR 50 to 300 per person per month. This is a strong point of these programmes, because it is approximately 30 % less than the premium rate charged by the insurance companies. Also the medical organization has the ability to make discounts for the excluded coverage services while the private insurance companies cannot. In some private hospitals the affiliated insurance programmes income represent about 15% of the total income of the hospital. But the medical organization insurance programmes cannot serve or provide services for the consumers outside KSA, while the insurance companies' programmes can do that. (Jaber A. 1995)

In general the insurance programmes, in both the private insurance companies and the other medical organizations, are interested mostly in group insurance, and the terms of the contract vary with the individual organization. (Rukun M, 1991, p.72)

#### 4.6.2 The Consumers

The main consumers of health insurance programmes, either governmental or private, are the Foreign Employees. (Jaber A. p.12), (Mop. 1993, p. 274), (Rukun M., 1991. p. 72) (Baker M., 1994. p. 12)



In KSA foreign employees number 4.6 million people which represents about 27.3% of the total of the population of KSA according to the last national census in 1993 (Baker M. 1994, p. 12)

They are two types of foreign employees: those foreigner employees who are working in the government agencies, and those who are working in the private sector companies and other private sector establishments. Up until a few years ago both of them fulfilled their health needs by using public health services and utilities free of charge. But the private sector in the KSA has grown very fast during recent years, for example,

- In 1392 H (1972) the number of private companies was 923 with capital of SR 1295.9 million (£185 million) while in 1412 H (1992) there were 7246 companies with capital of SR105,5832 million (£150,833 million). (MoP, 1993, p. 302)
- In 1389-90 H (1969-70), the share of the private sector's contribution to the total Gross Domestic Fixed Capital Formation increased from 44.8% to 47.6% in 1410 H (1990). (MoP, 1993, p. 92)

Thus the increasing number of the foreign employees put increasing pressure on the public health services, for example, the increasing bed occupancy by foreign employees (Baker M, 1994, p.12); and further the increased total attendances at public health organizations which amounted to 3.58 million foreign employees, of which 2.54 million were private sector employees. (Jaber A, 1995)

The 'Labor and Workmen Law' 1999 indicates that the Ministry Of Health is no longer responsible for providing a (free of charge) health service for foreign workers, but it is now one of the employer's responsibilities, even in the emergency cases of employment injury. The MOH can obtain the service fees from GOSI. (See Appendix VI)

In addition, Article 31 of the Fundamental Government System of KSA, states that the provision of a free of charge health service is a right for all Saudi Citizens (Baker M., 1994, p. 13), which means that foreign workers health should be one of the employer's responsibilities.

Therefore, the re-evaluation of the situation by the private sector in KSA which uses modern management themes, such as productivity improvement methods, has made many employers aware and willing to provide health services for their employees, in order to attract qualified employees to work with them.

Thus, the employers use and try to introduce and adopt a system for providing health services for their employees by one way or another. There are six alternatives used, namely:

1. Group Medical Insurance Programs (GMIP) which is the main focus of this study.
2. Payment per case (fee for services) by contracting with a specific private medical organization.
3. In-house health services, where the employer affiliates a health service within its organization.
4. Payment per bill, by which the employees can obtain the health services from any health organization for any kind of sickness and the employer, will pay for that.
5. Health allowance, where the employer pays fixed amount of money per month as a health allowance whether the employee is sick or not.
6. Some employers use a combination of some of the above alternatives according to the employee's position for example, the payment per bill for the higher positions, the payment per case for the middle positions, and the Group Insurance Program for the lower positions. So that, the health services that are provided for the private sector's employees have an observed variation from those employees who try to use the emergency department in public hospitals to those who have payment per bill coverage.



Wherefore the MOH and the MOL and SA try to introduce a unitary system for the health services provided for the private employees by using a kind of compulsory Health Insurance Plan (CHIP) (Baker M., 1994, p. 13; Jaber A., 1995).

The cumulative number of employees covered by GOSI's social insurance increased from 145.4 thousand in 1393 H (1973) to 3.1 million in 1412 H (1992), more that 90% of which were employed in the private sector in 1412. (MOP, 1993, p. 174)

In 1414 H, (1994) 84% of workers in KSA were aged between 25-54 years, and the workers in the middle age group between 35-44 years represented over 40% of the overall GOSI covered workers. 26.1% of these GOSI covered workers were in Riyadh, 24.9% in Dammam, 18.4% in Jeddah, and 3.7% in Abha. 63.4% of the workers were engaged in the economic activities, construction, trade and hotels. The workers covered whose wages were less than SR 500 or extended up to SR 1990 per month account for over 70% of the total number of the workers covered. (GOSI 1994, pp. 328-329)

The total benefit payments made under occupational hazards scheme of GOSI during the financial year 1413-1414 H (1993) amount to approx. SR 126 million distributed as follows:

- 34.2% Cost of medical care.
- 14.3% Daily allowance.
- 4.8% Lump sum compensation.
- 45.3% Monthly benefit.
- 0.5% Marriage grant.
- 0.9% Funeral expense grant.

The private sector in KSA employs about 40% of the total foreign employees in the Kingdom. There are approximately 600,000 Insurance policies contracted by private insurance companies with the private employers covering

these workers. That represents about 20% of the available health insurance market in KSA. NCCI takes possession of one third of the contracted policies (Jaber A, 1995).

The number or percentage of insurance policies contracted by medical organizations are undetermined but some estimate can be made by using the income percentages of the private hospitals which have been mentioned previously.

#### 4.6.3 The Providers

In general, the health services providers for all insurance programmes in KSA are private health organizations (hospitals, clinics, medical centers, etc.), except those which are part of the GOSI programmes where use can be made of the public health services as well as GOSI's hospitals.

GOSI investments in the field of medical care have been embarked on in the following two hospitals:

- National Hospital in Riyadh which is a 124 bed hospital.
- Social Insurance Hospital in Riyadh which is a 250 bed hospital.

In 1414 H (1994), there are 49,664 employment injuries of which,

- 29.9% were construction workers.
- 53.2% were cut, laceration and puncture-open wound.
- 33.5% were of arm or upper extremities.
- 46.2% were caused by struck against and struck by.
- 76.1% were production workers, transport equipment operators and laborers.

#### 4.6.4 Cooperative Health Insurance System

The number of Non-Saudi residents has been increasing and the growth rate of the population of the KSA is one of the highest in the world. It is therefore important to realize that as a result the demand for healthcare services is bound to increase correspondingly, putting pressure on government. The



Ministry of Health, in association with the Ministry of Labor and Social Affairs, the Ministry of Finance and National Economy and the Ministry of Trade, made a thorough study on the legality of the cooperative health insurance system, and submitted a draft of proposed legislation to the Council of Ministers, which approved it by its Decision No. 71 dated 27/4/1420H (2000).

Towards the end of 1999, the Government approved private health insurance regulations which make it mandatory for sponsors/employers to insure their expatriate workers are covered by a private medical insurance scheme. The aim of the scheme is to provide basic medical cover to expatriates in the Kingdom. The Minister of health has indicated that if his scheme is successful, it will be extended to Saudi nationals.

The implementation of the medical insurance scheme, which was expected originally to come into force in late 2000, was deferred until March 2001. (Murray, W., 2001, p. 11) The Council of Ministers decision No. 71 dated 27.04.1420H (11.08.1999 EC) on Co-Operative Health Insurance System (CHIS) specified some articles containing the scheme. (See Appendix VII)

Finally, the impact of proposed Insurance regulations can be described by the impending health insurance regulations which are expected to significantly increase the market for healthcare services, and also increase the demand for quality health services. There is also likely to be a pressure on fees charged by the healthcare facilities. Notwithstanding possible pressures on fees, all hospitals and clinics, in general, are expected to perform better due to an increase in outpatient and inpatient throughput.

The increased demand will come first from expatriates and later from Saudi nationals, once mandatory coverage is approved for Saudi nationals. However, many companies are expected to introduce insurance coverage for their entire work force, not just expatriate employees. Therefore, many Saudi nationals will enter the scheme, even before it becomes mandatory for them. Even today, some of the largest companies in the Kingdom (Aramco, Saudi



Telecom, SABIC, Saudia, certain banks, etc) have implemented mandatory healthcare cover for their Saudi nationals and expatriate employees. (Ernst & Young, 2002, p. 20)

#### 4.7. Conclusion

The Kingdom of Saudi Arabia is an Islamic country governed by Shariah law. The development of the phenomena of insurance in KSA has been subject to a discussion by Shariah scholars of whether it aligns with the principles of Shariah law. In this discussion there have been three main groups of opinion the opponent's contentions, the absolute supporters' contentions, and the cooperative insurance supporters. These last were the basis of the Saudi Council's Fatwa and the proposed scheme of insurance based on 'Zakat'.

Health insurance began its development as a social policy, at the beginning of the 1880s, but the most significant political step was taken in 1883 in Germany, which then spread gradually throughout Europe in a variety of forms particularly during the first half of the twentieth century.

Health insurance deals with two principal types of losses, the expense of medical treatment, and the income that an insured person is unable to earn during a period of disability. There are three basic types of health insurance namely: disability income, medical expense, and major medical insurance. In addition, health insurance coverage can be provided at an individual level, a group level, or at a national health level.

When we think of each health insurance plan as a social system, each would be made up of three components: the health insuring agency, the consumers, and the providers. The style of operation and outcomes of the social system will be influenced by the particular design. Therefore it may be expected that the quality as experienced by the consumers would be affected by the particular health insurance regime. Many studies have examined the impact of health insurance on various aspects of provision. Quality of provision is perhaps one of the most important of them.



In considering the previous studies carried out it is clear that a number of researchers have investigated the impact on a number of the quality dimensions defined by the quality cube described in Chapter 3. There is therefore considerable interest in the question of the impact of insurance on the quality of health provision. It is an important area to focus on, especially in that none of the previous studies was conducted in an Arab country.

In particular it is important for the Kingdom of Saudi Arabia where the implementation of a change to insurance based provision is taking place. In considering the comprehensiveness of the previous studies, it was found that none considered more than nine quality dimensions, nor attempted to use the accreditation elements of JACHO and/or quality cube dimensions to clarify and test the impact of the health insurance. This study therefore tries to be comprehensive and attempts to use the accreditation elements and quality cube dimensions to clarify and explore the impact of the health insurance. To the researchers knowledge some of the quality aspects will be considered for the first time.

In the KSA there are three kinds of health insurance schemes. Firstly, the GOSI scheme which is applies to all workmen in the KSA, in public or private organizations, where the treatment takes place mainly in the private health sector and rarely in the public health sector. Secondly, the private insurance companies schemes which apply mainly to private sector employees. Thirdly the provider health organization`s affiliated schemes which apply also mainly to private sector employees, where the treatment is obtained within the same health organization that the scheme is affiliated to.

In general, there are basically two kinds of coverage a) in-patient only, and b) both in-patient and out-patient. Both these include expenses incurred on account of the room and board in hospital within the limits of a maximum rate of stay per day, and physician`s charges per person per visit.

Since, the employer is responsible for providing health services for their employees, and there are neither detailed governmental rules nor a system for provision, some employers make use of a health insurance scheme, especially the private ones.

These face three main problems that are, competition between the private insurance companies, and the private health organization in providing a health insurance scheme: the absence of detailed insurance law; and accordingly the absence of private insurance company licensing and regulation.

Finally the observed variations of the health coverage for private sector employees has influenced the Ministry of Health, the Ministry of Labour, and Social Affairs in the KSA to introduce and implement a unitary system for such coverage by using a compulsory health insurance plan (CHIP).

The Council of Ministers Decision No. 71 dated 27.04.1420H (11.08.1999 EC) defined the Articles of the Cooperative Health Insurance System. The aim of the system is to provide basic medical cover to expatriates in the Kingdom. In 1999, the Health Insurance Council (HIC) was founded. The implementation of the medical insurance scheme came into force in 2005.



# CHAPTER 5: METHODOLOGY

The purpose of chapter five is to develop the methodology of the investigation. The chapter describes the development of the methodology, which includes the construction of a questionnaire survey instrument. The survey questionnaire is based upon the characteristics of the new quality model proposed in Chapter 3. This new multiple perspective model of health quality will be used to investigate changes in health quality due to the change from cash funded health system to an insurance funded health system. The target sample for the questionnaire survey was chosen to be a sample of Doctors and Patients. The chapter concludes with a summary of the methodology.

## 5.1 Development of Methodology

As May notes of a popular view of science:

“Scientific knowledge is proven knowledge. Scientific theories are derived in some rigorous way from the facts of experience acquired by observation and experiment. Science is based on what we can see and hear and touch, etc., personal opinion or preferences and speculative imaginings have no place in Science. Science is objective. Scientific knowledge is reliable knowledge because it is objectively proven knowledge.” (May, T, 1998:8)

The idea that objectivity, along with generalization and explanation are fundamental characteristics of a Science comes from the natural science model which some social scientists argue is an inappropriate model for studying people. (Bryman, A, 1996:3) In the complex world of social science it has been found that the assumption of a single ‘objective’ reality does not accord with observation, a reality is constructed by the individuals involved in the research situation and thus multiple realities may exist in any given situation. (Creswell 1994:4)

In formulating this research project I considered three main methodologies of research, quantitative research methods, qualitative research methods, and action research methods.

These describe “How one might begin to understand the world and communicate this as knowledge to fellow human beings.” (Burrell and Morgan, 1998: p. 1) Each methodology is underpinned by a particular epistemology where the researchers subscribe to a distinctive epistemological position. By an epistemological issue is meant “a matter, which has to do with the question of what is to pass as warrantable, and hence acceptable, knowledge.” (Bryman, 1996, p. 104)

### 5.1.1 Epistemology of Quantitative Methods

In social science the principal quantitative approach to research is the questionnaire survey where researchers are committed to a “positivist” epistemology in the study of society. The view from the “positivist” approach, the key idea of positivism, is that “The Social World exists externally, and that its properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intention.” (Smith, 1997, p. 22) In other words that “Only research, which conforms to the commons of scientific method, can be treated as contributing to the stock of knowledge.” (Bryman, 1996, p. 104) This approach contains two assumptions; firstly, that “reality is external and objective,” and secondly, that “knowledge is only of significance if it is based on observations of this external reality.” (Smith, 1997, p. 22)

Therefore, the relationship between researcher and subject is “fairly short lived or may require no contact with subjects at all, except in an indirect sense, such as postal questionnaire surveys.” (Bryman, 1996, p. 95-5)

As a result of searching for objectivity, researchers always try to make a clear distinction between science and personal experience, and also distinction between reason and feeling, as well, to be emotionally neutral. The research process and thought are governed by explicitly stated hypotheses and theories. Statistical and mathematical techniques for quantitative processing of data are



central. "Survey Research is structured in the sense that sampling and questionnaire construction are conducted prior to the start of the data collection, and then imposed on the sample members." (Bryman, 1996, p. 98) "In order to be able to generalize from regularities in human and social behavior, it is necessary to select samples of sufficient size." (Smith, 1997, p. 23) As a result, the approach seeks to establish general low-level findings, which can be deemed to hold irrespective of time and place or be a static view of social reality.

### 5.1.2 Epistemology of Qualitative Research

Ethnography is the main "form of the qualitative researches which combines several methods, including interviewing and observation." (Fielding, 1998, p. 154). Smith, and Cassell and Symon select Van Maanen's definition of a qualitative method which is "an array of interpretive techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world. (Smith 1997:p. 71; Cassell and Symon 1994:p. 3). Basing on this definition we can understand the epistemology of ethnography, especially when we consider that the most important word in the definition is "the meaning."

An ethnographic approach states that we should not see the social world as having patterns of causality of the same quality evidenced in the natural world, because the stuff of the social world is different. The social world in this approach is seen as created by the process by which people give meaning to their world and other supposed causal actions based on close attention to participant experiences.

So, the most fundamental characteristics of ethnography is its express commitment to viewing events, actions, norms, and values, from the perspective of the people who are being studied, which makes ethnographic researchers more likely to take advantage of other sources of data in interpreting events. This is because it is often associated with the collection and analysis of written or spoken text or the direct observation of behavior, rather than any quantification of observation as in quantitative methods.



One of the cornerstones of the ethnographic research is its acceptance of the inherent subjectivity of the research outcome: because the search for objectivity is to some extent misguided it seeks the participant's perspectives on the interpretation of the situation. Situations in the social world are dynamic, and "Qualitative methods are only sensitive enough to allow the detailed analysis of change, and more able to encompass this situation than Quantitative methods." (Cassell, 1994, p. 5)

According to this the flexibility of qualitative methods allow the researcher to change the nature of their intervention as the research develops in response to the changing nature of the context, and this "enhances the opportunity of coming across entirely unexpected issues which may be of interest to the researcher." (Cassell, 1994, p. 5)

### 5.1.3 Epistemology of Action Research

Both the Epistemology of survey research and the epistemology of ethnography are mainly designed to generate findings, "knowledge", but the main aim of Action Research is "to generate both research findings and action improvement out of the process of research of the issues in society." (Flood and Romm, 1997, p. 135) Therefore, "Action Research is a kind of Science with a different epistemology which produces a different kind of knowledge of use to the particular organization, in the course of which its members are developed to solve their future problems." (Gill, 1997, p. 75) The epistemology of action research is based on an ontological assumption that the construction of reality "becomes manifest not just through the "mind" but through the reflective action of persons and communication, while knowledge arises in and for action." (Reason, 1994, p. 333). Action Research emphasizes the "systematic testing of theory in live-action contexts." (Reason, 1994, p. 333)

Action Research facilitates learning and develops skills. The understanding developed during the research process is holistic because it "bounds episodes of research according to the local context." (Flood and Romm, 1997, p. 135; Gummesson, 1991, p. 103) For that reason it contributes to the



“empowerment of people to manage their own affairs while contributing to public knowledge.” (Flood and Romm, 1997, p. 135) This empowerment requires cooperation and feedback among all involved parties as well as a “continuous adjustment to new information and new events.” (Gummesson, 1991, p. 103). “The research findings should not be regarded as simply applicable or transferable to other situations. There must be a mutually acceptable ethical framework within which action research is used.” (Gummesson, 1991, p. 104) Because of “the degree to which researchers may legitimately challenge participants, views and practices.” (Flood & Romm, 1997, p. 135)

#### 5.1.4 The Researcher

The researcher has worked in the health sector for 15 years, 9 of them at the top management level in hospitals. During this period he has had a great interest in the quality of service provision as well as the question of insurance.

He has attended many conferences and contributed to some of them on these two topics. The papers contributed covered hospital operations contracts in KSA, types of insurance coverage in KSA, and organizational development. His involvement in a consultation undertaking a system analysis of a hospital information system played a major role in attracting him to the area of quality and insurance; and gave him an opportunity to manage and interact with related parties and gather information.

Currently, the researcher is working in Health Science College in Riyadh as a lecturer of health administration, nursing management, laboratories management, communication skills, pharmaceutical agents management, quality management, health professional ethics, and research methods.

The researcher’s role in the health sector allows him to carry out participant observations. These were natural observations undertaken during the daily activities. Therefore, the data collected were of high validity. To further

enhance the data validity. the researcher applied some other methodologies which will be discussed in the following pages.

## 5.2. The “JAR” Metaphor

The new “JAR” Metaphor described in Chapter 2 is based on an Arabic ontological approach that the human being (Ensan) is composed of three components, namely in Arabic, Jassad (Body), Aqel (Mind), and Rouh (Soul), and the life of a human being is an interaction between these three components. (See Figure 5.1)

This metaphor proved to be a useful tool to differentiate between the three research paradigms and their associated methodologies. It enabled the development of some new ideas to understand the differences. Firstly, quantitative research is based on a researcher having an objective, and external view-point in which reality is viewed as static and the methods used structured and quantitative. The corresponding component of the human being is the Jassad (Body). The Jassad (Body) is viewed objectively and externally, and the shape and form of its reality can be seen as static. In consequence, the methods used to investigate the body are always within the positivist paradigm and give rise to measurements such as the blood pressure, temperature...etc.

Secondly, qualitative research is subjective, participative, sensitive and dynamic. Qualitative research focuses mainly on meanings which are products of the mind. Qualitative research methods can therefore be seen to correspond to the second component of the human being, the Aqel (Mind). The mind is subjective, sensitive and dynamic.

Finally, action research is characterized by the empowerment of the research to make live-action changes, by trying to know the social dynamic from its complex and contextual reality. In terms of the ‘JAR’ metaphor it corresponds to the Rouh (Soul) of the human being, its third component. The Rouh (Soul) is where the empowerments take place and is the generator of the live-actions, a very complex issue and a very contextual matter of human beings.



Therefore, by using the metaphor of Jassad, Aqel, and Rouh (JAR) I found that quantitative research deals with social world from Jassad (Body) perspective. qualitative research from Aqel (Mind) perspective, and Action research from Rouh (Soul) perspective (as shown in Figure 5.1) and a summary of these metaphoric connections can be seen in Table 5.1.

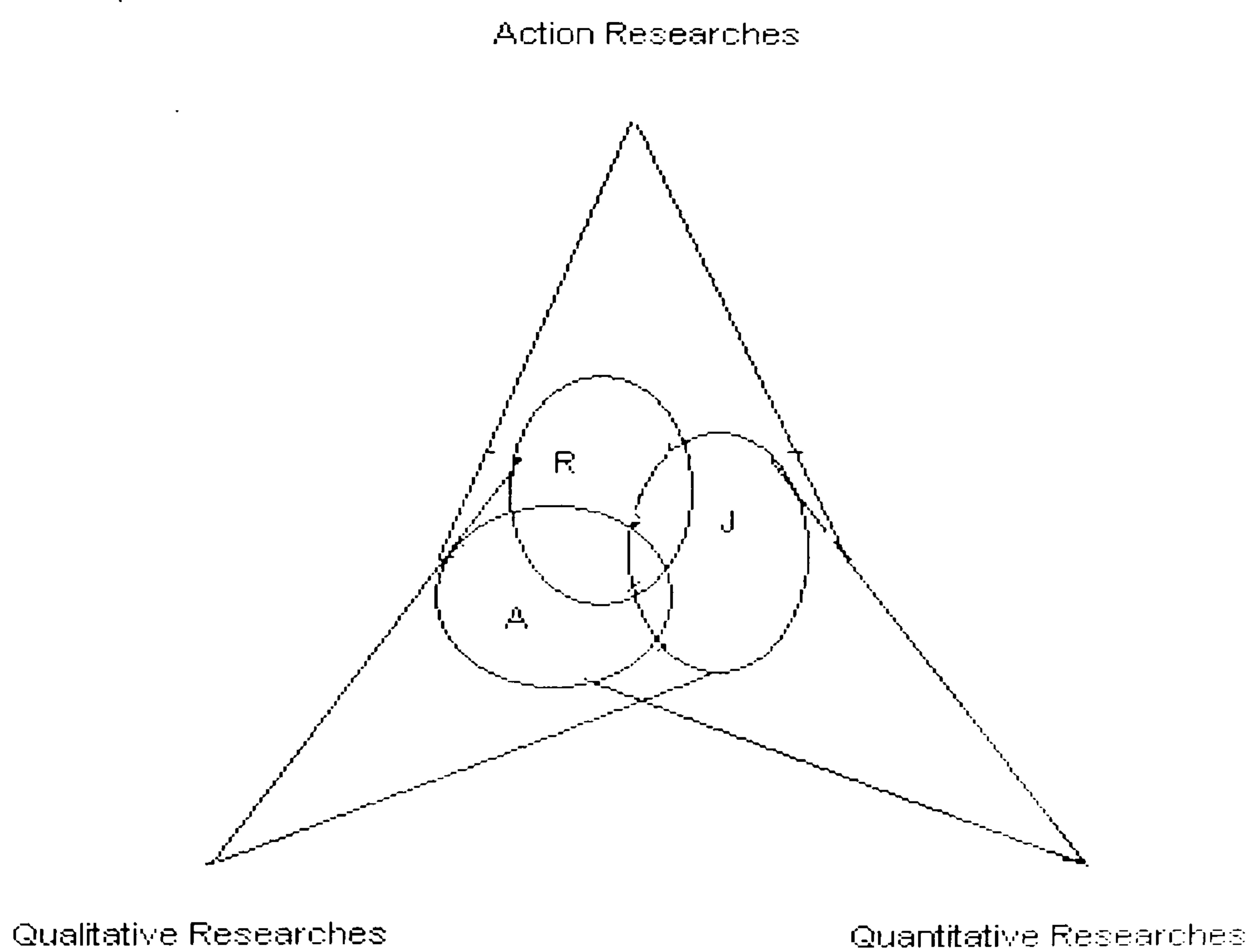


Figure 5.1: The JAR Metaphor of Common Research Methodologies

Types of Researches	Methods Characteristics	JAR`s components
Quantitative Methods	<ul style="list-style-type: none"> <li>- Objectivity</li> <li>- External reality</li> <li>- Static reality</li> <li>- Structured</li> </ul>	Through Jassad (Body)
Qualitative Methods	<ul style="list-style-type: none"> <li>- Subjectivity</li> <li>- Participative</li> <li>- Sensitive</li> <li>- Dynamic</li> </ul>	Through Aqel (Mind)
Action Methods	<ul style="list-style-type: none"> <li>- Contextual</li> <li>- Empowerment</li> <li>- Live action change</li> <li>- Complex</li> </ul>	Through Rouh (Soul)

Table 5.1: Common Research Methodologies Differentiations

### 5.3 Choosing a Methodology

Since quality is a multi-dimensional subject with more than forty dimensions, and the main objective of the study is to evaluate the changes in these dimensions of quality due to the changes from a cash funded health system to an insurance funded system, choosing a method to investigate the changes would be complex.

The study was conducted in the Al-Hammadi Hospital because other private hospitals approached would not allow the conducting of an investigation in their organizations, or cooperate for the researcher to obtain any information about their organizations. Therefore, the study was restricted to a case study of the Al-Hammadi Hospital because of insufficient access to any other organization.



To cover the insurance influences and changes upon all quality dimensions by suitable approaches and techniques, some interviews and personal knowledge were used. The target populations in the case study are the doctors working in the hospital and patients of the hospital, both outpatients and inpatients. Opinion was sought from 10 of the doctors about the method they would prefer in seeking information on the study problem. Their answer was that a questionnaire would be most suitable because of their time limitations. The working hours of the doctors in the private hospital in Riyadh are approximately like 8:30 am to 12:30 pm and from 4:30 pm to 9:00 pm. In addition, the doctors will be on call for the rest of time during the day hours. The questionnaire would be seeking information on some 40 aspects of care quality, and for doctors in the private hospital time is very limited, so to be able to give a considered response it was felt that a questionnaire rather than a meeting would be preferable since the time problem could be overcome by answering the questionnaire in their free time. A meeting would require a minimum of 20 minutes which would not be suitable for the doctors.

In the case of the outpatients, they spend on average a time of 10-15 minutes waiting time prior to meeting a doctor. Therefore, the outpatients' questionnaire was designed to be answered during this period of time. While in the inpatients case time is available, however patients suffer from pain from time to time and feel shy to be seen by others during their admission, particularly by persons who are not relatives, and so may not wish to be interviewed. Further in Saudi Arabian culture a male interviewer is not allowed to meet a female patient. However, with sensitivity to these issues the questionnaire can be answered at suitable times by both male and female patients without any problem.

#### 5.4 Constructing a Questionnaire Based on the Quality Model

Floyd J Fowler (Fowler 1998) states "Designing a good questionnaire involves selecting the questions needed to meet the research objectives, testing them to make sure they can be asked and answered as planned, then putting them into a form to maximize the ease with which respondents and/or interviewers can do their jobs."

The designing of the questionnaire survey divides into two phases. In the first phase the quality model derived from the JCAHO Hospital Accreditation Decision Grid described in Chapter 2 Figure 3.2 was reviewed. This model contains some 52 quality



dimensions. These elements provided the basis for the first design of the questionnaire shown in Appendix VIII. This first design was reviewed and evaluated by a group of jurors including five Professors, Dr. Khaleed Al-Thagafi, Dr. Mohammed Kardeman, Dr. Mohammed Al Hazemi, Dr. Zohier Al Sebaai, and Dr. Aws Saleem. This review resulted in the first draft questionnaire being modified as they recommended clarification of some elements of the quality model and the draft questionnaire and the combination of some elements with each other.

The first draft of the quality model questionnaire was classified into three parts. The first of these three parts sought to gather personal data, which included Sex, Nationality, Educational Level, Specialist, Occupation, Age, Service Years, Monthly Income, Marital Status and Family Size. The second part sought to gather information on previous/present insurance coverage, which includes requesting information about the present type of Care Coverage, Insurer Name, Coverage Class, Coverage Type, the Annual Payment of the coverage, the Coverage Exclusions, the Deductibles and Collectibles of the Coverage, and Coverage Limitations. Finally the third part sought to gather information on the quality dimensions which were divided into three groups: patient-focused functions, organization functions, and structures functions following the quality cube model. Respondents were to be asked for their perceptions of the impact of the insurance on each dimension using a Likert Scale of seven categories. (Most Negative Effect, More Negative Effect, Negative Effect, No Effect, Positive Effect, More Positive Effect, and Most Positive Effect).

The revision of the quality model and the questionnaire was carried out in individual interviews with Dr. Mohammed Kardeman, Dr. Mohamed Al-Hazemi and Dr. Aws Saleem who are based in Riyadh. With great pleasure each of them gave me an appointment to meet them. Each of the elements of the quality model was reviewed and elements were prioritized in importance in evaluating the quality changes due to the change to insurance funding. Further brain storming was done to ensure that any other element of quality not covered by the quality model but felt to be important would be included. For the same purpose the Delphi technique was used with Dr. Khaleed Al-Thagafi, Dr. Zohair Al-Subaai, (Who works in Jeddah) through sending the quality



model questionnaire to them and receiving their feed back (in writing from Dr. Subaai, and by a telephone Dr. Al-Thagafi).

The result of this first phase of the design of the pilot study questionnaire is shown in Appendix IV. The 52 Quality elements were reduced to 33 elements, which are the components of the new quality model that represent those elements likely to be effected by the change to insurance funding. This included the defining of some new elements to be sure that the survey would evaluate the change of quality due to insurance. Questions seeking information on the Previous/Present Insurance Coverage were eliminated because the majority (90% according to Al-Hammadi Hospital statistics) of the insurance coverage characteristics are provided by the employer not by the patients themselves. This change to the questionnaire was due to the recommendation of Dr. Kardeman and Dr. Saleem, whose view was that the coverage characteristics will not affect quality but will only affect the utilization behavior of the services. Finally, the personal data was moved to Part 2 of the questionnaire and the questions seeking Age, Monthly Income, Marital Status, Family Size were eliminated because they can be included or indicated by other factors such as work experience, and educational level.

The questionnaire was translated to produce versions in both Arabic and English language. The Likert Scale categories described above were coded using the symbols (--, -, 0, +, ++, +++).

## 5.5 The Pilot Study

The second phase of designing the survey questionnaire was the pilot study where the survey questionnaire (Appendix IV) was distributed to 15 doctors and 20 patients for the purpose of verification. The result of the pilot study was that the questionnaire was found to be satisfactory for Doctors, but should be shortened for patients. Therefore, the second survey questionnaire reproduced in Appendix Va and Vb was founded to be used for the patients. It is characterized by, firstly, it is one paper questionnaire for each language Arabic and English. Secondly, the organizational dimensions (10 elements) were eliminated due to a recommendation that the patient does not have the experience to evaluate these dimensions. The insurance effect scale

categories were reduced to five: More negative, Negative, No Effect, Positive and More Positive, because of limitations on the patient time in completing their response.

The result of the second phase of designing the survey questionnaire was that it had become two questionnaires, one for the doctors (Appendix VIII) and one for the patients (Appendix VIII). The two questionnaires were based on the new quality model composed of 33 quality elements divided into three groups.

Firstly, Dimensions of performance include the following 11 dimensions:

- Accessing appropriate level of patient care.
- Providing care on time.
- The availability of services, if needed.
- Patients respect and caring.
- Inpatient length of stay.
- Quality of hospital services, in general.
- Medical technology.
- Medical staff behavior in providing services.
- Matching patient needs over an extended time.
- Care Safety.
- Providing care effectively with respective cost.

Secondly, Care Dimensions (13 dimensions) include the following:

- Patient Rights, in general
- Hospital Ethics
- Patient Assessment
- Clinical Investigations
- Treatment decisions and plans
- Intensive and Anesthesia care
- Medication use
- Medical materials uses
- Nutrition care
- Operations and related procedures
- Physiotherapy and Rehabilitation care
- Nursing Services
- Patients, and their Families Education and Responsibility.



Thirdly, the Organizational Dimensions (10 Dimensions) include the following:

- Hospital planning and organizational design.
- Social environment of care.
- Managing patient specific data and information.
- Infection surveillance, prevention and control.
- Integration and coordination of hospital services.
- Hospital environment management and design.
- Hospital Staff management and planning.
- Hospital information system.
- Hospital board activities and ownership.
- Medical staff management and organization.

Quality assessment in the new quality model consists of the same three interlocking processes that compose the accreditation decision process as described in Chapter 2. These are: the quality survey, the aggregation process, and the decision process. These three processes result in the determination of the hospitals level of compliance with the standards based on the five-point scale, Score 1, for Substantial compliance, Score 2, Significant compliance, Score 3, Partial compliance, Score 4, for Minimal compliance, and score 5, Non-compliance.

The new quality model differs in some aspects from the “JCAHO’s” Quality Cube Model. Firstly, the initial assessment of patients, the reassessment, the structures supporting the assessment of patient and the additional requirements for specific patient population were all combined into and included in one element, which is, 'the patient assessment'. This was done to facilitate the understanding of the element. Secondly, the ‘Organization ethics’ element was changed to ‘Hospital ethics’ because the study focuses on a hospital. Thirdly, the elements, ‘Care decisions’, ‘planning and providing care’ were combined, and changed to ‘treatment decisions and plans’ to be clearer for health professionals as well as patients. Fourthly, the element, 'Pathology and Clinical Laboratory Services' was changed to 'Clinical Investigations'. which is more familiar in Saudi Culture. In a majority of Saudi hospitals intensive care unit reports to The Anesthesia Care unit, this causes the fifth change where intensive care was added to the



'Anesthesia care' element. Sixthly, due to the importance of medical materials used in the K.S.A., which is an open market supplied by more than 65 countries with different standards of quality, and with the absence of informative Saudi quality standards on medical materials, the new element called "Medical Materials Use." was added.

These changes were the major changes to the "Quality Cube" which were introduced to develop a model of hospital quality based on Saudi culture which could be easily understood by health professionals as well as patients. This model was the basis of the instrument (the two questionnaires) to be used in the quality assessment surveys. Therefore the new Saudi quality model for hospitals added a distinctive characteristic to the "Quality Cube Model" which is that the questionnaire/interviews were used to assess the quality both by the hospital doctors as well as by the patients. The Saudi quality model can be used to evaluate and investigate the changes in hospital quality due to change in any external or internal factors, such as the change from a cash funded health system to an insurance funded health system investigated in this project. Therefore, the main survey of the study is evidence of this new usage of the quality model and its questionnaire.

## 5.6 The Validity and Reliability of the Questionnaire

When researchers construct and evaluate measurements, they must pay special attention to two technical considerations: validity and reliability. Validity refers to the ability of a research instrument to actually test what it is supposed to test. Reliability is a matter of whether a particular research technique, applied repeatedly to the same situation, would yield the same result each time. (Treece & Treece, 1982; Marks 1982 and Babbie, 1992)

Treece and Treece wrote that:

"It is much more difficult and important to establish validity than to establish reliability; but the research instrument must have validity if a study is to be meaningful and worthwhile. If the instrument is valid, it can be used for prediction, as a representative of that which is to be measured, and to tell us something about the subjects."



Then, they added:

“If a measurement technique measures any factor accurately, even though it may not be the factor we want to measure, the technique is still reliable. If a technique is inaccurate and its measurements are inconsistent (unreliable) then it is not valid.”

The validity of an instrument involves various aspects; firstly face or logical validity which involves an analysis of whether the items of the instrument appear to measure what the instrument purports to measure. (Treece and Treece, 1982); secondly construct validity, do items measure hypothetical constructs or concepts; thirdly content validity, do the items measure the content they were intended to measure (Kaluzny & Veney, 1980; and Babbie, 1992); fourthly predictive validity, do scores predict a criterion measure; and fifthly concurrent validity, do results correlate with other results. Of these face validity is the most obvious, simple, and straightforward (Kaluzny and Veney, 1980). To validate the instruments in this study, a group of jurors was selected. Mouly (1978) stated that:

“The help of outside consultants is essential; outsiders, being generally more objective, can recognize flaws that the investigator is invariably too close to see.”

The group of jurors included five professors. At that time, jurors were asked independently to review and evaluate the questionnaires. Some amendments and modifications based upon their comments and feedback were carried out, as reported above.

Validity of the sample depends upon two considerations. They are: (a) accuracy, defined as the degree to which bias is absent from the sample, and (b) precision (of estimates) which is measured by the standard error of the estimate. (Emory, 1980, p. 147)

The questionnaires were translated into Arabic with double checking by two Arabic specialists in order to ensure that changing the language of the instruments did not affect the meaning and the understanding of the questions. This process played a

part in increasing the validity. Also the pilot study, necessarily leads to higher validity. (Bauman, 1980)

The reliability of a measurement, as stated by Bailey (1982):

“...is simply its consistency. A measure is reliable if the measurement does not change when the concept being measured remains constant in value.”

Much effort has gone into ensuring that the study undertaken was reliable. In this matter great effort was made to ensure that the questions were very clear, simple and unambiguous through the assistance of the jurors and the translators.

Several methods are employed to test the reliability of the instruments. These methods are test-retest method, split-half method, equivalent test method, and the Kuder-Richardson method. (Treece and Treece, 1982; Bryman and Cramer, 1992; and Babbie, 1992) added three more methods, which are: Cronbach's alpha method; using established measures; and research-worker reliability.

In order to measure the reliability of the instruments, the researcher selected and used test-retest method, because it is relatively easy to evaluate and give a good result (Kaplan and Saccuzzo, 1997). Therefore, the questionnaires were given again to 15 doctors and 20 patients. The Cronbach Alpha coefficient was used to determine the internal reliability. The result was computed using the SPSS program and found that the alpha coefficient was 0.9853. This result was considered to be an acceptable level of reliability. (Cramer, 1994; and Polgar & Thomas, 1991)

## 5.7 Sampling

“A census means gaining information about every individual in a population. A major development in the process of making surveys useful is learning how to sample, which is to select a small subset of a population representative of the whole population. The key to good sampling is finding a way to give all (or nearly all) population members the same (or a known) chance of being sampled, and to use probability methods for choosing the sample.” (Fowler, F.J., 1988, p. 12)



According to Accroyd surveys frequently use samples of between 30 and 250 respondents. Statistical analysis on samples less than 30 will not give information representative of the population it is taken from. (Accroyd. 1999: 35) However a sample of 150 will describe a population of 15,000 or 15 million with virtually the same degree of accuracy, assuming all other aspects of the sample design and sampling procedures were the same. (Fowler. F.J., 1988, p. 41)

400 copies of the questionnaire were distributed. One hundred fifty copies of the questionnaire were specified for doctors, who are working in the hospital fulltime, part time, or visiting for medical procedures mainly in the operating room, but also in other departments. Secondly, 50 copies of the questionnaire were specified inpatients who are covered by an insurance policy. Thirdly, 200 copies were specified outpatients who are covered by an insurance policy.

The specified numbers of questionnaire were select in the light of Dr. Stephan B. Hulley and Dr. Steven R. Cummings (1988). They stated that:

“Often the investigator finds that she is missing one or more of the ingredients for the sample size calculation, and becomes frustrated in her attempts to plan the study. This is an especially frequent problem when the investigator is using an instrument of her design (such as a new questionnaire on quality of life).”

“The first strategy is an extensive search for previous findings on the topic, thoroughly reviewing the relevant literature, including nonmedical journals and texts. Roughly comparable situations and dated findings may be good enough – the sample size calculation is just an estimate. If the literature review is unproductive, she should contact other investigators about their judgment on what to expect, and whether they are aware of any unpublished results that may be relevant.” (p. 149)



Two female social workers agreed to help in the data collection from female patients, one for inpatients and the other for outpatients. The Operating Room (OR) Nurse agreed to help to distribute and to collect the questionnaires among/from the doctors who are using the operating room. The distribution and collection for male patients, and other doctors, I undertook myself. The place of collection was the patient room for inpatients, Doctors offices and the operating room reception area for Doctors, and the insurance reception area for outpatients. The method of collection was next day collection for doctors and inpatients: and during the waiting time to see the doctors for outpatients. For outpatients, I waited for them to complete the answering of the questionnaire.

The Data collection of the survey was done throughout August, 2001 according to the strategy and the collection plan.

## 5.8 Description of Sample

The returned responses of the survey data collection process were 100 out of 150 copies of the questionnaire distributed among doctors (66.7%), 42 out of 50 for inpatients (84%), and 140 out of 200 for outpatients (70%). The results of the survey were compiled at King Saud University, College of Medicine, and Research Centre. The SPSS software programme was utilized for data analysis. The collated information describing the total sample characteristics is shown in Tables 5.2.a-d. That describing the sample of doctors is set out in Tables 5.3.a-c. the sample of outpatients in Tables 5.4.a-c, and the sample of inpatients in Table 5.5.a-c.

Male respondents represent 85% of the total sample, because of the cultural limitations preventing researcher access directly to female respondents. But there were 41 female participants, this was sufficient to provide some significant results which will be discussed in the next chapter. (see Table 5.2.a) Table 5.2.b. indicates that the majority of the sample were Arab (78%), where Saudis represents 46%, while other Arabs representing 54%. The work experience in the Table 5.2.c shows that about 63% of the samples have experience of over 10 years, which indicates the importance of experience in the private sector in K.S.A.; since the insured people in Saudi Arabia are mainly working in the private sector as discussed in Chapter 1.



**TABLE 5.2 : CHARACTERISTICS OF DEMOGRAPHIC DATA  
FOR TOTAL STUDY (N=282)**

**Table 5.2.a**

SEX	NUMBER & FREQUENCY
MALE	236 (85.2%)
FEMALE	41 (14.8%)
TOTAL	277 (100.0%)

**Table 5.2.b**

NATIONALITY	NUMBER & FREQUENCY
SAUDI	102 (37.2%)
ARABS	118 (43.1%)
NON-ARABS	54 (19.7%)
TOTAL	274 (100.0%)

**Table 5.2.c**

YEAR OF WORKING EXPERIENCE	NUMBER & FREQUENCY
<10 YRS	78 (37.1%)
>10 YRS	132 (62.9%)
TOTAL	210 (100.0%)

**Table 5.2.d**

SAMPLE TYPE	NUMBER & FREQUENCY
DOCTORS	100 (35.5%)
OUTPATIENTS	140 (49.6%)
INPATIENTS	42 (14.9%)
TOTAL	282 (100.0%)

- Some cases were not reported.

**TABLE 5.3: CHARACTERISTICS OF DEMOGRAPHIC DATA FOR  
DOCTORS**

**Table 5.3.a**

SEX	NUMBER & FREQUENCY
MALE	80 (81.6%)
FEMALE	18 (18.4%)
<b>TOTAL</b>	<b>98 (100.00%)</b>

**Table 5.3.b**

NATIONALITY	NUMBER & FREQUENCY
SAUDI	15 (15.3%)
ARABS	60 (61.2%)
NON-ARABS	23 (23.5%)
<b>TOTAL</b>	<b>98 (100.00%)</b>

**Table 5.3.c**

YEAR OF WORKING EXPERIENCE	NUMBER & FREQUENCY
<10 YRS	18 (18.8%)
>10 YRS	78 (81.2%)
<b>TOTAL</b>	<b>96 (100.0%)</b>

- Some cases were not reported.



**TABLE 5.4: CHARACTERISTICS OF DEMOGRAPHIC DATA FOR  
OUTPATIENTS**

**Table 5.4.a**

SEX	NUMBER & FREQUENCY
MALE	112 (86.2%)
FEMALE	18 (13.8%)
<b>TOTAL</b>	<b>130 (100%)</b>

**Table 5.4.b**

NATIONALITY	NUMBER & FREQUENCY
SAUDI	69 (54.3%)
ARABS	39 (30.7%)
NON-ARABS	19 (15.0%)
<b>TOTAL</b>	<b>127 (100%)</b>

**Table 5.4.c**

YEAR OF WORKING EXPERIENCE	NUMBER & FREQUENCY
<10 YRS	60 (64.5%)
>10 YRS	33 (35.5%)
<b>TOTAL</b>	<b>93 (100%)</b>

- Some of the cases were not reported.

**TABLE 5.5: CHARACTERISTICS OF DEMOGRAPHIC DATA FOR INPATIENTS**

**Table 5.5.a**

SEX	NUMBER & FREQUENCY
MALE	35 (87.5%)
FEMALE	5 (12.5%)
<b>TOTAL</b>	<b>40 (100.00%)</b>

**Table 5.5.b**

NATIONALITY	NUMBER & FREQUENCY
SAUDI	14 (35.0%)
ARABS	14 (35.0%)
NON-ARABS	12 (30.0%)
<b>TOTAL</b>	<b>40 (100.00%)</b>

**Table 5.5.c**

YEAR OF WORKING EXPERIENCE	NUMBER & FREQUENCY
< 10 YRS	9 (60.0%)
>10 YRS	6 (40.0%)
<b>TOTAL</b>	<b>15 (100.0%)</b>

- Some cases were not reported.



The total study sample was composed of 49.6% Outpatients, 35.5% Doctors, and 14.9% Inpatients out of the total number of respondents (282). This is near to the planned distribution of 50% of the sample should be outpatients, 37.5% doctors, and 12.5% inpatients. The doctors' sample was characterized by: 82% male, 76.5% Arab, and 81.2% have more than 10 years experience as shown in Tables 5.3.a-c. While, the outpatients sample was characterized by: 86.2% male, 85% Arab, and 64.5% have 10 years or less of work experience as shown in Tables 5.4.a-c. Thus, the inpatients sample was characterized by: 87.5% male, 70% Arab, and 60% of the reported cases have 10 years or less of work experience as shown in Tables 5.5a-c.

## 5.9 Conclusion

The effect of the change to insurance funding on the quality of health services is a hot debatable field in general. The treatment processes in health care, where many factors and persons are involved, makes the judgment on quality of care itself difficult. The evaluation of changes in the quality is more difficult. The government has officially approved the application of a national cooperative health insurance programme. This study aimed to develop a new multiple perspective model of health quality and use it to investigate the changes in health quality due to the change from cash funded health system to an insurance funded health system.

The development of methodology to investigate the perceptions of change using the model started from consideration of the three types of research methods and their associated epistemology, Survey Research, Ethnographic Research, and Action Research. The "JAR" metaphor, Jassad (Body), Aqel (Mind) and Rouh (Soul), developed in Chapter 2 was used to analyse these three approaches to research. As a result it was concluded that both the patients and the health professionals should be involved in the study, and the treatment procedure should be reviewed.

The project is to cover and to seek to know the most important issues in the process of seeking treatment service from both patients', and doctors' perspectives. The target populations of the survey are the doctors and patients, both outpatients and inpatients. The opinions of 10 doctors were sought about the method they prefer for the study problem. The answer they gave was that a questionnaire was their preferred



method, because of their time limitations which could be overcome by answering a questionnaire in their free time. In the case of the outpatients, the time was also limited to the 10-15 minutes whilst the patients were waiting to meet their doctors. Therefore, the outpatient's questionnaire was designed to be answered during this period of time. While in the inpatients case there were no time restrictions for consistency a questionnaire was the method of choice.

The steps in the design of the questionnaire can be summarized in two phases. The first phase started from the quality cube model. Five professors reviewed the first design of the questionnaire, shown in Appendix VIII. This resulted in the first draft questionnaire being modified as they recommended clarification of some elements and combination of other elements. The second phase of the design of the survey questionnaire was the pilot study, where the survey questionnaire (Appendix VIII) was distributed to 15 doctors and 20 patients for the purpose of verification. The result of the pilot study was that the questionnaire was satisfactory for Doctors but should be shortened for patients. Therefore, the survey questionnaire reproduced in Appendix VIII was developed for patients. Hence, two main questionnaires were developed based on a new quality model composed of 33 quality elements divided into three groups, firstly performance dimensions, secondly care dimensions, and thirdly organizational dimensions.

The validity of the survey instruments was verified by the group of five professors. They were asked independently to review and evaluate the questionnaires. Some amendments and modifications based upon their comments and feedback were carried out. The questionnaires were translated into Arabic with double checking, and a pilot study carried which formed a part of increasing the validity. Much effort has gone into ensuring that the study undertaken was reliable. In this matter great effort was made to ensure that the questions were very clear, simple and unambiguous through the assistance of the jurors and the translators. In order to measure the reliability of the instruments, the researcher selected and used test-retest method. The questionnaires were given again to 15 doctors and 20 patients, and the Cronbach Alpha coefficient was used to determine the internal reliability.



Three sampling procedures were considered, but for practical reasons as explained above the sample was restricted to one hospital. Four Hundred copies of the questionnaire were distributed: one hundred fifty for doctors, fifty for inpatients, and two hundred for outpatients. The data collection from female respondents was aided by two female social workers and an operating room (OR) Nurse. The returned responses of the survey data collection process were 100 out of 150 copies of questionnaires distributed among doctors (66.7%), 42 out of 50 for inpatients (84%), and 140 out of 200 for outpatients (70%). The results were compiled at King Saud University, College of Medicine, Research Centre.

## Chapter 6: DATA ANALYSIS AND RESULTS

The purpose of chapter six is to present the data analysis and results. The discussion of the results is divided according to the three dimensions of the quality model, the performance dimension, the care dimension, and the organizational dimension. Comparisons are made and discussed. A conclusion is drawn as to whether health quality has changed due to the change in funding mechanisms, and the chapter is concluded with recommendations for action.

The analysis is carried out according to the conceptual model of data analysis shown in Figure 6.1, where the dependent variable is the impact of health insurance on the quality of service given by the private hospital, in general. The five point scale of measurement was used to define the dependent variables operationally, that is: extremely negative, negative, neutral, positive, and extremely positive. The independent variables are the demographic data of the participants including Sex (male and female), Nationality (Saudi, Other Arabs and Non-Arab), Work Experience ( $\leq 10$  years, and  $> 10$  years), and Education Level (Doctorate, Master, College and Less than College graduate). The analysis considers the sample types of the target group, which are: Total Study Sample, Doctors, Outpatients, and Inpatients. The statistical analysis methods include: Description Analysis, Chi-Square Analysis, T-test Analysis, Anova one way Analysis, Regression Analysis and Bivariate Correlation Analysis.

### 6.1 The Performance Dimensions of Quality

The results of Performance Dimensions Analysis are shown in Tables 6.1 – 6.5.

The Descriptive Analysis of the Total Study shown in Table 6.1, indicate that 42-50% of the total study sample agreed that the impact of the health insurance on different performance of quality dimensions is Extremely Positive (which means 4.1 to 4.23 and Median for all 4, with P. value of 0.00) except the inpatient length of stay where the highest percentage was 38.1% of the sample agreed that the impact of the health insurance is Positive with mean 3.729, Median 4, and P. value equals 0.00.



**FIGURE 6.1: CONCEPTIONAL MODEL OF DATA ANALYSIS**

Independent V's:

<b>PERFORMANCE DIMENSIONS</b>
Accessing appropriate level of patients care
Providing care on time
The availability of services, if needed
Patients respect and caring
Inpatient length of stay
Quality of hospital services in general
Medical technology
Medical staff behavior in providing services
Matching patients needs over an extended time
Care safety
Providing care effectively with respective cost

<b>CARE DIMENSIONS</b>
Patient rights, in general
Hospital ethics
Patients assessment
Clinical investigations
Treatment decisions and plans
Intensive and anesthesia care
Medication use
Medical materials use
Nutrition care
Operations and related procedures
Physiotherapy and rehabilitation care
Nursing services
Patients family education and their responsibility

<b>ORGANIZATIONAL DIMENSIONS</b>
Hospital planning and organizational design
Social environment of care
Managing patient-specific data and information
Infection surveillance, prevention and control
Integration and coordination of Hospital services
Hospital environment management and design
Hospital staff management and planning
Hospital information systems
Hospital board activities and ownership style
Medical staff management and organization

<b>DEMOGRAPHIC DATA</b>
<input type="checkbox"/> Sex
<input type="checkbox"/> Nationality
<input type="checkbox"/> Work Experience
<input type="checkbox"/> Education

Dependent V.

The Impact of Health Insurance on the quality of by Private Hospitals, in general.
<input type="checkbox"/> Extremely Negative
<input type="checkbox"/> Negative
<input type="checkbox"/> Neutral
<input type="checkbox"/> Positive
<input type="checkbox"/> Extremely Positive

<input type="checkbox"/> Outpatients
<input type="checkbox"/> Inpatients
<input type="checkbox"/> Doctors

**TABLE 6.2: THE FREQUENCY DISTRIBUTION OF  
PERFORMANCE DIMENSIONS AND INSURANCE EFFECT,  
TOTAL SURVEY OF STUDY (N=282)**

QUALITY DIMENSIONS	Extremely Negative	Negative	Neutral	Positive	Extremely Positive	Means	Std Dev	Median	Pvalue
Accessing appropriate level of patients care	3 (1.1%)	17 (6.2%)	24 (8.8%)	100 (36.5%)	130 (47.4%)	4.230	0.927	4.000	0.00
Providing care on time	5 (1.8%)	29 (10.4%)	32 (11.5%)	81 (29.0%)	132 (47.3%)	4.097	1.077	4.000	0.000
The availability of services, if needed	4 (1.5%)	16 (5.8%)	30 (10.9%)	108 (39.3%)	117 (42.5%)	4.156	0.936	4.000	0.000
Patients respect and caring	4 (1.4%)	15 (5.4%)	48 (17.3%)	72 (25.9%)	139 (50.0%)	4.176	0.995	4.000	0.000
Inpatient length of stay	15 (5.5%)	39 (14.3%)	33 (12.1%)	104 (38.1%)	82 (30.0%)	3.729	1.191	4.000	0.000
Quality of Hospital Services in general	4 (1.4%)	21 (7.6%)	31 (11.2%)	100 (36.0%)	122 (43.9%)	4.133	0.968	4.000	0.000
Medical Technology	0	9 (3.3%)	44 (16.1%)	88 (32.1%)	133 (48.5%)	4.259	0.844	4.000	0.000
Medical Staff behavior in providing services	2 (0.7%)	19 (6.9%)	55 (20.1%)	62 (22.6%)	136 (49.6%)	4.135	1.013	4.000	0.000
Matching patients needs over an extended time	5 (1.8%)	23 (8.4%)	31 (11.3%)	99 (36.1%)	116 (42.3%)	4.088	1.016	4.000	0.000
Care safety	0	18 (6.5%)	50 (18.2%)	77 (28.0%)	130 (47.3%)	4.160	0.946	4.000	0.000
Providing care effectively with respective cost	4 (1.4%)	19 (6.9%)	32 (11.6%)	98 (35.5%)	123 (44.6%)	4.149	0.974	4.000	0.000

- Some cases are missing because they were not reported properly.



**TABLE 6.3: THE FREQUENCY DISTRIBUTION OF  
PERFORMANCE DIMENSIONS AND INSURANCE EFFECT,  
FOR DOCTORS**

QUALITY DIMENSIONS	Extremely Negative	Negative	Neutral	Positive	Extremely Positive	Means	Std Dev	Median	Pvalue
Accessing appropriate level of patients care	3 (3.1%)	10 (10.3%)	11 (11.3%)	41 (42.3%)	32 (33.0%)	3.918	1.067	4.000	0.000
Providing care on time	4 (4.0%)	18 (18.0%)	17 (17.0%)	28 (28.0%)	33 (33.0%)	3.680	1.222	4.000	0.000
The availability of services, if needed	2 (2.1%)	11 (11.5%)	14 (14.6%)	32 (33.3%)	37 (38.5%)	3.948	1.089	4.000	0.000
Patients respect and caring	2 (2.0%)	10 (10.2%)	29 (29.6%)	24 (24.5%)	33 (33.7%)	3.776	1.089	4.000	0.000
Inpatient length of stay	2 (2.0%)	21 (21.6%)	11 (11.3%)	30 (30.9)	26 (26.8%)	3.443	1.338	4.000	0.000
Quality of Hospital Services in general	1 (1.0%)	12 (12.0%)	16 (16.0%)	33 (33.0%)	38 (38.0%)	3.950	1.058	4.000	0.000
Medical Technology	0	6 (6.2%)	27 (27.8%)	24 (24.7%)	40 (41.2%)	4.010	0.974	4.000	0.000
Medical Staff behavior in providing services	2 (2.1%)	9 (9.3%)	33 (34.0%)	18 (18.6%)	35 (36.1%)	3.773	1.104	4.000	0.00
Matching patients needs over an extended time	4 (4.1%)	15 (15.5%)	11 (11.3%)	31 (32.0%)	36 (37.1%)	3.825	1.208	4.000	0.000
Care safety	0	8 (8.3%)	30 (31.3%)	20 (20.8%)	38 (39.6%)	3.917	1.023	4.000	0.000
Providing care effectively with respective cost	0	7 (7.1%)	13 (13.3%)	36 (36.7%)	42 (42.9%)	4.153	0.912	4.000	0.000

**TABLE 6.4: THE FREQUENCY DISTRIBUTION OF  
PERFORMANCE DIMENSIONS AND INSURANCE EFFECT,  
FOR OUTPATIENTS**

QUALITY DIMENSIONS	Extremely Negative	Negative	Neutral	Positive	Extremely Positive	Means	Std Dev	Median	Pvalue
Accessing appropriate level of patients care	0	5(4.0%)	10(7.9%)	45(35.7%)	66(52.4%)	4.365	0.796	5.000	0.000
Providing care on time	1(0.8%)	8(6.2%)	13(10.1%)	37(28.7%)	70(54.3%)	4.295	0.939	5.000	0.000
The availability of services, if needed	2(1.6%)	3(2.3%)	14(10.9%)	50(39.1%)	59(46.1%)	4.258	0.863	4.000	0.000
Patients respect and caring	2(1.6%)	3(2.3%)	16(12.4%)	34(26.4%)	74(57.4%)	4.357	0.900	5.000	0.000
Inpatient length of stay	4(3.2%)	18(14.3%)	17(13.5%)	44(34.9%)	43(34.1%)	3.825	1.146	4.000	0.000
Quality of Hospital Services in general	3(2.4%)	6(4.7%)	13(10.2%)	43(33.9%)	62(48.8%)	4.220	0.975	4.000	0.000
Medical Technology	0	3(2.3%)	15(11.7%)	35(27.3%)	75(58.6%)	4.422	0.790	5.000	0.000
Medical Staff behavior in providing services	0	10(7.9%)	19(15.0%)	32(25.2%)	66(52.0%)	4.213	0.973	5.000	0.000
Matching patients needs over an extended time	1(0.8%)	7(5.6%)	19(15.1%)	44(34.9%)	55(43.7%)	4.151	0.930	4.000	0.000
Care safety	0	9(7.0%)	16(12.5%)	44(34.4%)	59(46.1%)	4.195	0.914	4.000	0.000
Providing care effectively with respective cost	3(2.3%)	10(7.8%)	17(13.2%)	39(30.2%)	60(46.5%)	4.109	1.055	4.000	0.000

- Some cases are missing because of incomplete answers.



**TABLE 6.5: THE FREQUENCY DISTRIBUTION OF  
PERFORMANCE DIMENSIONS AND INSURANCE EFFECT  
FOR INPATIENTS**

PERFORMANCE DIMENSIONS	Extremely Negative	Negative	Neutral	Positive	Extremely Positive	Means	Std Dev	Median	Pvalue
Accessing appropriate level of patients care	0	2 (4.8%)	3 (7.1%)	12 (28.6%)	25 (59.5%)	4.429	0.831	5.000	0.000
Providing care on time	0	3 (7.3%)	2 (4.9%)	15 (36.6%)	21 (51.2%)	4.317	0.879	5.000	0.000
The availability of services, if needed	0	2 (4.8%)	2 (4.8%)	22 (52.4%)	16 (38.1%)	4.238	0.759	4.000	0.000
Patients respect and caring	0	2 (4.8%)	3 (7.1%)	12 (28.6%)	25 (59.5%)	4.429	0.831	5.000	0.000
Inpatient length of stay	0	2 (4.9%)	3 (7.3%)	27 (65.9%)	9 (22.0%)	4.000	0.866	4.000	0.000
Quality of Hospital Services in general	0	2 (4.8%)	2 (4.8%)	21 (50.0%)	17 (40.5%)	4.262	0.767	4.000	0.000
Medical Technology	0	0	2 (4.9%)	26 (63.4%)	13 (31.7%)	4.268	0.549	4.000	0.000
Medical Staff behavior in providing services	0	0	3 (7.3%)	12 (29.3%)	26 (63.4%)	4.561	0.634	5.000	0.000
Matching patients needs over an extended time	0	0	1 (2.4%)	21 (50.0%)	20 (47.6%)	4.452	0.550	4.000	0.000
Care safety	0	1 (2.4%)	2 (4.8%)	13 (31.0%)	26 (61.9%)	4.524	0.707	5.000	0.000
Providing care effectively with respective cost	0	2 (5.0%)	2 (5.0%)	21 (52.5%)	15 (37.5%)	4.225	0.768	4.000	0.00

- Some cases are missing because they did not answer properly.

**TABLE 6.6: Chi-SQUARE ANALYSIS OF PERFORMANCE  
DIMENSIONS BY SAMPLE GROUPS**

<b>PERFORMANCE DIMENSIONS</b>	<b>Outpatients</b>	<b>Doctors</b>	<b>Inpatients</b>	<b>Total</b>	<b>Chi-Square</b>	<b>D.F.</b>	<b>Asymp. Sig.</b>
<b>Accessing appropriate level of patients care</b>	133	99	42	274	16.944	8	.031
<b>Providing care on time</b>	136	102	41	279	23.586	8	.003
<b>The availability of services, if needed</b>	135	98	42	275	16.195	8	.040
<b>Patients respect and caring</b>	136	100	42	278	27.513	8	.001
<b>Inpatient length of stay</b>	133	99	41	273	26.241	8	.001
<b>Quality of Hospital Services in general</b>	134	102	42	278	12.851	8	.117
<b>Medical Technology</b>	133	99	42	274	39.561	6	.000
<b>Medical Staff behavior in providing services</b>	134	99	41	274	28.368	8	.000
<b>Matching patients needs over an extended time</b>	133	99	42	274	22.451	8	.004
<b>Care safety</b>	135	98	42	275	21.674	6	.001
<b>Providing care effectively with respective cost</b>	136	100	40	276	9.617	8	.293



The frequency distribution for the sample of doctors (Table 6.2) shows that across the measures 33% to 43% of them agreed that the impact of the health insurance on the performance dimensions is 'Extremely Positive'. Across the different performance dimensions Means varied from 3.68 to 4.153, Medians were 4 for all, with P. Value equal 0.00. Thus, the distributions were heavily skewed towards the positive end. In most dimensions values increased to the 'Extremely Positive', but there were exceptions where the 'Positive' category scored the highest: 'Accessing appropriate level of patient care' (42.3% with Mean = 3.918, Median = 4, and P. Value = 0.00) and 'Inpatient length of stay' (30.9% with Mean = 3.443, Median = 4, and P. Value = 0.00).

The frequency distribution for the sample of outpatients shown in Table 6.3 indicates that the outpatients agreed that the impact of health insurance on these performance dimensions, in general, is also Extremely Positive. In this case percentage scores vary between 43.7% to 58.6%, and Means vary between 4.15 and 4.422 (Medians of 4 or 5, and P. Value equal 0.00) for all. In each dimension this is the highest score with the minor exception of 'Inpatient length of stay' where the highest percentage 34.9% was for 'Positive' impact with Mean 3.825, Median 4, and P. Value equals 0.00. These results show a slightly greater skew to the positive end of the scale than the sample of doctors.

The frequency distribution for the sample of inpatients was not quite as heavily skewed to the positive end. The highest score for 'Extremely Positive' was obtained for five dimensions: - accessing appropriate level of patient care; providing care on time; patient respect and caring; medical staff behavior in providing services; and care safety. These percentage scores vary between 51.2% and 63.4% and Means vary between 4.317 to 4.561 (Median 5 and P. Value equals 0.00) for all. Whilst those dimensions scoring most highly in the 'Positive' category were: - the availability of services if needed; inpatient length of stay; quality of hospital services in general; medical technology; matching patient's needs over an extended time; and providing care effectively with respective cost. The highest percentages for these dimensions vary from 50% to 65.9% with Means of 4 to 4.268 (Median 4 and P. value equal 0.00) for all.



The variation of means between the three sample groups, outpatients, doctors and inpatients, was examined by Chi-Square analysis the results of which are shown in Table 6.5. The result of this analysis showed that there is a significant variance among these three groups in nine of the performance dimensions of quality, which include:- medical technology; and medical staff behavior in providing services (with 0.000 P. value); patient respect and caring, inpatient length of stay, and care safety (with P. value = 0.001); providing care on time (P. value = 0.003); matching patient needs over an extended time (P = 0.004); accessing appropriate level of patient care (P = 0.031); and the availability of services (p = 0.040).

Comparing the Chi-Square results with the descriptive analysis results, it was found that the highest percentage of respondents (65.9%) of the inpatients selected the 'Positive' category in assessing their view of the impact of insurance on the length of stay dimension. In considering the total sample this same dimension also scored the highest number of participants (15) selecting 'Extremely Negative' (5.5% of the total study), and 39 participants selected 'Negative' (14.3% of the total study).

The Chi-Square test indicated also that there is a variation of means among the sample groups in the length of stay dimension (P =0.001). The conversations indicate that this variation may be caused by doctors thinking that they are controlled by the approval procedure imposed by the insurance company, which outpatients do not experience. The approval procedure of whether a patient needs admission to hospital requires that the patient should get insurance company approval for specific days; if extra days are required another approval should be obtained. Inpatients experience this procedure but benefit from it as well.

The second highest percentage score was 58.6% of outpatients' selecting 'Extremely Positive' for the dimension of medical technology. The Chi-Square result for this dimension shows the highest value (39.56 with P = 0.000). For this dimension there is a large difference between the results from the inpatient sample and the outpatient sample. Here it is clear that Medical Technology is the main factor in the diagnostic process that mainly takes place in outpatient clinics, and is therefore a large factor in outpatient experience, whereas it plays a much smaller role in inpatient experience.



The third highest percentage score was 50% of the total study sample, who selected 'Extremely Positive' in their assessment of the dimension of impact on patient respect and caring. The Chi-square test result value of 27.513 (with P equal 0.001) shows that there is a significant variation between the samples in this dimension. The variation here may be seen to be caused by the difference between 83.8% of outpatients, and 88.1% of inpatients selecting either Positive or Extremely Positive in this dimension, while only 58.2% of doctors selected Positive or Extremely Positive. It is possible that compared to cash patients the patients experiencing admission on an insurance company account made them feel more respected while the doctors did not experience that and so they did not feel it.

Finally, the fourth highest percentage selected by the study groups was 42.9%, where doctors agreed that the impact of insurance is Extremely Positive on providing care effectively with respective cost. The chi-square test does not show a significant variation of Means in these dimensions between the sample groups. In this dimension the doctors have the experience of rejected medical procedures by the insurance company in cases where the procedure is not highly needed or necessary for the patient, and the doctors are encouraged to use generic medication with low prices.

## **6.2 The Care Dimension of Quality**

The results of the analysis for the Care Dimensions are shown in Tables 6.6 to 6.10. The frequency distributions for the total study are shown in Table 6.6, where again the results were heavily skewed towards the positive side. 'Extremely Positive' impact was selected across the dimensions with percentages ranging from 36.6% to 46.1%. Means ranged from 3.952 to 4.109 and the Median was 4 for all dimensions with P. value equal 0.000. Extremely Positive was the category with the highest percentage score in every dimension except the 'Physiotherapy and Rehabilitation care' dimension and the Patients family education and their responsibility dimension.



The largest percentage score in each of these cases was the score for 'Positive' at respectively 36.85% and 36.5%. The Means for these dimensions were respectively 3.8, and 3.735, Medians both 4 and P. values both .000.

The results for the sample of doctors for the care dimensions are shown in Table 6.7. 'Extremely Positive' impact was selected with the greatest frequency for the majority of care dimensions with percentage scores ranging between 31.6% and 37.8%. The Means for these dimensions ranged between 3.633 and 3.876, Medians all equal 4 and P. value equal 0.000. Neutral impact was selected with highest percentage scores for two dimensions, hospital ethics ( 34.7%, Mean 3.684, Median 4 and P. value 0.00), and Patient family education and their responsibility (30.7%, Mean 3.5, Median 3 and P. value 0.000). Positive impact was selected with the highest percentage score also for two dimensions, patients rights in general ( 33.3%, Mean 3.687, Median 4 and P. value 0.000), and physiotherapy and rehabilitation care ( 34.1%, Mean 3.545, Median 4 and P. value 0.000).

The 'Nursing service' dimension frequency distribution is characterized by equal percentage scores (29.3%) for three selections, neutral, positive, and extremely positive (Mean equal 3.75, Median equal 4, P. value equal 0.000).

For the Outpatients the results for the care dimensions are shown in Table 6.8. Here again the distributions are all heavily skewed toward the positive. 'Extremely Positive' has the highest percentage score for all dimensions except the last in the table. For these dimensions the percentage scores range from 34.9% to 50% with Means ranging from 3.789 to 4.254 and Median equal 4 for all variables and P. value equal 0.000. For the last dimension in the table, patient family education and their responsibility, 'positive impact' was the highest percentage score at 35.2% of the outpatients (Mean equal 3.811, Median 4 and P. value equal 0.000).

The results for inpatients are shown in Table 6.9. Here 'Positive' impact was selected with the highest percentage scores for eight dimensions ranging from 47.6% to 67.5%. For these dimensions Means ranged from 3.95 to 4.357, and all Median equal 4 and P. value equal 0.000. These eight dimensions are Hospital ethics, Clinical



**TABLE 6.7: THE FREQUENCY DISTRIBUTION OF CARE DIMENSIONS  
AND INSURANCE EFFECTS OF THE TOTAL STUDY (N= 282)**

CARE DIMENSIONS	Extremely Negative	Negative	Neutral	Positive	Extremely Positive	Means	Std Dev	<u>Median</u>	Pvalue
Patient Rights, in general	9 (3.3%)	31 (11.4%)	32 (11.7%)	93 (34.1%)	108 (39.6%)	3.952	1.125	4.000	0.000
Hospital Ethics	2 (0.7%)	21 (7.6%)	51 (18.4%)	94 (33.9%)	109 (39.4%)	4.036	0.974	4.000	0.000
Patients Assessment	2 (0.7%)	18 (6.7%)	42 (15.7%)	96 (35.8%)	110 (41.0%)	4.097	0.947	4.000	0.000
Clinical investigations	7 (2.5%)	32 (11.6%)	17 (6.2%)	104 (37.8%)	115 (41.8%)	4.047	1.085	4.000	0.000
Treatment decisions and plans	5 (1.8%)	32 (11.8%)	33 (12.1%)	99 (36.4%)	103 (37.9%)	3.967	1.067	4.000	0.000
Intensive and Anesthesia care	2 (0.8%)	19 (7.4%)	52 (20.2%)	70 (27.1%)	115 (44.6%)	4.074	1.005	4.000	0.000
Medication Use	5 (1.8%)	33 (12.1%)	30 (11.0%)	95 (34.9%)	109 (40.1%)	3.993	1.080	4.000	0.000
Medical Materials Use	3 (1.1%)	20 (7.5%)	42 (15.7%)	100 (37.3%)	103 (38.4%)	4.045	0.970	4.000	0.000
Nutrition Care	5 (1.9%)	12 (4.6%)	57 (21.8%)	92 (35.1%)	96 (36.6%)	4.000	0.971	4.000	0.000
Operations and related procedures	3 (1.2%)	22 (8.6%)	37 (14.5%)	76 (29.7%)	118 (46.1%)	4.109	1.023	4.000	0.000
Physiotherapy and Rehabilitation care	16 (6.5%)	26 (10.5%)	31 (12.6%)	91 (36.8%)	83 (33.6%)	3.806	1.197	4.000	0.000
Nursing Services	2 (0.7%)	16 (6.0%)	57 (21.3%)	85 (31.8%)	107 (40.1%)	4.045	0.961	4.000	0.000
Patients Family Education and their Responsibility	8 (3.1%)	30 (11.5%)	56 (21.5%)	95 (36.5%)	71 (27.3%)	3.735	1.077	4.000	0.000

- Some cases are missing because they were not reported properly.

**TABLE 6.8: THE DOCTORS FREQUENCY DISTRIBUTION OF CARE  
DIMENSIONS AND INSURANCE EFFECTS**

CARE DIMENSIONS	Extremely Negative	Negative	Neutral	Positive	Extremely Positive	Means	Std Dev	Median	Pvalue
<b>Patient Rights, in general</b>	5 (5.1%)	13 (13.1%)	19 (19.2%)	33 (33.3%)	29 (29.3%)	3.687	1.175	4.000	0.000
<b>Hospital Ethics</b>	1 (1.0%)	11 (11.2%)	34 (34.7%)	24 (24.5%)	28 (28.6%)	3.684	1.041	4.000	0.000
<b>Patients Assessment</b>	0	9 (9.3%)	26 (26.7%)	30 (30.9%)	32 (33.0%)	3.876	1.327	4.000	0.000
<b>Clinical investigations</b>	6 (6.1%)	22 (22.4%)	8 (8.2%)	28 (28.6%)	34 (34.7%)	3.633	1.327	4.000	0.000
<b>Treatment decisions and plans</b>	2 (2.0%)	20 (20.4%)	19 (19.4%)	26 (26.5%)	31 (31.6%)	3.653	1.185	4.000	0.000
<b>Intensive and Anesthesia care</b>	1 (1.1%)	10 (10.8%)	23 (24.7%)	25 (26.9%)	34 (36.6%)	3.871	1.066	4.000	0.000
<b>Medication Use</b>	1 (1.0%)	20 (20.8%)	16 (16.7%)	26 (27.1%)	33 (34.4%)	3.729	1.174	4.000	0.000
<b>Medical Materials Use</b>	2 (2.2%)	11 (11.8%)	26 (28.0%)	21 (22.6%)	33 (35.5%)	3.774	1.124	4.000	0.000
<b>Nutrition Care</b>	4 (4.4%)	7 (7.7%)	31 (34.1%)	18 (19.8%)	31 (34.1%)	3.714	1.148	4.000	0.000
<b>Operations and related procedures</b>	2 (2.2%)	14 (15.6%)	17 (18.9%)	23 (25.6%)	34 (37.8%)	3.811	1.170	4.000	0.000
<b>Physiotherapy and Rehabilitation care</b>	9 (10.2%)	12 (13.6%)	13 (14.8%)	30 (34.1%)	24 (27.3%)	3.545	1.303	4.000	0.000
<b>Nursing Services</b>	1 (1.1%)	10 (10.9%)	27 (29.3%)	27 (29.3%)	27 (29.3%)	3.750	1.034	4.000	0.000
<b>Patients Family Education and their Responsibility</b>	2 (2.3%)	15 (17.0%)	27 (30.7%)	25 (28.4%)	19 (21.6%)	3.500	1.083	3.000	0.000



**TABLE 6.9: THE FREQUENCY DISTRIBUTION OF CARE DIMENSIONS AND INSURANCE EFFECTS, FOR OUTPATIENTS**

CARE DIMENSIONS	Extremely Negative	Negative	Neutral	Positive	Extremely Positive	Means	Std Dev	Median	P value
Patient Rights, in general	4 (3.2%)	15 (12.1%)	10 (8.1%)	45 (36.3%)	50 (40.3%)	3.984	1.126	4.000	0.000
Hospital Ethics	1 (0.8%)	8 (6.2%)	16 (12.4%)	44 (34.1%)	60 (46.5%)	4.194	0.912	4.000	0.000
Patients Assessment	2 (1.6%)	7 (5.7%)	16 (13.1%)	44 (36.1%)	53 (43.4%)	4.139	0.965	4.000	0.000
Clinical investigations	1 (0.8%)	9 (7.1%)	6 (4.8%)	51 (40.5%)	59 (46.8%)	4.254	0.903	4.000	0.000
Treatment decisions and plans	1 (0.8%)	10 (8.1%)	12 (9.7%)	46 (37.1%)	55 (44.4%)	4.161	0.958	4.000	0.000
Intensive and Anesthesia care	1 (0.9%)	8 (6.9%)	22 (19.0%)	31 (26.7%)	54 (46.6%)	4.112	1.002	4.000	0.000
Medication Use	4 (3.2%)	12 (9.5%)	11 (8.7%)	47 (37.3%)	52 (41.3%)	4.040	1.084	4.000	0.000
Medical Materials Use	1 (0.8%)	8 (6.5%)	12 (9.7%)	50 (40.3%)	53 (42.7%)	4.177	0.911	4.000	0.000
Nutrition Care	1 (0.8%)	4 (3.3%)	21 (17.2%)	43 (35.2%)	53 (43.4%)	4.172	0.888	4.000	0.000
Operations and related procedures	1 (0.9%)	8 (6.9%)	14 (12.1%)	35 (30.2%)	58 (50.0%)	4.216	0.967	4.000	0.000
Physiotherapy and Rehabilitation care	6 (5.5%)	14 (12.8%)	15 (13.7%)	36 (33.0%)	38 (34.9%)	3.789	1.210	4.000	0.000
Nursing Services	1 (0.8%)	6 (4.8%)	26 (20.8%)	37 (29.6%)	55 (44.0%)	4.112	0.952	4.000	0.000
Patients Family Education and their Responsibility	5 (4.1%)	14 (11.5%)	20 (16.4%)	43 (35.2%)	40 (32.8%)	3.811	1.138	4.000	0.000

- Some cases are missing because they were not answered properly.

**TABLE 6.10: THE FREQUENCY DISTRIBUTION OF CARE DIMENSIONS AND INSURANCE EFFECTS, FOR INPATIENTS**

CARE DIMENSIONS	Extremely Negative	Negative	Neutral	Positive	Extremely Positive	Means	Std Dev	Median	Pvalue
Patient Rights, in general	0	2 (4.9%)	2 (4.9%)	13 (31.7%)	24 (58.5%)	4.439	0.808	5.000	0.000
Hospital Ethics	0	2 (4.9%)	0	22 (53.7%)	17 (41.5%)	4.317	0.722	4.000	0.000
Patients Assessment	0	2 (4.9%)	0	18 (43.9%)	21 (51.2%)	4.415	0.741	5.000	0.00
Clinical investigations	0	1 (2.4%)	2 (4.8%)	21 (50.0%)	18 (42.9%)	4.333	0.687	4.000	0.000
Treatment decisions and plans	1 (2.4%)	2 (4.8%)	1 (2.4%)	25 (59.5%)	13 (31.0%)	4.119	0.861	4.000	0.000
Intensive and Anesthesia care	0	1 (2.5%)	4 (10.0%)	13 (32.5%)	22 (55.0%)	4.400	0.778	5.000	0.000
Medication Use	0	1 (2.4%)	2 (4.8%)	20 (47.6%)	19 (45.2%)	4.357	0.692	4.000	0.000
Medical Materials Use	0	1 (2.4%)	3 (7.1%)	26 (61.9%)	12 (28.6%)	4.167	0.660	4.000	0.000
Nutrition Care	0	1 (2.5%)	4 (10.0%)	27 (67.5%)	8 (20.0%)	4.050	0.639	4.000	0.000
Operations and related procedures	0	0	5 (12.2%)	15 (36.6%)	21 (51.2%)	4.390	0.703	5.000	0.000
Physiotherapy and Rehabilitation care	1 (2.4%)	0	2 (4.9%)	20 (48.8%)	18 (43.9%)	4.317	0.789	4.000	0.000
Nursing Services	0	0	2 (4.8%)	18 (42.9%)	22 (52.4%)	4.476	0.594	5.000	0.000
Patients Family Education and their Responsibility	0	1 (2.4%)	9 (22.0%)	22 (53.7%)	9 (22.0%)	3.951	0.740	4.000	0.000

- Some cases are missing because they were not reported properly.



**TABLE 6.11: Chi-SQUARE ANALYSIS OF CARE DIMENSIONS**  
**BY SAMPLE GROUPS**

CARE DIMENSIONS	Outpatients	Doctors	Inpatients	Total	Chi-Square	D.F.	Asymp. Sig.
Patient Rights, in general	131	100	41	272	17.239	8	.028
Hospital Ethics	136	100	41	277	38.948	8	.000
Patients Assessment	128	99	41	268	27.901	8	.005
Clinical investigations	133	100	42	275	30.060	8	.000
Treatment decisions and plans	130	100	42	272	30.787	8	.000
Intensive and Anesthesia care	122	95	41	258	8.742	8	.365
Medication Use	132	98	42	272	21.343	8	.006
Medical Materials Use	131	95	42	268	35.237	8	.000
Nutrition Care	129	93	40	262	42.333	8	.000
Operations and related procedures	123	92	41	256	15.279	8	.054
Physiotherapy and Rehabilitation care	115	90	42	247	15.018	8	.059
Nursing Services	131	94	42	267	20.360	8	.009
Patients Family Education and their Responsibility	129	90	41	260	21.655	8	.006

investigations, Treatment decisions and plans, Medication use, Medical Material use, Nutrition care, Physiotherapy and rehabilitation care, and Patients family education and their responsibility. Five dimensions scored highest percentages in the 'Extremely Positive' category ranging from 51.2% to 58.5%, for these dimensions Means ranged from 4.39 to 4.476, Median equal 5, and P. value equal 0.000. These five dimensions are Patient rights in general, Patient assessment, Intensive and anesthesia care, Operations and related procedures and Nursing services.

The Chi-Square analysis of care dimensions by sample groups is shown in Table 6.10. This indicates that in five dimensions there are significant variations with P. value equal 0.000. These five dimensions are Hospital ethics, Clinical investigations, Treatment decisions and plans, Medical Material use and Nutrition care. In the Patient assessment dimension the P. value was equal 0.005, which indicates that, there is a significant variation as well. The Medication use dimension and Patient family education dimension have less significant variation with P. value equal to 0.006. Finally the variation in the Nursing services dimension was significant by P. value equal to 0.009.

By comparing the descriptive analysis results with the chi-square analysis results, it was found that the highest percentage score was that selected by the sample of Inpatients of 67.5% for the 'Nutrition care' dimension which has a high significant variation among the study group. The variation can be seen in that whereas 53.9% of the doctors selected Positive or Extremely Positive impact, 78.6% of Outpatients selected Positive or Extremely Positive and a full 87.5% of inpatients selected Positive or Extremely Positive. It seems reasonable to suppose that inpatients experience nutrition care to a much greater extent than outpatients or doctors and therefore Inpatients have been exposed to a greater extent to any changes, or at the least a recent positive experience.

The second highest percentage score was 50% selected by the sample of Outpatients in the category of 'Extremely Positive' impact on the 'Operations and related procedures' dimension where the chi-square analysis indicates that there is no significant variation between the sample groups.



The third highest percentage score was 44.6% for the 'Intensive and anesthesia care' dimension where again the Chi square analysis indicates that there is no significant variation between the sample groups.

Finally 'Extremely Positive' impact was selected by 37.8% of the sample of doctors in the 'Operations and related procedures' dimension where again the chi-square analysis indicates that there is no significant variation between the sample groups.

### **6.3 The Organizational Dimension of Quality**

The organizational dimensions of quality were included only on the questionnaire distributed to the sample of doctors according to the recommendation of the group of jurors as described in the previous chapter. Therefore only the Descriptive analysis was done for these dimensions of quality. Table 6.11 shows the descriptive analysis results for these organizational dimensions.

The first dimension is 'Hospital planning and organizational design' where the highest percentage of doctors selected the 'Extremely Positive' category for impact of insurance on this dimension (39.4%, Mean equal 4.014, Median equal 4 and P. value equal 0.000). This gives 69.0% in the 'Positive' or 'Extremely Positive' categories. This is a typical result for all dimensions except 'Infection surveillance, prevention, and control'. For these nine dimensions values for the 'Positive' or 'Extremely Positive' categories range from 61.8% to 69.4%.

For the fourth organizational dimension 'Infection surveillance, prevention, and control' there is a much less marked positive skew where 48% of the doctors agreed that there is no effect of the insurance on this dimension and only 42.7% of the sample group selected 'Positive' or 'Extremely positive'. This dimension had a Mean of only 3.48, Median 3 and P. value equal 0.000.

**TABLE 6.12: THE DOCTORS FREQUENCY DISTRIBUTION OF ORGANIZATION DIMENSIONS**

<b>ORGANIZATIONAL DIMENSIONS</b>	<b>Extremely Negative</b>	<b>Negative</b>	<b>Neutral</b>	<b>Positive</b>	<b>Extremely Positive</b>	<b>Means</b>	<b>Std Dev</b>	<b>Median</b>	<b>Pvalue</b>
<b>Hospital Planning and organizational Design</b>	1 (1.4%)	3 (4.2%)	18 (25.4%)	21 (29.6%)	28 (39.4%)	4.014	0.978	4.000	0.000
<b>Social Environment of care</b>	1 (1.5%)	3 (4.5%)	20 (30.3%)	22 (33.3%)	20 (30.3%)	3.864	0.959	4.000	0.000
<b>Managing Patient-specific Data and Information</b>	1 (1.4%)	7 (9.7%)	14 (19.4%)	23 (31.9%)	27 (37.5%)	3.944	1.047	4.000	0.000
<b>Infection surveillance, prevention and control</b>	4 (5.3%)	3 (4.0%)	36 (48.0%)	17 (22.7%)	15 (20.0%)	3.480	1.031	3.000	0.000
<b>Integration and coordination of Hospital services</b>	0	7 (9.2%)	16 (21.1%)	30 (39.5%)	23 (30.3%)	3.908	0.941	4.000	0.000
<b>Hospital Environment management and design</b>	0	5 (7.0%)	20 (28.2%)	24 (33.8%)	22 (31.0%)	3.887	0.934	4.000	0.000
<b>Hospital staff management and Planning</b>	0	5 (6.9%)	22 (30.6%)	22 (30.6%)	23 (31.9%)	3.875	0.948	4.000	0.000
<b>Hospital information systems</b>	0	2 (2.9%)	22 (31.9%)	18 (26.1%)	27 (39.1%)	4.014	0.915	4.000	0.000
<b>Hospital board activities and ownership style</b>	0	3 (4.4%)	23 (33.8%)	21 (30.9%)	21 (30.9%)	3.882	0.907	4.000	0.000
<b>Medical staff management and organization</b>	1 (1.4%)	5 (6.9%)	16 (22.2%)	25 (34.7%)	25 (34.7%)	3.944	0.991	4.000	0.000



## 6.4 Comparison and Discussion

For the purpose of comparison between the sample groups and between the dimensions, T-Test analysis, Anova one way analysis, Correlation analysis, and Regression analysis were conducted. See appendix IX for further results.

The T-test analysis shows that there was significant variation between the sexes among the care dimensions, with significance value equal 0.001. This was much greater than that for the performance dimensions with significant value equal 0.045 as shown in Table 6.12.

The Correlation analysis results are shown in Table 6.13. The purpose of this analysis is to measure the relationship between the qualities of hospital services in general and other variables from the two dimensions Caring and Performance.

The table shows that there is a strong significant positive relationship with P value equal 0.000 between the quality in general as a dependent variable and the seven dimensions, - Medical technology (R= 0.623), Patients respect and caring (R=0.598), Nutrition care (R=0.565), Medical staff behavior (R=0.564), Nursing services (R= 0.544), Patient assessment (R= 0.544), and Hospital ethics (R= 0.51).

The step wise regression analysis shows the most important variables that affected the dependent variable 'quality in general'. The results of the regression analysis are shown in Table 6.14. The most important variable is 'Medical technology' where 35% (R = 0.355) of the variation of the dependent variable 'quality in general' occurs while 61% (R= 0.61) of variation of the dependent variable caused by 'medical technology' compared with the other 14 variables shown in Table 6.14. The rest of the variables are excluded due to major co-linearity between the variables.

The Coefficients analysis results shown in Table 6.15 were calculated for the purpose of selecting the best combined variables model that cause most of variation of 'quality in general'. In table 6.15 it can be seen that model number 3 is the best model for our analysis. This model includes medical technology combined with patient respect and caring, and nutrition care, accounted for about 50% (R= 0.497) (shown in Table 6.14) of variation of hospital 'quality in general'.

**TABLE 6.13: T-TEST ANALYSIS OF QUALITY DIMENSIONS BY SEX**

DIMENSIONS	SEX	N	MEAN	STD. DEVIATION	STD. ERROR MEAN	Levine's Test For Equality of Variance		
							F	SIG
PERFORMANC E DIMENSIONS	Male	202	45.4455	8.3767	.5894	Equal Variance Assumed	4.045	.045
	Female	31	47.3871	6.2593	1.1242			
							Equal Variance Not Assumed	
CARE DIMENSIONS	Male	172	52.1337	10.7888	.8226	Equal Variance Assumed	11.655	.001
	Female	26	55.9615	6.2513	1.2260			
							Equal Variance Not Assumed	



**TABLE 6.14: SIGNIFICANT CORRELATION ANALYSIS AMONG THE STUDY VARIABLES**  
(P VALUE = 0.000 FOR ALL SPECIFIED VARIABLES)

Variables Entered	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	27	28	29	30	
Type of target group																										
Accessing proper services					0.636	0.659	0.723																			
Providing care on time					0.517	0.687	0.729																			
The availability of services					0.614																					
Patients respect and caring										0.598	0.543															
Inpatient length of stay										0.597																
Quality of health services										0.564	0.623															
Medical Technology										0.654																
Medical staff behavior																										
Matching patient needs																										
Care safety																										
Clinical investigations																										
Treatment decisions and plans																										
Intensive and Anesthesia care																										
Medication use																										
Medical Materials use																										
Nutrition care																										
Operations and procedures																										
Physiotherapy and rehabilitation																										
Nursing services																										
Patients family education																										
Efficiency of care																										
Patients rights, in general																										
Hospital Ethics																										
Patient Assessment																										

This result was approved by the standardized coefficients Beta equal to 0.912 (shown in Table 6.15) which means any model influencing the quality in general and hospitals and insurance companies should pay more attentions to these three variables.

The open question in the questionnaire asking for comments or suggestions was answered by 14 respondents: all were Saudis and many of the respondents agreed that the topic is very important. The following comments were included:

1. The Hospital board efforts for controlling the process are vital.
2. The most important is controlling patient's moral hazards.
3. The reliability of the private insurance company and private hospital is questionable.
4. A specific entity or organization for controlling and referencing, if any problem occurs.
5. The root cause of the effect is the controlling of treatment process which is very important.
6. The correct implementation of the insurance from the hospital's people and insurance company is the cure of the implementation.
7. The governmental insurance will be better for K.S.A.
8. The specified insurance coverage for the national programme is not significant.
9. The Unconstructive competition is the root cause of insurance problems.
10. The Islamic guides about insurance must be considered.
11. The most interesting about insurance is releasing the headache of the medical expenses.
12. The insurance can cause discrimination between the employees in one organization.
13. People are not aware of the insurance in general.
14. Insurance procedure will consume the doctors time.

These suggestions and comments indicate that there is a potential awareness of the absence of a control method of the medical procedures in private hospitals, and for the coverage of these procedures by private insurance company services.



**TABLE 6.15: REGRESSION ANALYSIS OF VARIABLES, STEPWISE**  
**WITH QUALITY OF CARE IN GENERAL**

<b>MODEL</b>	<b>VARIABLES ENTERED</b>	<b>R</b>	<b>R SQUARE</b>	<b>ADJUSTED R SQUARE</b>	<b>STD. ERROR OF THE ESTIMATE</b>
1	Medical Technology	.596	.355	.352	.786
2	Patients respect and caring	.685	.469	.466	.714
3	Nutrition Care	.705	.497	.492	.696
4	Inpatient length of stay	.716	.513	.506	.687
5	Physiotherapy and Rehabilitation Care	.724	.524	.515	.680
6	Care Safety	.735	.540	.530	.670
7	Nursing Services	.741	.549	.538	.664
8	Infection surveillance, prevention and control	.746	.557	.544	.660
9	Hospital staff management and planning	.756	.571	.557	.650
10	Nationality	.761	.578	.563	.646
11	Hospital planning and organizational design	.765	.585	.568	.642
12	Medication Use	.769	.591	.573	.638
13	Interest in the discussion about the Topic	.773	.598	.578	.634
14	Integration and coordination of Hospital services	.777	.604	.583	.631
15	Work Experience	.781	.610	.588	.627

**TABLE 6.16: BEST FOUR MODELS BY COEFFICIENTS ANALYSIS**  
**COEFFICIENTS**

MODEL		UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENTS	T	SIG.	TOTAL BETA
		B	STD. ERROR	BETA			
1	(Constant)	1.156	.245		4.278	.000	0.596
	Medical Technology	.699	.056	.596	12.405	.000	
2	(Constant)	.469	.239		1.963	.051	0.798
	Medical Technology	.489	.058	.416	8.442	.000	
	Patients respect and caring	.379	.049	.383	7.771	.000	
3	(Constant)	.261	.239		1.093	.275	0.912
	Medical Technology	.403	.061	.343	6.659	.000	
	Patients respect and caring	.308	.051	.312	6.069	.000	
	Nutrition Care	.217	.055	.208	3.926	.000	
4	(Constant)	.228	.236		.966	.335	0.871
	Medical Technology	.387	.060	.330	6.454	.000	
	Patients respect and caring	.249	.054	.252	4.601	.000	
	Nutrition Care	.187	.055	.179	3.378	.001	
	Inpatient length of Stay	.126	.043	.151	2.943	.004	



This is perhaps due to social and cultural aspects within Saudi Arabia not supporting private insurance programmes as discussed in chapter 4. This would lead to a recommendation to use a governmental or Islamic scheme of insurance with appropriate control methods based on accurate information systems, supporting previous conclusions.

## **6.5 Conclusion**

From the survey field work and the data analysis results of the study, we can conclude by that the main findings of the study which can be summarized in the following.

1. The main result of the descriptive analysis is that there is a general significant agreement among the study groups that the insurance impact on private hospitals is Positive. The median of the Descriptive Analysis of the total study sample is equal to 4 for all dimensions. This would indicate that in general the impact of the change to health insurance on the quality of service experienced in this private hospital is positive. This result can be converted to the Accreditation grid described in Chapter 3 as a score of 2 which corresponds to 'significant compliance' to the quality model standard.
2. The Chi-Square Analysis shows that there are significant variations of means among the study groups.
3. The T-test analysis shows that there are significant variations between the sex categories (Male, Female) in the care dimensions more than the performance dimensions.
4. The regression analysis shows that the variables that are responsible for 35% of the impact alone on quality in general was 'medical technology' with R equal 0.355.

5. The coefficient analysis results shows that the best model which combined 'medical technology', 'patient respect and caring', and 'nutrition care' has 50% of the influence on quality in general with R equal 0.497 and standard coefficients Beta equal to 0.912. Therefore it is concluded that more attention should be given to these three variables in private hospitals and insurance companies as significant indicators of quality.
6. The main result was the marked positive impact of the change to insurance on quality of service provided by a private hospital. However the absence of a control method and accurate information system, the main aspect of the suggestions taken indicates an area that needs attention.
7. The Saudi culture, its norms, beliefs, and values appear not to be supportive of insurance implementation, therefore to maximize the supportive role of the social culture in the insurance implementation: some concern may be directed to Islamic issues on the implementation process.

In sum, the derived model and instruments seem altogether appropriate for assessing quality in Saudi Arabia, a different setting from the ones in which the American Joint Commissions pioneered their approach.



## Chapter 7: SUMMARY AND CONCLUSIONS

In Saudi Arabia, both health insurance and quality management are relatively new topics of interest. The Saudi health system and its associated services are potential areas of application of these ideas in order to achieve improvement. However in the application of these ideas Saudi culture must be taken into account, and in particular that Saudi culture is based on Islamic guidance.

There are two mechanisms for funding a health system. The first of these is the 'cash model' which at its heart has two parties, a physician who provides the service and a patient who pays directly. On the other hand, the insurance model has three parties, a physician, and a patient who pays indirectly through the third party health insurance agencies for specific and agreed coverage. The duties of the third party (insurance agencies) are to make sure that the provided services are essential and included in the insurance policy coverage, and paying the expenses according to a certain amount of money paid by patient in advance.

The Government in the Kingdom of Saudi Arabia has officially approved the implementation of a national co-operative health insurance programme changing the way in which health services are provided in Saudi Arabia. However the establishment of an insurance system for this purpose and the eventual implementation of the programme will involve an enormous amount of work in many areas. In undertaking this work it is important to be as confident as possible that the outcomes will result in the improvement of the health system and its associated services in the Kingdom of Saudi Arabia. This provides the justification for the project described in this dissertation.

In order to establish the context of the project the early Chapters of the dissertation describe Saudi culture and the current health system in the Kingdom of Saudi Arabia. Secondly the concept of Quality was discussed starting from definitions of Quality, setting out a variety of approaches that have been developed to assure and improve the quality. The starting point of the investigatory project to gather primary

data was the quality model developed by the Joint Commission on Accreditation of Hospitals in the U.S.A. This quality cube model, which is the basis of a methodology for evaluating 45 performance areas in an accreditation decision grid plays an important role in determining quality standards in providing medical care in the U.S.A. and has begun to be used in the efforts of Saudi hospitals in developing a quality assurance programme.

## 7.1 The Aim of the Study

The focus of the study is to ascertain the impact of the change to insurance funding on the quality of the health care in the Kingdom of Saudi Arabia. In order to carry out this evaluation it was necessary to develop an appropriate methodology to measure perceptions of quality in the context of a Saudi hospital.

**Therefore this study was aimed to develop a multiple perspective model of health quality suitable to use in KSA and then to use it to investigate changes in health quality due to the change from cash funded health system to an insurance funded health system.**

## 7.2 The Development of the Model

The steps in designing the new quality model and from it designing the questionnaire that is at the centre of the assessment methodology can be summarized in five phases.

### 7.2.1 The Development Of JAR Metaphor

The first phase was the development of the JAR metaphor. Based on Ibn Taymiyah's discussion on the characteristics of "Ibadah," servanthip, Ibn Al Gayyme discussed the relationship between three components of a human being that are the body, the mind, and the soul. He concluded that the specific characteristics and needs of each of these components and all human acts result from the interactions of these three. Thus, the three components are the basis of the "JAR" metaphor which can be used to investigate and analyze organizations. (See Figure 7.1)



When using the “JAR” metaphor in organizational analysis the parallel that is drawn is that the “Jassad” (Body) of the organization is composed of the bodies of the collection(s) of people and related infrastructure, the “Aqel” (Mind) of the organization is the accumulative knowledge processing of the shared individuals knowledge within the organization. And finally, the “Rouh” (Soul) of the organization is an accumulative set of believing processing of the shared belief of individuals within and outside the organization.

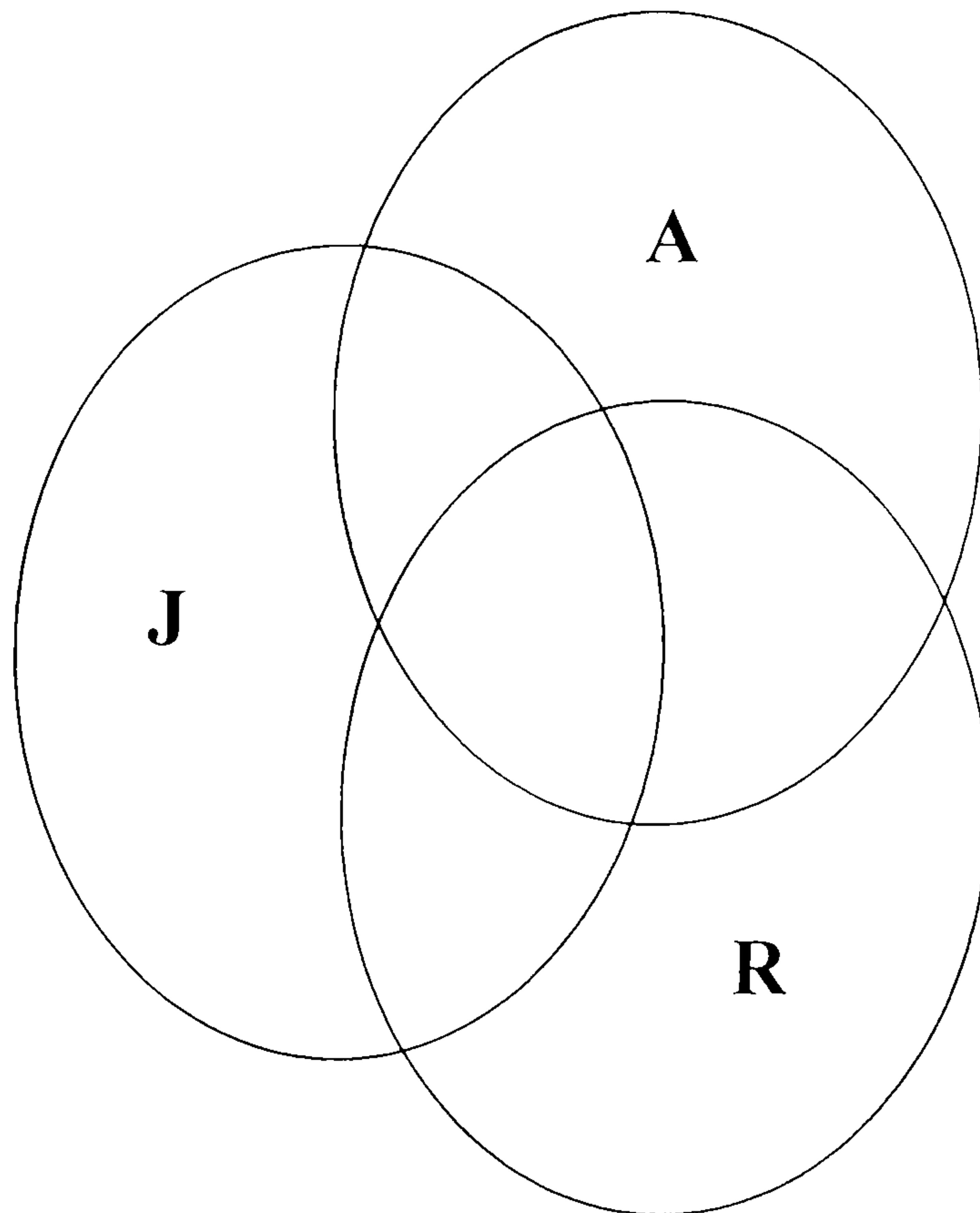


Figure 7.1: The Components of the whole person as a "JAR" Metaphor.

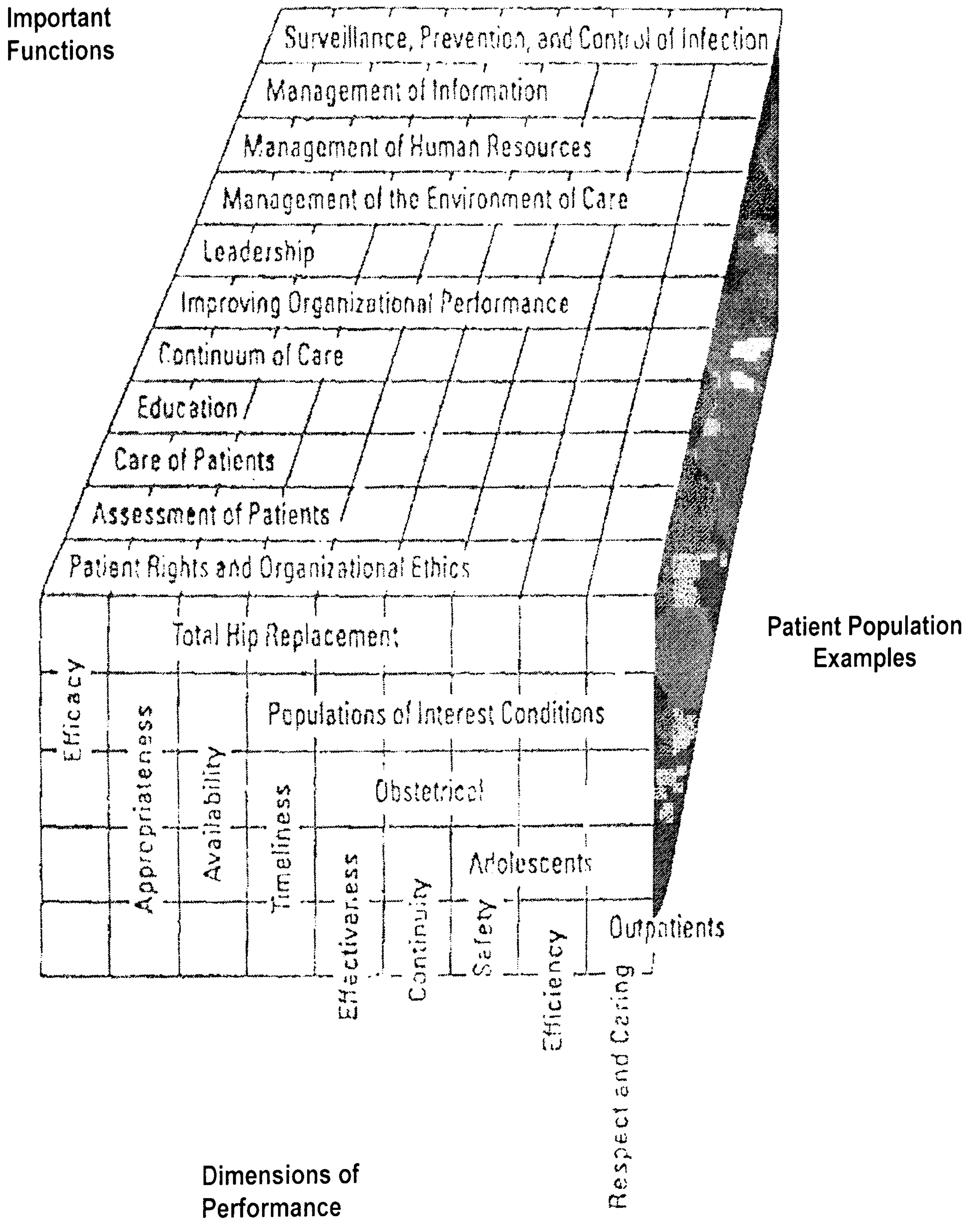
### 7.2.2 The Quality Cube Model

The second phase was the investigation of quality and the adoption of a suitable quality model for health care and health care services (See Figures 7.2 and 7.3). The starting point for this model arises from the hospital accreditation process used in the United States. The accreditation decision process begins with standards. The standards in the accreditation manual are organized into three sections: “Patient-focused Functions,” “Organization Functions,” and “Structures with Functions.” Each section includes a group of important functions or structures with functions that support the provision of patient care. Every important function or structure with functions has its own chapter of performance-focused standards and a scoring system that relates to processes and activities associated with that function.



# The Quality Cube

Figure 7.2 The Quality Cube, a model for assessing the quality of health care.





**JCAHO  
Hospital Accreditation Services  
Accreditation Decision Grid**

Organization: \_\_\_\_\_ Survey Date: \_\_\_\_\_

Location: \_\_\_\_\_ Survey Type: \_\_\_\_\_

**PATIENT-FOCUSED FUNCTIONS**

**Patient Rights and  
Organizational Ethics**

Patient Rights	
Organizational Ethics	

**Assessment of Patients**

Initial Assessment	
Pathology and Clinical Laboratory Services-Waived Testing	
Reassessment	
Care Decisions	
Structure Supporting the Assessment of Patients	
Additional Requirements for Specific Patient Populations	

**Care of Patients**

Planning and Providing Care	
Anesthesia Care	
Medication Use	
Nutrition Care	
Operative and Other Procedures	
Rehabilitation Care and Services	
Special Treatment Procedures	

**Education**

Patient and Family Education and Responsibilities	
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**Continuum Care**

Continuity of Care	
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**ORGANIZATION FUNCTIONS**

**Improving Organization  
Performance**

Plan	
Design	
Measure	
Assess	
Improve	

**Leadership**

Planning	
Directing Departments	
Integrating and Coordinating Services	
Role in improving performance	

**Management of the  
Environment of Care**

Design	
Implementation	
Measuring Outcomes of Implementation	
Social Environment	

**Management of  
Human Resources**

Human Resources Planning	
Orienting, Training, and Educating Staff	
Assessing Competence	
Managing Staff Requests	

**ORGANIZATION FUNCTIONS  
CONTINUED**

**Management of Information**

Information Management Planning	
Patient-Specific Data and Information	
Aggregate Data and Information	
Knowledge-Based Information	
Comparative Data and Information	

**Surveillance, Prevention  
and Control of Infection**

Surveillance, Prevention and Control of Infection	
--	--

**STRUCTURES WITH  
FUNCTIONS**

**Governance**

Governance	
------------	--

**Management**

Management	
------------	--

**Medical Staff**

Organization, Bylaws, Rules, and Regulations	
Credentialing	

**Nursing**

Nursing	
---------	--

**Special Type I recommendation(s)**

--	--

- 1 = Substantial Compliance
- 2 = Significant Compliance
- 3 = Partial Compliance
- 4 = Minimal Compliance
- 5 = Non-compliance
- N = Not Applicable
- P = Defer to Primary Service

Summary Grid Score = \_\_\_\_\_

Figure 7.3 A sample hospital accreditation service accreditation decision grid.

The standards in each chapter are grouped into performance areas considered most critical to a hospital's overall performance. There are 45 such performance areas within the 15 functional chapters of the manual.

The functional organization of the standards reflects a systems view of a hospital. Looking at the standards from a systems perspective can help the hospital move toward a multidisciplinary approach to health care delivery. To carry out and continually improve those processes that impact patient care, all individuals within the hospital must work together. When surveying a hospital according to performance areas, surveyors can better assess how well the caregivers within the hospital collaborate in providing or supporting care.

### 7.2.3 The Adaptation Of The Quality Model

The third phase is the adaptation of the model to the specific project context of the change to insurance funding in the Kingdom of Saudi Arabia. This necessitated an investigation of the definition of health insurance, and the discussion by Shariah scholars of the status of health insurance in Kingdom of Saudi Arabia. The legality of insurance in general and the effect of insurance on the quality of health services in particular is the subject of an ongoing debate in the Kingdom.

Saudi Arabia is one of a few developing countries that have institutionalized a formal Quality Assurance Programme applying a combination of Q.A. indicator approaches in the area of health services. More often the Medical Staff Committee approach is used in leading hospitals in KSA, such as KFSH&RC, Aramco, KKESH. MODA hospitals and some MOH hospitals. In the year 2000, a general directorate of quality assurance was founded within the Ministry Of Health but still up to the time of writing there is no national wide comprehensive quality standard.

Since, at this time the employer is responsible for providing health services for their employees, and there are neither detailed governmental rules nor system for this provision, some employers who use the health insurance schemes, particularly private schemes face three main problems. These problems are: firstly negative competition between the private insurance companies and the private health organization in



providing health insurance scheme; secondly the absence of detailed insurance law, and accordingly the absence of licensing for private insurance companies; and lastly the observed variations of health cover for private sector employees have influenced the MOH and the MOL & SA in KSA to introduce a unitary system for such cover by developing a compulsory Health Insurance Plan (CHIP).

The Council of Ministers Decision No. 71 dated 27.04.1420H (11.08.1999 EC) stated the Articles of the Cooperative Health Insurance System. The aim of the system is to provide basic medical cover to expatriates in the Kingdom. In 1999, the Health Insurance Council (HIC) was founded to implement a medical insurance scheme. This was expected to come into force in late 2000, but finally came into force in 2005.

In KSA there are three kinds of health insurance schemes. Firstly the GOSI scheme which covered all workmen in KSA, in public or private organization, where the treatment takes place mainly in the private health sector, but occasionally in the public health sector. Secondly, the private insurance companies' schemes under which treatment are provided mainly by private health organizations. Thirdly the health organization's affiliated schemes, which also cover mainly private sector employees, where the treatment is obtained from the health organization associated with the scheme.

#### 7.2.4 The Development Of The Methodology

The fourth phase of the development of the model took place in the adaptation of the model in the development of the research methodology to construct a survey questionnaire. The Development of methodology starts from the word "Science" and "Is social scientific research a science?" The "JAR" metaphor was used successfully to relate the epistemology of the three types of research methods that are, Survey Research, Ethnographic Research, and Action Research. The use of the JAR metaphor both in the analysis of the treatment process and in the selection of appropriate research methods, shows a wider applicability and gives rise to a potential of introducing this as a new systems thinking model which is very interesting area for further studies and research. The result of application of the 'JAR' metaphor in developing the methodology is the conclusion that patients should be involved in the study, as should health professionals, and also that treatment procedures should be reviewed.



This led to the development of the two main data gathering instruments, two survey questionnaires, used in the study. These were based on the new quality model composed of 33 quality elements grouped into three groups: firstly the dimensions of performance; secondly, the care dimensions; and thirdly the organizational dimensions.

#### 7.2.5 The Testing And Use Of The Data Gathering Instruments

The fifth phase of development concerned testing the validity of the instruments in this study. To this end firstly a group of jurors was selected that included five professors. At that time, the jurors were asked independently to review and evaluate the model, and questionnaires. The first draft questionnaires were modified as per their recommendations which suggested some clarifications. The second phase of testing the survey questionnaires was the undertaking of a pilot study, where the survey questionnaires (Appendix VIII) were distributed to 15 doctors and 20 patients for the purpose of verifying the questionnaires. The result of the pilot study was that the questionnaire for Doctors required no changes, but some simplification was required for patients. The final survey questionnaire for patients is shown in Appendix VIII.

The main result of the survey was the perception of positive impact of the change to insurance funding on the quality of care delivered in the case study private hospital. This result is perhaps surprising given the absence of control methods and an accurate information system. This is particularly the case because the norms, beliefs, and values of individuals in Saudi culture appear to be not supportive of insurance implementation. The main aspect of the suggestions resulting from the surveys is the improvement of the control methods and responsibility for them. Therefore to maximize the supportive role of social culture in the insurance implementation some concern should be directed to Islamic issues raised in the implementation process.

#### 7.2.6 The Main Findings

The main findings of the study can be summarized in four groups: the use of JAR metaphor, the 33 element quality model, and the study instrument, the field work and summary results. All in all, the survey of health insurance and its impact on the



quality of the services provided by the case study private hospital in Kingdom of Saudi Arabia showed that instrument was valid, reliable and practical in obtaining information about the quality of those services.

Thus it may be concluded the 33 element quality model and the derived survey instruments are suitable for use in other hospitals in Kingdom of Saudi Arabia. Quality assessment using the new quality model will then consist of the interlocking processes, the accreditation decision, the quality survey, the aggregation process, the decision process, and the determination of the hospitals level of compliance with the standards based on the five-point scale.

### 7.3 The Contribution of the Research

The contribution of the research can be summarized as six elements, firstly the 'JAR' Metaphor, secondly the 33 element model for hospital health services, thirdly the survey instruments developed from this for use in an accreditation process . fourthly the Quality Assessment, fifthly the case study results, and finally the debate on the legality of insurance.

#### **7.3.1 The 'JAR' Metaphor**

It is felt that the 'JAR' metaphor is an important contribution to management problem solving and decision making which arose from an Islamic viewpoint in exploring thinking about organizations. It has been used throughout the study to analyze organizational issues (Chapter 2), and investigating the patients' treatment process, and improving the quality cube model (Chapter 3). Further, it was found to be valuable in evaluating the relationship between the research methodologies, which contributed to the construction of the survey questionnaires (Chapter 5).

In the context of this dissertation the exploration of the JAR metaphor was necessarily limited, but as was indicated it is felt that this metaphor may have wider implications as a model in a systems thinking context which can be used in organizational analysis, problem solving and decision making. The JAR metaphor highlights the effects of the 'soul' aspect in the organizational and individual productivities, and the characteristics of the organization as a living organization. It is felt that this is an important contribution to the discussion in respect of human relations



in managing a team, a group, or an organization. This supplements the work carried out by the human relations school of management e.g McGregor, Maslow, Herzberg etc. It also is important in respect of communication, setting communications in an holistic framework to be aware that communication must take account of all three aspects of the human.

Finally it is felt that the JAR metaphor will be a useful metaphor not only in Saudi Arabia but throughout the whole Islamic world as a whole.

### **7.3.2 The 33 Element Quality Model**

When we think of the provision of health services as a social system, it would be made up of three components, the funding system, the consumers, and the providers. Clearly there are a number of aspects that are affected by a change in the funding system from governmental funding to a system of Health Insurance. The quality of the service provided is one of the most important of them.

In examining previous studies, we find a considerable number of the studies dealing with different sets of quality dimensions. This gives rise to in excess of 212 hypothesis or/and questions about the impact or the effect of the health insurance on quality in the literature examined. This indicated that the area of this study is a 'hot' topic, and an important area to focus on. This was particularly so since not one of these previous studies had been conducted in an Arab country.

None of these previous studies dealt with more than nine quality dimensions, nor was there an attempt to use the accreditation elements of the JACHO model and/or the quality cube dimensions to clarify and test the impact of the health insurance. It was therefore felt that a more comprehensive study was necessary. This study tries to be comprehensive, and is an attempt to use the accreditation elements, and quality cube dimensions to clarify and explore the impact of the change to health insurance funding which is taking place in the Kingdom of Saudi Arabia. For some of the quality dimensions it is the first time they have been studied or researched in the context of health and insurance.



The second contribution of the research is the 33 element model of quality in health care which was adapted from the JACHO model to the situation in the Kingdom of Saudi Arabia. This is summarized in Figure 7.4. The JAR metaphor contributes to making the quality model more comprehensive within the context of the Kingdom of Saudi Arabia and perhaps improves it for use elsewhere.

As a result of the use of the JAR metaphor it becomes apparent that patients should be involved in the evaluation of the performance dimensions, and the care dimensions. Health professionals will be involved in performance dimensions, care dimensions, and organizational dimensions. Finally, the model also indicates that treatment procedures should be reviewed by comparing them to a standard treatment procedure, although this is beyond the scope of this dissertation and is a subject for further research.

### **7.3.3 The Survey Instrument**

The study introduces a survey instrument based on this model valid to be used in Kingdom of Saudi Arabia for identifying the quality compliance to agreed standards in the health care services in the Kingdom of Saudi Arabia. The instrument enabled insight to be gained into the impact of some issues of quality connected with health insurance, which it is proposed can be used for other Islamic Countries. The survey instrument developed proved to be understandable by normal people since it was produced bilingually.

This is an important contribution to existing knowledge, since it has linked and explored three important fields and/or industries: healthcare, insurance , and quality management and can become an important element in a quality assessment and accreditation process.

<b>PERFORMANCE DIMENSIONS</b>	
Accessing appropriate level of patient care	
Providing care on time	
The availability of services, if needed	
Patients respect and caring	
Inpatient length of stay	
Quality of hospital services in general	
Medical technology	
Medical staff behavior in providing services	
Matching patients needs over an extended time	
Care safety	
Providing care effectively with respective cost	
<b>CARE DIMENSIONS</b>	
Patients rights in general	
Hospital ethics	
Patient assessment	
Clinical investigations	
Treatment decisions and plans	
Intensive and anesthesia care	
Medication use	
Medical Material use	
Nutrition care	
Operations and related procedures	
Physiotherapy and rehabilitation care	
Nursing services	
Patients family education and their responsibility	
<b>ORGANIZATIONAL DIMENSIONS</b>	
Hospital planning and organizational design	
Social environment of care	
Managing patient-specific data and information	
Infection surveillance, prevention and control	
Integration and coordination of hospital services	
Hospital environment management and design	
Hospital staff management and planning	
Hospital information systems	
Hospital board activities and ownership style	
Medical staff management and organization	

**Figure 7.4: New Quality Model Dimensions**



#### **7.3.4 Quality Assessment**

The quality assessment in the new quality model consists of three interlocking processes which compose the accreditation decision process. They are the quality survey, the aggregation process, and decision process. The outcome is the determination of the hospitals level of compliance with the standards based on the five-point scale.

The major changes to the “Quality Cube” provide a model of hospital quality based on the Saudi culture that can be understood by health professionals as well as patients. The associated instrument (the Questionnaire) can then be used in the quality assessment surveys in a way comprehensible to both patients and health professionals.

At the time of finalization of this dissertation there are three levels of current activity. The quality drive for health in which the author has played a considerable part has contributed to a general move to establish quality assurance within KSA. It has been agreed that a quality prize will be established, the King Abdulaziz Prize, which will be awarded to any organization within the Kingdom for the best implementation of efforts to achieve quality. The author is being considered as a member of the awarding body, King Abdulaziz Prize Quality Council.

Secondly, at the time of writing a national health quality council is being established and the author is being considered as a member of that council.

Thirdly the awareness of quality issues in the healthservices is being raised through education programmes. A Masters degree programme has been established validated by Oklahoma University and the Ministry of Health. Health Quality management is now a mandatory subject for any health or medical college. All health professionals must have taken one course on quality management as part of their qualification. Further to raise awareness of those already qualified one quality officer has been assigned to each of the 13 regions of KSA whose duties are to run workshops to raise quality awareness. These workshops are already taking place within hospitals, primary healthcare centers, and the MOH.

The author has been participating in all these developments in his position as senior lecturer in Health Quality both in terms of the MOH projects and in terms of practical implementation. The health quality courses now being taught are based upon the approach described in this dissertation.

### **7.3.5 The Case Study Results**

The most important results of the analysis of the case study results were firstly that the regression analysis shows that the dimensions responsible for 35% of the impact on quality in general were those associated with medical technology. The coefficient analysis results show that the best combined model was one of medical technology, patient respect and caring, and nutrition care. These three dimensions account for 50% of the influence on quality in general. It is clear therefore that private hospitals and insurance companies should give more attention to these aspects in any improvement programme.

In sum, the model and instruments seem altogether appropriate for assessing quality in Saudi Arabia, a setting different from the ones in which American Joint Commission originally pioneered them, there the focus was on quantitative methods and organizational performance at a particular time rather than generally in time and specifically for each patient.

To conclude the reflection upon my study, I believe that I can say that this study, through the model and instruments, succeeded in creating an awareness of the impact of health insurance upon quality. This study improved my technical professional knowledge within the health care field, my capability in managing the interaction between theory and practice and my communication skills with the interested parties.

### **7.3.6 The Contribution to the Debate on the Legality of Insurance**

As has been set out in Chapter 4 there is a discussion taking place of the legality of insurance within Shariah Law. The explanation of this debate was done by comparing the three main views that are expressed among the Shariah



scholars on this question. The debate around these three views is still hot in the Islamic world at the time of writing this dissertation.

The main contentions of opponents who argue against the implementation of commercial insurance are characterized by: it challenges divine predestination, it is gambling and wagering, it involves risk and uncertainty, it carries injustice, and it involves usury.

The absolute supporters who argue for the implementation of commercial insurance reply to the aforementioned contentions that Insurance is: merely a form of lessening risk, a serious business, a type of risk and uncertainty permitted by Islamic law, a conditional aleatory contract, a cumulative contract based on scientific methods and accurate calculations, and a new form of warranty contract which was not dealt with by any Islamic law and was not prohibited by any Islamic legislation.

While, other Shariah scholars are of the view that commercial insurance should be forbidden as it could be replaced by a Cooperative Insurance. The concept of Cooperative Insurance is based on the cooperation of the policy holders (the insured) contributing funds towards compensating those amongst them who are faced with accidental mishaps. Surplus resulting from insurance operations is returned back to the policy holders in a determined manner and time. The Saudi Council of Senior Ulema approved this form of insurance, as an Islamically accepted substitute for commercial insurance, in 1397 H.

The decision to implement only cooperative insurance has made the insurance system unique and complex. The debate has a great influence on the implementation of the insurance in general and specifically health insurance. People still hesitate to have insurance coverage and the need arises to make an argent decision by the International Islamic Conference. This has prevented immediate implementation whilst the details are being established.

The difficulties are:

- Actuarial statistics for KSA are only available for the private schemes which are currently in existence, it is not known how the statistics will

change and therefore how to establish premiums for cooperative insurance.(Penny)

- Private companies will only enter this market if they have opportunity to maximize their profits, and therefore are not interested in the cooperative market.
- All insurance companies pass on risk by reinsuring with specialist reinsurance companies. No such company exists at present in KSA and since this must also be subject to the same cooperative requirements, the risks cannot be undertaken by any existing outside company.
- At present no controls are being established to ensure these cooperative principals are being adhered to, and the present companies are working to change the situation and prevent the implementation of controls, and there are also attempts to implement the private style of insurance under the cooperative name.

There is as yet no clear policy for implementation to overcome these problems.

#### 7.4Future Research

The study has encouraged me to do and recommend conducting further research. For example, in the health quality field implementing the new 33 element quality model as an accreditation instrument and requirement of the implementation in Saudi Arabia is a subject to be investigated.

Further, the quality changes due to other factors introduced into the Saudi health system such as a comprehensive health information system, and quality changes due to insurance from other perspectives such as hospital managers, and Insurance companies should be investigated.

There are many other aspects for further research such as Saudization, the gradual replacement of non-Saudi employees with Saudi nationals: privatization, the transfer of ownership from government to the private sector: improving health information: and the impact of insurance on quality through comparing the insured and uninsured patient procedures.



Finally, the treatment procedures are recommended to be reviewed by comparing them to a standard treatment procedure. This is the subject of further research because of the limitations of the project and the difficulties in accessing patient medical records.

In conclusion this study provides the guidelines to, and is an important step in, the implementation of national health insurance based on scientific research methods.

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# APPENDIX I

## “What is Insurance?”

Before defining the ‘INSURANCE’, it is better to identify the major themes that insurance is based on. The Insurance Phenomena build and depend on the following themes:

- I.a. The legal relationship between the insured and the insurer by which, the insurance contract exist, (Sharafoadian, 1983, P. 15).
- I.b. The Law of large numbers to functioning the insurance. The Law of large numbers is a mathematical principle stating that as the number or exposures is increased the actual results tend to come closer to the expected results, (Crane, 1980, P. 11).
- I.c. Chance of loss (Probability), which is the probable number of losses out of a given number of loss exposures, (Crane, 1980, P. 9). The Insurance companies did not conduct any insurance contract until they make the estimation of the chance of loss based on what has happened in the past to be assured that the estimation is as accurate as possible.
- I.d. The Insurer role which can be summarized by grouping various risks and making its mathematical and statistical calculations to be able to pay for insured’s who are at risk, (Sharafoadian, 1983, P. 1).
- I.e. The insurance function that is not only the compensation of losses but also insurance works as a saving box for the future. (Sharafoadian, 1983, P.17).

Crane. F, was defined Insurance as “a system of combining many loss exposures, with the costs of the losses being shared by all of participants”. The term loss exposures refers to the objects that are subject to loss such as autos, lives etc. (Crane, 1980, P. 8). Crane’s definition is incomplete because it concentrates on the law of large numbers only it excludes or ignores other basic terms.



Dorfman, M. was defined Insurance as a financial arrangement for redistributing the costs of unexpected losses, and as a legal contract whereby an insurer agrees to compensate an insured for losses. (Dorfman, M. 1978, P.14).

Dorfman's definition was concentrated on the legal relationship between the insurer and the insured.

Mowbray, A was defined Insurance as that social device for making accumulations to meet uncertain losses, which is carried out through the transfer of the risks of many individuals to one person or to a group of persons. (Mowbray A.1969, P.62). This definition includes the social aspect of the insurance but it focuses on the large numbers law.

Finally, I think the preferred definition of Insurance is the Elliott & Vaughan definition, because they look at insurance from the individual viewpoint as well as from the society viewpoint. They defined insurance from the view point of the individual as an economic device whereby the individual substitutes a small certain cost (the premium) for a large uncertain financial loss (the contingency insures against) which would exist if it were not for the insurance contract. And they defined Insurance from a social point of view as an economic device for reducing and eliminating risk through the process of combining a sufficient number of homogeneous exposures into a group in order to make the losses predictable for the group as a whole. (Elliott C and Vaughan E, 1972, P.25, 35).

# APPENDIX II

## Insurance Terminology

### II.a. Risk:

The word “ Risk “ is frequently used in connection with insurance because insurance is one method of dealing with risk. Risk can be defined as the variability in possible outcomes of an event based on chance (Dorfman, M. 1978, P.7) or it is uncertainly about future loss. Risk can be either pure (that result only in loss on in the absence of loss) or speculative (that result in either loss or gain). (Crane F, 1980, P. 3).

### II.b. Loss:

The word “ Loss “ in insurance terminology takes on a more limited meaning because they do not include the wearing out or normal depreciation of property, nor do they include damage intentionally done to property by its owners. (Crane F, 1980, P.4). Loss in insurance terminology can be defined as an undersigned, unplanned reduction of economic value. Thus the loss of time or memory generally would not be a loss for the purpose of insurance, since neither represents the loss of economic value. (Dorfman M. 1978, P. 6). There are four principal types of losses: Loss of property ( which includes the cost of repairing or replacing thing such as automobiles, collision.. etc.), Loss of income ( that effect the ability to work and earn an income such as sickness, accidental injury etc.). Loss associated with legal liability claims that based on the Laws of negligence, and Loss due to unexpected expenses such as the expenses of medical services. (Crane F. 1980, P.4, 5).

### II.c. Chance of Loss:

Chance of loss can be defined as a concept refers to a fraction, with the numerator representing the actual or the expected number of losses and the denominator representing the number of exposures to the loss. Chance of loss



creates the need of insurance. If there were no chance of loss, insurance would not exist. (Dorfman M. 1978 P. 6).

#### II.d. Peril:

A peril is defined as the cause of the loss that Insurance provide protection against. (Dorfman M. 1978, P. 7). Commonly insured perils include fire, theft, explosion and illness (Crane F. 1980, P. 5).

#### II.e. Hazard:

Hazards are conditions that serve to increase either the frequency or severity of losses such as over-storage of gasoline gallons in fore losses and poor lighting in theft losses. (Dorfman M. 1978, P. 7). There are three kinds of hazard, Physical ( are tangible characteristics of whatever is exposed to loss), Moral (exists when the insured person is one who may dishonestly cause or exaggerate a loss), and Moral (exists when the presence of insurance causes the insured person to be indifferent to loss). (Crane F. 1980, P.5).

#### II.f. Insurance Policy:

Insurance policy is a legal contract under the terms of which an insurer agrees to pay for stated losses. that means policies cover the stereos for the perils of a period of time (commonly one year). (Crane F. 1980, P.9).

#### II.g. Premium:

A premium is the price of an insurance policy. (Crane F. 1980 P. 9). The elements of an insurance premium include the cost of paying for losses, plus the cost of operating and maintaining insurance pool, plus reserves for unexpected losses, minus the investment earnings.

#### II.h. Deductibles:

The common straight deductible provides for the insurer to pay only for the amount of loss in excess of the deductible amount. (Dorfman M. 1978. P. 158). In other words, under a deductible clause the insured bears losses up to a

specified amount and the insurer is responsible for losses in excess of this amount up to the policy limits. Deductibles assume many forms, first, they may apply to each loss or to the total losses in a stated period. Second, the deductible may be a specified amount or a percentage of the loss. Deductibles are included in insurance policies to reduce the premium rates and to decrease the moral hazard, since the insured must bear the first part of the loss. (Mowbray A. 1969, P. 149, 150).



## APPENDIX III

### Proposed Scheme of Insurance

Before working out the details, let us see what are the basic principles of the Islamic System. Public welfare and social security are the foremost economic obligation of an Islamic State. Alongside this, it is also the duty of an Islamic State to effect economic development as well as to reduce the gap caused by mal distribution of wealth in the society that aims at relieving the deprived and the destitute of want and misery so that not a single member of the society remains unprovided in his basic need- food, clothing, shelter, medicine and education. This will adversely affect life insurance, and to some extent, insurance covering accidents, fire, theft and other such perils. The vast financial resources that the scheme will include “Usher” and “Zakat” with considering what happened during the period of Al Kalifa Omar bin Abdul Aziz where they did not find any person to “Zakat” because the great public welfare during this period. In the light of the foregoing discussion the following is a brief sketch of an insurance scheme suitable for a modern Islamic economy.

- a. All insurance concerning perils to human life, limb, and health should be dealt with exclusively under the supervision of the State. This is to be done in conjunction with and related to the social welfare system. In the event of destitution caused by the occurrence of a peril everyone should be ensured relief to the extent that his own basic needs as well as those of his dependants will continue to be satisfied. This assurance should be available without paying any premium. However, when human life, limb or health comes to harm by an industrial accident or when it is impaired while carrying out some duty assigned by an employer, the burden of the relief and compensation may be born by the owner of the factory or the employer. The same principles may be applied while deciding on unemployment benefit, ascertaining if some measures taken by the

employer has resulted in the non-employment of the individual concerned. Alongside this provision of support from the state, it should be open to the individual to opt for insurance to offset the loss caused to his own or his family's interests by the above mentioned perils, so that he may maintain his own or his heirs economic productivity and continuance of business. Such insurance should also be the concern of the state, bringing all life insurance, medical insurance and most of insurance against accidents, under its jurisdiction.

- b. Insurance against perils involving money and property should also be run by the state. Preventive measures play a very important role in this area. In present conditions, effective preventive measures can be taken only by the state, especially when everyone needs this protection whereas everyone cannot meet its expenses. The state should take measures to protect people's wealth and property from fire, flood, wreckage, earthquake, storm, hail and theft. This protection is to be given to all citizens. In spite of these measures calamities may occur. Opportunity should be available to the individuals to take out insurance against the financial losses that result. The compensation money should be settled in all such cases according to the terms of the contract agreed upon beforehand, which is the basis of the payment of premium by the owner of the wealth. In the event of destitution caused by financial loss in the wake of calamities associated with wealth, the concerned person should be relieved of his destitution by the social security system. This assurance should be available without payment of any premium. The insurance under discussion does not provide only immediate relief but also compensation for the loss. It should be left however, to the individual to take out a policy covering the whole, or a part of property according to his capacity to pay the premium.



It will be fitting if factories, ships, shops and major vehicles (like aero planes, cars and motor boats, etc) are compulsorily insured. The case of residential units may also be considered along these lines. Resort to private agencies for insurance of important items of wealth and property may also be permitted.

- c. After a thorough survey and review of all the existing as well as possible forms of insurance relating to liabilities, rights and interests, and contracts, it will have to be decided separately for each of them whether a particular kind of insurance is to be in the public sector or private sector, or if individuals will have the option to resort to either of them. The insurance of the account holder's deposits in banks, for instance, should be part of the banking system. It should be carried out under the supervision of the central bank established by the state. But private credit transactions may be insured by private or cooperative agencies.

In modern times most of the newly emerging varieties of insurance come under the second category. This area provides ample scope for creativity and innovation in devising new methods. In view of growing cultural complexity this is rather inevitable. The national as well as international economy can hardly function without it. There are, however, chances that in this sphere gambling oriented practices may be employed.

In the light of the three points discussed above, it can be inferred that we propose to have most of the forms of insurance dealing with life, sea trade, fire and accidents, in the public sector, through some of them dealing with certain specific accidents, rights and interests and ordinary contracts shall be assigned to the cooperative private sector. (Siddiqi M, 1985, P. 59-69).

## APPENDIX IV

### Previous Studies

Firstly, **Dimensions of performance**, where I found that health insurance has an impact by a way or another on the following elements:

- Accessing appropriate level of patient care. (Macintyre. K., Hotchkiss. D. R., 1999, P.1473-87), (Sawyer, C. H., Sawyer, T. G., 1993, P. 257-60). (Shuval. J. T., 1990, P. 291-303), (Kane, W. J., 1978, P. 2647-50), (Jencks, S. F., et al. 2000, P. 1670-6), (Livingston, P., et al, 2000, P. 452-3), (Curtin, L. L., 2000, P. 198-202), (Mansour, M. E., et al, 2000, P. 512-9 ), (Rajmil, K., et al, 2000, P. 211-4), (Ginzberg, E., 1999, P. 55-66), (Halfon, N., et al, 1999, P. 181-204), (Melfi, C. A., et al, 1999, P. 201-15), (Iris, M., 1999, P. 36-40), (Atim, C., 1999, P. 881-96), (Normand, C., 1999, P. 865-9), (Burstin, H. R., et al, 1998, P. 389-97), (Lara, M., et al1999, P. 27-44), (Leigh, W. A., et al, 1999, P. 318-31), (Brinker, M. R., et al, 1999, P. 451-6), (Andrulis, D. P., 1998, P. 419-20), (Anderson, G. F., 1997, P. 163-71), (Weil. T. P., 1991, P. 533-7). (Leigh, W. A.,1994 , P.17-32), (Derrick, F. W., Scott, C. E., 1995, P. 55-63), (Khan, M. M., et al, 1996, P. 58-62), (Cohen-M. A., Barnea, T., 1992, P. 783-811).
- Providing care on time, (Macintyre. K., Hotchkiss, D. R., 1999, P. 1473-87), (Jofre-Bonet, M., 2000, P. 51-71), (Schoen, C., et al, 1997, P. 163-71).
- The availability of services, if needed, (Macintyre, K., Hotchkiss, D. R., 1999, P. 1473-87), (Shuval, J. T., 1990, P. 291-303), (Albrecht, L., 1998, P. 70-4), (Deal, L. M., Shiono, P. H., 1998, P. 93-104), (Brinker, M. R., et al, 1999, P. 451-6), (Dranove, D., White, W. D., 1998, P. 163-85), (Schoen, C., et al, 1997, P. 163-71), (Derrick, F. W., Scott, C. E., 1995, P. 55-63).
- Patients respect and caring, (Iris, M., 1999, P. 36-40). (Pearlman, D. N., 1998, P. 217-21), (Schoen, C., et al, 1997, P. 163-71), (Rubinm H. R., et al, 1998, P.



- 109-10). (Wagner, E. H., Bledsoe, T., 1990, P. 191-200). (Cooper, P. F., et al, 1996, P. 237-46).
- Inpatient length of stay, (Ginzberg, E., 1999, P. 55-66), (Nauenberg, E. Basu, K., 1999, P. 135-48), (Wickizer, T. M., Lessler, D., 1998, P. 1545-54), (Dranove, D., White, W. D., 1998, P. 163-85), (Anderson, G. F., 1997, P. 163-71), (Wagner, E. H., Bledsoe, T., 1990, P. 191-200). (Van-de-Ven, W. P., Schut, F. T., 1994, P. 1459-72).
  - Quality of hospital services in general, (Macintyre, K., Hotchkiss, D. R., 1999, P. 1473-87), (Shuval, J. T., 1990, P. 291-303), (Jencks, S. F., et al, 2000, P.1670-6), (Hays, RD, 1997, P. 22-31), (Iris, M., 1999, P. 36-40), (Ginzberg, E., 1999, P. 55-66), (Normand, C., 1999, P. 865-9), (McGee, J., et al, 1997, P. 32-40), (Lara, M., et al, 1999, P. 27-44), (Sisk, J. E., 1998, P. 687-707), (Escobar, G. J., et al, 1998, P. 422-36), (Seidman, J. J., et al 1998 , P. 1607-25), (Deal, L. M., Shiono, P. H., 1998, P. 93-104). (Twigg, J. L.,1999, P. 371-82), (Block, L. E., 1997, P. 193-244), (Schoen, C., et al, 1997, P. 163-71), (Malik, A. M., 1997, P. 55-9), (Rubinm H. R., et al, 1998, P. 109-10), (AHA et at, 1991, P. 1- 8), (Himmelstein, D. U., Woolhandler, S., 1991, P. 223-8), (Strasser, A. L., 1990, P. 52), (Marmor, T.R., 1993, P. 45-62), (Bisset, K. ,1997, P. i10-i12), (O’Leary, J., 1997, P. 1-7), (Cohen-M. A., Barnea, T., 1992, P. 783-811), (Feldstein, M.S, 1981, P. 133-155), (Hetherington, R.W. 1975, P. 140-196).
  - Medical Technology. (Farrell, M., 1998, P. 180-9), (Curtin, L. L., 2000, P. 198-202), (Pintoo, M. M., Ramos, F., Pereira, J., 2000, P. 520-31), (Iris, M., 1999, P. 36-40), (Vermon, S. W., et al, 1995, P. 179-84), (Jones, S. B., 1998, P. 101-15).
  - Medical staff behavior in providing services, (Sawyer, C. H., Sawyer, T. G., 1993, P. 257-60), (Schaefer, M., 1999, P. 425-37), (Iris, M., 1999, P. 36-40), (Brinker, M. R., et al, 1999, P. 451-6), (Schoen, C., et al, 1997, P. 163-71), (Steinman, T. I., 1997, P. 1618-23), (Borowsky, S. J.,et al, 1997, P. 917-21), (DFM, 1997, P. 129-35), (Cooper, P. F., et al, 1996, P. 237-46).

- Matching patients needs over an extended time, and, (Macintyre, K., Hotchkiss. D. R., 1999, P. 1473-87), (Farrell, M., 1998, P. 180-9), (Halfon, N., et al, 1999, P. 181-204), (Latham, C. E., 1998, P. 93-5), (Jones, S. B., 1998, P. 101-15), (Dranove, D., White, W. D., 1998, P. 163-85), (Klinkman, M. S., et al. 1997, P. 557-66), (DFM, 1997, P. 129-35 ). (Van-de-Ven. W. P., Schut, F. T., 1994, P. 1459-72).
- Providing care effectively with respect to cost, (Farrell, M., 1998, P. 180-9), (Burton, R. I., 1994, P.169-80). (Reilly, B. J., Fuhr, J. P, 1983, P. 795-801), (Curtin, L. L., 2000, P. 198-202), (Iris, M., 1999, P. 36-40), (Atim, C., 1999, P. 881-96 ), (Normand, C., 1999, P. 865-9), (Lara, M., et al, 1999, P. 27-44), (Albrecht, L., 1998, P. 70-4), (Deal, L. M., Shiono, P. H., 1998, P. 93-104), (Jones, S. B., 1998, P. 101-15), (Hoerger, T. J., et al, 1998, P. 1728-34), (Dranove, D., White, W. D., 1998, P. 163-85), (Daniels, L., 1998, P. 167-76 ). (Block, L. E., 1997, P. 193-244), (Steinman, T. I., 1997, P. 1618-23 ). (Tonneau, D., 1997, P. 201-5), (Scanlon, D. P., et al, 1997, P. 507-28), (Enthoven, A., Kronick, R., 1989, P. 94-101), (Weil, T. P., 1991, P. 533-7), (Wagner, E. H., Bledsoe, T., 1990, P. 191-200), (Khan, M. M., et al, 1996, P. 58-62), (Cohen-M. A., Barnea, T., 1992, P. 783-811).

Secondly, **Care Dimensions** where, I found that health insurance has an impact by a way or another on the following elements;

- Patients rights, in general, (Farrell, M., 1998, P. 180-9), (Burton, R. I., 1994, P. 169-80), (Shuval, J. T., 1990, P. 291-303), (Livingston, P., et al, 2000, P. 452-3), (Curtin, L. L., 2000, P. 198-202), (Rajmil, K., et al, 2000, P. 211-4), (Atim, C., 1999, P. 881-96), (Pearlman, D. N., 1998, P. 217-21), (Deal, L. M., Shiono, P. H., 1998, P. 93-104), (Block, L. E., 1997, P. 193-244), (Anderson, G. F., 1997, P. 163-71), (Schoen, C., et al, 1997, P. 163-71), (DFM, 1997, P. 129-35), (Rubinm H. R., et al, 1998, P. 109-10), (Enthoven, A., Kronick, R., 1989, P. 94-101), (Enthoven, A., Kronick, R., 1989, P. 29-37).
- Hospital ethics, (Curtin, L. L., 2000, P. 198-202), (Goldman, J., 1998, P. 47-60), (Dranove, D., White, W. D., 1998, P. 163-85).



- Patients assessment, (Jencks, S. F., et al, 2000, P. 1670-6), (Vermon, S. W., et al. 1995, P. 179-84), (Deal, L. M., Shiono, P. H., 1998, P. 93-104), (Daniels, L., 1998, P. 167-76), (Klinkman, M. S., et al, 1997, P. 557-66), (Maisonneuve, H., et al, 1997, P. 3-13).
- Clinical investigations, (Jencks, S. F., et al, 2000, P. 1670-6), (Hoerger, T. J., et al, 1998, P. 1728-34), (Klinkman, M. S., et al, 1997, P. 557-66), (Kaestner, R., 1999, P. 162-75).
- Treatment decisions and plans, (Farrell, M., 1998, P. 180-9), (Jencks, S. F., et al, 2000, P.1670-6), (Vermon, S. W., et al. 1995, P. 179-84), (Escobar, G. J., et al, 1998, P. 422-36), (Deal, L. M., Shiono, P. H., 1998, P. 93-104), (Klinkman, M. S., et al, 1997, P. 557-66), (Steinman, T. I., 1997, P. 1618-23), (Maisonneuve, H., et al, 1997, P. 3-13), (Kaestner, R., 1999, P. 162-75), (Cooper, P. F., et al, 1996, P. 237-46).
- Medication use, (Anderson, G. F., 1997, P. 163-71).
- Operations and related procedures, (Seidman, J. J., et al 1998 , P. 1607-25), (Brinker, M. R., et al, 1999, P. 451-6).
- Physiotherapy and rehabilitation care, (Van-de-Ven, W. P., Schut, F. T., 1994, P. 1459-72).
- Nursing services, and, (Cohen, S. S., Williams, D. R., 1998, P. 150-61), (Iris, M., 1999, P. 36-40), (Klinkman, M. S., et al, 1997, P. 557-66), (Tonneau, D., 1997, P. 201-5), (Ward, D., 1990, P. 206-7).
- Patient, family education and responsibility, (Mansour, M. E., et al, 2000, P. 512-9), (Klinkman, M. S., et al, 1997, P. 557-66), (DFM, 1997, P. 129-35), (Scanlon, D. P., et al, 1997, P. 507-28).

Finally, **Organizational Dimensions** where, I found that the health insurance has an impact on the following elements:

- Hospital planning and organizational design, (Shuval, J. T., 1990, P. 291-303), (Curtin, L. L., 2000, P. 198-202), (Ginzberg, E., 1999, P. 55-66), (Iris, M., 1999, P. 36-40), (Dranove, D., White, W. D., 1998, P. 163-85), (Enthoven, A., Kronick, R., 1989, P. 94-101).

- Social environment of care, (Farrell, M., 1998, P. 180-9), (Curtin, L. L., 2000, P. 198-202). (Atim, C., 1999, P. 881-96), (Van-de-Ven, W. P., Schut, F. T., 1994, P. 1459-72).
- Managing patient-specific data and information, (Jencks, S. F., et al, 2000, P. 1670-6), (Roos, N.P., et al, 1999, P. 27-41), (NACHRI, 1999, P. 302-18), (Goldman, J., 1998, P. 47-60), (Klinkman, M. S., et al, 1997, P. 557-66), (Tonneau, D., 1997, P. 201-5).
- Infection surveillance, prevention and control, (Klinkman, M. S., et al, 1997, P. 557-66).
- Integration and coordination of hospital services, (Macintyre, K., Hotchkiss, D. R., 1999, P. 1473-87), (Shuval, J. T., 1990, P. 291-303), (Escobar, G. J., et al, 1998, P. 422-36), (Brinker, M. R., et al, 1999, P. 451-6), (Dranove, D., White, W. D., 1998, P. 163-85), (DFM, 1997, P. 129-35), (Maisonneuve, H., et al, 1997, P. 3-13).
- Hospital environmental management and design, (Enthoven, A., Kronick, R., 1989, P. 94-101).
- Hospital staff management and planning, (Cohen, S. S., Williams, D. R., 1998, P. 150-61), (Tonneau, D., 1997, P. 201-5), (Enthoven, A., Kronick, R., 1989, P. 94-101), (Cooper, P. F., et al, 1996, P. 237-46).
- Hospital information systems, (NACHRI, 1999, P. 302-18), (Goldman, J., 1998, P. 47-60), (Tonneau, D., 1997, P. 201-5).
- Hospital board activities and ownership style, and, (Dranove, D., White, W. D., 1998, P. 163-85), (Cohen-M. A., Barnea, T., 1992, P. 783-811), (Bisset, K., 1997, P. i10-i12).
- Medical staff management and organization, (Ginzberg, E., 1999, P. 55-66). (Iris, M., 1999, P. 36-40).



## APPENDIX V

### N C C I

NCCI is a Saudi Company which was established with the specific aim of meeting the demand for a National insurer equipped with ample resources in both capital and professional expertise to transact insurance business in accordance with the cooperative insurance concept approved by the Saudi Council of Senior Ulema as the Islamically accepted substitute for commercial insurance. NCCI was proclaimed by Royal Decree M/5 of 17/4/1405 H, as a Saudi Joint Stock Company with a subscribed capital of SR 500,000,000 out of which SR 250,000,000 is paid up (by the group of governmental Agencies including GOSI and others). NCCI is now one of the largest insurance companies in the Middle East.

The role of the insurance companies in providing health insurance will be clarified by describing a case of typical insurance company which is the NCCI.

NCCI is introducing its “taj” Group Medical Program specifically developed to meet the increasing demand for company employee medical care service.

“taj” which in Arabic means “Crown” refers to an old Arabic saying, identifying the “crown” with good health. In NCCI’s concept, “taj” symbolizes the company’s eagerness to provide to its clients adequate medical care that would ensure that they and their dependants enjoy health and comfort that would reflect positively on their work performance. At the same time, “taj” program aims at relieving employers from the

administrative burden in the field and ensuring that no unexpected expenses are sustained in respect of medical care for their employees.

In order to provide first class service to its clients, NCCI has established a special Medical Department that is fully equipped to look after their needs at every stage.

“taj” Group Medical Program provides the following advantages:

a. First class Health Care for Employees and their Families:

By providing a high standard health care for its employees and their families, a company maintains a state of psychological and physical comfort which should reflect positively on their standard of work and performance.

b. Controlling Medical Expenses:

The cost of providing adequate health care for employees is difficult to predict and can cause considerable worry for employers. “taj” Group Medical Insurance Program solves this problem, as the employer pays a fixed contribution for providing employee cover. This ensures peace of mind and no nasty surprises due to miscalculations.

c. Relieving Management of Administrative Burden:

Overall, “taj” Group of Medical Insurance Program offered by NCCI is designed to provide a company with all the advantages of ensuring adequate health care for its employees but at the same time relieving it of the administrative burden of doing so.

The persons covered by medical insurance under this program include the employee who is regularly employed by the institution which has entered into a contract of insurance with NCCI, his wife or wives, his



unemployed sons under the age of 21 and his unmarried or divorced daughters.

“taj” Group of Medical Insurance Program is so designed as to cover all medical expenses incurred by the insured on account of treatment from an ailment covered under the policy and defined by its terms.

There are basically two kinds of coverage The first: Inpatient only. The second: Inpatient and outpatient.

The maximum liability of NCCI under “taj” Group of Medical Insurance Program is to be agreed upon according to the requirements of the policy holder and the benefits he wishes to provide to his employees within the limits of an amount stated in the schedule per assured person and per year.

In general terms, the basic medical coverage whether for the inpatients and outpatients classification or for the inpatient classification alone includes expenses incurred on account of the following:

- Room and board in hospital within the limits of maximum rate per day of stay.
- Physician’s charges per person, per visit.

The basic coverage under this program can be extended to include several other benefits as follows:

a. Optical Treatment:

Within a suitable limit per person per year, this extension reimburses for charges incurred on account of eyesight tests and the provision of visual aids but excludes the cost of providing contact lenses and spectacles frames.

b. Dental Treatment:

Within a suitable limit per person per year, this coverage provides for reimbursement of charges incurred on account of teeth extraction and amalgam filling but specifically excludes provision of artificial teeth and orthodontics.

c. Child Birth Care:

Covers charges incurred for child birth whether natural or by caesarian operation as well as miscarriage and legal abortion. The eligible expenses are payable for only one pregnancy per wife per year subject to a waiting period of 280 days.

All the above listed benefits are to remain within the limit stated in the schedule per person per insurance year.

*Eligible Expenses Under "taj"* include charges incurred on account of the following:

- Room and board in hospital.
- All other Hospital services and supplies for medical care.
- Anesthetics and their administration.
- Ambulance service for travel to and from Hospital.
- Physician's fees.
- Replacing natural teeth lost or damaged through violent external means within six months of the accident.
- Private nursing by a nurse other than a close relative or a resident within the insured's home.
- Oxygen and rental of equipment for its administration.
- Treatment by X-ray and by radium.
- Treatment by a physiotherapist, other than a close relative.
- Prescribed drugs and medicines.
- Surgical dressings.



- Blood and blood plasma.
- Artificial limbs and eyes when necessary.
- Casts and splints.
- Rental and wheel chair.

But there are two categories of claims that are specifically excluded under "taj" Group Medical Program. The first category includes all those claims listed under **General Type Exclusion** such as war, invasion, radiation, radio active or poisonous explosions and military or police operations whether land, on sea or in the air.

The second categories of claims are those arising from cases listed under **Special Exclusions** and those include the following:

- Suicide and self inflicted injury whilst sane or insane; venereal diseases such as AIDS, HIV, Syphilis etc.
- Treatment of any condition as a result of alcohol and or drug abuse, rest cure, sanatoria or custodial care.
- Any treatment connected with fertility, impotence, circumcision and any sexually transmitted diseases.
- Cosmetic surgery and dental treatment unless caused by gum disease or through violent act.
- Any vaccination or prophylactics, general check up or hearing test for the purpose of obtaining and or changing the hearing aid and the cost of obtaining such aids.
- General health examination, vaccinations or precautions.
- The cost of opening a file or files at clinics or hospitals not part of the agreed hospital or clinic list.
- Psychiatric treatment, allergy testing and alopecia treatment.
- Any expenses exceeding the maximum limit fixed in the policy schedule.
- Treatment expenses for which the assured person is covered by any other insurance company or under any other plan or scheme.

- Treatment for any cases which originated prior to the effective date of the insured's coverage.

In order, for the insured person to be aware of the value of medical benefits provided to him, it is customary that he is asked to contribute a portion of the total expenses that is called "Deductible". This contribution helps in controlling that the beneficiary makes rational use of his medical "taj" card as he is required to bear a portion of medical expenses whether incurred inside the Kingdom or abroad.

"taj" Group of Medical Insurance covers policyholder's employees and their eligible dependents whilst they are in Saudi Arabia. However the cover can be extended to provide benefits for insured persons while abroad for temporary periods of time to be agreed upon per person and per insurance year.

In addition the extension could provide for medical care abroad if such care is declared by physicians not to be available within the Kingdom.

NCCI has developed a system that provides the insured with dedicated service, rapidly and efficiently. The service is administered through "taj" Medical cards which are of four categories differentiated by colours Golden, Silver, Bronze and white – each providing for specific benefits according to the limits and groups specified by the policyholder for his employees (NCCI, 1993).



# APPENDIX VI

## Labour and Workmen Law

*By reviewing Labor and workmen Law states in:*

- Article 128 that “Every employer shall take the necessary precautions for the protection of workmen from hazards and diseases resulting from the work and the machinery used, and for the protection and safety of the work. The employer may not charge the workmen or withhold from their wages any amount in return for providing such protection.
  
- Article 134 that “The employer shall provide first-aid services for the workmen in accordance with the standards to be determined by the ministry of Labor in collaboration with the Ministry of Health. If the number of his workmen in a single location or town, or within a radius of fifteen kilometers, exceeds fifty, he shall employ a nurse who shall be familiar with first-aid services and shall be exclusively assigned to rendering such services; the employer shall assign a physician to examine and treat the workmen at the place to be provided by the employer for this purpose, and the employer shall provide them with the medicines necessary for their treatment. The afore-mentioned services shall be free of charge whether during working hours or otherwise. If in the cases mentioned above, the number of workmen exceeds a hundred, the employer shall, in addition, provide them with all other means of treatment in cases requiring treatment by specialists, or performance of surgical or other operations. In case operation are performance of surgical or other operations. In case operations are performed, as well as in cases of incurable diseases, the expenses shall be taken from the Social Insurance Fund. The costs of treatment, medicines and hospitalization in government or charitable

hospitals, as well as the party, who will assume such costs, shall be determined pursuant to the decision to be made by the Ministry of Labour in agreement with the Minister of Health, or to the rules laid down in the Social Insurance Law.

- Article 135 that “Every employer who employs more than fifty workman shall inform the appropriate Labor Office of the name of the physician whom he has selected to treat his workman, he shall inform the office of the names of the physicians and specialists whom he has selected to treat his workman, and of the names of the hospitals which he has designated for that purpose. In both cases, he must notify the appropriate Labor office of the minimum number of days fixed for the examination of workmen, provided that this minimum shall not be less than three times a week.
  
- Article 136 that “Every employer shall prepare for each workman a medical file showing the results of the medical examination performed on the workman upon the employment, a description of the cases of his illness, the stages of his treatment, and the periods of his absence from work, provided the mention shall be made in the file of the kinds of ordinary and occupational diseases and labor injuries.
  
- Article 137, “ the employer shall make the necessary medical arrangements for the proper protection of the health of the workmen and for the comprehensive treatment of their legal dependants with due regard to the provisions of the “Social Insurance Law” (MOL & SA, 1979 P. 42-47).



# APPENDIX VII

## Co-Operative Health Insurance Scheme

**Article 1:** The system aims to improve healthcare services for the benefit of all Non-Saudi residents and it will be applicable to Saudi citizens only by a decision of the Council of Ministers.

**Article 2:** Cooperative Health insurance coverage will apply to all Non-Saudi residents and their families in accordance with Article 5(b).

**Article 3:** All sponsors of Non-Saudi residents will be responsible to see that they participate in Cooperative Health Insurance. It is allowed to issue or renew a residence permit of an employee unless he possesses a certificate of health insurance for the period of his residence.

**Article 4** A Health Insurance Council will be formed. It will consist of the following members:

- A representative of the Ministry of Interior A representative of the Ministry of Health
- A representative of Ministry of Labor and Social Affairs
- A representative of the Ministry of Finance and National Economy
- A representative of the Ministry of Trade
- A representative of the Saudi Chamber of Commerce and Industry

A representative of Cooperative Insurance Companies nominated by H.E. Minister of Finance with the cooperation of Ministry of Trade.

- A representative from the private health sector to be nominated by the Ministry of Health.
- Two representatives from other government health sector.

The service period of the council is three years, subject to renewal.

**Article 5:** The Health Insurance Council will supervise the application of the system and will be responsible for the following:

- a. To prepare the by-laws of the system.
- b. To organize an alternative method of insurance cover that will provide comprehensive benefits to all families.
- c. To determine the allocation the insurance cost in relation to an employer and employee,
- d. To set up the maximum limit of benefit of a policy as computed and recommended by an actuarial.
- e. To determine the qualification of the cooperative insurance companies and hospitals which will be allowed to practice health care services,
- f. To assess costing structure of Healthcare Providers which intend to provide similar services as for the health cooperative insurance companies,
- g. To assess the feasibility of Co-operative Insurance Companies that intend to provide similar services as Healthcare Providers subject to approval of the Ministry of Finance and National Economy,
- h. To prepare the budget for the Health Insurance Council and submit it for approval of Ministry of Finance and National Economy,
- i. To prepare a work plan and to organize administrative structure for the Council.



- j. To appoint Secretary General upon recommendation by the Ministry of Health and set up a secretariat with its duties and responsibilities.

**Article 6:** All eligible expenditure that may incur for Health Insurance Council (including salaries and bonuses) will be covered by the revenue allocated and approved by Ministry of Finance and National Economy.

**Article 7:** Health Cooperative Insurance will cover the following basic medical services:

- a. general examination, treatment and medicine for out patient,
- b. preventive treatment i.e. vaccination, parental care and child care,
- c. laboratory tests, radiation (as may be necessary).
- d. hospital accommodation and treatment (including child birth) and surgical operation,
- e. dental treatment (i.e. gum amalgam) including artificial implantation.

These services will not be in contradiction with the Social Insurance System nor the comprehensive provision of companies, private establishments and individuals.

**Article 8:** An employer will be allowed to extend the benefits over the basic coverage (as stated in article 7) at an extra cost.

**Article 9:** An employer will be bound to follow the procedures and directives laid by the Ministry of Health in respect of additional benefits.

**Article 10:** An employer will be responsible for the payment of the cost of insurance in respect of each employee for the period between his employment and issuance of the policy.

**Article 11:** stated that if it becomes necessary that the Non-Saudi resident needs to utilize the medical services of the government, he will be allowed to do so but it will be on a free charge basis for the service. Such charges will be determined by the agencies permitted to do so by the Health Insurance Council. The Minister of Health in consultation with the Minister of Finance and National Economy will determine on the procedure and control of the revenue that can be generated from the cooperative insurance companies.

**Article 12:**An employee who work with the government and his family can still use the medical service of government hospitals as may be granted under his contract.

**Article 13:** Health Insurance Council exempts employees who work with the companies which administer their own health care services.

**Article 14:** stated that If an employer fails to participate or pay the premium of the insurance on behalf of his employee and his family, will be penalized up to a maximum limit not exceeding the annual period. An employer henceforth will be suspended from bringing foreign workers or banned till further noticed. The penalty will be fixed by Special Committee set up to carry out this task. If a cooperative insurance company fails to honor the terms and conditions of each policy, it will be obliged to compensate the injured employee in full and also pay penalty not exceeding SR 5,000.00. The President of the Health Insurance Council will establish the sub-committee for the grievances which will look into the procedures, obligations (including the penalty scale) and the course of action that will be necessary. The sub-committee will be composed of representatives from the



following ministries; Ministry of Interior, Ministry of Labor and Social Affairs, Ministry of Justice, Ministry of Finance and National Economy, Ministry of Health, Ministry of Trade. If it is felt that the penalty is not correct or unfair the dependant has the right for appeal within 60 days from the date of the judgment given.

**Article 15:** In rare occasions it may be become absolutely necessary for Non-Saudi residents to be attached to a different employer other than their direct sponsor. In this respect the resident will take the responsibility of the sponsor on his own account.

**Article 16:** The Ministry of Health will ensure that the medical service provided by the Cooperative Health Insurance companies to members of the public are conducted under a strict quality control system.

**Article 17:** Cooperative Health Insurance companies will be obliged to conduct their affairs on the principle of cooperative insurance in a similar manner the National Company for Cooperative Insurance which is authorized by Supreme Religious Committee Decision No. 51 dated 04.04.1397H.

**Article 18:** The Ministry of Health will issue by-laws within a year from the date of decision.

**Article 19:** This legislation will be published in the official gazette. It will be effective 90 days after the insurance of the by-laws. The Health Insurance Council will be deemed operative on the date of publication.

## Explanatory notes on the Cooperative Health Insurance (CHI)

### System:

To explain the trend toward the cooperative health insurance should be known that the social and economic development in the Kingdom of Saudi Arabia has attracted a large number of foreign workers. More than six million expatriates currently work in the Kingdom. This large labor force ought to be provided with basic healthcare facilities enjoying the same privileges with Saudi citizens.

However, the progress and development in various fields has increased the demands for labor force and increased the financial burden for running the healthcare services. This has prompted us to seek for an alternative system that will help to reduce the financial burden without affecting the current standard of service and benefits to residents and citizens. Therefore, it became necessary to introduce a system that will stop the ways in health services that are being offered free of charge.

It is hoped that such a system will secure the benefits of healthcare services to all Non-Saudi residents of this early stage and Saudi citizens at a later stage at affordable price and easy terms of payment i.e. installment.

The Health Insurance Council will try to make sure that adequate protection will be provided by cooperative health insurance companies.

Article 3 has mandatory insurance on Non-Saudi residents and stipulates that an employee's resident permit will not be granted or renewed without the position of a health insurance certificate from a cooperative insurance company.



The Ministry of Health in consultation with representatives of various government agencies and private organizations has set up procedures to monitor the quality of service.

Article 5 has stipulated the duties and responsibilities of the Health Insurance Council and to examine the necessary steps to cope with changing circumstances in relation to treatments offered through health cooperative insurance system. It has also been given the additional task for checking the premium structure and the allocation of contribution within the employer and the employee as may be recommended by experts.

The existence of several companies will encourage competition among the medical service provided and will ultimately benefit the general public in terms of service and affordability.

Article 5 authorizes the Health Insurance Council to decide on the qualifications of the health cooperative insurance companies and healthcare providers.

The Health Insurance Council has the authority to license Healthcare Providers to enter the field of insurance subject to approval of the Ministry of Health. The Health Insurance Council will present its budget for approval by the Ministry of Finance and National Economy. The Health Insurance Council will prepare its work plan. The Health Insurance Council will appoint Secretary General who will set up a secretarial as an administrative center.

Article 6 states that the revenue emanating from granting license to cooperative health insurance companies as mentioned in Article 5 and 7 will meet the necessary expenditure of the Council.

Article 8 allows an employer to increase the benefits over the basic limit at an extra cost.

Article 9 allows the Ministry of Health to take necessary steps to prevent an epidemic being spread by organizing treatment such as vaccination and other medical tests.

Article 10 requires an employer to pay the cost of treatment on behalf of his employee. In some remote areas where there are no private hospitals, an employee can benefit from the government hospital services which will charge fee for their services. The cost will be determined in accordance with the scale of charges approved by Health Insurance Council.

Article 12 stipulates that treatment received by Non-Saudi residents and their families working with government institutions can utilize government hospital if they are still under the sponsorship of the government institutions. Their contract will include the right to this privilege.

Healthcare Providers must be qualified Saudi companies. If not qualified they must buy cover from Cooperative Health Insurance companies. Anyone who violates this legislation will be subject to penalty. The Health Insurance Council will fix the penalty and appeal will be granted within 60 days after the fine was ordered.

Private Healthcare Providers will be subject to penalty in the event of malpractice by professionals hired by them and under their sponsorship. As mentioned in Article 16, quality control team will carry out inspection from time.



In the event of a dispute between the cooperative insurance company and healthcare providers, the matter will be referred to an arbitration under the supervision of Health Insurance Council.

Article 18 stipulates that company eligible to practice health insurance ought to be registered as Cooperative Insurance company in accordance with the Royal Decree No. 5 dated 17.04.1405H.

Minister of Health will issue the legislation within a year and must be effective 90 days after it is endorsed by the cabinet.

## APPENDIX VIII

THE UNIVERSITY OF HULL, U.K.

DOCTORATE OF BUSINESS ADMINISTRATION

“QUESTIONNAIRE ABOUT THE IMPACT OF  
THE HEALTH INSURANCE  
ON THE QUALITY OF SERVICES  
IN RIYADH PRIVATE HOSPITALS”  
(JULY 2001)

NASSER ALI AL-JARALLAH, Bsc., MBA.



THE UNIVERSITY OF HULL, UK.  
DOCTORATE OF BUSINESS ADMINISTRATION

“QUESTIONNAIRE ABOUT THE IMPACT OF  
HEALTH INSURANCE ON THE QUALITY OF  
SERVICES IN RIYADH PRIVATE HOSPITALS”

Dear Doctor / Nurses / Para-Medical professionals,

As a part of my Doctoral studies in Business administration at the University of Hull, U.K., I am conducting this survey to learn more about the impact of the implementation of the health insurance on the quality of services of Riyadh Private Hospitals in K.S.A. I hope you will be able to help me in this study by completing the enclosed survey.

This survey should take about ten minutes to complete. After you have answered these questions please return the survey in the enclosed envelope. Should any clarification be needed, please call on my Mobile # 055268908 or on Tel. 4161702.

Thank you for your help,

**Nasser Ali Al-Jarallah, Bsc., MBA,**

Health Administration Lecturer,

College of health Sciences,

P.O. Box 55004, Riyadh 11534

Kingdom of Saudi Arabia.

**PART 1: (PERSONAL DATA)**

- 1.1 Sex :  Male  Female
- 1.2 Nationality:  Saudi  Non-Saudi
- 1.3 Educational Level:  
 High School or Less  College Graduate  
 Master Degree  Doctoral Degree or above
- 1.4 Specify the Specialist: .....
- 1.5 Occupation:  Private  Governments  
 Other (specify).....
- 1.6 Age Range:  20 – 35  36 – 50  > 50 years
- 1.7 Services Years:  < 5  6 – 10  11 – 15  > 15
- 1.8 Monthly Income:  < 5000 SR  5000 – 10000 SR  > 10000SR
- 1.9 Marital Status:  Married  Other
- 1.10 If married the number of the family members is;  
 2 – 5  6 – 10  < 10

**PART 2: (Previous/Present Insurance Coverage)**

- 2.1 What is the present type of your health care coverage?  
 Personal Account  Commercial Insurance  
 Cooperative Insurance  The Employer  
 Other (specify).....

If the present coverage is insurance or you have previous experience with insurance coverage, please specify the following:-

- 2.2 The Insurer Name .....
- 2.3 Coverage Class  VIP  A  B  C  D
- 2.4 Coverage Type  Single  Family
- 2.5 How much you pay for your coverage?  
 < 1000 SR  1001 – 2000 SR  
 2001 – 3000 SR  > 3000 SR
- 2.6 The coverage exclude: (You can select more than one, if applicable)  
 Out-patient Services  Major operations  
 Minor Operations  Psychiatry  
 Dental  Medical Prescriptions  
 Ophthalmology  
 Other (specify) .....



**2.7 The deductibles and collectibles of the coverage is:**

- Nil                     20 SR per visit                     20% of the Total  
 Other(specify).....

**2.8 Coverage Limitations:**

- SR 25,000                                     SR 25,001-50,000  
 SR 50,001-100,000                     > 100,000

**PART 3:**

<b>In my opinion the effects of Health Insurance on the following aspects will be:-</b>  (Please make circle for appropriate category)	--	Most Negative effect
	-	Negative effect
	0	No effect
	+	Positive effect
	++	Most Positive effect

**3. A. PATIENT-FOCUSED FUNCTIONS:**

Patients Rights	--	-	0	+	++
Organization Ethics	--	-	0	+	++
Initial Assessment	--	-	0	+	++
Pathology and Clinical Laboratory Services	--	-	0	+	++
Reassessment	--	-	0	+	++
Care Decisions	--	-	0	+	++
Structures Supporting the Assessment of patients	--	-	0	+	++
Additional Requirements For Specific Patient Populations	--	-	0	+	++
Planning And Providing Of Care	--	-	0	+	++
Anesthesia Care	--	-	0	+	++
Medication Use	--	-	0	+	++
Nutrition Care	--	-	0	+	++
Rehabilitation Care And Services	--	-	0	+	++
Special Treatment Procedures	--	-	0	+	++
Patient And Family Education And Responsibilities	--	-	0	+	++
Continuum Of Care	--	-	0	+	++
Appropriateness of Care	--	-	0	+	++
Availability of care	--	-	0	+	++
Timeliness of care	--	-	0	+	++
Effectiveness of care	--	-	0	+	++
Care Efficacy	--	-	0	+	++
Efficiency of care	--	-	0	+	++
Continuity of care	--	-	0	+	++
Care Safety	--	-	0	+	++
Patient Respect and Caring	--	-	0	+	++
Patient Length of Stay	--	-	0	+	++

<b>In my opinion the effects of Health Insurance on the following aspects will be:-</b>  <b>(Please make circle for appropriate category)</b>	--	<b>Most Negative effect</b>
	-	<b>Negative effect</b>
	0	<b>No effect</b>
	+	<b>Positive effect</b>
	++	<b>Most Positive effect</b>

### 3. B. ORGANIZATION FUNCTIONS:

<b>Organization Plans</b>	--	-	0	+	++
<b>Organization Design</b>	--	-	0	+	++
<b>Organizational Measures</b>	--	-	0	+	++
<b>Organizational Assess</b>	--	-	0	+	++
<b>Organizational Improvement</b>	--	-	0	+	++
<b>Leadership, Planning</b>	--	-	0	+	++
<b>Directing Departments</b>	--	-	0	+	++
<b>Integrating and Coordinating Services</b>	--	-	0	+	++
<b>Improving Performance</b>	--	-	0	+	++
<b>Physical and Environmental Design</b>	--	-	0	+	++
<b>Managing the Environment of care</b>	--	-	0	+	++
<b>Measuring Outcomes of the Implementation</b>	--	-	0	+	++
<b>Social Environment</b>	--	-	0	+	++
<b>Human Resources Planning</b>	--	-	0	+	++
<b>Orientating, training and Educating Staff</b>	--	-	0	+	++
<b>Assessing Competence</b>	--	-	0	+	++
<b>Managing Staff Requests</b>	--	-	0	+	++
<b>Information Management Planning</b>	--	-	0	+	++
<b>Patient-Specific Data and Information</b>	--	-	0	+	++
<b>Surveillance, Prevention, and Control Of Infection</b>	--	-	0	+	++

### 3. C. STRUCTURES WITH FUNCTIONS:

<b>Governance and Ownership</b>	--	-	0	+	++
<b>Management, in General</b>	--	-	0	+	++
<b>Medical Staff Credentialing</b>	--	-	0	+	++
<b>Nursing Services</b>	--	-	0	+	++



KINGDOM OF SAUDI ARABIA

المملكة العربية السعودية

“HEALTH INSURANCE AND  
QUALITY OF SERVICES  
IN SAUDI PRIVATE  
HOSPITALS.”

“التأمين الصحي  
و جودة الخدمات الخاصة  
في المستشفيات الخاصة  
السعودية”

RESEARCHER : NASSER ALI AL JARALLAH, BSc., MBA.,  
Health Administration Lecturer,  
College of Health Sciences,  
P. O. Box 55004, Riyadh 11534

الباحث : أ / ناصر بن علي الجارالله  
محاضر الإدارة الصحية  
كلية العلوم الصحية  
ص. ب ٥٥٠٠٤ الرياض ١١٥٣٤

2001, September

رجب - ١٤٢٢ هـ

Dear Participant,

As a part of my Doctoral Study in Business Administration at the University of Hull, UK, I am conducting this survey to learn more about the impact of the implementation of the Health Insurance on the Quality of services of Saudi Private Hospitals. I hope you will be able to help me in this study by completing the enclosed questionnaire.

The researcher hopes to remember that the previous model (Cash Model) has two parties, a physician who provides the service and a patient who pays directly. On the other hand, the new model (Insurance Model) has three parties, a physician, a patient who pays indirectly through the third party Health Insurance Agencies for specific and agreed coverage.

Could you please put under consideration the following points while answering the questionnaire. First, the duties of the third party (Insurance Agencies) are to make sure that the provided services are essential and included in the Insurance policy coverage, and paying the expenses according to a certain amount of money paid by patient in-advance. Second, the effect of entering the Health Insurance agencies in the treatment process in- comparison with the cash model.

The information obtained in this questionnaire is to be used for research purposes only and it is strictly confidential.

Finally, this questionnaire should take about ten minutes to complete. After you have answered these questions please return it in the enclosed envelope. Should any clarification be needed, please call me at 055268908 (Mobile) or 4161702 (Tel.) or 4471900 Ext. 1091(Tel) Thanking you for your help.

Best regards,

Nasser Ali Al-Jar Allah

عزيري المشارك... تحية طبية... كجزء من دراستي لنيل درجة الدكتوراه في إدارة الأعمال من جامعة " هال " البريطانية ، أقوم بعمل هذا البحث للتعرف عن كثر على أثر تطبيق التأمين الصحي على جودة الخدمات في المستشفيات الخاصة السعودية . وأمل منك عزيري مساعدي في هذا البحث بالإجابة على الاستبيان المرفق .

عزيري : أود أن أؤكد لك بأن النموذج السابق ( نموذج النقد ) يشترك فيه طرفان هما طبيب يقدم الخدمة ومريض يدفع نقداً مباشرة بينما النموذج الجديد ( نموذج التأمين ) يشترك فيه ثلاث أطراف هم الطبيب والمريض الذي يدفع في هذه الحالة بشكل غير مباشر عن طريق شركات التأمين الصحي ولخدماتٍ محددةٍ تم الإتفاق عليها مسبقاً مقابل مبلغ مقطوع يدفع عند بداية العقد ( القسط ) .

عزيري : وانت تجيب على أسئلة الإستبيان رجاءً ضع في إعتبارك بعض النقاط. النقطة الأولى هي أن مسؤوليات الطرف الثالث ( شركات التأمين ) تشمل التأكد من أن الخدمات المقدمة ضرورية وشمولة في وثيقة التأمين إلى جانب دفع التكاليف مقابل ذلك القسط المدفوع من المريض مسبقاً . والنقطة الثانية هي أثر دخول شركات التأمين في العملية العلاجية مقارنة بالنموذج النقدي .

وللعلم فإن المعلومات الواردة في هذا الإستبيان سوف تستخدم لغرض البحث العلمي فقط وستعامل بسرية تامة .

أخيراً ... هذا الإستبيان سيأخذ منك قرابة العشر دقائق لإجابته . بعد ذلك أعد الإستبيان للطرف المرفق . إذا احتجت لأي توضيحات برجاء الإتصال بي على الرقم ٠٥٥٢٦٨٩٠٨ ( جوال ) أو ٤٤٧١٩٠٠ تحويلة ١٠٩١ أو ٤١٦١٧٠٢ ( مباشر مساءً ) . . . شاكرًا لك سلفاً حسن تعاونك .

مع أطيب تحياتي... ”

ناصر بن علي الجار الله



## PART 1 :-

### Dear Participant,

Please read the guidelines in the previous page carefully, then put a circle around suitable answer for each dimension or leave it free if you do not know, and give your opinion about the effect of Health Insurance on the following dimensions of the quality of services in Riyadh Private Hospitals.

الجزء الأول :-  
عزيزي المشارك ...

أرجو قراءة التعليمات في الصفحة السابقة ثم ضع دائرة حول الإجابة المثلى لكل بُعد على حده ، أو اترك ذلك البعد ان لم تكن تعرف الإجابة. والمطلوب هو رأيك في أثر التأمين الصحي على الأبعاد التالية لجودة الخدمات في المستشفيات الخاصة بمدينة الرياض .

QUALITY DIMENSIONS	INSURANCE EFFECT					أثر التأمين		
	سليبي للغاية Extremely Negative	سليبي جداً More Negative	سليبي Negative	لن يؤثر No Effect	إيجابي Positive	إيجابي جداً More Positive	إيجابي للغاية Extremely Positive	أبعاد الجودة
1.1. Dimensions of performance :-								1. أبعاد أداء الخدمات :-
Accessing appropriate level of patient care	- - -	- -	-	○	+	++	+++	الحصول على مستوى الرعاية المناسب لحاجة المرضى
Providing care on time	- - -	- -	-	○	+	++	+++	تقديم الخدمة في الوقت المناسب
The availability of services, if needed	- - -	- -	-	○	+	++	+++	توفر الخدمات عند الحاجة لها
Patients respect and caring	- - -	- -	-	○	+	++	+++	احترام المرضى ورعايتهم
Inpatient Length of Stay	- - -	- -	-	○	+	++	+++	مدة الإقامة والتنويم للمرضى
Quality of Hospital Services, in general	- - -	- -	-	○	+	++	+++	الجودة في المستشفيات ، بشكل عام
Medical Technology	- - -	- -	-	○	+	++	+++	التقنية والتجهيزات الطبية
Medical Staff behavior in providing services	- - -	- -	-	○	+	++	+++	سلوك الأطباء في تقديم الخدمة
Matching patient needs over an extended time	- - -	- -	-	○	+	++	+++	استمرارية الرعاية بما يلبي حاجات المريض
Care safety	- - -	- -	-	○	+	++	+++	الحرص على السلامة في تقديم الخدمة
Providing care effectively with respective cost	- - -	- -	-	○	+	++	+++	تقديم الخدمات بكفاءة وبتكلفة جذابة للمرضى

QUALITY DIMENSIONS	INSURANCE EFFECT					أثر التأمين			أبعاد الجودة
	سلبى للغاية Extremely Negative	سلبى جدا More Negative	سلبى Negative	لن يؤثر No Effect	إيجابى Positive	إيجابى جدا More Positive	إيجابى للغاية Extremely Positive		
<b>1.2. CARE DIMENSIONS :-</b>									١. ٢. أبعاد الرعاية :-
Patient Rights, in general	---	--	-	○	+	++	+++		حقوق المرضى ، بشكل عام
Hospital Ethics	---	--	-	○	+	++	+++		أخلاقيات العمل بالمستشفيات
Patients Assessment	---	--	-	○	+	++	+++		تقييم الحالة المرضية
Clinical Investigations	---	--	-	○	+	++	+++		الفحوصات الطبية
Treatment decisions and plans	---	--	-	○	+	++	+++		قرارات وخطط العلاج
Intensive and Anesthesia Care	---	--	-	○	+	++	+++		العناية المركزة والتخدير
Medication Use	---	--	-	○	+	++	+++		استخدام الأدوية
Medical Materials Use	---	--	-	○	+	++	+++		استخدام المواد والأدوات الطبية
Nutrition Care	---	--	-	○	+	++	+++		خدمات التغذية
Operations and related procedures	---	--	-	○	+	++	+++		العمليات والإجراءات المتعلقة بها
Physiotherapy and Rehabilitation Care	---	--	-	○	+	++	+++		العلاج الطبي والتأهيل
Nursing Services	---	--	-	○	+	++	+++		خدمات التمريض
Patient, Family Education and Responsibility	---	--	-	○	+	++	+++		توعية ومسئوليات المرضى وعوائلهم
<b>1.3. ORGANIZATIONAL DIMENSIONS :-</b>									١. ٣. الأبعاد التنظيمية :-
Hospital Planning and Organizational Design	---	--	-	○	+	++	+++		تخطيط المستشفيات والتصميم التنظيمي لها
Social Environment of care	---	--	-	○	+	++	+++		البيئة الاجتماعية للرعاية
Managing Patient-specific Data and Information	---	--	-	○	+	++	+++		إدارة المعلومات والبيانات الخاصة بالمرضى



QUALITY DIMENSIONS	INSURANCE EFFECT					أثر التأمين	أبعاد الجودة
	سلبى للغاية Extremely Negative	سلبى جدا More Negative	سلبى Negative	لن يؤثر No Effect	إيجابى Positive		
Infection surveillance, prevention and control	- - -	- -	-	0	+	+++	الاصابة بالعدوى والوقاية منها ومكافحتها
Integration and coordination of hospital services	- - -	- -	-	0	+	+++	تكامل وتنسيق خدمات المستشفى
Hospital Environment management and design	- - -	- -	-	0	+	+++	ادارة وتصميم بيئة ومرافق المستشفيات
Hospital staff management and planning	- - -	- -	-	0	+	+++	ادارة وتخطيط الموارد البشرية للمستشفيات
Hospital Information systems	- - -	- -	-	0	+	+++	نظم المعلومات بالمستشفيات
Hospital board activities and ownership style	- - -	- -	-	0	+	+++	اعمال مجلس الادارة وملكية المستشفيات
Medical staff management and organization	- - -	- -	-	0	+	+++	ادارة وتنظيم الكادر الطبي

## PART 2 :- ( PERSONAL DATA )

Please mark the proper category ;

- 2.1. Sex :     Male     Female
- 2.2. Nationality :     Saudi     Arab     Non-Arab
- 2.3. Work Experiences : ..... Years
- 2.4. Specify the Speciality: .....
- 2.5. Educational Level :     Doctorate     Master     Bachelor     Less
- 2.6. Can you participate in a group discussion about the topic?     Yes     No
- 2.7. If yes, please write your Name & Tel. No. ....
- 2.8. I would be grateful, if you could write further suggestions about the topic ;

Thanks & Best regards, Nasser

لك خالص التحية والتقدير - ناصر

## المملكة العربية السعودية

# " التأمين الصحي وجودة الخدمات في المستشفيات الخاصة بالرياض "

عزيزي المشارك... تحية طيبة...  
كجزء من دراستي لنيل درجة الدكتوراه في إدارة الأعمال من جامعة " هال " البريطانية، أقوم بعمل هذا البحث للتعرف عن كثب على أثر تطبيق التأمين الصحي على جودة الخدمات في المستشفيات الخاصة السعودية. وأمل منك عزيزي مساعدتي في هذا البحث بالإجابة على الاستبيان المرفق .

عزيزي : أود أن أؤكد لك بأن النموذج السابق ( نموذج النقد ) يشترك فيه طرفان هما طبيب يقدم الخدمة ومريض يدفع نقداً مباشرةً بينما النموذج الجديد ( نموذج التأمين ) يشترك فيه ثلاث أطراف هم الطبيب والمريض الذي يدفع في هذه الحالة بشكل غير مباشر عن طريق شركات التأمين الصحي والخدمات محددة تم الاتفاق عليها مسبقاً مقابل مبلغ مقطوع يدفع عند بداية العقد (القسط) .

عزيزي: وأنت تجيب على أسئلة الاستبيان رجاءً ضع في اعتبارك بعض النقاط. النقطة الأولى هي أن مسؤوليات الطرف الثالث ( شركات التأمين ) تشمل التأكد من أن الخدمات المقدمة ضرورية ومشمولة في وثيقة التأمين إلى جانب دفع التكاليف مقابل ذلك القسط المدفوع من المريض مسبقاً. والنقطة الثانية هي أثر دخول شركات التأمين في العملية العلاجية مقارنة بالنموذج النقدي .

وللعلم فإن المعلومات الواردة في هذا الاستبيان سوف تستخدم لغرض البحث العلمي فقط وستعامل بسرية تامة.

أخيراً ... هذا الاستبيان سيأخذ منك قرابة العشر دقائق لإجابته . بعد ذلك أعد الاستبيان للطرف المرفق . إذا احتجت لأي توضيحات برجاء الاتصال بي على الرقم ٠٥٥٢٦٨٩٠٨ ( جوال ) أو ٤٤٧١٩٠٠ تحويلة ١٠٩١ أو ٤١٦١٧٠٢ ( مباشر مساء ) ... شاكراً لك سلفاً حسن تعاونك .

مع أطيب تحياتي ،،،

الباحث : أ / ناصر بن علي الجارالله  
محاضر الإدارة الصحية  
كلية العلوم الصحية  
ص.ب ٥٥٠٠٤ الرياض ١١٥٣٤

رجب - ١٤٢٢ هـ



الجزء الأول :- عزيزي المشارك ...أرجو قراءة التعليمات في الصفحة السابقة ثم ضع دائرة حول الأجابة المثلى لكل بُعدٍ على حده ، أو اترك ذلك البعد ان لم تكن تعرف الاجابة. والمطلوب هو رأيك في أثر التأمين الصحي على الأبعاد التالية لجودة الخدمات في المستشفيات الخاصة بمدينة الرياض .

سيكون أثر التأمين على هذا البعد				أبعاد الجودة		
سلبى للغاية	سلبى جداً	سلبى	لن يؤثر إيجابى	إيجابى جداً	إيجابى للغاية	
---	--	-	○	+	++	١.١. أبعاد أداء الخدمات :-
---	--	-	○	+	++	الحصول على مستوى الرعاية المناسب لحاجة المرضى
---	--	-	○	+	++	تقديم الخدمة في الوقت المناسب
---	--	-	○	+	++	توفر الخدمات عند الحاجة لها
---	--	-	○	+	++	احترام المرضى ورعايتهم
---	--	-	○	+	++	مدة الإقامة والتنويم للمرضى
---	--	-	○	+	++	الجودة في المستشفيات ، بشكل عام
---	--	-	○	+	++	التقنية والتجهيزات الطبية
---	--	-	○	+	++	سلوك الأطباء في تقديم الخدمة
---	--	-	○	+	++	استمرارية الرعاية بما يلبي حاجات المريض
---	--	-	○	+	++	الحرص على السلامة في تقديم الخدمة
---	--	-	○	+	++	تقديم الخدمات بكفاءة وبتكلفة جذابة للمرضى
---	--	-	○	+	++	١.٢. أبعاد الرعاية :-
---	--	-	○	+	++	حقوق المرضى ، بشكل عام
---	--	-	○	+	++	أخلاقيات العمل بالمستشفيات
---	--	-	○	+	++	تقييم الحالة المرضية
---	--	-	○	+	++	الفحوصات الطبية
---	--	-	○	+	++	قرارات وخطط العلاج
---	--	-	○	+	++	العناية المركزة والتخدير
---	--	-	○	+	++	استخدام الأدوية
---	--	-	○	+	++	استخدام المواد والأدوات الطبية
---	--	-	○	+	++	خدمات التغذية
---	--	-	○	+	++	العمليات والإجراءات المتعلقة بها
---	--	-	○	+	++	العلاج الطبيعي والتأهيل
---	--	-	○	+	++	خدمات التمريض
---	--	-	○	+	++	توعية ومسئوليات المرضى وعوائلهم

## الجزء الثاني :- ( المعلومات الشخصية )

رجاءً علم على الفقرة المناسبة :

٢-١ . الجنس :  ذكر  أنثى

٢-٢ . الجنسية :  سعودي  عربي  غير عربي

٢-٣ . سنوات الخبرة : ..... ( سنة - سنوات )

٢-٤ . حدد التخصص : .....

٢-٥ . مستوى التعليم :  دكتوراه  ماجستير  بكالوريوس  أقل من ذلك

٢-٦ . هل تستطيع أن تشارك في حلقة نقاش عن موضوع البحث ؟  نعم  لا

٢-٧ . إذا كنت تستطيع برجااء كتابة اسمك ورقم تليفونك .

٢-٨ . لك مني عظيم الشكر والإمتنان إن كتبت اقتراحاتك أو مرئياتك عن موضوع البحث .

## **KINGDOM OF SAUDI ARABIA**

### **“ HEALTH INSURANCE AND QUALITY OF SERVICES IN SAUDI PRIVATE HOSPITALS .”**

**Dear Participant,**

As a part of my Doctoral Studies in Business Administration at the University of Hull, UK, I am conducting this survey to learn more about the impact of the implementation of the Health Insurance on the Quality of services of Saudi Private Hospitals. I hope you will be able to help me in this study by completing the enclosed survey.

The researcher hopes to remember that the previous model (Cash Model) has two parties, a physician who provides the service and a patient who pays directly. On the other hand, the new model (Insurance Model) has three parties, a physician, a patient who pays indirectly through the third party Health Insurance Agencies for specific and agreed coverage.

Could you please put under consideration the following points while answering the survey questions. First, the duties of the third party (Insurance Agencies) are to make sure that the provided services are essential and included in the Insurance policy coverage, and paying the expenses according to a certain amount of money paid by patient in-advance. Second, the effect of entering the Health Insurance agencies in the treatment process in- comparison with the cash model.

Please, let your answer reflects your opinion about such effect on al Private Hospitals, as a whole, not in a certain hospital.

The information obtained in this questionnaire is to be used for research purposes only and it is strictly confidential.

Finally, this questionnaire should take about ten minutes to complete. After you have answered these questions please return the survey in the enclosed envelope. Should any clarification be needed, please call me at 055268908 (Mobile) or 4161702 (Tel.). Thanking you for your help.

**Best regards,**

**RESEARCHER:** NASSER ALI AL-JARALLAH, Bsc, MBA,  
Health Administration Lecturer,  
College of Health Sciences  
P.O. Box. 55004, Riyadh 11534

**2001, August**



## PART 1 :- Dear Participant,

Please read the guidelines in the previous page carefully, then put a circle around suitable answer for each dimension or leave it free if you do not know, and give your opinion about the effect of Health Insurance on the following dimensions of the quality of services in Riyadh Private Hospitals.

QUALITY DIMENSIONS	INSURANCE EFFECT								
	Extremely Negative	More Negative	Negative	No Effect	Positive	More Positive	Extremely Positive		
<b>1.1. Dimensions of performance :-</b>									
Accessing appropriate level of patient care	---	--	-	0	+	++	+++		
Providing care on time	---	--	-	0	+	++	+++		
The availability of services, if needed	---	--	-	0	+	++	+++		
Patients respect and caring	---	--	-	0	+	++	+++		
Inpatient Length of Stay	---	--	-	0	+	++	+++		
Quality of Hospital Services, in general	---	--	-	0	+	++	+++		
Medical Technology	---	--	-	0	+	++	+++		
Medical Staff behavior in providing services	---	--	-	0	+	++	+++		
Matching patient needs over an extended time	---	--	-	0	+	++	+++		
Care safety	---	--	-	0	+	++	+++		
Providing care effectively with respective cost	---	--	-	0	+	++	+++		
<b>1.2. CARE DIMENSIONS :-</b>	---	--	-	0	+	++	+++		
Patient Rights, in general	---	--	-	0	+	++	+++		
Hospital Ethics	---	--	-	0	+	++	+++		
Patients Assessment	---	--	-	0	+	++	+++		
Clinical Investigations	---	--	-	0	+	++	+++		
Treatment decisions and plans	---	--	-	0	+	++	+++		
Intensive and Anesthesia Care	---	--	-	0	+	++	+++		
Medication Use	---	--	-	0	+	++	+++		
Medical Materials Use	---	--	-	0	+	++	+++		
Nutrition Care	---	--	-	0	+	++	+++		
Operations and related procedures	---	--	-	0	+	++	+++		
Physiotherapy and Rehabilitation Care	---	--	-	0	+	++	+++		
Nursing Services	---	--	-	0	+	++	+++		
Patient, Family Education and Responsibility	---	--	-	0	+	++	+++		

## PART 2 :- ( PERSONAL DATA )

Please mark the proper category ;

2.1. Sex :  Male  Female

2.2. Nationality :  Saudi  Arab  Non-Arab

2.3. Work Experiences : ..... Years

2.4. Specify the Specialty: .....

2.5. Educational Level :  Doctorate  Master  Bachelor  Less

2.6. Can you participate in a group discussion about the topic?  Yes  No

2.7. If yes, please write your Name & Tel. No. ....

2.8. I would be grateful, if you could write further suggestions about the topic ;

Thanks & Best regards, Nasser

# APPENDIX IX

## DATA ANALYSIS RESULTS



**Chi-SQUARE ANALYSIS OF PERFORMANCE  
DIMENSIONS BY SEX**

<b>PERFORMANCE DIMENSIONS</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Chi-Square</b>	<b>D.F.</b>	<b>Asymp. Sig.</b>
Accessing appropriate level of patients care	228	41	269	2.721	4	.606
Providing care on time	233	41	274	5.202	4	.267
The availability of services, if needed	231	39	270	1.315	4	.859
Patients respect and caring	233	40	273	4.871	4	.301
Inpatient length of stay	229	39	268	7.379	4	.117
Quality of Hospital Services in general	234	39	273	1.238	4	.872
Medical Technology	231	38	269	3.241	3	.356
Medical Staff behavior in providing services	229	40	269	4.730	4	.316
Matching patients needs over an extended time	229	40	269	4.143	4	.387
Care safety	230	40	270	6.914	3	.075
Providing care effectively with respective cost	232	39	271	3.788	4	.435

**Chi-SQUARE ANALYSIS OF CARE DIMENSIONS BY  
SAMPLE GROUPS.**

<b>CARE DIMENSIONS</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Chi-Square</b>	<b>D.F.</b>	<b>Asymp. Sig.</b>
<b>Patient Rights, in general</b>	228	40	268	7.140	4	.129
<b>Hospital Ethics</b>	231	41	272	3.239	4	.519
<b>Patients Assessment</b>	227	36	263	3.649	4	.456
<b>Clinical investigations</b>	233	37	270	2.326	4	.676
<b>Treatment decisions and plans</b>	228	39	267	1.914	4	.752
<b>Intensive and Anesthesia care</b>	216	38	254	8.062	4	.089
<b>Medication Use</b>	230	37	267	1.523	4	.823
<b>Medical Materials Use</b>	226	37	263	.660	4	.956
<b>Nutrition Care</b>	218	39	257	8.941	4	.063
<b>Operations and related procedures</b>	217	35	252	3.482	4	.481
<b>Physiotherapy and Rehabilitation care</b>	206	36	242	2.499	4	.645
<b>Nursing Services</b>	222	40	262	.687	4	.953
<b>Patients Family Education and their Responsibility</b>	220	36	256	2.426	4	.658



**Chi-SQUARE ANALYSIS OF PERFORMANCE DIMENSIONS BY NATIONALITY**

<b>PERFORMANCE DIMENSIONS</b>	<b>Saudi</b>	<b>Arabs Other</b>	<b>Non-Arab</b>	<b>Total</b>	<b>Chi-Square</b>	<b>D.F.</b>	<b>Asymp. Sig.</b>
<b>Accessing appropriate level of patients care</b>	99	117	51	267	13.322	8	.101
<b>Providing care on time</b>	101	117	54	272	13.808	8	.087
<b>The availability of services, if needed</b>	101	116	50	267	13.995	8	.082
<b>Patients respect and caring</b>	102	115	53	270	21.452	8	.006
<b>Inpatient length of stay</b>	98	116	51	265	17.376	8	.026
<b>Quality of Hospital Services in general</b>	100	117	53	270	11.019	8	.201
<b>Medical Technology</b>	101	113	52	266	7.373	6	.288
<b>Medical Staff behavior in providing services</b>	101	113	52	266	19.219	8	.014
<b>Matching patients needs over an extended time</b>	100	115	51	266	9.694	8	.287
<b>Care safety</b>	102	115	51	268	6.051	6	.418
<b>Providing care effectively with respective cost</b>	101	115	52	268	4.186	8	.840

## Chi-SQUARE ANALYSIS OF CARE DIMENSIONS BY NATIONALITY

<b>CARE DIMENSIONS</b>	<b>Saudi</b>	<b>Arabs Other</b>	<b>Non Arab</b>	<b>Total</b>	<b>Chi-Square</b>	<b>D.F.</b>	<b>Asymp. Sig.</b>
<b>Patient Rights, in general</b>	100	114	51	265	12.516	8	.130
<b>Hospital Ethics</b>	102	115	52	269	12.238	8	.141
<b>Patients Assessment</b>	98	111	51	260	8.470	8	.389
<b>Clinical investigations</b>	99	114	54	267	13.434	8	.098
<b>Treatment decisions and plans</b>	100	112	52	264	13.686	8	.090
<b>Intensive and Anesthesia care</b>	90	111	51	252	8.670	8	.371
<b>Medication Use</b>	99	114	52	265	20.471	8	.009
<b>Medical Materials Use</b>	99	112	50	261	21.271	8	.006
<b>Nutrition Care</b>	97	109	49	255	17.718	8	.023
<b>Operations and related procedures</b>	97	105	49	251	7.763	8	.457
<b>Physiotherapy and Rehabilitation care</b>	91	100	50	241	5.396	8	.715
<b>Nursing Services</b>	99	110	52	261	6.469	8	.595
<b>Patients Family Education and their Responsibility</b>	100	107	48	255	8.255	8	.409



**ONEWAY ANALYSES (ANOVA) OF VARIANCE FOR QUALITY DIMENSIONS**

DIMENSIONS		SUM OF SQUARES	DF	MEAN SQUARE	F	SIG
PERFORMANCE DIMENSIONS	Between Groups	176.594	2	88.297	1.335	.265
	Within Groups	15147.820	229	66.148		
CARE DIMENSIONS	Between Groups	58.156	2	29.078	.267	.766
	Within Groups	21135.875	194	108.948		

**T-TEST FOR EQUALITY OF MEANS OF QUALITY DIMENSIONS**

DIMENSIONS		T	DF	SIG.(2-TAILED)	MEAN DIFFERENCE
PERFORMANCE DIMENSIONS	Equal Variance Assumed	-1.238	231	.217	-1.9416
	Equal Variance not Assumed	-1.530	48.214	.133	-1.9416
CARE DIMENSIONS	Equal Variance Assumed	-1.762	196	.080	-3.8278
	Equal Variance Not Assumed	-2.593	51.067	.012	-3.8278

**ONEWAY ANALYSIS OF VARIANCE OF SEX FOR QUALITY DIMESIONS**

<b>PERFORMANCE DIMENSIONS</b>		<b>Sum of Squares</b>	<b>D.F.</b>	<b>Mean Square</b>	<b>F</b>	<b>SIG</b>
<b>Medical Technology</b>	BETWEEN GROUPS	.146	1	.146	.102	.75
	WITHIN GROUPS	380.731	266	1.431		
<b>Medical Staff behavior in providing services</b>	BETWEEN GROUPS	2.904	1	2.904	2.822	.094
	WITHIN GROUPS	274.799	267	1.045		
<b>Nutrition Care</b>	BETWEEN GROUPS	4.689	1	4.689	5.019	.026
	WITHIN GROUPS	238.276	255	.934		
<b>Operations and related procedure</b>	BETWEEN GROUPS	3.581	1	3.581	3.420	.066
	WITHIN GROUPS	261.736	250	1.047		



**Chi-SQUARE ANALYSIS OF PERFORMANCE DIMENSIONS BY  
WORK EXPERIENCE.**

<b>PERFORMANCE DIMENSIONS</b>	<b>&lt;=10YEARS</b>	<b>&gt;10 YEARS</b>	<b>Total</b>	<b>Chi-Square</b>	<b>D.F.</b>	<b>Asymp. Sig.</b>
Accessing appropriate level of patients care	77	127	204	7.847	4	.097
Providing care on time	77	131	208	2.173	4	.704
The availability of services, if needed	76	128	204	6.050	4	.195
Patients respect and caring	76	130	206	2.205	4	.698
Inpatient length of stay	75	128	203	.684	4	.953
Quality of Hospital Services in general	77	131	208	3.616	4	.461
Medical Technology	76	127	203	1.148	3	.766
Medical Staff behavior in providing services	75	128	203	2.071	4	.723
Matching patients needs over an extended time	76	127	203	4.112	4	.391
Care safety	77	127	204	4.556	3	.207
Providing care effectively with respective cost	76	129	205	4.832	4	.305

**Chi-SQUARE ANALYSIS OF CARE DIMENSIONS BY  
WORK EXPERIENCE.**

<b>CARE DIMENSIONS</b>	<b>&lt;=10 YEARS</b>	<b>&gt;10 YEARS</b>	<b>Total</b>	<b>Chi-Square</b>	<b>D.F.</b>	<b>Asymp. Sig.</b>
<b>Patient Rights, in general</b>	74	129	203	5.169	4	.270
<b>Hospital Ethics</b>	77	129	206	8.941	4	.063
<b>Patients Assessment</b>	73	127	200	6.135	4	.189
<b>Clinical investigations</b>	74	130	204	7.900	4	.095
<b>Treatment decisions and plans</b>	74	129	203	6.379	4	.173
<b>Intensive and Anesthesia care</b>	70	123	193	4.075	4	.396
<b>Medication Use</b>	76	127	203	9.250	4	.055
<b>Medical Materials Use</b>	76	124	200	3.969	4	.410
<b>Nutrition Care</b>	73	121	194	3.791	4	.435
<b>Operations and related procedures</b>	72	122	194	4.825	4	.306
<b>Physiotherapy and Rehabilitation care</b>	66	118	184	8.942	4	.063
<b>Nursing Services</b>	74	125	199	6.557	4	.161
<b>Patients Family Education and their Responsibility</b>	73	118	191	3.233	4	.520