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Patients' perceptions of hospital care and quality policy development for health care in developing countries: A case study from Yemen

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By

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DEDICATION

To

MY PARENTS,

For their prayers to Allah for me, and for their forbearance while I am away from them during the course of the study. May Allah bless them all.

MY BELOVED FAMILY,

My wife, Gamilah Taher, for her sincere support and taking the responsibility to look after our beloved children, Osama, Anas and Sumaia for their unfailing love, support and prayers to me throughout the course of this study.

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The health policy makers and care providers who are looking for evidence base for developing quality policy and strategy to improve quality of health care services in Yemen.

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List of Abbreviations

ACHCS	Australian Council On Health Care Standards
CSO	Central Statistic Organisation
EFARP	Economic Financial Administrative Reform Programme
EMRO	Eastern Mediterranean Regional Office
EU	European Union
GDP	Gross Domestic Product
GTZ	Germany Technical Advisory Programme
HPI	Human Poverty Index
HRD	Human resource development
HSR	Health Sector Reform
IMF	International Monetary Fund
LDC	Less Developed Country
MCH	Maternal Child Health
ME	Middle East
MENA	Middle East And North Africa
MoF	Ministry Of Finance
MoPHP	Ministry Of Public Health And Population
MOPIC	Ministry Of Planning And International Cooperation
NHQP	National Health Quality Plan
PCA	Principal Component Analysis
PHC	Primary Health Care
QA	Quality Assurance
QMS	Quality Management System
ROY	Republic Of Yemen
SFYP	Second-Five Year Plan
SIP	Service Improvement Programme
STDs	Sexually Transmitted Diseases
TFYP	Third –Five Year Plan
UNDP	United Nation Development Programme
USAID	United States Agency International Development
WHO	World Health Organisation

Abstract

Patients' perceptions of hospital care and quality policy development for health care in developing countries: a case study from Yemen

Khaled M. Al-Surimi

Background

In this thesis the process of improving health care quality in Yemen is addressed at three levels; the first is the policy making level, the second is the implementation level where the strategy and the quality management components for bringing about quality improvements are developed, and the third is the level of monitoring quality in health services. The first level was studied by reviewing relevant policy documents and conducting interviews with senior policy makers about quality of health care. The second level was studied by a questionnaire survey for managers and health professionals in hospitals. The third level was tackled through patient surveys at out-patient and in-patient settings in four hospitals in Sana'a, the capital city of Yemen. Often, there is a wide gap between the quality policy development level and the implementation at facility level. This thesis, therefore, considered a framework on how these two levels can be studied to move from policy development to real quality improvements that are observable at the health facility level. This study looked at the whole process in Yemen as a case study, with the hope that a similar approach could be adopted in studying the process in other Middle Eastern countries that now see quality of care as an important issue in their health sector reform process.

Aim and objectives

The overall aim of this study was to provide a framework and evidence base to inform policy makers and health providers in Yemen to develop a quality policy and strategy for introducing quality improvement initiatives in a health care facility, more specifically, the study had the following primary specific objectives:

1. To explore the extent of quality policy development at national health policy level,
2. To assess the existence of the quality management system components to implement any quality policy at hospital level, and
3. To identify the patients' perspective on quality of hospital care in Yemen

Methods

The study used both quantitative and qualitative methods; quantitative methods to identity patients' perspective on quality of hospital care, and to assess the existence of quality management system from the health care managers and professionals' point of view, and the qualitative method for exploring the situation of quality policy development at national level, i.e. Ministry of Health. Data were collected by four instruments: two structured interview questionnaires for identifying patients'

perception of quality of hospital care, including both out-patient and in-patient settings, one self-administered questionnaire for assessing the existence of developing a quality management system in the hospital from the professionals' point of view, and a semi-structured interview guide for conducting in-depth interviews with key informants on quality policy development at the Ministry of Health. SPSS for Windows Version 12 was used for both entering and analysing the quantitative data. Descriptive statistics were produced; factor analysis using principal component analysis (PCA) was used to identify the quality component dimensions of patient quality perception of hospital care, and multivariate analysis (regression) were used also to identify the probable determinants of the overall quality rating of hospital care. The transcripts of the qualitative data were analysed using the framework approach and principle of grounded theory.

Results

The study findings revealed that patients were dissatisfied with many aspects of care provision in Yemen hospitals. The overall quality rating scores of hospital care, including both out-patient and in-patient settings, were 54 and 64 respectively. The availability of drugs and continuity for care at out-patients, and quality emergency services and food services for in-patients were amongst the main patient quality concerns. Overall, patients were more dissatisfied with the quality of technical aspects of hospital care than with interpersonal aspects at both settings. The patient perception of quality of hospital care were found to be multi-dimensional; four quality component dimensions for out-patients, namely, 'technical care quality, 'availability of services', 'continuity of care', 'doctor's behaviour', and nine quality component dimensions for in-patient care classified under two main group clinical aspects (five quality components) and non-clinical aspects (four quality components). At policy level, the development of quality policy at national level was questionable and no quality policy has yet been put into practice. Likewise, the indicators of existing quality assurance system components at hospital level were missing and no quality assurance system has been introduced into Yemen hospitals.

Conclusion

Ensuring the provision of good quality health care at facility level requires much more than quality policy development. The managers and health professionals who are charged with the responsibility for quality need to know and understand what the policy is and there needs to be an effective quality improvement strategy at facility level that is reflected in a quality management structure. Monitoring of quality at health facilities is required for demonstrating that quality improvements have been achieved and using a patient's perspective on quality of the health services is a useful means for doing this.

This study suggests a framework for policy makers and health providers on how to fill the gaps between developing a quality policy at national level, developing quality assurance system at facility level, and the use of patient perceptions and satisfaction tools for monitoring and assessing health care quality performance.

Chapter One: Introduction

1. Overview

This chapter introduces the thesis study through three sections; Section 1.1 describes the study background and justification, Section 1.2 presents the overall aim of the study and specific objectives and the research questions, and Section 1.3 gives an outline of the thesis structure.

1.1 Background

The quality in health care is increasingly becoming a central health policy issue in both developed and developing countries health care systems (Shaw and Kalo, 2002, Ovretveit, 2004). In Middle East (ME) countries quality of health care has received an upsurge of interest in the past decade. To some extent this is due to the vast global increase in attention given to quality, which has built on the work of Donabedian, Ovretveit and many others, coupled with the development of national and international organisations dedicated to improving health service quality.

In developing countries the influence of donor funding has also concentrated attention on the quality of the health services that governments provide, especially when compared with the private sectors in many developing countries. This increased attention has been taken up in the Yemen and this thesis is one of the first attempts at studying how far and how well this attention to quality of health care has been taken in Yemen.

Interest in quality of health care has been driven by political and financial imperatives, including resource limitations, rising medical costs and increasing consumer expectations. Health reforms in many countries have also contributed to

more attention being given to quality and efficiency of health service policy in both developed and developing countries, and recognition of existence of quality problems in health care delivery systems and the realisation of the need for a systematic approach for analysis and improvement of the quality problems (Bassett et al., 1997a, Reerink and Sauerborn, 1996, Shaw, 1993, Satia and Dohlie, 1999).

Increased concern for health care quality is reflected at two levels; one is the policy making level where this increased attention is reflected in policy documents that are dedicated to the vision and strategy for improving quality, and the second level is the implementation level where the practicalities of how to bring about quality improvements are dealt with. Often, there is a wide gap between the policy development level and the strategic implementation at facility levels.

This thesis therefore has considered a framework for how these two levels can be studied by identifying the various steps through which a country must go to move from policy to real quality improvements that are observable at the health facility level. This study looks at the whole process in Yemen as a case study, with the hope that a similar approach can be adopted in studying the process in other ME countries now taking quality of care as an important issue.

In Yemen, quality of health care has been a central issue in statements of many policy documents and a key objective of the health sector reform policy (GoY, 2003, MoPHP, 1998, WorldBank, 2006a). However, the quality assurance of health care is still in its infancy in all levels of health system, although it has been reported that quality of health care provided is poor (Attal, 2003b, Al-Serouri, 2004).

To date no studies have been done on quality policy development at national level and quality management at facility level; and no research has been done to assess patient perception of quality of hospital care.

The study starts with a consideration of the quality of care policy in Yemen, looking at both documentation and views of the senior policy makers and health service decision makers. At policy level, whilst quality has been a key issue in the health sector reform policy for country health care systems (Hermida, 1999a, Ross et al., 2000, MoPHP, 1998, Haran, 1998), experience has shown a great deal of disconnection between developing quality policy, making quality improvement strategy, quality organization and the quality assurance methods used (Whittaker et al., 1998, Zanten, 1996).

The study then looks at the extent to which such policy on health care quality, as can be identified, has been developed into strategic plans for implementation. Then the views of health care managers and professionals are looked for whether they are aware of and have been involved with the implementation of strategic plans for quality improvement in their own facilities. Finally, the patient views on the quality in hospitals in Sana'a were assessed as a means of measuring the success of the implementation of policy and strategic plans for quality improvements.

In summary, this study attempts to provide a framework and evidence base to inform policy makers and health providers to devise quality policy and strategy for introducing quality improvement initiatives in health care. The study tried to bring together the situation of quality policy development at national level and quality management at facility level in addition to assessing the patients' quality perception of hospital care.

1.2 Study overall aim and objectives

1.2.1 Overall aim

The overall aim of this study was to provide a framework and evidence base to inform policy makers and health providers in Yemen to develop quality policy and strategy for introducing quality improvement initiatives in a health care facility.

1.2.2 Research hypothesis

The overall aim can be expressed in a research hypothesis as "The policy and management of quality in health care in Yemen could be improved by systematic response to patients' view, using a patient perception survey as a practical tool for monitoring quality performance and in identifying quality improvement opportunities, and link the quality policy development at national level with quality management system at facility level". This hypothesis is predicted on the following two propositions:

1. "There is a gap between quality policy development level and quality management level which needs to be filled by linking quality improvement policy with quality management system at the facility level".
2. "Assessing quality patient perception is a practical means for monitoring quality performance to identify quality improvement opportunities".

1.2.3 Statement of objectives

The following objectives were developed to address the above overall aim:

Primary objectives:

1. To explore the extent of quality policy development at national health policy level,
2. To assess the existence of the quality management system components to implement any quality policy at hospital level, and
3. To identify the patient perspective on quality of hospital care in Yemen.

Secondary objectives:

1. To describe the quality policy development at national health policy and hospital level,
2. To identify the quality dimensions of hospital care from the patient's perspective,
3. To assess the relationship of individual quality dimensions to the overall patients' quality rating of hospital care, and
4. To assess the association between respondents' characteristics and services features and the overall quality rating of hospital care.

1.2.4 Research questions:

1. What is the situation of quality policy development at national level?
2. Are there any indications of developing a quality management system at hospital level?
3. How do patients perceive quality of hospital care?
4. What are the quality issues of hospital care from the patient's perspective?
5. What are the quality dimensions affecting patients rating of the overall quality of hospital care?

1.3 Thesis structure

The thesis is presented in seven chapters. Chapter one, the introduction, describes the study background and rational of conducting the research, concluding with the study objectives and research questions. Chapter two, the literature review, has five sections, including describing the source and method of the literature review and presenting the reviewed literature findings on the quality concept and quality policy development, quality improvement strategies, quality management and quality organisation, quality monitoring and assessment methods. The chapter concludes in summarising the key findings of the literature review. Chapter three presents the country study profile of Yemen, and gives a general background about the study country, summarises the socio-economic development and challenges, describes Yemen health care system including discussing the health policy environment, particularly the health policy reform and quality policy development. Chapter four, study methodology, presents the study methods used, including the qualitative and quantitative methods. Each method is described separately in detail. Chapter five gives the study results in two main sections. Section one presents the quantitative findings of the patient perception survey and health care managers and professional views survey. Section two presents the qualitative findings of the policy makers' views of quality policy development at national level. Chapter six, the discussion chapter, describes the quality assurance measures of data including the validity and reliability of the study methods. The study findings are interpreted within the context of previous study findings. The chapter concludes with highlighting the study findings development implications. Chapter seven, conclusions and recommendations, presents the study conclusions together with recommendations according to the study objectives.

Chapter Two: Literature Review

2 Overview

This chapter presents a review of the literature relating to the development of quality policy, quality assurance methods (QA) and monitoring and assessment of quality in health care. The objectives of conducting the literature review are primarily to identify and describe quality policy development, quality improvement strategies and monitoring and assessment methods, giving more attention to patients' perception and satisfaction approach.

This review provides a conceptual framework for the study so that the conclusions and recommendations from the study could best inform policy makers and health providers in devising a quality policy and strategy for introducing quality improvement strategies or initiatives in health care in developing countries.

The chapter is presented in five sections:

- Section one describes the source and method of literature review.
- Section two presents the review of literature on the quality concept and quality policy development.
- Section three reviews literature on quality improvement strategies, quality management and quality organisation.
- Section four reviews the literature on quality monitoring and assessment methods based on patients' perception and satisfaction with quality of health care services.
- Section five summarise the key findings of the literature review.

2.1 Source and methods of literature review

Databases such as PubMed, Medline/Ovid, ScienceDirect, Scopus, and other electronic databases were searched for finding the relevant research articles on the research topic. The search period covered from 1990 through to 2006, using the following key words (in individual or combined format) "health care quality", "quality assurance", "quality management", "quality improvement", "quality policy"", "quality strategy", "hospital quality strategy", "patient perceptions", "patient satisfaction", "patient views", "hospital care" and "developing country/countries". In addition, a manual search for relevant articles from the reference lists was undertaken, and sources such as web sites, publication lists (especially WHO, USAID/quality assurance project) were also consulted.

All selected articles and relevant materials were critically appraised and their findings were summarised. Finally, all references had been entered into an automated references database (Endnote 8.2 version).

2.2 Quality in health care - concept and policy development.

Research has shown significant preventable and avoidable patient injuries occurring in health care organisations, particularly in hospitals, increasing medical care cost, and emergence of the adverse events (Leap, 1994). Other authors argue that poor quality of health services wastes the limited resources of health care that could be used to provide health care for those who are most in need (Ovretveit, 1992).

Nowadays, it is evident that the users of health care have become more critical, they have raised expectations and demand better health services quality (Sitzia and Wood, 1997b, Donabedian, 1980, Elias, 1997, Donabedian, 1992). By the same token, health stakeholders, including politicians, policy makers, health service providers, and patients have become more concerned about health care quality due

to an increase in medical errors, poor health services and increasing patient expectations in addition to a growing general belief that there might be effective quality methods for assuring quality and safety in health care. As a result, improving quality of health care and ensuring safety of patients and personnel has become priority for health care systems in both developed and developing countries alike (Ovretveit, 2003).

A different view is taken by the WHO working group on quality assurance which discusses the different rationales behind improving quality of health care, including economic, social, political, and professional. In 1998, WHO resolution of Health For All in the 21st Century continued to emphasise on quality improvement at global, regional, and national levels (WHO, 1998). The following section discusses the concept of quality in health care and the development of quality policy.

2.2.1 The concept of quality in health care

There is no overall consensus on a single definition for the quality of health care. Nonetheless, there is general agreement that 'quality' is a multi-dimensional concept. Donabedian, for example, defines quality as "The *application of medical sciences and technology in a way that maximises its benefits to health without correspondingly increasing its risk*". According to his definition, quality services are those which aim to provide the most favourable balance of risks and benefits. However, this definition has been criticized as it maintains professional control over health care and there is no provision for patients' view on quality in addition to reflecting of the individualism in quality assurance (Vuori, 1991).

It has been emphasised that the goal of quality assurance is not simply to improve technical and professional performance but should include "meeting the needs of the customers" (Ovretveit, 1992). Roemer and Aguilar (1988) defined quality as

"*Proper performance, according to standards of interventions that are known to be safe and affordable to the society in question, and that have the ability to produce an impact on morbidity, mortality, disability, and malnutrition*". This definition broadens the quality concept to include both the process of care interventions and its outcomes.

Ovretveit points out that some authors had tried to define quality in terms of evaluating the features of services which might be useful for deriving criteria for a quality assessment (Ovretveit, 1998). For example, Maxwell (1984) provides six criteria to be used for evaluating quality dimensions. These criteria are:

- Access to services
- Relevance to needs (appropriateness)
- Effectiveness of care
- Equity (fairness)
- Social acceptability
- Efficiency

Along the same lines, the Joint Committee on Accreditation of Healthcare Organisations (JCAHO) lists quality criteria with accompanying questions to further elucidate what is being covered:

- Efficacy (is the intervention useful?)
- Appropriateness (is it right for this patient?)
- Accessibility (if right can this patient get it?)
- Acceptability (if right and available, does this patient want it?)
- Effectiveness (is it carried out well?)
- Efficiency (is it carried out in a cost-effective way?)

- Continuity (did it progress without interruption, with appropriate follow up, exchange of information and referral?).

However, Ovretveit argues these definitions, which are based solely on service features, miss the idea of customer responsiveness that, thus, should be central to the quality approach. He goes on to stress that quality should address the perspectives of all stakeholders of health care, including managers, professionals and patients. This requires a fine balance of attention and emphasis is placed on different aspects such as specification, measurement, attitudes and relationships, increasing productivity, reducing cost and raising customer satisfaction.

Thus, Ovretveit suggests that quality management can be regarded as "an umbrella for a co-ordinated set of staff and organisational development activities" that aims to enable staff to use new methods to improve quality in a systematic way. Such an approach should be built on existing strengths and good practices as well as introducing new methods.

In short, quality in health care is seen as a multi-dimensional concept with some definitions that appear to regard quality as attributes or properties of health care services whilst others see quality according to the perceptions and priorities of the person who receives those services. It is not surprising, therefore, that there is difficulty in achieving consensus on an appropriate operational definition of quality and thus has handicapped the development of effective QA methods (WHO, 1985).

2.2.2 Quality policy development

It has been emphasised that quality improvement in health care is basically a strategic decision that should be taken at policy level. However, its success depends highly on senior management commitment, the co-operation of the middle management level and a proper understanding of the implementing process at first management level (Nwabueze, 2001). Furthermore, middle management should take the responsibility of the monitoring and assessing process and authorise the decision-making authority of change to first-line management level (Kaluzny et al., 1992). However, at the initial stage of implementation, the success of quality management is dependent not only on the top management commitment but also on a proper and effective implementation strategy as championed by middle management and involvement of the workforce and showing a domino-effect across the whole organisation (Nwabueze, 2001, Whittaker, 1999).

The quality approaches of health care quality improvement reflect both organisational structure and the policy options available in different contexts (WHO, 2003b). There are two distinct kinds of quality approaches; one might be termed as the comprehensive quality approach and the other as a specific problem-oriented approach (Brown et al., 2001). The comprehensive approach requires a wide-ranging information system and is, therefore, considered unsuitable for use in developing countries. It also needs substantial buy-in and commitment from senior management and leadership in terms of political support, not to mention that it is also resource-intensive in terms of both financial and human resources. In contrast, the problem-oriented approach concentrates on practical and small-scale quality related activities that leads to incremental quality improvement. This approach can be more easily implemented at facility level where local teams can focus on specific problems that

are more prioritized for them. Thus, over time, the problem-oriented approach can be expanded to become similar to the comprehensive approach.

2.2.3 Quality improvement strategies, quality management and quality organisation

There is a growing recognition that quality is not just a matter for medical professionals but is also an organisational matter (Ellis and Whittington D, 1994). Quality improvement strategies will be short-lived if they are not integrated within the general management process (Kagan, 1984). The WHO working group on the principles of quality assurance as earlier stated that an effective quality improvement strategy must be seen as an agent of organisational change, and quality assurance staff need to acquire skills of identifying the causes of resistance to change and develop the strategies and tactics of organisational change (WHO, 1985).

Hence before any quality initiative can take place, there are a number of pre-requisites such as quality mission, quality policy and strategy, not to mention the proposed quality management structure. There is a need for some development of what has come to be known as a "culture of quality" - that is getting staff involved in quality activities (Donabedian, 1996a). By the same token, Ovretviet asserts "there is a need to sell services quality" to staff before to convince external customers. Training needs should be assessed and all staff should have the opportunity for the development of quality knowledge and skills (Ovretveit, 1992).

2.2.3.1 Quality management

The quality management literature indicates a variety of models suggesting for developing quality management systems which, for most of them, have been influenced by the work of quality gurus such as Deming, Juran, and Crosby. These

models usually describe a sequence of 'steps' to be undertaken in the pursuit of quality improvement (Nwabueze, 2001).

Much of the research shows that success of quality management is dependent not only on the top management commitment but also on a proper and effective implementation strategy which is championed by middle management and, crucially, involving the workforce in the rationale and in the development of quality improvement activities (Nwabueze, 2001, Reerink and Sauerborn, 1996). Furthermore, Donabedian emphasised the importance of contextual and operational factors in quality management. These factors include, for example, leadership, culture and ownership of quality improvement initiative (Donabedian, 1996a).

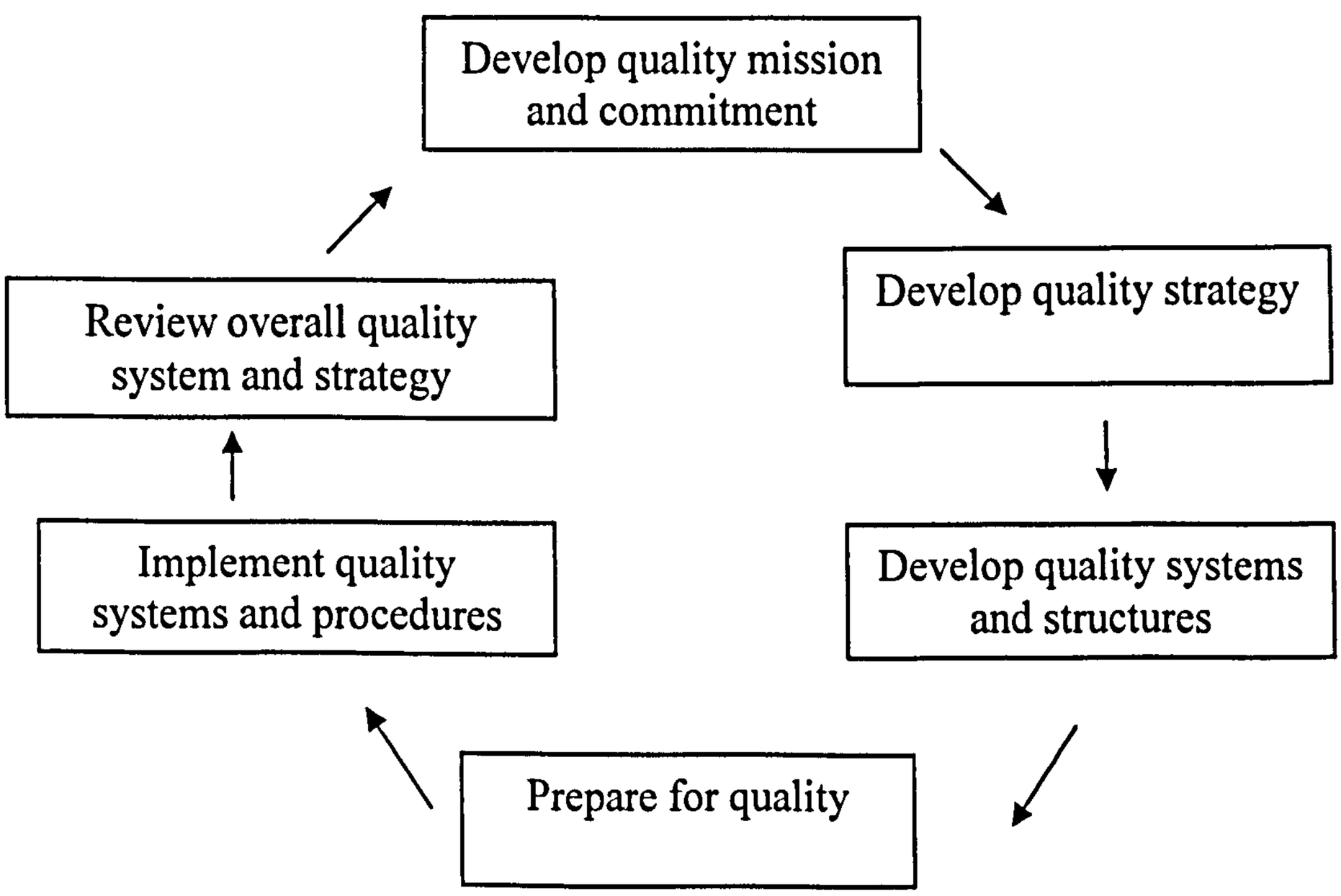
Claus (1991) argues that quality management is essentially a matter of organizational change and advocates five steps to quality management implementation, including organising for change, preparing the environment, empowering employees, focusing the environment and engaging the environment. Other authors point out that an organisation needs to take into account at an early stage of introducing and implementing a quality improvement initiative, there will be existing barriers and obstacles such as hostile culture that may jeopardize the implementation of the quality improvement process (Claus, 1991, Thompson, 1996, Whittaker, 1999). Hillman (1991) stresses the importance of the effective communication that provides a free flow of communication and information for everyone in the organization to know and understand the mission, planned improvement, customer requirements, success stories, feedback and what still needs to be done (Hillman, 1991). It is worth mentioning that in health care settings, the effective communication is flawed as patients move horizontally across hospital functions whilst the communication within the hospital is vertical (Nwabueze, 2001).

James (1992) cited in (Ellis and Whittington D, 1994) identified eight components for health care quality management system:

i. Demonstrable top management commitment
ii. Securing the support of professionals (especially clinicians)
iii. Developing quality culture and empowering staff
iv. Training capacity building
v. Customer sensitivity
vi. Process for continuous quality improvement
vii. Quality specification (qualitative and quantitative standards)
viii. Effective communication

Thus, quality management involves deploying resources, including human and material resources, to develop effective quality assurance systems through continuous planning, implementation and evaluation of quality assurance methods to improve quality of health care. This process can be represented as a cycle, as shown below:

Figure 2-1 Quality management cycle



2.2.3.2 Quality organization

There are two extreme positions for organising QA functions and activities. One is that all QA functions should be built into the ongoing organizational structure with direction provided by the line manager, and the other extreme position is that QA functions could be organized and managed in a separate QA unit (Hermida, 1999b, Franco LM et al., 2002). The selection of quality organization type depends on the circumstances and local conditions such as having a clear management philosophy and organizational structure for the health care system and its organisations. Once a health organization considers the quality management approach as an integral part of it's management philosophy, then almost all QA activities and functions can be easily incorporated into the routine management structure activities. However, in a situation where there is no clear management approach philosophy and quality management in particular introducing QA methods could gradually improve both management quality and quality of services.

In brief, assigning quality responsibility will rest heavily on the selected quality organisational structure and the responsibility of any overlooked quality activities which might be taken up by line managers or be given to the director of the QA unit. Hence, each organization needs to decide on the suitable structure for organizing quality activities and the appropriate way for designating responsibility.

Another important factor for successfully organizing quality activities is the availability of competent leadership that believes in the importance of QA methods as managerial tool for improving health system performance (Donabedian, 1996a, Silimperi et al., 2002). This leadership should demonstrate political commitment and managerial support for spreading quality culture and allocating resources needed for implementing QA activities.

Several studies in industry and health care settings have revealed that leadership is the most important factor which leads to achieving high quality product and service (Manaf, 2005b, Ennis and Harrington, 1999, Penland, 1997, Habib et al., 1997). Having periodical monitoring and assessment of performance at all levels is also an essential catalyst for improving quality of health care because monitoring quality performance may lead health care professionals and managers to recognise any shortcomings in the current situation and develop strategies and opportunities for improving quality performance. Likewise, there is a need for spreading culture of quality among health politicians, professionals, lay people, training institutions and other partners who are interested in improving quality of health care. In addition, promoting professional ethics and commitment to quality health services are critical elements for sustaining quality assurance management (Brown, 1995).

In developing countries, the sustainability of quality activities remains a real and critical challenge for any quality improvement strategy, especially when the initial funding and technical assistance are funded by donors and there is a risk of stopping or withdrawing of such funds. Brown et al. (2001) summarised the most important key activities for organising QA initiative as follows:

- Conducting a preliminary review of QA-related activities
- Developing the purpose and vision for QA
- Determining level and scope of initial QA activities
- Assigning responsibility for QA
- Allocating required resource for QA management.
- Developing a written QA plan
- Strengthening QA skills and critical management system
- Disseminating QA activities
- Managing change

2.2.3.3 Quality improvement strategy

As quality policy is usually developed to answer the question of *why* QA is needed, quality improvement strategy should answer the question of how to improve quality. Ovretveit suggests that quality strategy should be part of the general business strategy and quality management should be integrated within the existing management systems. He also warns from what is called 'quality over saturation', i.e. when senior management insists on detailed specifications and standards for quality procedures before involved staff have had time to come to terms with quality (Ovretveit, 1992). Over-saturation is also a danger where large numbers of 'off the shelf' techniques are recommended with little consideration for local needs or where actual standards and specifications are adopted from somewhere else.

Over the last few decades, many quality improvements strategies have emerged in the literature. These strategies refer to both external and internal quality improvement assessment (Ovretveit, 1994, Shaw, 2001, Ruiz, 2004). The following section will shed light on quality improvement strategies as follows:

- **Increasing resources** - this refers to increasing health care inputs such as the financing, personnel, facilities or equipment used in a hospital or health system, aiming at treating more patients or treating the same number of patients faster, better and at lower cost-per-person.

- **Reorganization reform** - seeking primarily for making changes in the structure of a hospital or health system so as to facilitate better decision-making or use of available resources. This choice may incur changes in financing and management style, and strengthening the management capacities by increasing management responsibilities and authority or competencies as a way of improving quality.

- **Standards and guidelines** - including formulating standards of what is expected from health providers, communicating standards to users and providing training in and monitoring and evaluating to enforce using the standards in practice. Most medical and clinical audits belong to this category as well as some approaches called "quality assurance" (Shaw, 1993). An example of this method is the clinical practice guidelines for various health conditions such as Zambian national technical standards (Bouchet et al., 2002).
- **External quality assessment** - There are a number of quality assessment systems; the best known is the European Foundation for Quality Management (EFQM) which is based on the American Baldridge Award (Shaw, 2001). Other well known external quality assessment including licensure, certification, and accreditation systems. The accreditation systems differs in which aspects of hospital operations are assessed and whether quality outcomes are considered in the assessment (Ovretveit, 2001). Some quality experts argue that hospital accreditation programmes are not a good use of limited resources in low-income developing countries (Ovretveit, 2002a).
- **Total quality management** (TQM) and continuous quality improvement (CQI) - TQM is a set of principles and methods which are applied in many different ways and originating from organisation-wide industrial quality programme. It is based on a view that quality problems are more often due to poor organization than to individual faults (Berwick et al., 1990). This strategy aims at developing personnel performance and providing the best patient experience and outcomes.
- **Quality management system** - defines quality responsibilities and puts into place the structures and systems to ensure it. The components of such a system are interpreted differently from country to country in the absence of over-arching

standards (Ovretveit, 2003). This strategy might include developing 'quality indicator comparison' seeking to motivate patients, clinicians and others to use information about quality performance in order to make improvements. In practice, this strategy can be used by one hospital taking part in a comparative data gathering programme (Thompson et al., 1997), or as a voluntary or compulsory strategy for hospitals in an area to collect and report the same data. Some comparison systems are public and promoted to encourage both patients and providers in taking action to improve quality. Further, some institutions use a benchmarking strategy which refers to having comparative information about best quality performance with additional methods to help providers decide on how to improve quality. It is worth mentioning that nowadays there is a growing interest in introducing patient safety strategy in health care. This strategy often includes risk management that aims at identifying high risk procedures or situations that put the hospital at financial risk from patient litigation claims, using a wide range of methods from other industries for collecting and analysing adverse events and situation.

- **Patient empowerment and rights** - this method aims to give patients a voice through, for example, a complaints systems or conducting patient satisfaction surveys as well as publicizing what patients have a right to expect, such as the United Kingdom's "Patients Charter" (DoH, 1992). There might be other schemes contributing to strengthen patient power such as including patient health care rights in the national constitution and laws.

In summary, it is worth mentioning that all these quality improvement strategies indicated above have been developed in western developed countries that have sufficient resources available to address the quality problems and commitment to prevent unnecessary patient suffering. In contrast, in developing countries and, in particular, the low income countries, the quality improvement efforts is still in its infancy stage and is severely limited due to the lack of available resources and adequate knowledge of quality methods. Hence, for the purpose of this thesis, the patient perception and satisfaction will be the focus of this study as a tool for QA in monitoring and assessing quality of hospital care. Further, a clear preference has been observed, at a universal level, for adoption of quality assurance principles in the field of health care (Theodorakioglou and Tsiotras, 2000) due to QA is a planned and systematic assessment of the actual level of quality services provided plus improving the provision of those services (Black, 1990).

2.2.3.3.1 Quality assurance (QA) as a means for quality improvement

In the health care literature, no single and universal definition for QA was found. For instance Donabedian defines QA as "*All the arrangements and activities that are meant to safeguard, maintain, and prompt the quality of care*". Palmer (1983), a QA expert in U.S. ambulatory care, defines QA as "*A process of measuring quality, analyzing the deficiencies discovered, and taking action to improve performance followed by measuring quality again to determine whether improvement has been achieved*" (Palmer, 1983). Ruelas and Frenk, who had conducted extensive QA work in Mexico, defines QA as "A *systematic process for closing the gap between actual performance and the desirable outcome*" (Ruelas and Frenk, 1989). Berwick, a US-based clinician, who is working to apply the principles of continuous quality

improvement (CQI) to health services, defines QA as "*A systematic managerial transformation designed to address the needs and opportunities of all organizations as they try to cope with increasing change, complexity, and tension within their environment*" (Berwick, 1991).

The Australian Council on Health Care Standards (ACHS) defines QA as "*The planned systematic approach to monitoring and assessing the care provided, or these services being delivered, which identifies opportunities for improvement and provides a mechanism through which action is taken to make and maintain these improvement*" (ACHS, 1990).

It is clear that these definitions of QA have a number of common elements, as all view QA as a systematic, ongoing process which looks for opportunities to improve performance and uses data to monitor the process of quality improvement and evaluate the outcomes of improved quality. However, Brown et al. assert that in order to raise services quality, the quality approach should be oriented toward meeting the needs and expectations of patients and the community, focusing on process and system, using data to analyse services delivery and encouraging team approach to problem solving and quality (Brown et al., 2001).

In principle, WHO states that introducing QA system is to assure public accountability, protect the public from inappropriate, substandard and harmful care and stimulate interests of critical mass of interested health stakeholders, such as health professionals, policy makers, managers, and patients in order to create a suitable supportive environment for change (WHO, 1989).

In practice, QA is a quality management tool for identifying quality problems and opportunities, identifying solutions and taking corrective action (Overtveit, 1992). For example, applying QA methods would demonstrate the differences among

professionals performance that may lead in stimulating their intellectual curiosity toward improving their performance in addition to facilitate in exchanging benchmark information within and among health institutions. Assuring public accountability is another principal objective of any QA initiative because there are substantial proportions of health services that have been or are still financed from public sources, especially in developing countries. So, it is critical that quality assurance methods should provide evidence that funds are being spent both efficiently and effectively.

2.2.3.3.2 QA methods

In the middle of the nineteenth century, Florence Nightingale, a British nurse, was the first person to introduce QA standards and nursing care standards into modern medicine. This intervention led dramatically to a decrease in mortality rates in hospitals during the Crimean war (Ellis & Whittington, 1994). Later in the 1950's, QA was introduced into hospital care in North America and Europe, and it was further extended to involve ambulatory care/primary care. Consequently, growing quality assurance methods such as regulations, licensure and accreditation have emphasised for assuring quality of health care and not using quality improvement methods as an end in itself but as a managerial means for improving health service. Furthermore, the importance of having such regulations, formulating peer review committees and implementing studies and pilot projects is to improve quality of health care provided and its outcomes such as patient and personnel satisfaction (WHO, 1989). Nonetheless, Kaluzny, et. al. argues that despite increasing uses of quality assurance methods, the applications of these methods lag behind in the process of providing health services in the public sector (Kaluzny et al., 1992). Overtveit pointed out a need for developing a conceptual framework and strategy for

introducing quality methods and ensuring that these methods are being used across the services (Overtveit, 1992). Moreover, although introducing quality assurance methods might provide such a framework and a strategy for quality improvement, managing quality of health care requires involving different quality perspectives. These perspectives should reflect the needs and desires of patients, managers and health professionals involved in the health care process (Kaluzny et al., 1992). By the same token, it has been documented that most quality problems in the health services organisations are not merely the results of individual error but are due to the failure of the system in which all personnel can function in performing the task adequately. Hence, it is obvious that there is no universal specific recipe for QA approach. It is obvious that QA methods should be introduced gradually through a carefully planned and systematic approach aimed at monitoring, assessing and improving quality of health care services, especially for a health system or an organization with a rudimentary management system.

2.3 Quality monitoring and assessment methods (how can we monitor quality?)

2.3.1 Patients' perceptions and satisfaction approach

Monitoring and measuring customers' perceptions of services quality has become an important topic in service quality literature (Brady, 2001). In health care settings, the patient's perceptions of quality of health care have influenced their satisfaction and health seeking behaviour (Williams, 1994a, Vuori, 1991). It has also been argued that the effectiveness of clinical outcomes is determined, to some degree, by patient satisfaction as patients willingness to comply with treatment has often been related with the satisfaction level (Gilson et al., 1994).

Thus, patient satisfaction has come to be seen a legitimate health care goal and therefore a pre-requisite of assuring quality care (Donabedian, 1996b, Vuori, 1987). For some researchers, patients' quality perception represents a comparative balance between the patient's perceptions of the service they have received and their expected standards for the service (Aharony and Strasser, 1993). These standards may represent what is ideally expected, what patients believe they deserve to receive, what they believe is minimally acceptable or what they have received during prior encounters (Pascoe, 1983, Thompson and Sunol, 1995b).

The literature provides ample evidence that there is link between patient perceptions of service quality and patient behaviour, such as seeking medical care, changing providers, and complying with recommended treatment (Vom Eigen Ka et al., 1998, Willson and McNamara, 1982). Satisfied patients are more likely to comply and adhere to doctors' instructions and treatment plan (Williams, 1994a), whilst dissatisfied patients are more likely to distrust the provider of care, miss their appointments and switch providers (Pascoe, 1983). Hence, patients' perception of quality of care has gained a greater interest amongst health care providers and policy makers (Sitzia and Wood, 1997b, Loker and Dunt, 1978, Donabedian, 1980).

The perception of service quality has been described as an attitude formed as a function of some combination of attributes that an individual considers to be the components of the quality (Carman, 2000). These attributes are found to have a role in forming the client's attitude towards the service provider when the service fails to meet consumer values and expectations (Newsome and Wright, 1999).

Likewise, Brown and Swartz state that satisfaction is evident when health care outcomes meet or exceed the client's expectation whilst dissatisfaction appears when

a negative discrepancy is present between the client's anticipated outcome and the actual outcome (Brown and Swartz, 1989) .

Carman suggests that these attributes could be grouped into two sets: functional, such as provider attentiveness that describes how service is delivered; and technical, such as outcomes that describes the quality of what is delivered. In health care literature, the former has been referred to as "process" attributes and the latter has been referred to as "outcome" attributes. However, some authors argue that attention has been given to the attributes that may make up the perceptions of service quality than exploring the way in which these attributes are combined and this can affect the overall perceptions of quality (Carman, 2000). Other authors view the perception of service quality as the difference between expectations and actual experiences on all of the quality attributes that concern the users of services as far as expectation is concerned (Murray et al., 2001).

Thus, the patients' perception of the service quality is the outcome of the gap between the service they expected and their experience of the service they actually received (Ovretveit, 1992). However, although there is a relation between patient expectations and satisfaction, it has been suggested that expectations and values could only account for between 8% to 10% of the variance in satisfaction with service received (Newsome and Wright, 1999). In addition, there is little evidence suggesting that satisfaction is the direct result of fulfilled expectation and values. Nonetheless, expectation has an independent effect on satisfaction (Linder-pelz, 1982b, Linder-pelz, 1982a, Rao et al., 2000).

Although satisfaction and perception of quality are generally a subjective personal evaluation of health care services and providers (Ware et al., 1983), it is important to recognise that perception of service quality is a multi-dimensional construct

reflecting patients' expectation, values and experiences with health care quality (Linder-Pelz and Struening, 1985, Sitzia and Wood, 1997b). In addition, patient satisfaction surveys reflect at least three factors, including patient's personal preferences, patient's expectation, and the actual quality of care received.

However, it is important not to view feedback from patient surveys as the whole measure of health care quality as the patient surveys themselves may need to emphasise different aspects of services delivery according to the weight given by the patient to these different aspects (Ware et al., 1983).

In summary, thus far patient satisfaction and quality perception has gained widespread recognition as a measure of a quality and quality indicator of health care delivery systems performance (Newsome and Wright, 1999). The attention given to patient perception is linked to the drive for greater public accountability that has led to several significant implications for examination of patients' perceptions of quality (Sofaer and Firminger, 2005). Moreover, other authors claim that a real improvement in health care quality can not take place unless the patients are involved and an evaluation of health care will not be satisfactory if it focuses only upon measures of clinical effectives and economic efficiency without including patients views measures (Thompson and Sunol, 1995a). Also, it has been argued that identifying patients' priorities among different quality dimensions could lead to allocating the limited health resources more efficiency and effectively (Choi et al., 2005).

Thus, measuring patient perception of quality and satisfaction is a significantly valuable source for providing feedback on quality performance and identifying areas and opportunities for improvement (Wensing et al., 1994, Abd Al Kareem et al., 1996). The findings of patient perceptions studies could be used to facilitate identifying areas that need improvement, in guiding the strategic decision making

(Sower et al., 2001) and in managing the expectations of patients (Mawajdeh et al., 2001) in addition to considering patient perception as a measure of quality outcomes in terms of to what extent are patients satisfied with quality of care, particularly the inter-personal aspects of care (Donabedian, 1988, Donabedian, 1980).

2.3.2 Quality dimensions of patient perception and satisfaction.

There is no consensus on the number of the components underlying patient satisfaction and quality perception. Hall and Dornan (1988) conducted a meta-analysis of 221 studies in quality of health care, and the review showed that a quarter (25%) of the studies used only one dimension (although using multiple items, all referring to that dimension), 46% of studies used two to four dimensions, 32% of studies tapped five to seven dimensions and only 6% tapped eight or more dimensions (Hall and Dornan, 1988a). Taking into account that potential shortcomings of multi-dimensional measures of patients' perception of quality of care and satisfaction fails to consider all aspects of satisfaction important to patients (Ware et al., 1978) and 'it is wrong to equate all information derived from patient survey with patient satisfaction' (Ware 1981).

One of the few experimental studies designed specifically to identify the important dimensions of quality from the patients' perspective was conducted with out-patients at an urban hospital in the United States of America. In this study, the patients were asked to rate both the absolute and relative quality of six dimensions of health care quality. The most important dimensions were found to be 'the behaviour of doctors and nurses', followed by clinical outcome, the extent to which services offered matched perceived needs, the attitude of ancillary staff, accessibility of the facilities and, lastly, waiting times (Pascoe and Attkisson, 1983).

In the U.K, (Williams and Calnan, 1991) also attempted to assess the relative importance of various dimensions of satisfaction in a number of U.K. health care settings including general practice, dentists and hospital. Irrespective of the medical context, the most important criteria were professional competence and the nature and quality of the patient–professional relationship. An international study conducted amongst different European countries asked primary heath care patients to prioritise 38 items of health care. The findings revealed that the top ten items reported by patients were related to access, the patient-doctor relationship, communication, competence, courtesy, and privacy (Grol et al., 1999). Bowers et al. (1994) suggested that a useful way to organise the findings from these different studies in developed countries on the underlying dimensions of quality is to divide them into two rather distinct categories, 'quality of technical care' and 'quality of interpersonal care' (Bowers et al., 1994).

Hence, these differences in the relative importance of satisfaction construct and quality perception might be attributed to satisfaction models used and, in particular, the study instrument used. Some authors have claimed that the contents of these instruments are biased towards issues that concern the providers of health care rather than the users (Calnan, 1988). This view is supported by the findings of a meta-analysis study (Wensing et al., 1994) which concluded that patients were relatively often asked to assess aspects like accuracy, informativeness and availability, whereas aspects such as professional competence and empathy were less frequently included and aspects such as effectiveness were hardly included at all.

2.3.3 Patient satisfaction and quality perception in developing countries.

In developing countries the literature on patient quality perception and satisfaction is limited compared with the volume of research that has been published in developed countries (Bernhart et al., 1999). However, although there are limited studies on patient satisfaction and quality perception in developing counties, the available literature showed that patients' perception of health service quality is a multi-dimensional concept (Haran et al., 1993, Haddad et al., 2000, Yildiz and Erdogmus, 2004). For example, Haran (1993) conducted a study among an out-patient department of two hospitals in the Eastern province of Ghana, which aimed at identifying the quality factors as perceived by the patients. The main factors that the patients perceived as influencing the quality of care were 'availability of a doctor', 'the availability of medicine' and 'the availability of information on diagnosis', in addition to the relationship between patient's perception of the quality of service received and their sense of satisfaction with the services (Haran et al., 1993).

Tengilimoglu et al. conducted a study to measure patient satisfaction in a public hospital in Ankara, Turkey, and three composite factors were identified including 'accessibility and availability of services' perceived quality of patient care', and 'organisational and administrative issues' (Tengilimoglu et al., 2001). Another study conducted in Riyadh city, Saudi Arabia, to identify which main aspects of public hospitals services are important to patients and had an influence on satisfaction. The findings showed 11 statistically significant items. These items were 'cleanliness of the hospital' nutrition services', 'perceived nurses quality', 'perceived physicians quality', 'staff kindness', 'availability of medicine', 'hotel services', 'simplicity of admission procedure', 'availability of advanced medical technology', and 'availability of recreation facilities' (Al-Omar, 2000).

In 2004, a nation-wide survey covering 1,100 patients in 31 hospitals was conducted in Turkey (Yildlz and Erdogmus, 2004). The findings showed seven factors responsible for explaining patient satisfaction with quality of hospital care. These factors are 'physician care', 'nursing care', 'nutritional care', 'room cleanliness', 'room atmosphere', 'the procedure of incoming patients', and 'other serving factors'.

In the United Arab Emirates (UAE), a study comparing quality of private and public hospitals care using the SERQUAL model identified five factors explaining the variance in the hospital care quality. These factors were 'empathy', 'tangibles', 'reliability', 'administrative responsiveness', and 'supporting skills' (Jabnoun and Chaker, 2003). Another study conducted in UAE investigated the relationship between service quality dimensions in UAE hospitals using SERVQUAL scale dimensions of tangibility, assurance, responsiveness, reliability, and empathy (Jabnoun and AL Rasasi, 2005). The findings from the analysis of 242 patients and 201 hospital employees revealed that hospital service quality was positively associated with all dimensions of service quality.

In 2003, a study conducted in Egypt on patient satisfaction with primary health care services in two districts in lower and upper Egypt using exit interview showed high patient satisfaction with accessibility, waiting area conditions and performance of doctors and nurses, but low satisfaction with the availability of prescribed drugs and laboratory investigations and lack of privacy during clinical examination (Gadallah et al., 2003). Another Egyptian study on patient views of hospital care quality employed the SERVQUAL mode and three factors explained 67% of variation in patient satisfaction. These factors have been labelled as "human performance quality", "human reliability", and "facility quality". It is interesting to note that in this study the author argued that the results do not support the five-component

structure of the SERVQUAL scale (Mostafa, 2005). In 2006 (Zineldin, 2006) conducted a study to examine the major factors affecting patients' perceptions of cumulative satisfaction among hospital patients in Egypt and Jordan. The results of analysing 224 in-patients' completed and usable questionnaire revealed five quality dimensions. These dimensions were 'quality of object, 'quality processes', 'quality of infrastructure', 'quality interaction', and 'quality of atmosphere'. In Jordan, a patient satisfaction study was conducted among community and university health centres to identify the influence of factors representing quality dimensions on patient satisfaction. The study results revealed that dimension of quality included client-provider relationship, information exchange, continuity of care, and the availability of services had a significant effect on patient satisfaction (Mawajdeh et al., 2001). In South Korea, a study was conducted to investigate the relationship between service quality dimensions and out-patient satisfaction. The findings revealed four dimensions of quality relating to patient satisfaction, including 'physician concern', 'staff concern', 'convenience of the care process', and ' tangibles dimension' (Choi et al., 2005). Similarly, in South Africa, a satisfaction survey conducted among diabetic out-patients' clinics at two hospitals revealed that attributes of providers and setting characteristics were the major components of the patient satisfaction. These components referred to interpersonal and organisational dimensions of patient satisfaction study (Westaway et al., 2003).

Thus, this review of patients' perceptions of quality of care in developing countries suggest that the quality dimension categories of 'quality of technical care' and 'quality of interpersonal care' are equally applicable in developing countries.

2.4 Methods of measuring patients' perception and satisfaction

There are several approaches for measuring patient perceptions of health care quality. These approaches can be grouped primarily into quantitative and qualitative methods including, for example, counting and categorising complaints, examining critical incident and adverse events and satisfaction surveys (Bowling, 2002, Sofaer, 1999). The most widely used approach to assess patient perception is to assess patient satisfaction (Williams, 1994a, Crow et al., 2002). Several instruments have been developed to assess patient satisfaction (Castle et al., 2005, Tijhuis et al., 2003, van Campen et al., 1995, Beattie et al., 2002).These instruments nearly all ask patients to evaluate services received on either global level (e.g. overall satisfaction with care) or a service-specific level (e.g. satisfaction with nursing care).

The evidence in the literature suggests that asking about overall satisfaction gives a high level of satisfaction (83%-97%) and provides an over-optimistic evaluation of patients' experience of health care. A different picture emerged when patients were asked to report or evaluate specific aspects of their experience of care (Jenkinson et al., 2002b, Williams and Calnan, 1991). Commonly, the measurement scale used was the Likert-type scale, either "quality rating" that ranges from 'excellent' to 'poor', or "satisfaction scale" ranging from 'very satisfied' to 'very dissatisfied', or a "declarative scale" ranging from 'strongly agree' to 'strongly disagree' (Rosenthal and Shannon, 1997).

There are also different approaches for measuring patient perceptions which focuses primarily on assessing elements that shape the judgement of patient satisfaction. For example, (Cleary et al., 1991a) developed an instrument oriented problem based on problems that were identified from patient and family focus groups. The main aim of this instrument type is to minimize the subjectivity of assessment and the

confounding effect of patient's prior expectations. Similarly, early in 1988, (Parasuraman et al., 1988) developed a 22-item SERVQUAL scale to measure the quality in services and retail industries. This scale was later adapted to health care (Babakus and Mangold, 1992) and included questions about patients' perceptions of actual services delivery and expectations of the health care delivery systems for providing these services.

Thus, the review above showed that several frameworks exist for measuring patient perceptions. Although each examines patient perceptions from a different conceptual perspective, it is likely that measurements based on these alternative frameworks would be reasonably correlated (Cleary et al., 1992, Rosenthal and Shannon, 1997). Castle et al (2005) conducted a comprehensive review (1980-2003) of survey instruments used for assessing patients' perception of hospital care. This review covered studies done in U.S. A., Europe, and the Middle East. The review reported that there are many instrument being used for measuring patients' perception of hospital care. These instruments are different in terms of the instrument domains, mode of administration of the instrument to respondents and characteristics of instrument performance, especially psychometric properties.

2.5 Summary of key findings of the literature review

- There is no universal consensus definition for quality, but there is a general agreement that quality is a multi-dimensional concept; this dimensionality includes at least three perspectives: professional quality, management quality, and patient quality. Thus quality is not just a matter for the medical professional but it is also an organisational matter and patient concern as well.
- There are many quality approaches that have been reported in the quality literature. These approaches, in principle, are client-oriented, focussing on process and system improvement, data driven, and encouragement using teamwork approach. Nevertheless, quality policy development is basically a strategic decision requiring political commitment and managerial support from leadership at the top management level.
- To organise quality improvement activities, there are two main approaches, namely, the comprehensive approach, which requires a wide range of information system that could not be suitable for use in developing countries as it needs substantial buy-in and commitment from senior management leadership, not to mention it is also resource-intensive in terms of both financial and human resources, and the problem based approach, which gives attention to practical and small-scale quality activities leading to incremental quality improvement. Hence, each organisation should find a suitable structure for organising quality activities and the appropriate way for designating quality responsibility, taking into account the contextual and operational factors in quality management.
- The patient perception and satisfaction survey is a common method widely used in developed countries, as a quality indicator for health care services and a tool for identifying quality improvement opportunities. In contrast, the patient

perception and satisfaction survey is limited to being used in developing countries, especially in low income developing countries

- Patient perceptions and satisfaction with health services are important methods for monitoring and assessing health care quality. Patient views represent significant measures that provide feedback to health care providers on the quality care performance in addition to in helping to identify quality problems and opportunities that need improvement. Thus, patient perceptions have become a major indicator in the evaluation and quality improvement policy in health care.
- Research shows that patient satisfaction surveys that look at particular aspects of the service as well as the overall satisfaction provide a useful means for monitoring and assessing quality improvements.
- Patient perception of quality of care is a multi-dimensional concept consisting of several dimensions. These dimensions are of an individualistic, dynamic and specific context. So any quality dimensions findings from developed countries may differ from the dimensions in developing countries, in addition there is no one standardised number of quality dimensions.
- The main concerns about quality perceptions in developing countries are the services availability and organizational aspects of care including the technical aspect, whilst in developed countries the patient perception of inter-personal aspects of care is more important than the technical aspects of care.
- Position of recipients of health care in developing countries is different from those in developed countries in terms of importance of eliciting their views about quality of care.
- There are a limited number of quality perceptions and satisfaction studies of public health services in developing countries.

Chapter Three: Country study profile, Yemen

3 Overview

This chapter consist of five sections which highlights the country profile of the study. Section 3.1 presents a general background of the country. Section 3.2 summarises the socio-economic development and challenges. Section 3.3 describes the health care delivery system. Section 3.4 discusses the health policy environment, in particular the health reform policy and quality policy development. Finally, section 3.5 presents the key findings.

3.1 General background

The Republic of Yemen (ROY) is a Middle Eastern country with an area 555,000km^2. It is located in the southern west corner of the Arabian Peninsula, bordered by the Kingdom of Saudi Arabia in the north, the Arabian Sea and the Gulf of Aden in the south, Sultanate of Oman in the east and the Red Sea in the west (see Figure 3.1). It has various topographical areas with mountains, plateaus, islands, coast, and a desert called Al-Rub-Alkhali (CSO, 2003)

According to the latest population census conducted in 2004, Yemen's population reached 19.7 million, distributed over 21 governorates including the capital city, Sana'a. Administratively, each governorate consists of a number of districts, which reach in total 333 districts, and each district is divided into small villages.

Strikingly, about half of the entire population (43%) is concentrated only in four governorates namely: Taiz (12.2%), Al-Hodeidah (11%), Ibb (10.8) and Sana'a city (8.9%). The vast majority of the population (75%) live in the rural areas and about half of the population are under fifteen years of age (CSO, 2004).

Politically, Yemen used to be divided into two separate countries; one in the North called the 'Yemen Arab Republic (YAR) and one in the South called The People's Democratic Republic of Yemen (PDRY). In 1990, the two countries were unified as the Republic of Yemen (RoY). The political system of the new RoY country is a multi-party democratic system, with an elected president and parliamentary system. As a result, many political parties have emerged since the unification. The most influential political parties are the Yemen General Congress (YGC), the Ruling Party, the Yemeni Congregation for Reform Party (Islah), and the Yemeni Socialist Party (YSP), the opposition parties.

Figure 3-1 Map of Yemen

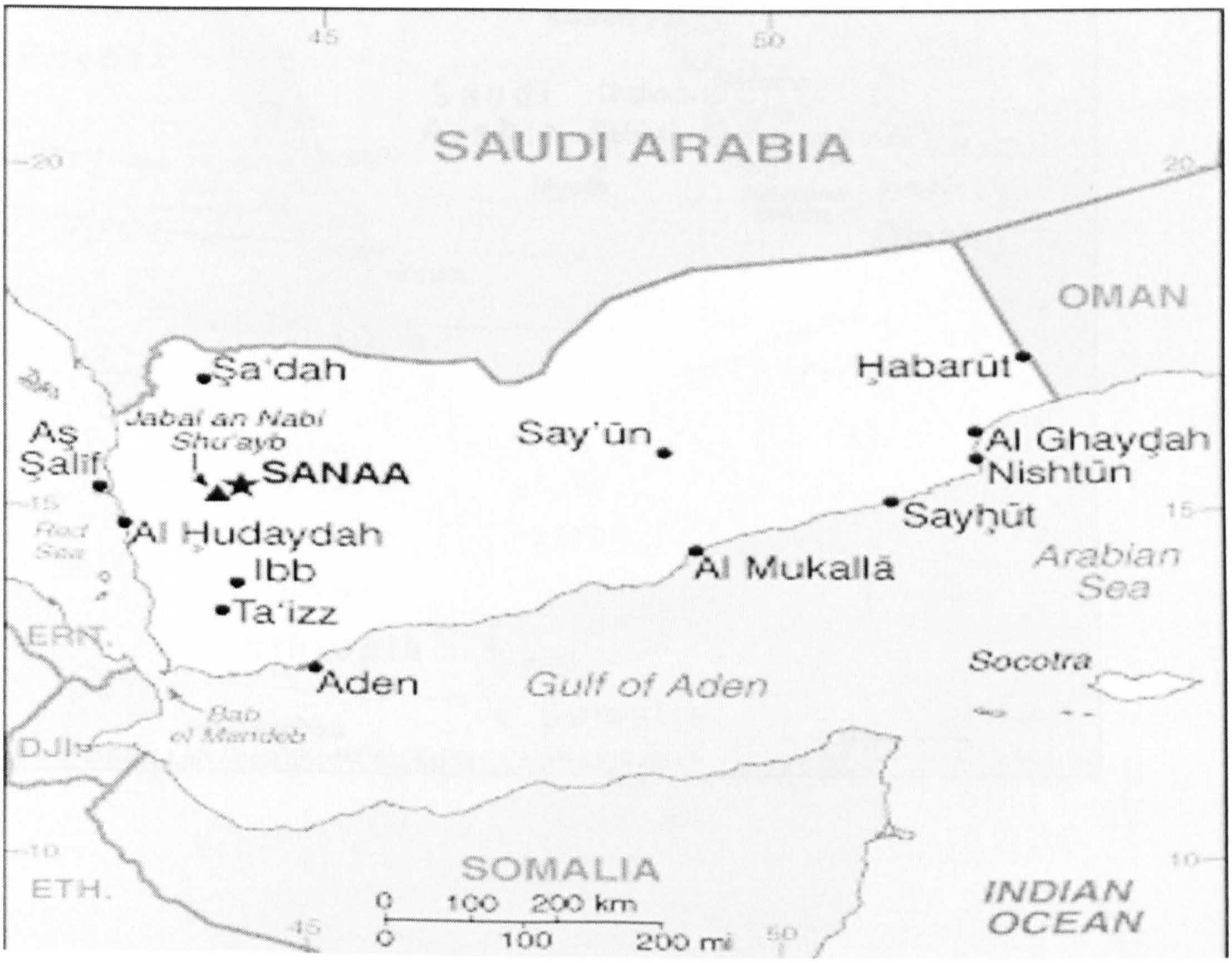


Figure 3-2 Yemen's location in the Middle East map

3.2 Socio-economic development and reform program

Since the early 1990s, the Yemeni socio-economic development has coped with several shocks. As a matter of fact, these shocks have had a negative effect on the socio-economic development momentum. For example, the Gulf war in 1991 had forced at least 800,000 Yemeni workers to leave the Gulf States (GoY, 2003) . As a result, Yemen's economy has lost the migrant remittances and employment opportunities in the Gulf States and accommodated the return of this huge number of people. A few years later in the summer of 1994, a civil war in Yemen added another pressure to the fragile socio-economic development.

In 1995 following the civil war, Yemen embarked on the Economic-Financial-Administrative Reform program (EFARP) in order to make a structural adjustment in the national economy. This program has been supported by several donors, including the World Bank, the International Monetary Fund (IMF) and others. The EFARP has adopted policy changes such as economic-market oriented, public expenditure rationalization, and the privatization of public enterprises. The impact assessment of EFARP revealed that it had a positive effect on the macro-economic growth and a negative effect of the socially vulnerable groups, especially people with a limited source of income (GoY, 2003).

The Household Budget Survey (HBS) (1998) revealed that the socio-economic status of people was getting worse. The real GDP per capita declined from US$ 701 in 1990 to US$ 302 in 1998, about 42 %(6.9 million) of the population live under the national poverty line, and 18% (3 million) live under the poverty food line[1].

Hence, under this current fragile economy and absence of sustained growth in per capita income, the World Bank indicated that a sizeable part of the Yemeni

[1] Food poverty line refers to "insufficient income to meet the basic essential food requirements", that is, YR 2101 per person per month (GoY, 2003).

population is economically vulnerable and more susceptible to live near the poverty line. In addition, it is doubtful that poverty in Yemen can be eradicated in the absence of a sustained growth economy and an improvement in the human development indicators (WorldBank, 2002).

In 2000, GoY realized that there was a need for a long-term strategic development vision. Therefore, the GoY worked on developing a strategic development vision for 25 years, aiming primarily at achieving three targets. The main targets included average annual GDP growth of 9% in the next coming 25 years, reducing population growth rates and increasing diversity of economy productivity. This strategic vision stresses strongly on poverty reduction as a main human development challenge through adopting strategies for creating and encouraging an investment environment for the private sector, improving human resources development and living standards indicators and making improvements in the social services, especially in health services and education in addition to raising income per capita to the levels of the middle-income countries (GoY, 2000).

In 2001, the Second Five-Year Plan (SFYP) (2001-2005), as a first step in implementing the 25 year strategic vision was developed. The SFYP had specific targets such as achieving an average GDP growth rate of 6.5%, raising the contribution of non-oil sectors in GDP from 71% to 75% by 2005, and an annual growth rate of 6.7% for agriculture and 8% for the services sector, while the growth rate of industrial value-added was set at 3.0%. However, achieving these targets were thought to be a challenging task pragmatically (WorlBbank, 2002).

Recently, in 2006, the Third Five-Year Plan (TFYP) (2006-2010) was developed. The TFYP has been entitled as a "reducing poverty plan". The major strategies of the plan include diversifying the economy, encouraging the tourism investment, and

rationalization using scarce resources, especially water (MOPIC, 2006). It has been thought that the financing for implementing the TYFP is expected to be highly supported by international donors. Accordingly, Yemen has convened a meeting for international donors in London in November 2006. The donors pledged a $4.7 billion economic support package to enable Yemen to implement the TFYP and overcome the development challenges.

3.2.1 Current development challenges

Yemen is one of the least developed countries in the world due to it's limited institutional and human resources development (UNDP, 2005, GoY, 2003). The Human Development Report of 2005 ranked Yemen at 151 out of 177 countries in terms of human development indicators, with Human Development Index (.48). As of 2003, Yemen has a per capita GDP of US$ 565 and people living in poverty is at 42% (UNDP, 2005). The following section will attempt to shed some light on the current human development challenges.

3.2.1.1 Poverty challenge

Poverty in Yemen is a growing economic and social problem, challenging the government, society, and donors alike. According to the 1998 HBS, 17.6 percent of the Yemeni population live under the food poverty line and more than forty percent of this populace are incapable of obtaining all of their food and non-food requirements[2] (the national poverty line). Further, poverty is more concentrated in rural areas and it varies between governorates ranging between 10.1% in Sana'a city and 38.8% in Hadramout (GoY, 2003). The Human Development Report (2005),

[2] There are two type of poverty: the food poverty line which refers to insufficient income to meet the basic essential food requirements, and the national poverty line which refers to insufficient income to meet the food and non-food requirements. Their value has been estimated at YR 2,110 and YR 3,210 per month respectively.

ranked Yemen as 77th out of 103 developing counties in relation to the Human Poverty Index (HPI) (UNDP, 2005).

Poverty and its development are not just seen through poverty lines alone, but also through the different social and economic indicators. There is a relationship between poverty and education level; about 87% of the poor are among the illiterate group or have incomplete primary education. Similarly, 86% of the poor families are rural dwellers that are headed by an illiterate individual (GoY, 2003). As for poverty and health services, there are significant differences regarding the availability of health services for the poor and non-poor populace. The percentages of access to hospitals services constitute 22.5% for the non-poor families compared to 14.2% for the poor families. Similarly, the primary health units (36.2% for the non-poor family versus 15.6% for the poor families) (GoY, 2003).

In conclusion, although the social services, especially education and health are basic requirements for socio-economic development and an instrument for poverty alleviation, most indicators still reflect a pressing need for escaping the limitation of access to these basic services for both poor and non-poor alike.

3.2.1.2 Population challenges

Population in terms of growth, structure and distribution is the observable population challenges to the development process. During the last three decades, the population size has grown remarkably. It has increased from 12.8 million in 1990 to 19.7 million in 2004, with a huge young age structure below 15 years of age that constitutes about 46.5 percent of the whole population. Moreover, the Yemeni population live predominantly in rural areas, and are scattered among 129,299 small rural villages and 3,642 urban centres (MoPHP, 2006). All these factors are seen as major

challenges for the national economy and social development, particularly in terms of providing more basic services, especially for education and health care.

3.2.1.3 Human development challenge

Over the last three decades, although there has been a noticeable improvement in human development indicators, significant human development challenges still remain. For example, life expectancy has increased from 42 years of age in 1970 to 61 years of age in 2003, the adult literacy rate has increased from 14.2 to 49 percent, in addition to the significant increase in basic education enrolment from 3 million in 1996 to 4.1 million in 2004 (UNDP, 2005). All these improvements, by all standards considered, are poor when compared to human development indicators in other developing countries. For example, the life expectancy and adult literacy rate in developing countries have reached 65 and 76.6 years of age respectively in 2003 (UNDP, 2005).

In summary, there are still many constraints facing human development in Yemen. The population growth and fertility rate are two of the highest rates in the world, with 3 percent per annum and 6.5 births per woman respectively (MoPHP, 2003) in addition to the high morbidity and mortality rates. Moreover, more than sixty five percept of the population are illiterate and there is poor enrolment in basic education (57%), especially for girls whose enrolment has not exceeded 38 percent (GoY, 2003).

Hence, all these factors discussed above and others not mentioned are still major challenges for human development in particular and socio-economic development in general.

Table 3-1 shows Yemen human development indicators compared with the MENA countries and the Least Developing Countries (LDC). At a glance, all the indicators show that Yemen falls behind the average development indicators in the MENA countries and close to the situation in LDC, with the exception of a better life expectancy rate.

Table 3-1 Indicators comparing Yemen with MENA and LDC countries

Indicator	Yemen	MENA	LDC
Annual population growth (%)	3.0	1.8	2.5
Life expectancy at birth	61	69	52
Infant mortality rate (per 1000 live births)	75	44	99
Under 5 mortality rate (per 1000 live births)	102	55	156
Adult Literacy rate (% ages 15^{+})	49	72	54
GDP per capita	$565	$2241	$580

Source: World Bank: World Development Indicators 2006; Republic of Yemen at a Glance 2005, Human Development Report 2005.

3.2.2 Role of health sector in development

It is not surprising to mention that improving the population health status would contribute significantly to poverty reduction and strengthen the socio-economic development. In other words, having a healthy and productive human capital is a basic input in economic growth development and increasing capital investment. Shown another way, reducing the burden of diseases such as malaria, malnutrition and other public health priorities in addition to an efficient use of public health care and available resources would lessen the burden on the economy. The following section will refer to the health care system development.

3.3 Health care system

This section describes the health care system within the context of socio-economic development and challenges as discussed earlier. It is intended to provide a basis for understanding the Yemeni health system within the context of the Middle East and North Africa countries. The section is divided into five subsections, including 'health status and healthcare', 'health delivery system', 'health system resources', 'health sector reform policy', and 'quality policy development'.

3.3.1 Health and health care

The health status of the Yemeni population is poor, and Yemen has been ranked at 141 out of 191 countries worldwide for the level of health (WHO, 2000). The health indicators show the population still suffer from high morbidity and mortality rates and a low percentage of population health services coverage. The latest Family Health Survey findings revealed that the infant mortality rate is 75 per 1000 live births, the under- five mortality rate is 102 per 1000 live births, and the maternal mortality rate is 365 per 100,000 live births (MoPHP, 2003). Moreover, although comprehensive data on low birth weight is lacking, a community-based survey showed that 19% of newborns have low birth weight, 46% of children are moderately or severely underweight, and 25% of women have a high nutritional deficit (WHO, 2003a).

Yemen is still in the early stages of an epidemiological transition as the morbidity and mortality rates from communicable diseases dominate that from non-communicable diseases. The most prevalent conditions are diarrhoeal diseases, malnutrition, complications of pregnancy, acute respiratory infections, and malaria (MoPHP, 2006, MoPHP, 2000a). According to WHO estimates (2003), one-third of all deaths amongst Yemeni children under-five years happen because of vaccine-

preventable diseases. In addition Yemen has one of the highest disease burden for measles and neonatal tetanus in the Eastern Mediterranean Region (WHO, 2003a).

The overall health service coverage is fifty percent of the population. It is higher in urban areas (80%) and lower in rural areas (20%), although three quarters (75%) of the population live in rural areas (MoPHP, 2006). This low health service coverage in rural areas might be due to several factors such as the rugged topography, inefficient management of public health resources, the limited resources allocated for primary health care, insufficient community participation, and the strong bias of health resources in favour of urban areas, especially for doctors and paramedics (Nasher, 2000).

3.3.2 Health delivery system

The health care delivery system in Yemen is a public and private mix with regards to financing and providing health care services (MPH&P, 2006). The public sector remains the main provider of health care at all health care system levels. Although the MoPHP runs most of the public sector facilities, the Ministries of Defense and Interior Affairs run their own hospitals and two self-controlled tertiary hospitals, namely, Al-Thawra and Al-Kuwait hospitals which are funded directly from Ministry of Finance (MoF).

The health care delivery system has been built traditionally into three levels, including primary, secondary, and tertiary levels. The primary level refers to the primary health care (PHC) which includes the public health programs services such as immunization, MCH, among others. The PHC services are usually delivered though the health centers and health units in addition to conducting community outreach services.

The secondary level is the level of health care services which are provided at district and governorate levels. These health services are hospitals based which distinguish them from the PHC services.The bed capacity of the hospital range from 40-60 for the district hospital and 100-200 for the governorate hospital. At the secondary level, hospitals provide mainly four major specialties, including general medicine, surgery, Obs. & Gyn., and pediatrics, taking into consideration the different levels of the specialties between the district and governorate level.

The tertiary care level is the top level of care. This level of care is delivered at the tertiary hospitals at national level. These hospitals are highly specialized in terms of having highly trained cadre and highly technological equipment. In addition to tertiary hospitals serving community, it provides a teaching and training setting for medical students and postgraduates. Most of these hospitals are in Sana'a and Aden city. On average, the hospital bed capacity is 500 beds each.

In addition to the public sector, there is a sizeable private health sector. It has been estimated that there are about 8,000 private health facilities and most of them are located in the major cities. Sixty percent of the population have access to the private sector facilities (MoPHP, 2006) but, the quality of health care in the private sector is questionable because of the absence of the government regulatory role in protecting the public and ensuring that the private sector provides quality of care up to standards (MoPHP, 2000a).

3.3.3 Health system resources

This subsection discusses the types and distribution of the health facilities and health manpower in addition to the sources of health financing and levels of expenditure.

3.3.3.1 Health facilities network

The number of health care facilities network has increased remarkably over the past three decades. For example, between 2000 and 2005, the number of hospitals have increased from 121 to 178 in 2005 (47% increase), health centres increased from 688 to 895 (30% increase), the health units increased from 1,818 to 2,730 (45.1% increase), and MCH centres increased from 241 to 460 (90% increase) (MOPIC, 2006). However, despite these noticeable increases in the numbers of facilities, there is a shortage of drugs, equipment, and manpower (see Table 3-2). Twenty six percent of the public facilities are without drugs and equipment while seventeen percent do not have an operational budget. As a result, on average, the existing public facilities provide only fifty percent of the health services required with the exception of the immunization, which is currently 84 percent (MoPHP, 2006).

Table 3-2 Shortages in the public health facilities

Indicator, 2003	**%**
Facilities without drug	26
Facilities without equipments	24
Facilitates without operational budget	17
Facilities without cadre	7
Average availability of health service	50

Source: (MoPHP, 2006)

3.3.3.2 Health personnel

There are currently 42,000 employees working in the public health sector in Yemen, and there are a total of 6,739 physicians and 1,3506 nurses in the health sector which represents a national ratio of 3.3 and 6.5 per 10,000 population respectively (see Table 3-3). The distribution of health personnel is disproportionate between urban and rural areas and between or within governorates; about 42 percent of physicians are concentrated in three governorates only (Sana'a, Taiz, and Aden). In Aden governorate for example there is one physician per 500 population and one nurse per 700 population, whilst in Aljawf and Amran governorates there is one physician per 40,000. Similarly, there is an even distribution among urban and rural areas to the disadvantaged of rural areas. Although the number of the health facilities in the urban areas constitute only twenty percent of the public health facilities, they have more than eighty percent of the available human resources (MoPHP, 2006).

Table 3-3 Health system resources

Indicator	No	Rate per 10,000 population	Year
Physicians	6,739	3.3	2004
Dentists	850	.4	2004
Nurses	1,3506	6.5	2004
Pharmacist	2,638	1.3	2004
Hospital bed	12,734	5.9	2004
PHC facilities [a]	2,696	1.4	2004

Source: WHO: World Health Statistics, 2006. [a]MoPHP (2006)

3.3.4 Health sector financing and expenditure

There are three sources for financing the health sector, including the government which represents the public health expenditure, private source which represents patient out of pocket payment, and foreign assistance(Nasher, 2000). Strikingly, the private payment constitutes the highest contribution (75%) in the health care costs as compared to only 25% from the government, taking in consideration that 10% of the government's contribution is from foreign assistance (MoPHP, 2000a).

In 2004, the total health expenditure was estimated at 1.4 percent of GDP and 3.5 percent of the government budget. Moreover, the overall health expenditure per capita was US $ 32, and the contribution of MoPHP expenditure per capita was only US $7 (MoPHP, 2006). Strikingly, the Yemeni patients bear more than 75% of the health costs, while the MoPHP contributes only 25% of the medical costs, taking into consideration that 10% of the health expenditure is from foreign assistance (MoPHP, 2000a). This situation means that Yemen has the highest share of private out of pocket expenditure on health in the MENA region countries.

Table 3-4 below shows the health expenditure levels in the MENA region as a percentage of the GDP in 2002. Yemen is the lowest (3.7%) spender on health compared to all the individual MENA countries, and the average health expenditure in the lower-middle income countries (5.8%). Likewise, concerning the public health spending, Yemen spends only one percent of GDP compared with public health spending in MENA regions and lower-middle income countries (2.9 and 2.5% respectively). Moreover, the health expenditure per capita in MENA regions is around $89, and in lower-middle income countries it is around $75, whereas in Yemen it is only $23 (WorldBank, 2006b).

Table 3-4 Health expenditure in MENA countries

Country	Health expenditure (% of GDP)			Health expenditure (US$ per capita)
	Public	Private	Total	
Algeria	3.2	1.1	4.3	77
Arab Republic of Egypt	2.4	3.6	6.0	79
Islamic Republic of Iran	2.9	3.1	6.0	104
Jordan	4.3	5.0	9.3	165
Lebanon	3.5	8.0	11.5	568
Morocco	1.5	3.1	4.6	55
Syria	2.3	2.8	5.1	58
Tunisia	2.8	2.8	5.1	126
Republic of Yemen	**1.0**	**2.7**	**3.7**	**23**
Middle East and North Africa	2.9	3.0	5.9	89
Lower-middle-income countries	2.5	3.3	5.8	75

Source: (WorldBank, 2006b)

3.4 *Health sector reform policy*

In1998, the MoPHP launched a health sector reform (HSR) program in response to serious challenges facing the government's health system. These challenges included lack of quality, efficiency, and accessibility of the present health care system. As a result, the long-term goal articulated in the HSR program to make the necessary changes in the existing system in meeting the health care needs of the Yemeni people (MoPHP, 2000a). In general, the HSR strategy concentrates basically on three inter-related policy areas, including improving effectiveness and efficiency of the management systems, decentralization of management and financial functions to district level, and redefining the role of MoPHP from provider services to a stronger policy and regulatory role. Box 3-1 below shows a brief description of the key components of the HSR program.

Box 3-1 Health sector reform policy objectives and reform elements

LONG TERM OBJECTIVES:

1. Adequate/universal access to health care services
2. Equity in both the delivery and eventuality the health care financing
3. Improved allocating and technical efficiency of the service delivery system
4. Improved quality of health services
5. System's long term financial sustainability

Key ELEMENTS:

- Decentralization of planning, decision making, and financial management.
- Redefining role of MoPHP, with a stronger emphasis on policy, regulation roles, and the smaller role as service provider for public health and preventive services
- District health system approach
- Community co-management of health systems
- Cost sharing
- Essential drugs policy, and realignment of the logistics system for drugs and medical supplies
- Decentralized, outcome-based management system from the central to the community level
- Hospital autonomy and eventual basic health facility autonomy
- Inter-sectoral co-operation
- Encouragement of responsible participation by the private sector and NGOs through appropriate policy design regulation
- Encouragement of innovation
- Sector wide approach to donor funding and programming

Implementation of the HSR strategy has two phases. Phase one is called the initiation phase that aims to test the feasibility of HSR components and learn from the practical experiences. In this phase the key aspects of the reform have been initiated, such as passing the key legislation, introducing the district health into 40 percent of districts, revising the financial system and bringing the major actors on board. Phase two is a five year *consolidation* phase in which the lessons learned in the initiation phase can be fashioned into long term systems, policies and regulations, and the remainder of the districts are brought into the health district system.

However, the HSR strategy may be seen as too ambitious if some factors are taken into consideration. The World Bank commented on the HSR as follows:

The proposed MOPH HSR program is evidently very ambitious. For example the period of the initiation phase was completed with little achievement. The program's long-term objectives are broad, the time frame of the phases is unrealistic, and the

key reform elements are all-inclusive with a lack of prioritization. In terms of feasibility, there was little consideration in the capacity required to implement, manage, and monitor the program. As for affordability, there was no reflection on the financial requirements and implications. The MOPH reform program would need to be scaled down to a more realistic and feasible level that takes into account the constraints in management capacity and financial resources within the country's political, economic, and social context (Worldbank, 2000).

Moreover, in 2004 the HSR program had been reviewed to evaluate the progress of the HSR. The review concluded that the HSR faced several constraints, and the most important of these constraints were that the MOPHP has been unable to turn the concepts of HSR document into an action plan. There was a weak ownership and commitment towards the reform program, the health authorities at governmental and district levels lacked the power to implement the regulatory role, and government health facility managers performed poorly because they lacked the authority to manage their health facilities autonomously. Hence, while the HSR program depends, to large extent, on donor support, especially the World Bank there was found to be a need for rethinking of the HSR program in terms of the affordability for translating the reform agenda into practice, otherwise the HSR will not achieve its long term objectives.

3.4.1 Quality policy development

In principle, the health rights of Yemen people are granted and guaranteed by the following constitution: "*Health care is a right for all citizens. The State shall guarantee this by building various hospitals and health establishments and expanding their care... the State shall guarantee social security for all citizens in cases of illness, disability" (GoY, 1994).* However, in practice, the quality and quantity of health care do not measure up to the constitutional guarantees. There are a number of factors facing quality improvement of public services including, amongst others, weak public

institutional capabilities, lack of public services administration, effectiveness and inefficient personnel performance, and no effective disciplinary measures and accountability which have been put in place due to absence of the rewarding and accountability system (MoPD, 2000).

The following section highlights the quality policy development at MoPHP from a different angle, including the quality of care, quality responsibility, quality policy and strategy

3.4.1.1 Quality of health care

The quality of health care is a predominate issue in the health policy documents. The former Minister, in his foreword to the HSR document, stated that *"Ministry of Public Health is in a deep crisis...the crisis is not only financial, but it is also a crisis* ***of quality of care****, and of accountability to the public. It has become clear that the system in place does not fit with the present realities in Yemen*" (MoPHP, 2000b). Similarly, the World Bank (2000) reported that there are a number of constraints which prevent the health care system from providing a good quality care; "*insufficient budget allocation for operation and maintenance especially for drugs and medical supplies... which is compounded by over-extension of health facilities beyond the government capacity to provide an adequate support.*" By the same token, Nasher (2000), the former health minister, stated that the quality of health care in the existing health care facilities was less than satisfactory(Nasher, 2000).

As a result, it is not surprising that many patients leave their home country to seek medical care abroad as they are not satisfied with the quality of care provided locally(Al-Surimi, 1999) .Thus, the notion of health care service quality has constituted one of the main long-term objectives in HSR strategy (MoPHP, 1998)

and this a central issue in all the Fifth health development plans (MoPHP, 2006, MoPHP, 2000a, MoPHP, 1995).

According to the recent administrative situational analysis of MoPHP (MOPHP/EU, 2004) the findings showed that there are a number of administrative problems facing the Ministry of Health, including the weakness of managerial functions particularly the gap between strategic planning and implementation, lack of an effective co-ordination and co-operation within Health Ministry's departments on one hand and between the Ministry and other health partners outside the Ministry on the other hand. Moreover, there is no committed personnel in terms of taking over the responsibility of duties and rights and accountability, including the supervision and monitoring tasks which are not clearly stated. In other words, there is practically no reward nor sanction mechanism in place. Moreover, the recruitment and promotion process is not transparent, i.e. selection is not necessarily qualification based but is 'relationship' based, and training need-assessment and selection of trainees are not always transparent processes, and no systematic approach is being applied for in-service training (MOPHP, 2004, Ovretveit, 2002b).

Thus, the quality culture in terms of continuous training, licensing medical professionals and accreditation of health care providers is missing, and there is also functioning quality management mechanisms is in place, public health services is not patient oriented, and quality is also not rewarded. Likewise, the organisation by-law of MoPHP (MoLA, 2004) gives no explicit indication to patients' and consumer's rights. Hence, one can argue that the quality concept is still premature in Yemen where even basic access and equality issues have not been reached yet and the public health system performance is poor in terms of quality and quantity of healthcare as perceived and illustrated by health indicators earlier.

3.4.1.2 Quality responsibility and structure

Quality responsibility at Ministry level is not clear, and there are a number of Ministry departments that are implementing different quality related activities (Al-Serouri, 2001). In these situations, confusion, duplications and disclaiming of the responsibility of implementing any quality policy initiative into practice is inseparable. For example, in 2002 the MoHPP has developed a promising National Health Quality Plan (NHQP), but the plan has not yet been translated into practice. Ovretveit, the consultant of the plan, in his consultancy report, stated that the main constraints of not progressing with the plan exist because more than one party is implementing quality activities in the ministry, and there is a lack of a clear executive structure with necessary power for action and the insufficient capacity of either the quality assurance department or other ministerial quality institutions to provide co-ordination, advice and training or to judge the capability of others to do so. In addition to this, low priority is given to the quality plan by the Minister or his responsible deputy (Ovretveit, 2005).

In 2002 Ovreitvet in his consultancy report suggested a framework for a national health quality plan, including quality structure for implementing quality policy. However, this proposal has not unfortunately been put into place. The following section presents the suggested quality structure.

- **National Health Quality Co-ordination Group (NHQG) -** The NHQC should take the responsibility of co-ordinating quality activities, stimulate quality initiatives, and advise the minister of health to progress with the quality plan. The NHQC member should include key partners with a commitment to improving quality.

- **Ministry health quality unit (MHQU) -** this unit should primarily take the strategic and adversity quality responsibility to make sure that quality is placed and kept within the line management structure extending from the Ministry through the governorate and district to each level of management at institutional level. This unit should not have a role in dealing with operational quality issues but should support and supervise governorates to help them take up their quality responsibility.
- **Quality support structure - Quality committees.** These committees should be formed at each level of health care systems including national, governorate, district, and institutional levels. The committees should report to the director of each level advising about quality issues and progression of quality projects.
- **The partners in health care -** this suggestion aims to share with other health partners in improving quality of care. These partners include professional bodies (medical and paramedical syndicates), health care associations (private hospital association), educational institutions (universities and health institutes), donors and NGOs, and any health related partners.
- **Quality assessment and regulation (self and external review) -** these methods include self assessment, peer review, certification, licensing, and accreditation. Consideration should be given to developing a system for receiving and investigating patient complaints, including strengthening patient and community participation in raising quality awareness.

3.4.1.3 Quality policy and strategy

In principle, the notion of health care service quality has constituted one of the main long-term objectives in the HSR strategy (MoPHP, 2000a), and a central issue in the Fifth Health Development plans (MoPHP, 2006, MoPHP, 2000a, MoPHP, 1995). In practice, the Ministry's quality policy development has gone through different experiences. Between 1999 and 2001, there have been some attempts in trying to improve quality of health care by developing standards and guidelines. For example, the Reproductive Health Directorate developed some guidelines and standards that cover most of reproductive health activities, such as counselling and family planning, and sexually transmitted diseases (STDs). However, these standards and guidelines have not been fully distributed to users, and are also not being implemented in health facilities (Attal, 2003b). This was found to have negative effects on the managerial, technical, and clinical aspects of the health services.

The second Five-Year plan for health development (2000-2005) mentioned 'quality assurance and improving performance' as one of its main strategies for improving the health sector performance. The strategy called for developing standards and norms for clinical, administrative and technical aspects of care on the one hand, and setting up a mechanism for monitoring and improving health services on the other hand (MoPHP, 2000a). Unfortunately, and because of many existing ministry departments implementing quality related activities which have caused duplication, confusion and conflicts, this strategy has not been implemented.

Hence, the Ministry of Health has started thinking of a national health quality plan (NHQP) to provide a framework for any quality improvement. The following section will discuss the NHQP initiative.

3.4.1.4 NHQP initiative

In 2002, the MoPHP developed a national health quality plan (NHQP). The NHQP development has been supported by an international quality consultant and was being sponsored by the European Union (EU). The overall aims of the NHQP were to outline the new institutions and support structures for quality improvement, to describe the role of partners of the MoPHP in improving health care quality, and to indicate the first steps to be taken and responsibility for action.

The NHQP listed the quality improvement strategy options, including the quality standard base approach, quality assessment approach (certification, accreditation, and licensure), quality problem solving approach, patient and community focused services approach and the quality management cycle approach. However, between 2002 and 2004 no action was taken by ministry officials or quality committee to proceed with the experiment project and no action was taken by the ministry on any of the other recommendations provided by the consultant for taking the strategy forward (Ovretveit, 2005).

Unfortunately, what is being implemented from the NHQP is only an experiment project of establishing the 'Quality Management System' (QMS), as a pilot project in a district hospital while other components of the NHQP are not being implemented. The pilot project is being implemented as it is sponsored by the donor, i.e. the EU. The main constraints of not moving forward in implementing the NHQP components are the low priority given to quality by the ministry's leadership and the lack of existing executive structure which is responsible for quality improvement at national level. In addition there is a weak institutional capability of the ministry to translate the health policy initiatives and decisions into action (MoPHP, 2006).

3.4.1.5 Other quality improvement initiatives

There have been some quality improvement initiatives which are being sponsored by donors. For example, GTZ (German Technical Advisory Program), launched a quality initiative called the quality improvement project (Siponen and Va?lima?ki). This project has been fully funded and managed by GTZ. The overall aim of SIP is in improving quality of curative services in the health centers and health units in the GTZ target districts. The SIP has been designed to be implemented through three phases, including phase one which is conducting baseline surveys to identify the current problems and setting priorities for intervention. Phase two is developing and implementing the intervention strategies, while phase three is the post intervention follow up, monitoring and evaluation (GTZ, 2002).

The baseline surveys showed that the most quality problems are related to management, clinical practice, poor drug services, and weak community participation. The project has made good strides in implementing a quality improvement intervention aimed at improving clinical services quality of PHC. However, the project ceased at mid-point before reaching the third phase of impact evaluation due to financial constraints from the donor, and the SIP was therefore not sustained. Hence, the problem with donor derived projects is sustainability of the projects after the donors ceases or withdraws funding. Generally speaking, most donor-driven projects collapse after donors leave the project, and the most apparent reason for this is due to a lack of existing effective mechanisms for co-ordination between the donors and the ministry of health. Hence, without strengthening the institutional capability of the ministry to take over initiatives driven by donors, these projects is at risk of collapsing.

3.4.2 Patient involvement in the quality policy development

In theory, patient satisfaction and consumer protection are central issues in the health policy documents, especially the HSR and the Fifth plans for Health Development. Until this present study was conducted, there were no patient satisfaction surveys done in Yemen which explored patients' perspectives on quality of health care. The anecdotal evidence showed that patients are dissatisfied with the quality of health care provided at all health care delivery system levels (Al-Serouri, 2004). The high rate of passing PHC to higher level care, which has been estimated to be between 35 and 75%, is another indication of the level of quality care (Nasher, 2000).

Additionally, in the NHQP and HSR documents, the concerns about patient dissatisfaction and quality of care was expressed apparently as motives for improving quality of health care and the NHQP has also listed 'patient and community participation' as one of quality improvement strategy options. The patient's views on quality policy development may well be a very important means of helping to identify the quality improvement priorities from different perspectives rather than the quality expert and health professionals and managers. Thus, it is time to question patients and listen to their perceptions of quality of care. Hopefully, the study will bring the patients' perception of quality to inform policy makers and health care providers about other quality improvement policies and strategies.

3.5 Summary of the key findings

Box 3-2 Key findings summary

Socio-economic development:

Yemen is still classified as a least developed country; per capita income is less than US$ 600, forty percent of the population live on the national poverty line and nearly a fifth of the population live in food poverty. Thus, the socio-economic development would be a major determinant for improving health status in Yemen. The most current development challenges are poverty, low human development, population growth, and weakness of institutional capacity.

Health care system:

- The population's health status is poor and mortality and morbidity rates are high. The health system is mixed public and private funding with limited resources in terms of human, facilities, and level of health spending and expenditure.

- Quality is a major concern for policy makers and health providers. These concerns have been reflected in most of the health policy documents. However, most the quality policy documents such as the NHQP and standards and guidelines developed have not yet been translated into action.

- There are a number of constraints which hinder the quality policy to move forwards, such as low priority given to quality by ministry leadership, lack of existing clear organisational structure for quality management at national level, and no real political commitment in terms of allocation of resources for quality improvement have been articulated. In addition, there is no clear quality vision for quality policy improvement.

- Quality responsibility is scattered among many ministry departments. As a result, the quality policy development initiatives, especially the NHQP, have not been implemented and have ended up as just a policy document on the shelf.
- The quality improvement initiatives are donor driven projects. Most of them have ceased or on the way to collapsing. The reasons are varied and include a lack of ownership of these projects by the Ministry of Health, absence of developing an effective co-ordination mechanism between the donors and the responsible party to take over these projects when the donor withdraw.
- Dissatisfaction with quality of care is a central issue in most of the health policy development documents. However, the views of patients are a neglected issue in health policy development, especially in the quality policy document. The NHQP document reflects the experts and professionals views on quality policy development but there is no mention of the patients' views in these documents except that the patients and community could be one of the quality improvement approaches.

Chapter Four: Study Methodology

4 Overview

The study methodology chapter is divided into four main sections. Section 4.1 describes the quantitative methods used for conducting a survey of patients' perception of quality hospital care and a survey of hospital professionals' and managers' views on quality management system development at hospital level. Section 4.2 describes the qualitative method used for exploring the situation of quality policy development at national health policy level, i.e. Ministry of Public Health and Population (MoPHP). In general, each section covers the study setting and time, study population and sampling, the instruments used for data collection, the data collection procedure, the pilot study and its outcomes, and the methods of data processing and analysis. The chapter concludes with describing the data quality assurance measures (Section 4.3) and the study's ethical approval (Section 4.4).

4.1 Quantitative methods

This section describes the study methodology used for conducting patients' perception survey of quality of hospital care and survey of professionals and managers views on the existence of quality management systems in the study hospitals. The section is presented in two independent sub-sections, including the methodology of patient perspective survey and methodology of professionals and managers survey.

4.1.1 Patients' perspective survey

4.1.1.1 Study setting and time

The study was carried out at four central public hospitals in Sana'a city, the capital of Yemen. These hospitals were Al-Thwra General Hospital, Al-Kuwait University Hospital, Al-Jomhoury General Hospital and Al-Sabeen Specialist Hospital. These

hospitals were chosen as they represent the main referral national public tertiary hospitals and are being used for academic teaching purposes and assumed to be providing good quality of health care. Also, their sources of finance are the same (Ministry of Finance) and are being technically supervised by the Ministry of Health. Thus, they share similar constraints in terms of resources deficiency, management style, and organisational structure. The researcher restricted the study to the tertiary hospitals base on the assumption that if the tertiary hospitals do not have any quality management system in place, it is unlikely to be introduced into the secondary and primary care level s as anecdotal evidence shows that the bypassing rate from primary and secondary care levels to the tertiary level is high (43%-75%) due to the poor quality of secondary and primary care levels. The study time was conducted during June, 2004.

4.1.1.2 Study population and sampling

The study population was made up of all patients who were seeking medical care during the study period, including both out-patients and in-patients. There were no specific exclusions for selecting from the study population.

The sample size was calculated using Statcalc in Epi-Info 6. The sample size was based upon an expected dissatisfaction rate of 50% (conservative point) with a 95% confidence interval of ± 10% marginal error; given a figure of 100 subjects, in addition to 20% of an expected non-response rate. The final sample size was 120 out-patients and 120 in-patients to cover all aspects of hospital care.

The sampling technique employed was the consecutive sampling technique, that is, after finishing interviewing with the first interviewee, the next available patient was selected for interview and so on until the required sample size were achieved. The

interviews were conducted with the patients as they were leaving the hospital out-patient clinics, and also those who were ready to leave the hospital in-patient ward.

4.1.1.3 Data collection

For the purpose of this study, interview questionnaires were used. The questionnaires were adapted from an existing patient questionnaire that was developed by WHO/EMRO and has been used elsewhere. Hence, these questionnaires were adopted as they have been developed by a 'technical quality group' for ME region countries, included Yemen, and have been recommended to be used in region countries (WHO, 1996). Furthermore, in the pilot study for checking the suitability of the questionnaires in the Yemeni local context, the findings showed that all participants had a good understanding of the questionnaire items. Moreover, to ensure having a valid content study instrument, the questionnaires were first translated from English into Arabic by the researcher and then translated back from Arabic to English by a qualified person who had not seen the original English version. The consistency between the two versions was crossed-checked for any discrepancies that may have arisen due to the translations. Finally, the differences were resolved so that the Arabic version was consistent in meaning with the English version. This is a well validated procedure known as back-translation. The mode of administration of the questionnaires was the interview technique with the respondents as most of them were less educated. Two questionnaires were used, one questionnaire for out-patients and the other for in-patient care. Each questionnaire had a certain number of sections, and each section contained questions or phrases relating to a particular aspect of care process. The description of the questionnaire structure as follows.

4.1.1.4 Outpatient questionnaire

The out-patient questionnaire consists of three sections. Section one has eight questions about the characteristics of the respondents and the services. Section two has nine questions concerning patients' perception of services types provided at out-patients. Section three has 17 items (quality scale) assessing patient experience with quality of out-patient care aspects in addition to one independent question for rating the overall quality of hospital outpatient. The quality scale was the 4-point Likert scale (poor, acceptable, good and excellent). Finally, one open-ended question asked for any comments or suggestions that the patients wished to express about their visit to the hospital out-patient clinics, which would enhance the meaning of the quantitative data (see Appendix 4.1).

4.1.1.5 In-patient questionnaire

The in-patient questionnaire consisted of four sections. Section one referred to the demographic characteristics of the respondents and the characteristics of services, both were used as explanatory variables. Section two included 43 phrases and statements which dealt with aspects of the in-patient experience. The quality items were rated on a the 4–point Likert scale (poor, acceptable, good and excellent) distributing among seven specific in-patient services areas, including admission services (3 items), emergency services (4 items), nursing care (11 items), medical care (9 items), food services (5 items), housekeeping service (4 items), and hospital environment and facility services (7 items), in addition to one independent question for rating the overall quality of in-patient care. Section three included questions about recommendation of the hospitals to others, patient expectation about the care before admission, and expected improvement of their health status on the admission. Finally, there was one

open-ended question asking for any comments or suggestions the patients wished to express about their hospital stay (see Appendix 4.2).

4.1.1.6 Data collection process

4.1.1.6.1 Research team set up and pilot study

In addition to the principal investigator, the research team consisted of eight research assistants (4 male and 4 female) who were recruited and trained beforehand. The aim of the training was to make the team fully aware of the research topic and objectives and to enhance their skills to undertake scientific interviews in order to achieve consistent and trustworthy data. The period of training was over two consecutive days, and the training consisted of several sessions and employed different techniques of training such as role play. On the final day of the training, the time and place of conducting the pilot study was specified and a schedule was prepared for conducting the pilot study.

Prior to the actual collection of the data for the main study, a pilot study was conducted to test the feasibility of the data collection methods in terms of questionnaires length, clarity of wording and phrasing to the interviewee and also the interviewer. In addition, the pilot study aimed to explore the research environment and the willingness of respondents to take part in the study. Twenty four participants were interviewed; 12 out-patients and 12 in-patients. Afterwards, the data collected were entered into a computer and were analysed. The results of the responses were discussed with the supervisors to identify items that were not producing useful information, and the content of the questionnaire were modified accordingly. Minor changes were made, such as rephrasing of some statements to make them easier for the respondents to understand and re-ordering of items in order to ensure a logical sequence of the items.

The pilot study was conducted in a different hospital from the four that were selected for the study.

4.1.1.6.2 Data collection procedure

The research assistants were distributed among the study hospitals, and in each hospital there were two interviewers; one male and one female. The interviewers attended their respective hospital from 8 am to 12 noon very day, which was the official working time of the hospitals. Each interviewer was responsible for interviewing six patients per day; three out-patients and three in-patients. The time of the interviews ranged between 15-20 minutes. Every other day the researcher met the team to discuss the daily issues and any problems which arose from the data collection process and the completed questionnaires of the previous day were collected, and blank questionnaires for the next two days were given out. These meetings helped to keep the work going smoothly and any problems were solved as they arose from day to day.

4.1.1.7 Data processing and analysis

All questionnaires were checked by the principal researcher before they were entered into the computer. SPSS programme version 12 was used for both entering and analysing the data. Firstly, simple statistics such as frequency distribution, percentages and descriptive statistics, including cross-tabulation were done. Then statistical significant tests were used as appropriate. The factor analysis using the principal component analysis (PCA) and Varimax rotation were applied to identify the underlying satisfaction structure with quality of care. The details of using PCA are described in detail in the Results chapter. The multivariate analysis using regression methods were performed to examine the effects of the independent factors (individual quality components) on the overall quality rating of hospital care. This

technique allowed the development of a model of quality components that have the greatest impact on the overall quality rating of hospital care and the amount of variation in the overall quality rating that could be explained by this model.

4.1.2 Professionals and managers views survey

4.1.2.1 Study setting and time

The survey was done in the same hospitals as the patient survey. The survey was conducted one month after the patient survey and extended from June to July 2004.

4.1.2.2 Study population

The study population were the professionals and administrative staff who were working in the hospitals under study during the time of conducting the study. "Professional" refers to clinicians, nurses and technicians, while "administrative staff" refers to the managers and their deputies and heads of departments and their deputies.

The study targeted all the study population. Three hundred questionnaires were distributed and 150 useful questionnaires were returned, (see appendix 4.3). The strategy of distributing was to cover most of the professionals and administrative staff. The questionnaires were distributed by the principal researcher himself, who personally visited the respondents to hand out the questionnaires.

4.1.2.3 Data collection instrument

The data collection instrument were a questionnaire adapted from a previously validated questionnaire that was developed elsewhere (Wagner et al., 1999). This questionnaire was primarily developed to assess the existence of quality management system components. The questionnaire had been modified, tested and piloted to suit the local situation. Here again "back translation" was used to develop the Arabic version of the questionnaire.

The questionnaire consisted of 61 indicators clustered under six main focal areas relating to the quality management system components. The main components are the quality policy document indicators, the standards and protocol, the human resources management, quality organisation structure, patient participation in QA activities and quality improvement methods (see Appendix 4.4). The validity and reliability of the questionnaire is described in the Discussion chapter.

4.1.2.4 Data collection procedures

Before carrying out the main study, a pilot study was done to test the applicability of the method. Twelve questionnaires were distributed to the target group of administrative and professional staff, and their responses were reviewed for completeness and consistency. When the responses to questions showed inconsistency or questions were regularly not answered, the questions were modified. The results were discussed with the supervisors. As a result, one question had been replaced by an open-ended question instead of a close–ended question to avoid social desirability as the pilot study findings showed there was over reporting of using a different quality improvement method when they do not really exist.

The following procedures were followed to collect the data from the field:

- Contacting the hospital administration to get their approval and permission to conduct the fieldwork.

- Appointing a focal person in each hospital to assist the principal researcher in distributing the questionnaire and collecting the complete questionnaires.

- Distributing the questionnaires amongst the hospitals staff, including the administrative and professionals, via visiting the participant at her or his office and to introduce the researcher and the focal person, then the researcher would

respondents role in taking part in this study, and finally a questionnaire inside an envelope was handed to each participant.

- Following up the study participants by both the researcher and the focal person to remind them to complete questionnaire and hand it back to the focal persons. For those who said they had lost their questionnaire, another questionnaire was given to them.

- The researcher visited the hospitals at regular intervals during data the collection, in order to answer any question and to collect the completed questionnaires.

4.1.2.5 Data processing and analysis

All data collected had been checked for completeness, and were entered into the computer by the principal researcher himself using SPSS version 12 for entering and analysing the data. The data were then analysed; statistics such as frequencies and percentages, along with descriptive statistics, including cross-tabulation were performed.

4.2 Qualitative methods

4.2.1 Data collection and sampling methods

The data collection method was an in-depth interview, a using semi-structured interview guide. In-depth interviews provided the opportunity to explore issues in detail in addition to uncovering ideas or experiences that were not anticipated at the outset. However, the validity and relevance of the data collected relied on the interviewer's skills and techniques. The topic guide included a list of core open-ended questions relating to the research objectives and several sub-questions to help the interviewer probe for more detail and to clarify the meaning of interviewee's responses A potential source of bias in the in-depth interview data is usually the personal characteristics of the interviewer; being an outsider and the answers given might not correspond with what the participants actually thought or do. This is seen as a risk inherent in any research involving qualitative methods (Sofaer, 2002).

Seven key informants had been purposefully selected and interviewed. It was assumed that these informants would be better at articulating their information and experiences about quality policy development at national level. The inclusion criteria for selecting the key informants included:

- being in their position for at least 2 years;
- begin the middle management level and above; and
- have previous experience and involvement in quality policy issues at national level.

The principal investigator himself conducted the in- depth interviews in Arabic using a semi-structured guide (see appendix 4-5). The interviews took place in the interviewee's office and were tape recorded with the participant's permission.

Table 4-1 gives the background information about the key informants who were interviewed. All informants were male, except for one female, and all of them have at least a bachelor degree or above. The key informants consisted of six general directors; one deputy minister, one head of quality department and two project officers who were working for a donor funded quality project (see Table 4-1).

Table 4-1 Characteristics of the key informants

ID	Code	Gender	Position	Main duties
1	QHD	M	HD	Head of the Quality Assurance Department.
2	GDMS	M	GD[1]	General Director of Medical Services.
3	GDHPU	M	GD[2]	General Director of Health Policy Unit.
4	DMPHC	M	DM[3]	Deputy Minister of Primary Health Care sector and ex-General Director of the Health Policy Unit.
5	MSSIP	M	PO[4]	Project officer of Services Improvement, a project sponsored by GTZ.
6	GDRH	F	GD	General Director of the Reproductive Health and Family Planning.
7	GDCP	M	GD	General Director of Community Participation and the representative of the Yemen Quality Committee in the Health Council of the Gulf States.

[1]Head of Department, [2]General Director, [3]Deputy Minister, [4]Project officer

4.2.2 Data processing and analysis

4.2.2.1 Framework approach

The in-depth interviews data were analysed manually using the principle of grounded theory and the framework approach (Ritchie and Spencer, 1994). The transcripts were coded and managed using Microsoft word processor. A thematic framework was

devised using the framework approach (see Box 4.1 below). The themes and categories for analysis were derived primarily from the transcripts, prior identified issues, and interview guide and study objectives. A list of coding index were developed and applied to the whole dataset. The framework approach typically consisted of five key stages of analysis.

Box 4-1 Five stages of data analysis using the framework approach

Familiarization	Immersion in the raw data, listening to tapes, reading through transcripts, studying notes, getting a feel for the data and emerging themes.
Identifying a thematic framework	The process of identifying all the key themes and concepts by which the data can be coded and referenced. The end product is a comprehensive coding index.
Indexing	Applying the thematic framework to all transcripts systematically, annotating the textual data codes from the index.
Charting	The process of developing individual matrices for each key theme and entering coded sections of text (plus identifiers) into appropriate charts.
Mapping and interpretation	Using the charts to map the range and nature of responses, create typologies, identify associations between themes, and attempt explanation.

Source: Adapted from (Ritchie and Spencer, 1994) and (Pop and Mays, 2000)

4.2.2.2 Primary analysis steps

The processes of data analysis were derived through the following steps; bearing in mind that the finding categories and themes were developed through the iterative process including:

- Listening repeatedly to the recorder in order to become familiar with the responses and to assimilate with the content of the interview,
- Transcribing the recorded material into transcripts using Microsoft Word processing,

- Individual document files were coded using the copy and paste command,
- The researcher read and re-read the individual transcripts and took notes during reading of the about possible themes and ideas which emerged from the data set,
- A thematic framework were constructed using prior issues from the original topic guide and emerging concepts from reading the transcripts,
- Indexing of the transcripts using the prepared index cards,
- During the indexing phase, regular comparisons were made to help identify all the data that were relevant to each category and theme,
- Gathering and charting the index cards of related categories into key themes, and
- Writing up the findings.

4.3 Data Quality assurance

Several measures were established to ensure the quality of the data collection and analysis processes in order to maximise the reliability and validity of both quantitative and qualitative data. Reliability refers to consistency or reproduction of the data. The reliability of the quantitative method (scales or indices) is relatively straightforward to establish statistically (see the Discussion chapter, Section 6.1.2), but some may argue that the nature of the qualitative methods (especially the flexible approach used for in-depth interviewing) limits the extent to which reliability can be measured. However, it is recommended to attempt to establish the reliability of the qualitative analysis process to ensure that critics cannot argue that the findings were based on the subjective judgment of one researcher (Pope et al., 2000). The reliability of qualitative findings is presented in the Discussion chapter, Section 6.1.3.

4.4 Ethical approval

The Ethics Committee of the Liverpool School of Tropical Medicine and the Ethics Committee of the Yemen Ministry of Public Health and Population approved the study. Following approval of the study, the respective hospitals administration gave permission for the study to be conducted.

The aim of the study was explained and the confidentiality and privacy of the participants were assured. Participants were informed that their participation was entirely voluntary and any person who felt uncomfortable with being interviewed was free to withdraw or to leave at any time without question. In addition, consent was sought before interviewing the participants.

Chapter Five: Results

5 Overview

The results are presented as two separate sections, distinguishing quantitative and qualitative findings. Section 5.1 presents quantitative findings including, on the one hand, the results of the survey of patients' perceptions of hospital care quality together with out-patients and in-patients views and, on the other hand, the results from the survey of health professionals and managers on quality management system development in hospitals.

Section 5.2 presents qualitative findings that cover the situation analysis of health quality policy development at national level from the point of view of the policy-makers and senior managers in the Ministry of Health.

Each section starts by giving an overview of the results and then goes on to present the findings under the following heading and sub-heading.

5.1 Quantitative Findings

Here the findings of quantitative data analysis are presented based on the data analysis plan as outlined in the Methods chapter. It is divided into two sub-sections; Section 4.1.1 presents the findings from the patients' perception surveys of hospital care quality including out-patients and in-patients, and Section 4.1.2 presents the findings from the survey of professionals and managers in which their views were sought on the development of quality policy within the Yemen hospitals health service.

This survey employed internationally validated and reliable self-administered questionnaires which had been used elsewhere, as described earlier in the Method

chapter. The link between the two sections is that each section complements the other as the first section attempts to shed light on the patients' perspective on hospitals health care quality provided and the second section presents the views of professionals and managers about the current quality management system development in the hospitals under study.

5.1.1 Patient survey

The patient survey findings are presented in two main subsections; Section one show the findings of the out-patients survey and section two shows the findings of in-patients survey.

5.1.1.1 Out-patient care

In five subsequent sub-sections, the following are described:

- The characteristics of the responders,
- The services characteristics and type of out-patient services provided,
- The patients' perception of out-patient services and their perception of the quality of out-patient services,
- The components of the quality dimensions of out-patient care, and
- The determinants of the overall quality rating of out-patient care.

5.1.1.1.1 Respondents' characteristics

The analysis of the demographic characteristics of the out-patient survey respondents showed that the mean age of responders was 25.2 years and the median was 23.5 years, while more than two-thirds of the responders were in the age categories of < 20 and >20-30 years old. The proportion of females was more than males (58.8% vs. 44.2%). About 37% of respondents were illiterate, 24.2% had primary school level, and 20.0% had secondary school level while the university educational level

constituted only 10%. Strikingly, almost half of the respondents (45.9%) had no formal schooling (see Table 5-1 below).

Table 5-1 Characteristics of respondents

Characteristics	No.	%
Sex:		
Male	53	44.2
Female	67	55.8
Age (years)		
<20	44	36.7
20-30	42	35.0
>30	34	28.3
Education level		
Illiterate	44	36.7
Read and write	11	9.2
Primary school	29	24.2
Secondary school	24	20.0
University and above	12	10.0

5.1.1.1.2 Service characteristics

The services characteristics referred to 'source of care', 'frequency of visits during the last 12 months', 'waiting time spent in out-patient clinic', 'consultation time with doctor', and 'the reasons of visiting the out-patient clinic'.

As shown in Table 5-2, more than half the respondents (55.5%) reported that these hospitals were the main source of their medical care. Just over one third (32.5%) of respondents had made one visit to the out-patient clinic during the last 12 months ,about another one third (30.2%) visited the out-patient clinic four times or more, and the remainder of the respondents expressed their frequency visit ranging between two and three visits during the last 12 months. One third of the respondents (33.3%) waited less than 30 minutes before being seen by a doctor and 14.2 % waited between 1 hour to 1.30 minutes. On the contrary, one quarter (24.4%) of the respondents saw the doctor without the need to wait.

The consultation time with doctor was roughly divided equally between patients who spent <5minutes, 5-9 minutes and 10 minutes or more (37.5%, 32.5%, and 30% respectively). More than one third (34.5%) of the out-patient visitors had acute illness followed by chronic illness (27.7%) while, as was expected, those who expressed child care and accident as the reason for their visit constituted the lowest percentage (2.5% vs. 4.2%), (see Table 5-2 below).

Table 5-2 Characteristics of services

Characteristics	No.	%
Hospital is usual source of care		
Yes	66	55.5
No	54	44.5
No. of visits during the last 12 months		
One visit	39	33.6
Two visits	29	25.0
Three visits	13	11.2
Four and more	35	30.2
Waiting time in OPD		
0 (no waiting)	29	24.2
<30 minutes	40	33.3
30-1hour	34	28.3
1h-1.30 minutes	17	14.2
Time spent with doctor		
<5 minutes	45	37.5
5-9 minutes	39	32.5
>=10 minutes	36	30.0
Reason for visit		
Acute illness	41	34.5
Chronic illness	33	27.7
Maternal care	20	16.8
Child care	5	4.2
Accident	3	4.2
Other reasons	17	14.3

5.1.1.1.3 Out-patient services type

The respondents were asked about the types of health services provided at out-patient clinics, and Table 5-3 below shows the distribution of respondents according to whether or not they received nine specific medical services. Table 5-3 shows that out of 118 respondents only 27 (22.9%) reported that they received a complete physical examination, while 91 (77.1%) did not, and 54.3 % reported they received a 'Lab. test', 44.2% received 'X-ray examination' and 23.5% reported they had been 'referred to specialist' compared with 17.3% who had been 'referred to admission'. Nearly three fifths of the respondents reported receiving 'an explanation about their condition or treatment' and 'reassurance and relief of worry' and the chance to 'participate in decision making of their care plan' (59.3%, 61.9% and 61.3% respectively) (see Table 5-3 below).

Table 5-3 Perception of out-patient service type provided

Service aspect	Received	Not received	No. of responses
	%	%	
Complete examination	22.9	77.1	118
Specific medication	51.5	48.5	101
Lab. Test	54.3	45.7	116
X-ray examination	44.2	55.8	113
Referral to specialist	23.5	76.5	115
Referral to admission	17.3	82.7	110
Explanation about condition or treatment	59.3	40.7	118
Reassurance and relief of worry	61.9	38.1	118
Participation in decision about care	61.3	38.7	119

5.1.1.1.4 Perception of out-patient health care

Patients' perceptions and expectations of out-patient care were explored by comparing the patients wishes for services with whether they actually received those services or not. Nine out-patient services were included in this exploration, including 'complete examination', 'specific medication', 'Lab. test, 'X-ray examination', 'referral to specialist', 'referral to admission', 'explanation about condition and treatment, 'reassurance and relief of worry', and 'participation in decision about care plan'.

Table 5-4 shows the percentage of patients who desired and received services compared to those who desired but did not receive them. Generally speaking, the percentage of those who received their desired services were less than those who did not get their desired services. For example, a complete physical examination was desired and received by only 15.3% of the respondents (18 out of 118), and those who desired but had not received by 50% (59 out of 118) (see Table 5-4)

Table 5-4 Percentage of desired and received services to desired but not received

Service type	Desired and received		Desired but not received	
	No.	%	No.	%
Complete examination	18	15.3	59	50
Specific medication	48	47.5	27	26.7
Lab. test	53	46.5	27	23.3
X-ray examination	36	31.9	16	14.2
Referral to specialist	22	19.1	51	44.3
Referral to admission	19	17.3	15	13.6
Explanation about condition or treatment	65	55.1	42	35.6
Reassurance and relief of worry	71	66.2	41	35.6
Participation in decision making about care	70	58.8	41	34.4

The service types were classified into two groups, including technical versus interpersonal aspects of care. A cross-tabulation was then employed to explore the significant difference between those who 'desired for and received services' compared to those who 'desired for but did not receive'. The services that related to interpersonal aspect of care showed no significant differences. However, statistically significant differences between "desired for" and "receiving" a given service were found with services related to technical aspects of care (see Table 5-5).

No difference due to the respondent's demographic characteristic were found except for sex which had a statistical significant difference with respondents who desired to receive a service, but not with those who actually received the services.

Hence, these results demonstrate that there is a gap between what patients expect and what they thought they actually received, and this may be due to the fact that the desired services were deemed to be unnecessary from the professionals' point of view. If this was the case, then efforts would need to be directed towards bridging this gap by either providing the necessary services or effectively communicating with the patients to manage their expectations for unnecessary services.

Table 5-5: Differences between perception of desired and actually received services and desired but not actually received services

Care aspect	Service type	Desired and received the service (%)	Desired but not received the service (%)	P-value
Technical aspects	Complete examination	66.7	64.8	0.86
	Specific medication	92.3	55.1	0.00
	Lab. Test	85.7	50.9	0.00
	X-ray examination	72.0	25.4	0.00
	Referral to specialist	81.5	58.0	0.03
	Referral to be admitted into hospital	100.0	16.5	0.00
Interpersonal aspects	Explanation about condition or treatment	92.9	87.5	0.35
	Reassurance and relief of worry	97.3	93.3	0.37
	Participation in decision about care plan	95.9	89.1	0.26

5.1.1.1.5 Quality perception of out-patient care services

The quality of out-patient services were assessed by asking patients to rate a set of quality indicators. These indicators are related to the process of the particular services provided, such as 'competency and attitude of staff', 'time spent with doctor', 'waiting time for services', 'availability of services', including drugs, laboratory services, and other out-patient services.

For this purpose, quality scoring scale ranges were used, from bad (score = 0) to excellent (score = 3). A simple quality score was calculated for each aspect of the out-patient service which was being evaluated. This quality score was calculated as a percentage of the maximum score that the particular indicator could achieve. In each case the maximum score achievable was 3 × the number of responders who provided valid responses. The actual score received was calculated as the sum of the number of responders giving a particular rating × the value for the rating.

Hence the quality score was calculated as the actual score divided by the maximum score. For example, the quality score for "courtesy of doctor" was (39 x 3) + (56 × 2) + (18 × 1) + (7 × 0) divided by (120 × 3) which is 68.6 (see Appendix 5-1 for the distributions of the patients' responses on each indicator).

Table 5-6 shows the distribution the respondents' quality rating of out-patient care and Figure 5-1 shows the overall quality scores of out-patient quality indicators. As shown below, the overall quality scores varied considerably according to which aspects of out-patient health care was being assessed. Across all items rated by out-patient patients, the average overall quality score of services was 53.9. The highest scores achieved were under 'courtesy of doctors' and 'doctor's concern on patient as a person' (68.9 and 66.1 respectively) but even 6% and 3% of the patients thought the quality was "bad". The lowest score was given to the 'availability of drugs'

(15.0) with only 4% of respondents judging it to be excellent. Also amongst the low scores were 'the extent of seeing the same doctor each time', 'follow up of doctor on previous visit', and 'adequacy of number of chairs in waiting area' (27.2, 28.9, and 34.5 respectively).

Table 5-6 Quality rating perception of out-patient care

Aspect of care	No. of responses	Excellent %	Good %	Acceptable %	Bad %	Overall Score
Courtesy of doctor	120	32.5	46.7	15.0	5.8	68.6
Doctor's concern about patient as a person	120	24.2	53.3	19.2	3.3	66.1
Doctor's explanation about medication use	119	20.2	44.5	21.8	13.4	57.1
Doctor's giving patient the chance to participate in care plan	118	23.7	40.7	24.6	11.0	59.0
Doctor's thoroughness in examination	116	13.7	19.0	45.7	21.6	40.6
Time spent with doctor	119	20.2	33.6	33.6	12.6	53.8
Competence of doctor in diagnosis and treatment	117	21.4	42.7	29.1	6.8	59.5
Courtesy of nurses and other staff	119	20.0	42.5	18.3	18.3	55.4
Clinic hours	117	11.1	35.9	34.2	18.3	45.3
Waiting time in clinic	116	13.8	28.4	33.6	24.1	43.6
Availability of drug	120	4.2	10.0	11.6	74.2	15.0
Availably of laboratory facilities	119	17.5	24.1	20.8	36.6	40.9
Availability of comprehensive services	120	18.3	26.7	35.0	20.0	47.8
Extent of seeing the same doctor each time	120	9.7	15.8	22.0	52.5	27.2
Follow up of doctor on previous visit	120	10	17.5	21.7	50.8	28.9
Cleanliness of clinic	119	22.7	46.2	22.7	8.4	61.1
Adequacy of number of chairs in waiting area	116	8.3	22.2	30.0	35.8	34.5
Overall quality rating of hospitals out-patient services	120	13.3	40.0	41.7	5	53.9

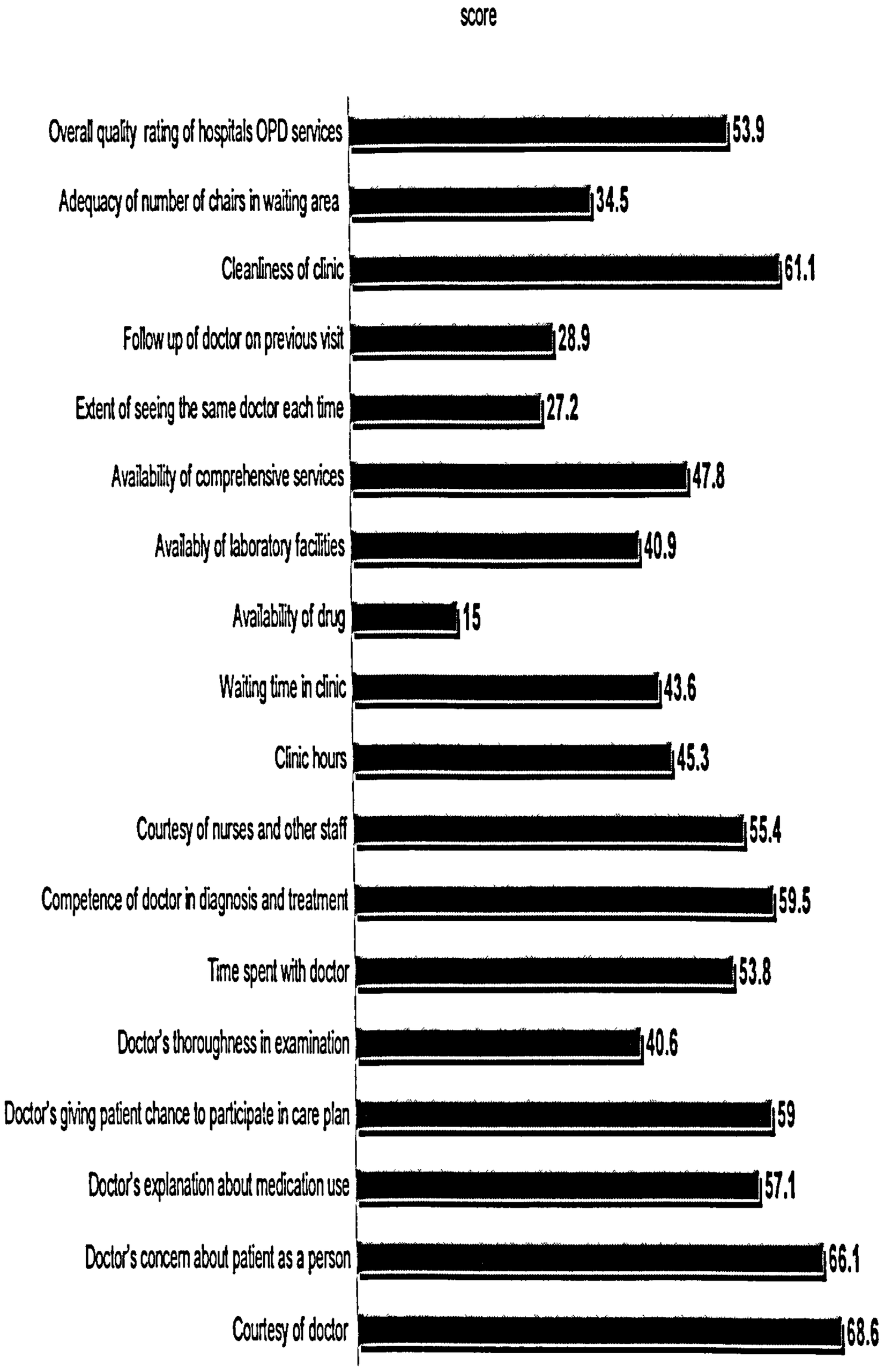


Figure 5-1 Quality scores of out-patient health care aspects

5.1.1.1.6 Quality dimensions of out-patient care

There were seventeen items which measured the patients' perspective on the quality of the health care received at the hospital out-patient department. In order to simplify the analysis of these variables, factor analysis were employed to identify the components structure underlying patients' perspective towards quality of health care rendered using the Principal Component Analysis (PCA)[3] method and Varimax rotation.

Prior to performing the PCA, the suitability of data for factor analysis was assessed. The inspection of the correlation matrix revealed the presence of many coefficients of ±.3 and above, the Kaiser-Meyer-Oklin was .7 exceeding the recommended value of .6 (Kaiser.1970, 1974) and the Bartlett's' test of Sphericity (Bartlett, 1954) reached the statistical significance, supporting the factorability of the correlation matrix.

Then, PCA was performed and produced five components[4], including components A though E, explaining 28%, 12%, 9%, 8%, and 6% respectively of the variance in overall quality rating of out-patient care. These five components were accounted for by approximately 63% of the total variance. That is, approximately 37% of the variance in the scale items were not explained by the five common components (see Table 5-7). Then, the extracted components were rotated orthogonally to enhance the association of items with the components. The loading of items was distributed among the components and were ordered ascendingly in each extracted component.

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[3] PCA is a statistical procedure summary which aims at identifying the pattern of relationship among many observed variables or scale items. It summarises many variables or items into a small set of manageable components (Tabachnick &Fidell, 1989, Pallant, 2005).

[4] The cut-off of point for detaining components was the value of Eige-values greater than 1, in other words, unless a component extracts at least as much as the equivalent of one original variable, it is omitted. This criterion was proposed by Kaiser (1960).

Hence, the quality scale items assigned to a particular component had the higher loading factors (±.40) on that component and the lower loading factor on the other components in the matrix (see Appendix 5-2). The extracted components were labelled as follows:

- Component (A) *"technical care quality"*,
- Component (B) *"availability of the services"*,
- Component (C) *"continuity of care"*,
- Component (D) *"physician behaviour"*, and
- Component (E) *"services responsiveness"*.

The following section describes briefly the content of the five components.

5.1.1.1.6.1 Description of quality dimensions components content

As the goal of using PCA was to identify the common components underlying various dimensions of patients' perception of quality of care provided, the content of each component is explained as follows:

- Component A- the three items with high loading are 'competency of doctor', 'being time spent with doctor' and 'nurse and staff courtesy'. The content of these items suggests that most the component's items pertain to technical quality services. This component, therefore, has been labelled as "*technical care quality*".
- Component B- has items with high loading of 'Lab. test availability', 'comprehensiveness of the services' and 'clinic hours'. The content of this component suggests that the shortage of providing services at out-patient clinics might be one reason of lowering quality ratings of the services. Therefore, this component is labelled "*availability of services"*.

- Component C- has the highest loaded items for 'seeing the doctor on each visit' and 'following up by doctor on previous visit', and this component has been labelled as "*continuity of care*".
- Component D- holds the highest loading items pertaining to 'doctor's courtesy', 'doctor's concern' and 'doctor's explanation'. This component structure suggests naming the component as "*doctor's behaviour*".
- Component E- has the items with a high factor loading, including 'thoroughness in examination' and 'availability of drugs'. Therefore the component has been labelled as "service responsiveness". It is worth mentioning that "availability of the drug" item refers to the responsiveness of hospitals in terms of to what extent the patient got the drug from a patient point of view, and does not necessarily measure the actual availability of drugs at facility level. In addition, this component had only two items, and as a result, it had low Cronbach Alpha (.48).

Table 5-7 Quality scale items and quality component dimensions with the variance explained and reliability coefficient

Component name and item	Factor Loading	Variance explained (%)	Cronbach's alpha
Technical care quality		28	.70
Waiting time in clinic	.735		
Doctor's competence	.651		
Nurse and staff courtesy	.625		
Time spent with doctor	.480		
Clinic cleanliness	.419		
Availability of services		12	.72
Lab. Test Availability	.782		
Comprehensive services availability	.687		
Clinic hours	.672		
Continuity of care		9	.73
Seeing the same doctor each visit	.837		
Follow up by doctor on previous visit	.806		
Doctor's behaviour		8	.64
Doctor's courtesy	.663		
Doctor's explanation	.591		
Doctor's concern	.559		
Patient participation in the care plan	.524		
Services responsiveness			
Drug availability	.799	6	.48
Thoroughness in examination	.630		
% of the overall variance explained	**63**		

5.1.1.1.7 Association of demographic and services characteristics with quality dimensions of out-patient care

This section describes the association between quality rating scores of the quality component dimensions of out-patient care and respondents and services characteristics. In this section, only significant results will be presented and the details of the whole findings will be appended in the appendices list (see Appendix 5-3).

The analysis revealed that the difference in mean scores of the 'technical care quality' component was not statistically significant in relation to sex, age, and educational level, but the difference in the mean scores were statistically significant associated with services characteristics such as 'waiting time' (P<01).

Likewise, the difference in the mean quality scores of the '*availability of the service'* component showed no statistical association with respondents characteristics, but were statistically associated with some of the services characteristics such as 'source of care' and 'waiting time' (p< .01 vs. p<0.02).

The relationship between the *'continuity of care'* component and the respondents and services characteristics revealed that there were no statistical significant relationship between the difference in means quality scores and either respondents nor service characteristics while the *'doctor's behaviour*' component was unrelated to the respondents characteristics but was significantly associated with 'consultation time' (p< 0.01).

The differences in mean quality scores of the '*responsiveness of services' component* demonstrated no statistical difference due to either respondent's nor services characteristics. Hence, it is noticeable that the most difference in quality rating scores of quality component dimensions of out-patient care had no association with

respondents' variables but there was association with service characteristics, especially 'waiting time' and 'source of care'.

5.1.1.1.8 Determinants of overall quality ratings of hospital outpatient care.

In order to identify the probable determinant factors of overall quality rating of out-patient care, regression analysis was employed. The results are presented as regression model[5] in which the overall quality rating is explained as weighted association of the factor analysis components. R-value of the model indicates the amount of the variation in the overall quality rating of out-patient care that is explained by the quality components included. The impact of each component can be estimated from the value of the 'Beta coefficient' and its statistical significance (p-value). The model is responsible for of 38% of variance in the overall quality rating of out-patient care. This amount of variance was found to be statistically significant (F=13.7, P<000).

Table 5-8 shows the results of the regression analysis in the form of the ' β-coefficient' and the associated p-values for the five underlying components regressed against the overall quality rating score. The importance and contribution of each component is signified by value of the β-coefficient coefficients. The largest β-coefficient (.41) was for 'services availability' followed by 'technical care quality' (.39). This means that these two components make the strongest unique contribution in explaining the overall satisfaction with quality of out-patient care provided.

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[5] **Overall quality rating** = .39 × 'Technical care quality' +.41 × 'Availability of services' + .10 × 'Continuity of care' + .13 × 'Doctor's behaviour' +.07 × 'Service responsiveness'.

Table 5-8 Determinant factors of overall quality ratings of out-patient care

Quality components	β-coefficient	p-value
Technical care quality	.39	.00
Availability of services	.41	.00
Continuity of care	.09	.19
Doctor's behaviour	.13	.01
Services responsiveness	.07	.35

5.1.1.2 In-patient care

This section refers to hospital in-patient care, and the respondents' characteristics and services characteristics are presented. The section then presents the quality perceptions of in-patient care services, including 'Emergency services', 'Admission services', 'Nursing care services',' Medical care services', 'Food services', 'Housekeeping services' and 'Environment and facility services', in addition to the perception of the overall quality rating of in-patient services. The section concludes by presenting the quality component dimensions of in-patient care and the determinants of the overall quality rating of hospitals in-patient service.

5.1.1.2.1 Respondents' characteristics

The demographic variables included in the questionnaire were age, gender and education level. These factors were included as previous studies have indicated that these variables have an effect on patient's levels of satisfaction.

As shown in Table 5-9, the mean age of the respondents were 28.9 years, and the vast majority fell into the 20-30 years and >30 years of age categories, and the female percentage were more than males (54.5% vs. 45.5%). Almost two fifths of the

respondents were illiterate (38.3%), and a small number had a university degree (5.2%). Again, the findings showed over two thirds (62.6%) of respondents had no formal schooling. It is worth noting that this is consistent with the overall situation of education level in the study country which is characterised as having a high illiteracy rate.

Table 5-9 Characteristic of respondents

Characteristics	No.	%
Sex		
Male	54	45
Female	66	55
Age category		
<20	33	28.8
20-30	35	30.4
>30	47	40.8
Educational level		
Illiterate	44	38.3
Read and write	28	24.3
Primary school	20	17.4
Secondary school	17	14.8
University and above	6	5.2

5.1.1.2.2 Services characteristics

The service characteristics are presented in Table 5.10 below. The mode of admission into hospital was found to be equally distributed through either the emergency department or out-patient clinics. More than half of emergency patients (55.9%) waited less than half an hour to be seen by a doctor while the rest of the

respondents (44.1%) had to wait more than half an hour to be seen by a doctor in the emergency room.

For those who were admitted through the out-patient clinics, just over one third (36.6%) of respondents reported that they had to wait more than 5 days to be admitted into hospital while the majority of the rest of them had to wait less than 5 days to be admitted into a hospital.

The average time between the admission office and arrival to the ward was 2.2 hours (SD 2.3 hour), on the other hand, half (50%) of the respondents reported that they had waited more than 2 hours, and nearly one third (28.3%) had waited less than half an hour to complete their admission procedure.

On admission, more than two fifths (44.3%) of the respondents expected a better standard of service, nearly one third (29.6%) expected the same standard of services, while just over one quarter (26.1%) expected getting worse service. However, despite the poor level of quality, more than half of the patients felt their condition had improved a great deal compared with only 6.6% who felt that their condition had not improved, and over two-thirds (68.6%) of discharged patients said they would recommend these hospitals to their relatives or friends. The distribution of the respondents were Medicine (22.3%), Surgery (30.8%), Obs. & Gyn. (14.2%), Paediatrics (15.8%), and others (5.8%).

Table 5-10 Characteristics of in-patient care services

Characteristics	No.	%
Mode of admission		
Emergency room	60	50
Out-patient clinic	60	50
ER waiting time to be seen by doctor		
<30 minutes	33	55.9
30minutes -1huor.	13	22.0
>1hour	14	22.1
Time spent in ER (3.79hr)		
<1hour	26	43.3
1-4hurs	23	38.3
>4hours	11	18.4
Waiting for admission through OPD (Median = 3days)		
One day	13	21.7
2 days	12	20.0
3-5 days	13	21.7
>5 days	22	36.6
Time between admission office and arrival to ward		
<30 minutes	17	28.3
>1-2hours	13	21.7
>2 hours	30	50.0
Expectation about care		
Expected better services	51	44.3
Expected same standard	34	29.6
Expected worse service	30	26.1
Improvement of condition		
Improved a great deal	65	54.2
Improved a little	47	39.2
Did not improve at all	8	6.6
Recommending hospital to the others		
Yes	83	69.2
Probably	27	22.5
No	10	8.3
Ward type		
Medicine	37	30.8
Surgery	40	33.4
Obs. & Gyn.	17	14.2
Paediatrics	19	15.8
Others	7	5.8

5.1.1.2.3 Quality perception of hospital in-patient care

5.1.1.2.3.1 Emergency services quality

The quality of emergency services was assessed by four indicators, including:

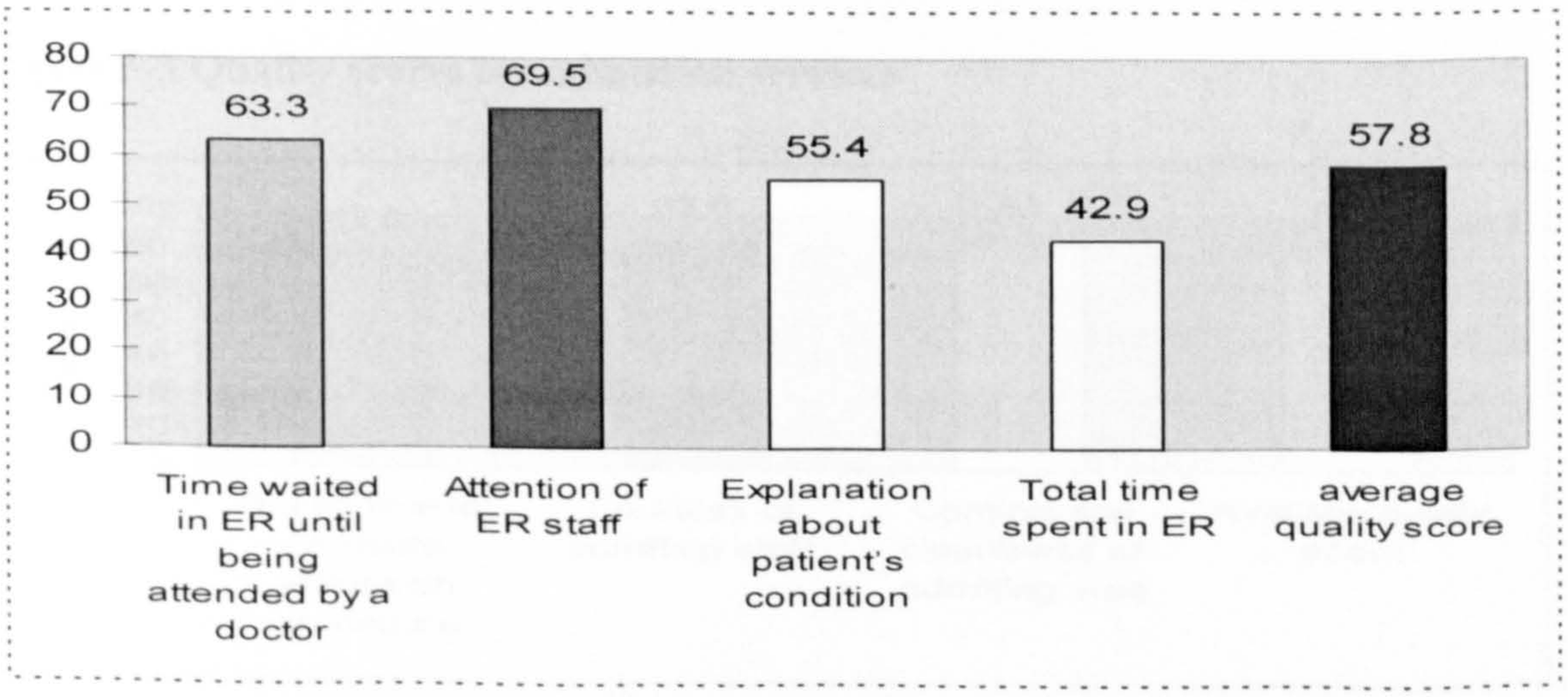
- "Waiting time in emergency room"
- " Time spent with patient"
- "Attention of emergency staff to patients"
- "Explanation of condition to patient"

Table 5-11 shows the patient perception of quality of emergency services. The overall quality score of emergency was 57.8 compared with different aspects of emergency services such as "attention of ED staff", which had the highest score (69.5), and the "total time spent in emergency" which had the lowest score (42.2) (see Figure 5-2).

Table 5-11 Quality of emergency department service

ED service indicator	No. of responses	Excellent %	Good %	Acceptable %	Bad %	Score
Time waited in ER until being attended by a doctor	59	39.0	30.5	11.9	18.6	**63.3**
Attention of ER staff	59	37.3	39.0	18.6	5.1	**69.5**
Explanation about patient's condition	59	17.5	47.4	24.6	10.5	**55.4**
Total time spent in ER	59	22.0	18.6	25.5	33.9	**42.9**
Overall quality score						**57.8**

Figure 5-2 Quality scores for emergency department services



5.1.1.2.3.2 Admission services quality

Three indicators were used to assess the quality of admission services. These indicators assessed the respondent's perception of quality of admission services, including:

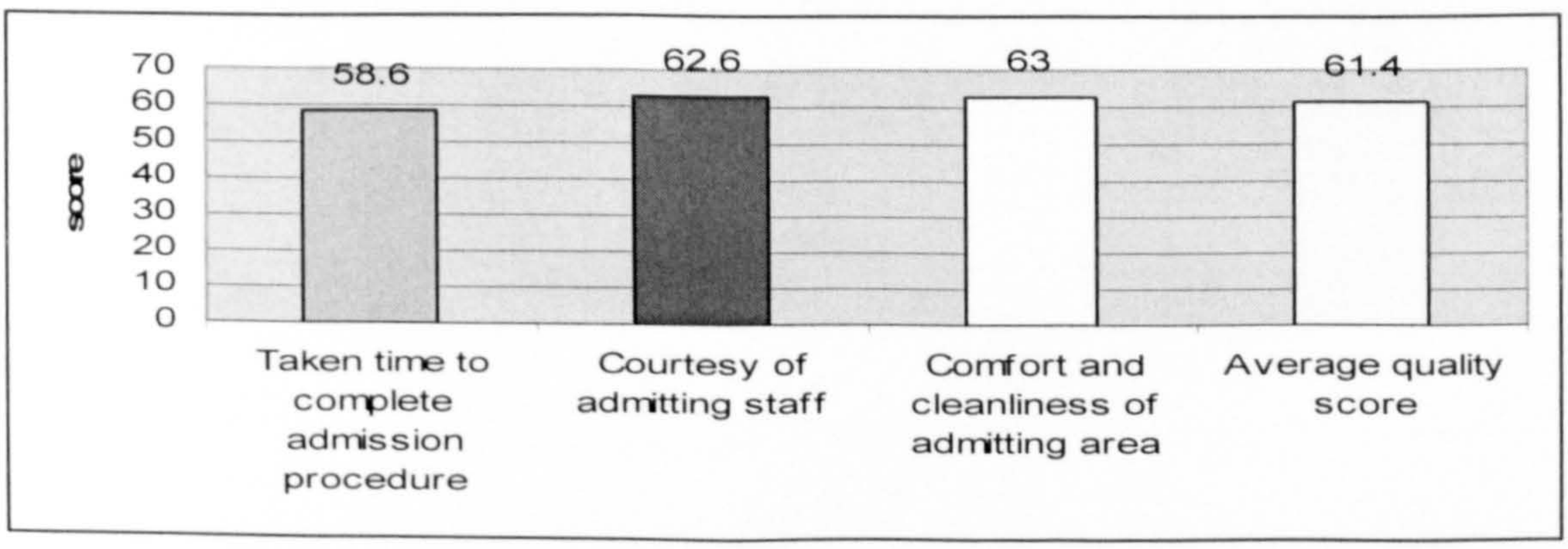
1. "Time taken to complete admission procedure",
2. "Courtesy of admitting staff",
3. "Comfort and cleanliness of admission waiting area".

As shown in Table 5-12, the respondents gave admissions services an overall quality score of 61.4. The highest score was given to "courtesy of admitting staff" (62.6) whilst the lowest score was given to the "time taken to complete admission procedure" (58.6) (see Figure 5-3). For these items 18% and 10% of patient respectively thought the service quality was "bad" (see Table 5-12).

Table 5-12 Quality of admission services

Admission quality indicator	No. of responses	Excellent %	Good %	Acceptance %	Bad %	Score
Taken time to complete admission procedure	120	30.8	31.7	20.0	17.5	**58.6**
Courtesy of admitting staff	115	23.5	47.8	21.7	7.0	**62.6**
Comfort and cleanliness of admitting area	119	30.3	38.7	21.0	10.0	**63.0**
Overall quality score						**61.4**

Figure 5-3 Quality scores for admission services



5.1.1.2.3.3 Nursing care quality

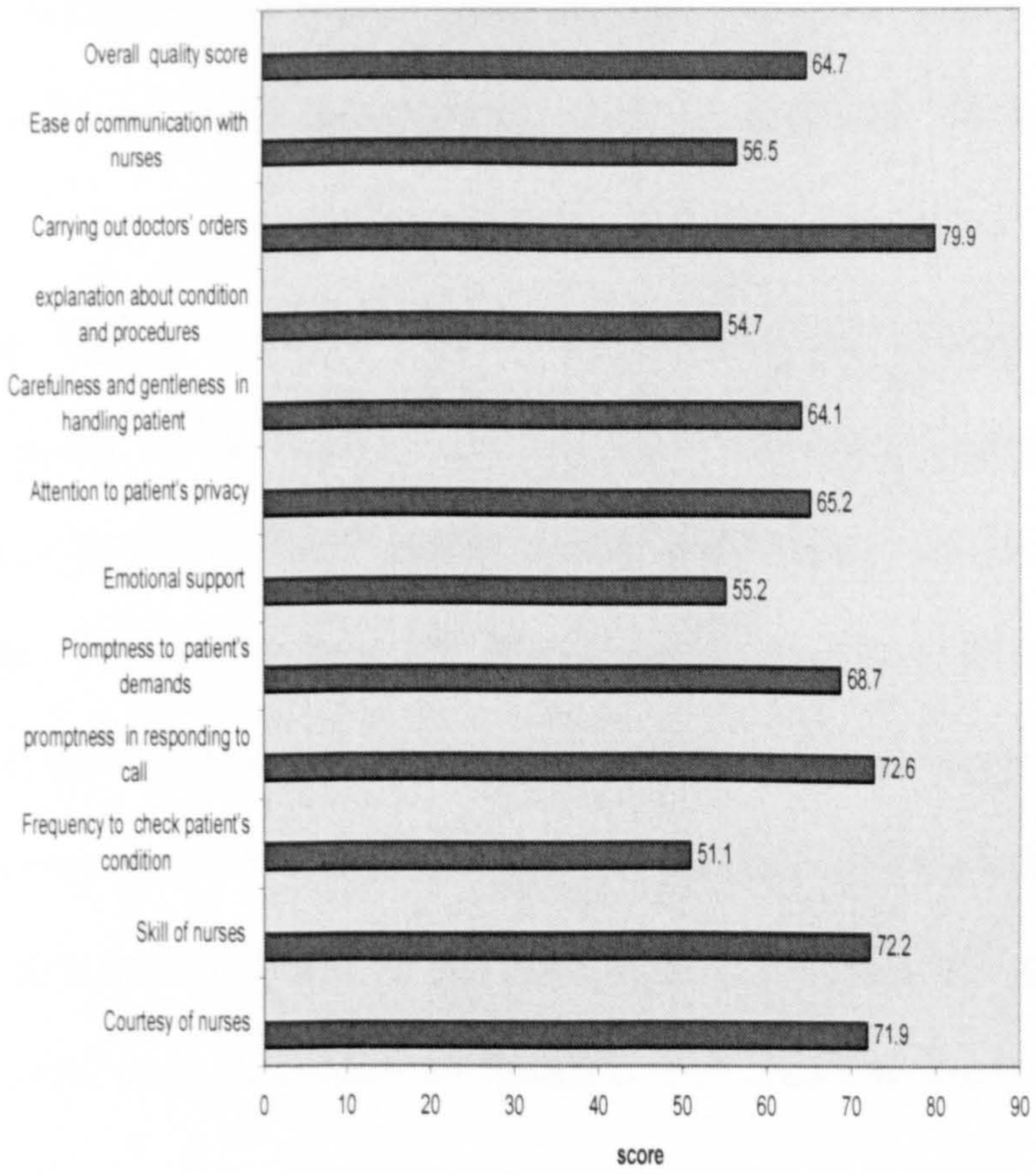
The quality perceptions of nursing services were assessed using 11 indicators. These indicators assessed the quality of nursing services provided regarding the 'nurses' attitude', 'the manner in which service was given', 'nurses responding to patient's needs', 'the explanation given about condition and procedure', and 'the communication of nurse with patient'.

As shown in Figure 5-4, the overall quality score of nursing services was 64.7 compared with the score of each separate indicator, including "the promptness of nurses in responding to patient's call" (72.6) and "skills of nurses in patient care" which had the highest quality scores (72.2). The lowest scores were given to 'frequency of nurse to check patient's condition' (51.1) followed by 'explanation about condition and procedure' (54.7), 'emotional support' (55.2) and 'ease communication with nurse' (56.5). Moreover, nearly one fifth (17.9) of respondents thought the quality of 'nurse explanation about condition and procedure' was "bad". Likewise, fourteen percent of patients rated quality of 'emotional support' and 'ease of communication with nurse, as "bad" (see Table 5-13).

Table 5-13 Quality of nursing services

Nursing care quality indicator	No. of responses	Excellent %	Good %	Acceptance %	Bad %	Score
Courtesy of nurses	120	40.8	36.7	18.3	4.2	**71.9**
Skill of nurses	120	35.0	48.3	15.0	1.7	**72.2**
Frequency of nurse check to patient's condition	120	33.3	35.0	21.7	10.0	**51.1**
promptness in responding to call	118	40.7	42.4	11.0	5.9	**72.6**
Promptness of patient's demands	117	35.0	41.1	18.8	5.1	**68.7**
Emotional support provided	119	18.5	42.8	24.4	14.3	**55.2**
Attention to patient's privacy	115	27.0	48.6	17.4	7.0	**65.2**
Carefulness and gentleness of in handling patient	115	28.7	42.6	20.9	7.8	**64.1**
Nurse explanation about condition and procedures	117	23.1	35.9	23.1	17.9	**54.7**
Carrying out doctors' orders	116	51.7	37.9	8.6	1.8	**79.9**
Ease of communication	118	28.0	35.6	22.0	14.4	**56.5**
Overall quality score						**64.7**

Figure 5-4 Quality scores for nursing care



5.1.1.2.3.4 Medical care quality

The quality of medical care services were assessed using nine indicators. These indicators assessed the patients' views on 'the doctor's attitude and humanness', 'the manner in which services were provided', 'competency of doctors in diagnosis and treatment', 'availability of doctors when needed', 'doctor's respect for patient privacy' and 'quality of instruction given to patient on discharge' for both self-care and follow up.

Table 5-14 and Figure 5.5 below shows the distribution of patient's quality perception and scores of the medical care rendered. The overall quality score for medical services was 67.1. These quality scores were varied across all the nine quality indicators. The highest score (77.3) was given to 'courtesy of doctor', while the lowest (50.3) quality score was given to 'availability of doctor when needed'. By the same token, more than forty percent of patients reported quality of 'thoroughness in examination' as either acceptable or bad (18.1% vs 12.1%), and the 'availability of doctor when needed' and 'frequency of doctor's visit' rated as "bad" (20.8% and 14.3% respectively),

Figure 5-5 Quality scores for medical care

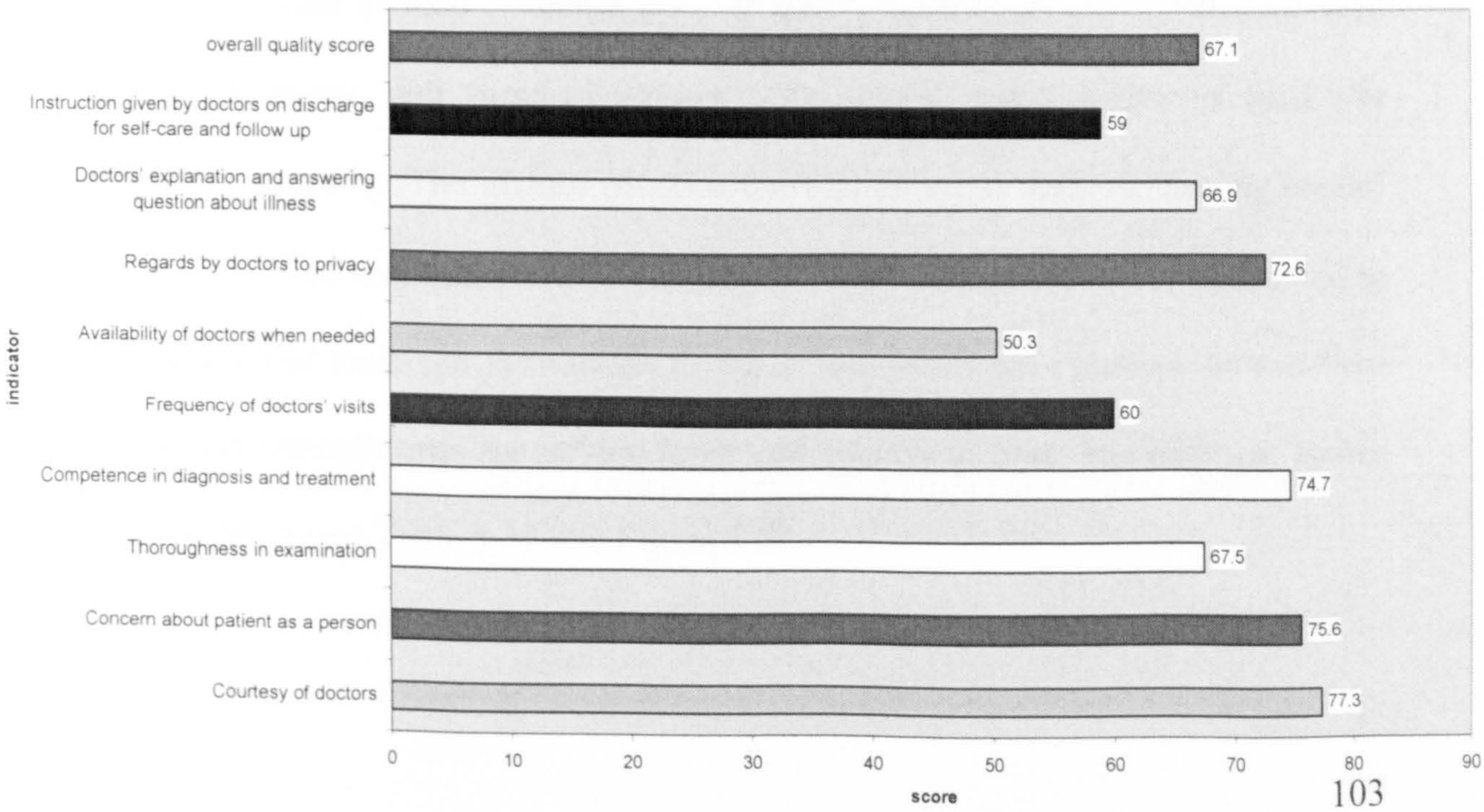


Table 5-14 Quality of medical care services

Medical care quality indicator	No. of responses	Excellent %	Good %	Acceptance %	Bad %	Score
Courtesy of doctors	118	50.8	33.9	11.9	3.4	**77.3**
Concern about patient as a person	119	51.8	28.0	16.9	3.3	**75.6**
Thoroughness in examination	116	46.5	23.3	18.1	12.1	**67.5**
Competence in diagnosis and treatment	120	45.4	37.0	14.3	3.4	**74.7**
Frequency of doctors' visits	120	31.1	31.9	22.7	14.3	**60.0**
Availability of doctors when needed	120	19.2	28.3	31.7	20.8	**50.3**
Regards by doctors to patient's privacy	120	35.8	40.0	15.9	8.3	**72.6**
Doctors' explanation and answering question about illness	120	34.2	38.3	20.0	7.5	**66.9**
Instruction given by doctors on discharge for self-care and follow up	120	24.2	33.3	26.7	15.8	**59.0**
Overall quality score						**67.1**

5.1.1.2.3.5 Food services quality

The quality of food services were assessed using six indicators. Respondents were asked to rate the quality of food services received according to the fowling indicators: "taste of food", "temperature of food", "quality of food", "utensils used for serving meals, and "time of serving". The overall score quality of food was relatively low (55). The highest (61.2) score was given to "time of serving meals" but only 7.7% of respondents rated this item as "bad". The lowest score was given to 'temperature of food' (48.1) although 13.5% of responders gave the item an excellent rating, and 'utensils used for serving food' and 'quality of food' had both low scores (53.2vs. 54.1) (see Table 5-15 and Figure 5-6).

Figure 5-6 Quality scores for food services

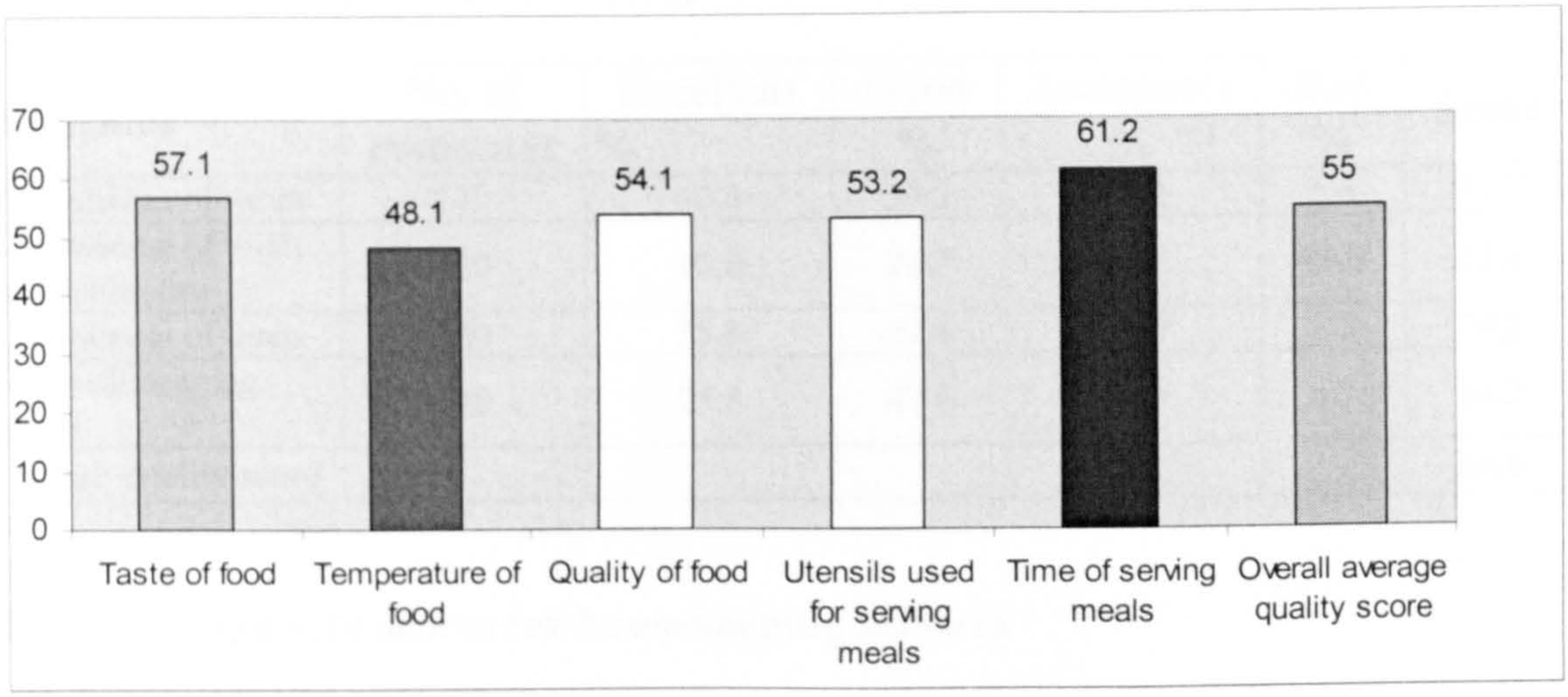


Table 5-15 Quality scores of food services

Quality Indicator	No. of responses	Excellent %	Good %	Acceptance %	Bad %	Overall Score
Taste of food	104	20.2	45.2	23.1	11.5	**48.8**
Temperature of food	104	13.5	35.5	32.7	18.3	**53.9**
Quality of food	104	16.3	38.8	33.7	11.5	**54.1**
Utensils used for serving meals	104	17.3	39.4	28.9	14.4	**53.2**
Time of serving meals	104	24.0	43.3	25.0	7.7	**55.1**
Overall quality score						**55**

Note: 16 respondents reported that they did not eat hospital food.

5.1.1.2.3.6 Housekeeping services quality

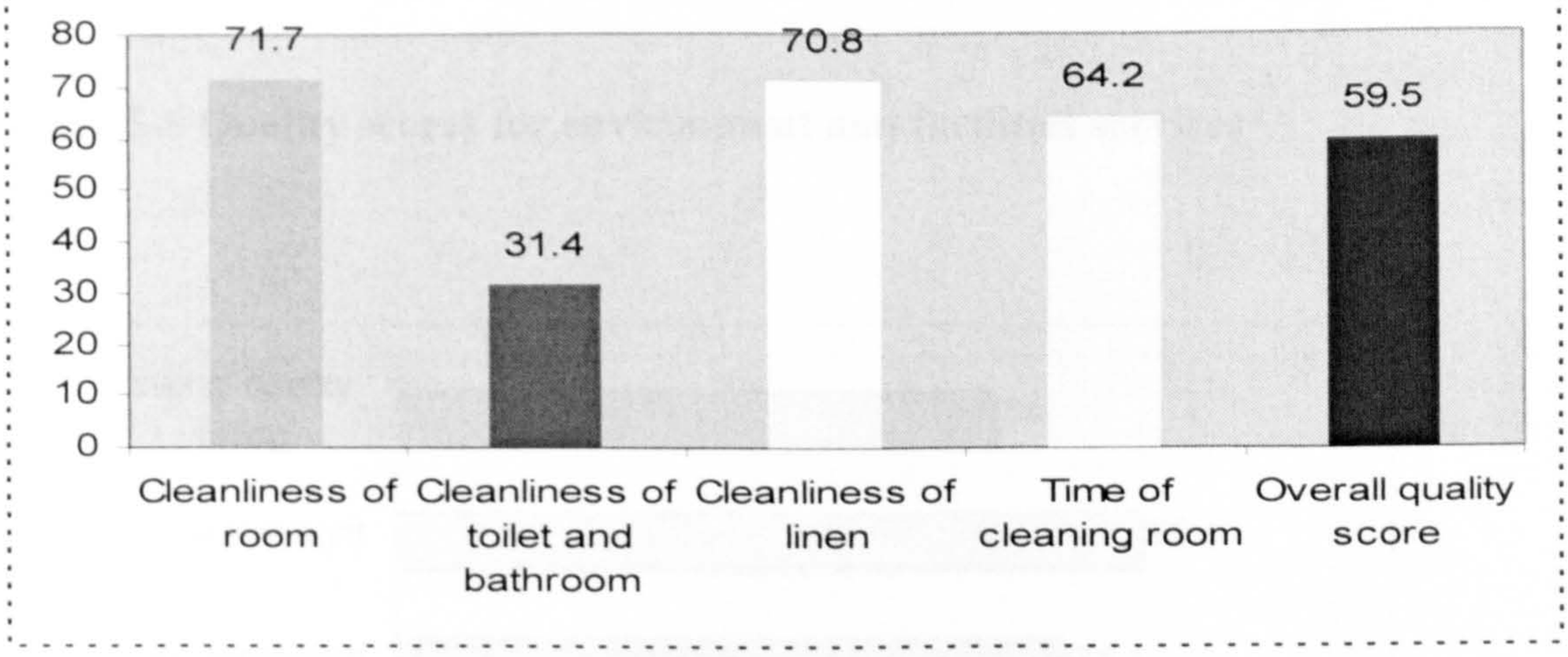
Four quality indicators were used to assess quality of housekeeping services, and these indicators included 'cleanliness of room', 'cleanliness of toilet and bathroom', 'cleanliness of linen', and 'time of cleaning room'.

The 'Cleanliness of toilet and bathrooms' gave the lowest quality score (31.4) amongst the housekeeping services items, with nearly more than half (49.2%) of respondents reporting the quality of this item as "bad", whereas the quality of "Cleanliness of room" had the highest score (71.7). Overall, the quality score for housekeeping services collectively reached 59.5 (see Table 5-16 and Figure 5-7).

Table 5-16 Quality of housekeeping services

Indicator	No. of responses	Excellent	Good	Acceptance	Bad	Score
		%	%	%	%	
Cleanliness of room	120	40.8	39.2	14.2	5.8	**71.7**
Cleanliness of toilet and bathroom	120	10.8	21.7	18.3	49.2	**31.4**
Cleanliness of linen	120	35.8	42.5	20.0	2.5	**70.8**
Time of cleaning room	120	25.8	47.5	20.0	6.7	**64.2**
Overall quality score						**60.0**

Figure 5-7 Quality scores for housekeeping services



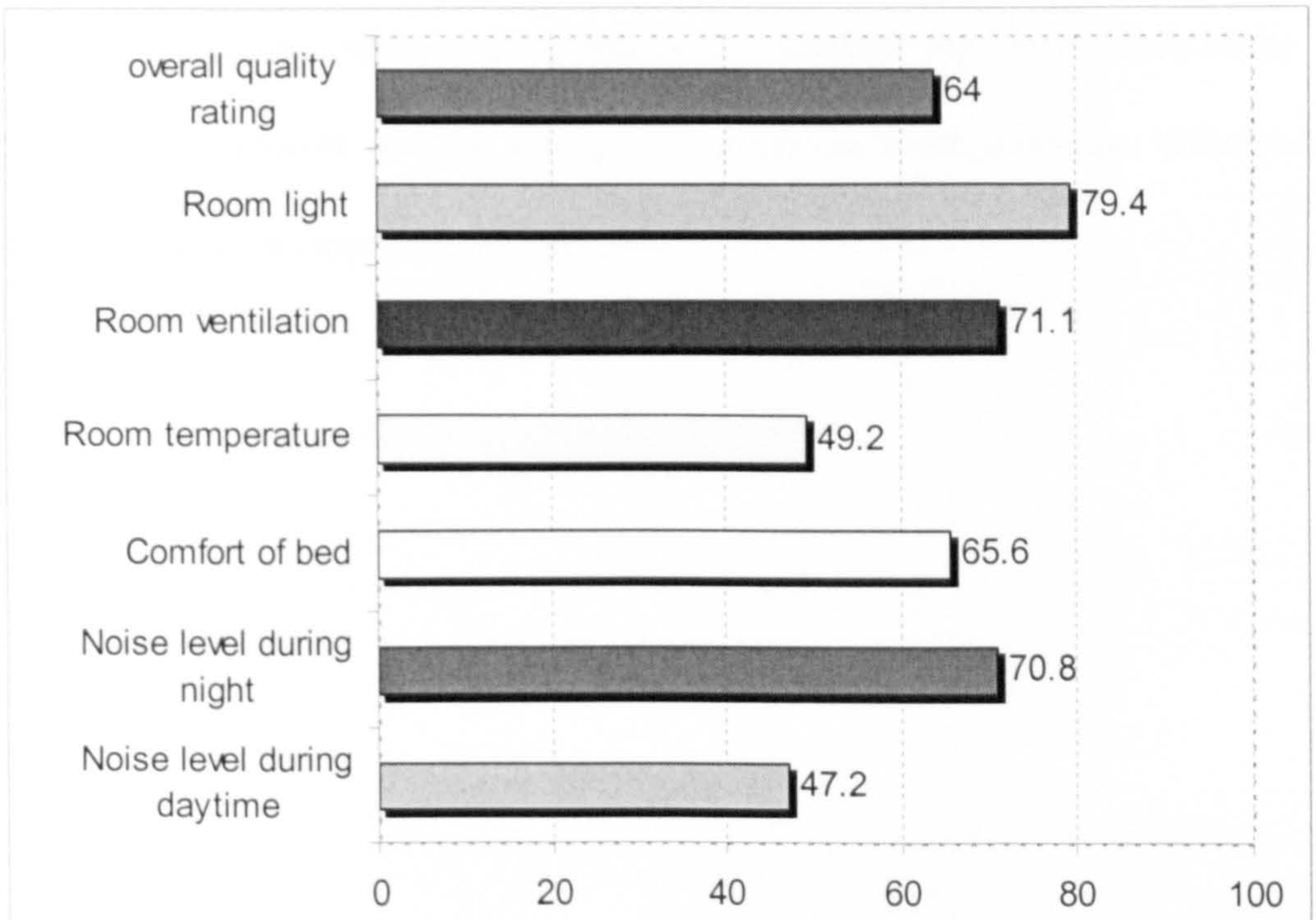
5.1.1.2.3.7 Environment and facilities services quality

Six indicators were used to assess the quality of the hospital environment and facilities services. These indicators refer to 'noise level', 'comfort of bed', 'room temperature', 'room ventilation' and 'room light'. Table 5-17 and Figure 5-8 shows the distribution of quality rating and scores of hospital environment and facilities services. The overall quality score for all the indicators of environment and facilities collectively was 64.0. The 'noise level during daytime' had the lowest score (47.2) while the 'room light' had the highest score (79.4), but 49 % only rated this item as "excellent".

Table 5-17 Quality of environment and facility services

Indicator	No. of responses	Excellent %	God %	Acceptance %	Bad %	Score
Noise level during daytime	120	14.2	30.0	39.2	16.7	**47.2**
Noise level during night	120	42.5	36.7	11.7	9.2	**70.8**
Comfort of bed	120	33.3	41.7	13.3	11.3	**65.6**
Room temperature	120	29.1	44.2	14.2	12.5	**49.2**
Room ventilation	120	38.4	42.5	13.3	5.8	**71.1**
Room light	120	49.0	40.8	9.2	1.0	**79.4**
Overall average quality score						**63.3**

Figure 5-8 Quality scores for environment and facilities services

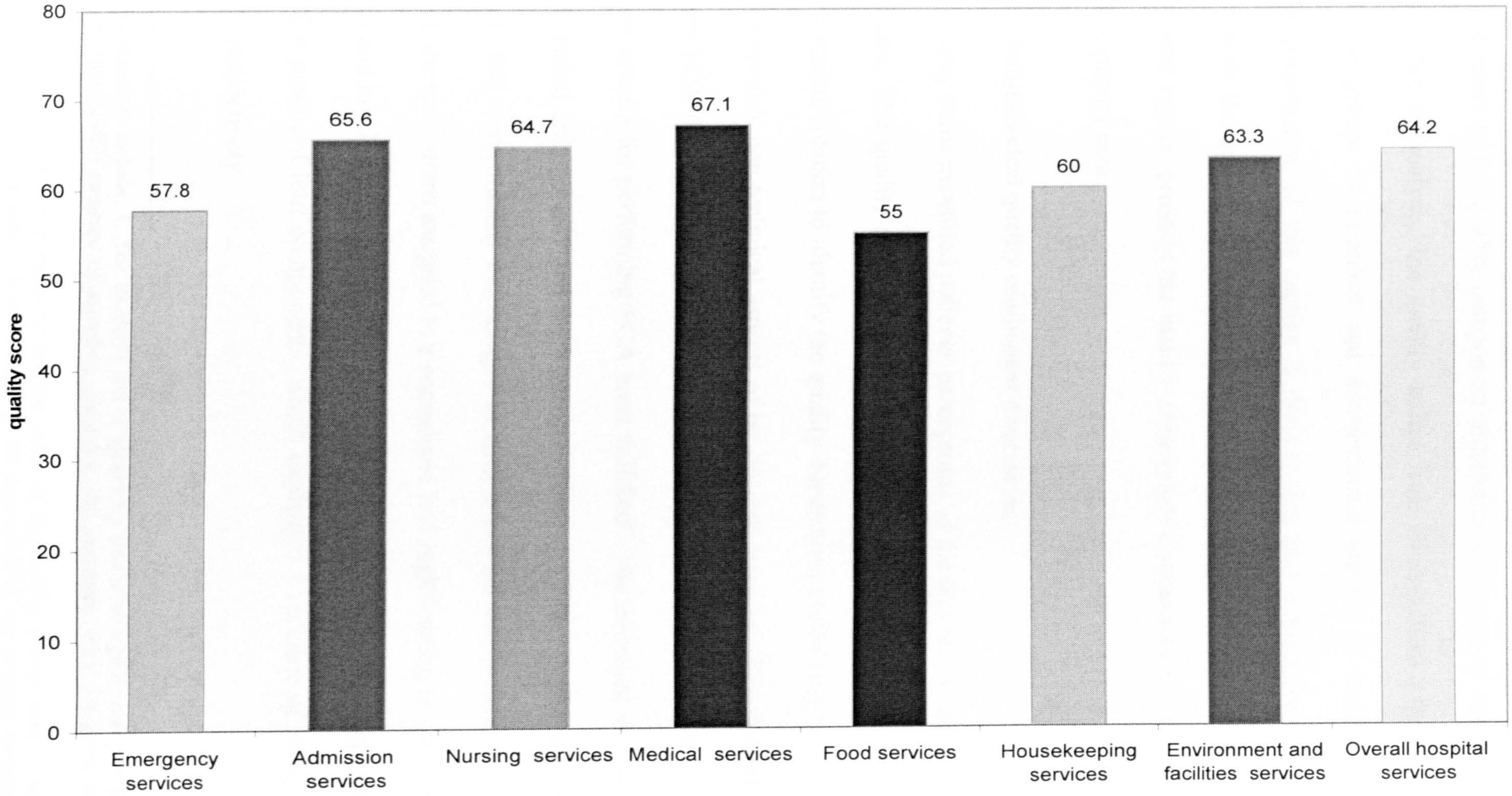


5.1.1.2.4 Summary of overall hospital quality score and quality scores for different aspects of in-patient care

Figure 5-9 shows the overall quality score of in-patient care compared with the overall quality score of hospital services. The overall quality of hospital services were measured independently of the quality of each aspect of in-patient care services. The results revealed that the overall quality rating of hospitals care falls in the middle of the ratings of various different in-patient services, indicating a certain consistency between the respondents' views for the overall rating and their ratings of individual services, even though these were rated independently of each other.

In summary, amongst the different individual aspects of in-patient care services, the highest quality rating was given to the doctors' services followed by nursing care and the lowest quality rating was given to food services followed by the housekeeping services (see Figure 5-9).

Figure 5-9: Comparison of overall quality score of hospital service with the scores for diffent in-patient care aspects.



5.1.1.3 Quality component dimensions of in-patient care

This section refers to the quality component dimension of in-patient care services. For the purpose of analysis, the quality scales item of in-patient care has been classified into groups of technical and non-technical aspects of in-patient care. Hence, the presentation of this section is divided into two sub-sections. The first section presents the quality component dimensions of non-technical in-patient care and the second section presents the quality component dimensions of the technical aspects of in-patient care.

5.1.1.3.1.1 Non-technical quality component dimensions

Eighteen quality items measured patients' perceptions of the non-technical aspects of in-patient care. The quality scale items were exposed to factor analysis using the PCA and Varimax rotation to identify the quality dimensions underlying the patient's perspective towards non-technical aspects of health care received. The suitability of the data for PCA had been checked before performing the factor analysis. All the requirement criteria for performing PCA were fulfilled[6]. The extracted components were then rotated orthogonally and the loading of items were distributed among the components and were ordered ascendingly in each extracted component. For each component, the scale items assigned to a component had high loading (± .40) on that component and low loadings on all other components in the matrix (see Appendix 5-4). The PCA produced four components[7] which explained a variance of 39%, 10%, 7% and 6% respectively.

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[6]Factorability measures include: 1. The Bartlett's test of sphericity should be significant ($p<.05$), 2. Kaiser-Meyer-Olkin(KMO) measure of sampling adequacy, the minimum value for good factor analysis is .6.

[7] The cut-off point for retaining component was the value of eige-nvalue greater than 1, in other words, unless a component extracts at least as much as the equivalent of one original variable, it is omitted; this criterion was proposed by Kaiser (1960).

Overall, these four components accounted for 62 % of the total variance. The highest percentage of variance explained in the non-technical aspects of in-patient care was attributed to the component which has items that refer to 'hospital environment and facility services' (see Table 5-19).

The following section describes the content of each component extracted from the CPA.

5.1.1.3.1.2 Description of quality components content

As the main purpose of using PCA was to explore the common components underlying various dimensions of patient's perception, and the content of each component has been highlighted. Below are the descriptions of the four components of the items that load heavily on them and these were assigned labels which reflects the content of those items.

- Component A- The items with high loadings on this component were 'time taken to complete admission procedure', 'room ventilation', 'noise level during night', 'room light', 'courtesy of admitting' ,'room temperature' and 'time of cleaning room'. Most of these items refer to the hospitals' environment and facility items. Hence, component A was labelled as "Environment and facility services".

- Component B- the items with the highest loading on this component were ' food temperature', 'food quality', 'food taste', 'time of serving meals', and 'utensils used for serving food'. Thus this component was labelled as 'food services".

- Component C- the loading items for this component were 'cleanliness of room', 'comfort of bed', 'comfort and cleanliness of admission waiting area', and

"cleanliness of linen". These items related to hospital housekeeping services, therefore, the component was labelled 'Housekeeping services'.

- Component D- the manifest content of these items suggests that the items belong to 'cleanliness of toilet and bathroom' and the 'noise level during daytime'. Hence, the component was labelled as 'Cleanliness and noise ', (see Table 5-18).

Table 5-18 Quality components of non-clinical aspects of in-patient care with variance explained and reliability coefficient

Component's label and its items	Loading factor	Variance explained %	Cranbach's alpha
Environment and facility services		39	.84
Time taken to complete admission procedure	.690		
Room ventilation	.682		
Noise level during night	.635		
Room light	.632		
Courtesy of admitting staff	.622		
Room temperature	.599		
Time of cleaning room	.468		
Food services		10	.85
Food temperature	.866		
Food quality	.812		
Food taste	.672		
Time of servicing meals	.653		
Utensils used for serving food	.621		
Housekeeping services		7	.76
Cleanliness of room	.756		
Comfort of bed	.619		
Comfort and cleanliness of admission waiting area	.600		
Cleanliness of linen	542		
Cleanliness and noise		6	.59
Cleanliness of toilet and bathroom	.726		
Noise level during daytime	635		
% of the overall variance explained		62	

5.1.1.3.1.3 Technical quality component dimensions

Twenty three items in the in-patient questionnaire related to measuring the perception of quality of the technical aspects of in-patient care. These items have been exposed to factor analysis using PCA to identify the components underlying quality dimensions of the technical aspects of in-patient care. Five components responsible for 64 percent of the variance were extracted.

Table 5-19 below shows the extracted technical in-patient care quality components. Each component has a set of items that explains its structure.

- Component A- encompasses six items with most of them relating to quality medical care provided, and was labelled as 'Medical service quality'.
- Component B- contains seven items relating to quality of nursing care provided, which was labelled as 'Nursing service quality'.
- Component C- holds three items relating to nurses' availability when needed, with a label of 'Availability of nurses'.
- Component D- embraces four items relating to doctor's availability when needed, labelled 'Availability of doctors'.
- Component E- has three items related to emergency services, with a label of 'Emergency services'.

Table 5-19 Quality component dimensions of technical aspects of in-patient care with variance explained and reliablity coefficient

Component's label and its items	Loading factor	Variance explained	Cranbach's alpha
Medical service quality		37	.89
Concern of doctors about patient as a person	.819		
Thoroughness of examination	.811		
Courtesy of doctors	.725		
Regard by doctor to privacy	.716		
Competence of doctors in diagnosis and treatment	.710		
Carrying out doctors orders	.460		
Nursing service quality		8	.86
Carefulness and gentleness of nurses in handling patient	.767		
Emotional support provided by nurses	.744		
Easy of communication with nurses	.721		
Attention of nurses to the patient's privacy	.623		
Courtesy of nurses	602		
Nurse explanation about condition and procedure	.549		
Skills of nurses in patient care	.528		
Availability of nurse		7	.82
Promptness of nurses in responding to calls	.849		
Frequency of nurses stopping by room to check patient 's condition	.762		
Promptness of nurses in responding to patient's demand	.724		
Availability of doctor		7	.83
Doctor's explanation and answering questions about illness	.724		
Frequency of doctor visit	.662		
Instruction given by doctors on discharge for self-care and follow up	.618		
Availability of doctor when needed	.600		
Emergency service		5	.72
Time waited in ER until attended by a doctor	.819		
Total time spent in ER	.781		
Attention of ER staff	.659		
% of the overall variance explained	**64**		

5.1.1.3.2 Influence of respondents and services characteristics on rating of in-patient care quality component dimensions

So far, the results have focused on describing and explaining patients' perception of quality of in-patient care including technical and non-technical aspects of health care in terms of their underlying quality components. In the following section, those components are analysed for their associations with characteristics of the respondents and health services with the mean score of quality rating of in-patient care provided. The section is divided into two subsections: the first section relates to the technical aspects of care and the second section relates to the non-technical aspects of care. Only significant results are presented here and the whole findings are appended in Appendix 5-5.

5.1.1.3.3 Quality components of technical aspects of in-patient care

The mean score of 'medical service quality' and 'availability of nurse' components were statistically significant and associated with the education level of respondents, while there were no statistically significant differences in mean scores of the other technical quality components due to education level. The mean scores of 'nursing service quality' and 'availability of doctor' components were found to be statistically significant related to the sex of respondents and not statistically significant differences were found in mean scores of the other components.

Likewise, the differences in the mean scores of quality components due to characteristics of services were statistically significant difference among some components but not among others. The 'nursing service quality' component was found to be statistically significant relating to waiting time for admission through out-patient and no significant difference were found in the mean scores of other quality components. In the same way, means scores of 'emergency services'

component were found to be statistically significant due to 'waiting time to be seen by doctor', and time spent in emergency room. Also, the 'expectation about care on admission' had statically significant negative association with quality ratings for the emergency services.

The mean scores of quality rating of 'nursing service quality' and 'availability of doctor' components were different statistically with patients' perceptions if their condition had improved as a result of the hospital care rendered. There was statistically significance difference in quality mean scores of quality components due to whether the respondents would recommend these hospitals to their relatives and friends. For example, there was only significant difference among means scores of 'medical care quality', nursing service quality', and 'availability of doctor' (see Appendix 5-6).

5.1.1.3.4 Quality components of non-technical aspects of in-patient care

The mean scores of 'environment and facility services' and 'cleanliness and noise level' were statistically different due to sex. The mean score of 'food service' component was statistically different due to age. However, other quality components mean scores, such as 'housekeeping service', had no association with respondents' demographic characteristics. Likewise, the mean scores for 'environment and admission services' were statistically different due to patient's feelings of condition improvement while means score of 'food services' were statically associated with patient's expectation about care on admission (see Appendix 5-7).

5.1.1.3.5 Determinant factors of overall quality rating of hospital inpatient care

Regression analysis was performed to identify the determinants of overall quality rating of hospital care, and all criteria of applying the regression analysis were respected. The dependent variable was the overall satisfaction level and the independent variables were the nine components[8] from the factor analysis as described earlier. The results here are presented as a model[9] containing the factors explaining the variance in overall satisfaction with quality of health care. The R-value of the model indicates the amount of variation in the overall quality rating of care that is explained by the factors is 51 percent, and this amount of variance explained was statistically significant (F = 11.5, P<.00). Table 5-20 below shows the importance and contribution of each factor; the largest beta coefficients are 'Nursing serve quality' (.29) and 'Medical service quality' (.26). This means that these factors make the strongest unique contribution to explaining the overall satisfaction with quality of care provided.

Table 5-20 Determinant factors of overall quality rating of in-patient care

Quality dimension components	β coefficient	p-value
Medical services quality	.26	.00
Nursing service quality	.29	.00
Nurses availably	.15	.05
Doctor availability	.23	.00
Emergency services	.02	.83
Environment and facility services	.15	.09
Food services	.17	.02
Housekeeping services	.20	.01
Cleanliness and noises level	.10	.15

[8] Components refer to the nine components produced from the factor analysis using PCA. These components are divided into two main groups; one group includes components of technical aspects of hospital care quality and the other group includes the components of the non-technical aspects of hospital care quality.

[9] **Overall quality of hospital inpatient care** = .26 × Medical service quality +.29 × Nursing service quality + .15 × Nurse's availability + .23 × Doctor's availability + .02 × Emergency service + .15 × Environment and facility service + .17 × Food services + .20 × Housekeeping service + .10 × Cleanliness and noise level.

5.1.2 Quality management system development

A quality management system has several components. The existence of each component can be realistically measured by a set of indicators. In this study six components were selected to assess how far the quality policy system had been developed in the hospitals under study. These components assessed the existence of:

1. "Quality assurance documents",
2. "Standards and protocols care process"
3. "Functioning human resource management system",
4. "Quality management organizational structure",
5. "Evidence of patients' involvement in quality assurance activities" , and
6. "Using quality improvement procedures".

The following sections present the findings of the quality management system assessment, as reported by the professionals and managers working in these hospitals at the time of conducting the study. The study population is first described, it then goes on to present quality system components assessment findings.

5.1.2.1 Study population description

The socio-demographics of respondents are given in Table 21. Three quarters of the respondents were male with an average age of 36, and two thirds of them had been in their current post for more than 5 years. Hence, it was expected that good information concerning the questions in the questionnaire assessment would be obtained.

Table 5-21 Characteristics of respondents

Characteristics	No.	%
Sex		
Male	118	74.2
Female	41	25.8
Age (years)		
20-29	28	17.6
30-39	83	52.4
40+	39	24.5
Missing	9	5.5
Post		
Director General	4	2.5
Vice-Director General	4	2.5
Department head	60	37.7
Other	84	52.8
Missing	7	4.4
Profession		
Manager	13	8.2
Specialist	75	47.2
General Practitioner	28	17.6
Nurse	10	6.3
Dentist	3	1.9
Pharmacist	12	7.5
Technicians	18	11.3
Qualification		
PhD or equivalent	32	20.1
Master	45	28.3
Bachelor	53	33.3
Diploma	29	18.2
Work duration (years)		
<2	23	14.5
2-5	34	21.4
>5	98	64.1
Missing	4	2.5

5.1.2.2 Hospital quality management system development

This section presents the findings of quality management system components development. The components include 'quality policy documents', 'standards and protocols for clinical procedure', 'human resource management', 'quality management structure', and 'patient involvement and quality improvement procedures'.

5.1.2.2.1 Quality policy documents

Nine questions were asked about the indicators of quality management that might be found in documents. These indicators were

1. 'Written mission statement',
2. 'Product or services description',
3. 'Quality services profiles,
4. 'Existence of any quality policy document',
5. 'A quality action plan for the hospital as a whole hospital
6. 'Any quality action plans for individual departments if not for the hospital as a whole',
7. 'Quality action plans in existence for every department',
8. An annual quality report', and
9. 'Quality handbook'

Responses from the respondents were classified as "Yes", "in-development, and "No" for each indicator, and the results are shown in Table 5-22. For all the items, the majority of the responders felt that the indicator did not exist in their experience. If the "Yes" and "in development" categories were taken together, the most optimistic picture is painted for "quality plans in some departments" (49%), 'quality mission statement' (41%) and 'quality plans for whole organisation' (41%).

Table 5-22 Quality policy document indicators

Indicator	Yes %	In development %	No %	No. of response*
1. Written Mission statement	26.1	14.8	59.2	142
2. Product or service description	29.4	9.4	61.0	136
3. Quality profile	15.9	12.3	71.7	138
4. Quality policy	12.6	17.8	69.6	135
5. Quality action plan for a whole hospital	23.3	17.3	59.4	133
6. Quality action plan for some hospital departments	29	20.3	50.7	138
7. Quality action plan for every department	16.3	19.3	64.4	135
8. Annual quality report	24.8	11.3	63.9	133
9. Quality handbook	7.3	7.3	85.4	137

* The numbers of responses is different as some items had missing values

5.1.2.2.2 Standards and protocols

Existing standards and protocols for the health services delivery process is an essential component of a quality management system. In this study, nine process-based standards and protocols were employed in this survey to assess their existence in the hospitals involved. It is obvious from Table 5-23 that, in general, these standards and protocols do not exist in these hospitals. The most optimistic picture is for 'standards or protocols for specific treatment of intervention' (35%), 'standards or protocol for patient safety' (33%), and 'standards and protocol for critical moment in service provision' (32%).

Table 5-23 Quality standards and protocols

Indicate	Yes %	No %	No of responses
1. Standards or protocols for specific treatment of intervention	34.8	65.2	132
2. Standards or protocols for patient education	9.9	90.1	131
3. Standards or protocol for restricted medical actions	14.4	85.6	132
4. Standards and protocol for critical moment in service provision	31.6	68.4	133
5. Standards or protocol for infection control	22.6	77.4	133
6. Standards or protocol for target groups	10.6	89.4	132
7. Standards or protocol for patient safety	33.3	66.7	132
8. Standards or protocol for patient routing from intake to discharge	13.6	86.4	132
9. Standards or protocol for cooperation with other organization	27.1	72.9	133

5.1.2.2.3 Human Resource Management (HRM)

The existences of a quality focus within the HRM functions of the hospitals and the Health Service was assessed by studying three issues. These were 'Implementation of QA activities in HRM', 'any relationship between HRM and quality policy in the hospital', and "involvement of health professionals in quality assurance activities'. Each of these areas were assessed through a set of indicators.

A set of eleven indicators were used to assess the implementation of quality assurance activities (see Table 5-24), six indicators were used to assess the application of the quality policy criteria (see Table 5-25), and nine indicators were used for assessing the involvement of professionals in quality assurance/improvement activities (see Table 5-26).

Table 5-24 shows the findings of the indicators of QA activities as implemented in HRM. A high percentage (>80%) of respondents reported that most activities of the QA are not implemented in HRM except for the training activities of the management and professional staffs (62.3% and 43% respectively).

HRM and quality policy, as in Table 5-25 shows that most of the quality assurance policy criteria were not applied in HRM. For example, three quarters (76.1%) of respondents thought the selection of new personnel was not based on a positive attitude to quality assurance. Nearly the same percentage said that undertaking continuous education based on priorities on quality policy was absent. In addition, 84.5% of respondents reported that there was no any assessment process for the training needs.

Concerning the management of how to encourage professionals to be involved in quality assurance activities, the findings in Table 5-26 indicates that most strategies of encouraging professionals to be involved in QA were nearly absent from the respondents' point of view. What is striking about these findings is that neither incentives nor sanctions are being used for improving quality. In other words, all are the same whether they work in a correct or wrong manner. In addition, most respondents (>90%) reported that management did not indicate what is expected from professionals with respect to QA and also did not check whether the professionals adhere to commitment. A further 93.9% of respondents reported that management did not give them any systematic feedback about the results achieved.

Table 5-24 Quality improvement activities and human resources management

Indicate	Yes %	No %	No. of responses
1. Training of management/staff	62.3	37.7	146
2. Training of professional	43	57.0	149
3. Professional participation in QA	11.5	88.5	148
4. Appointing quality coordinator	20.8	79.2	149
5. Setting up a steering committee	10.7	89.3	149
6. Setting up quality working group	11.4	88.6	149
7. Allocate budget for quality management	6.7	93.3	149
8. Supporting quality assurance by consultant	10.1	89.9	148
9. Regular (monthly) quality team meeting	7.4	92.6	149
10. Monitoring QA by senior management	12.1	87.9	149
11. Monitoring QA by MoH group or committee	4.7	95.3	149

Table 5-25 Quality policy criteria and human resources management

Indicate	Yes %	No %	No. of responses
1. Selection of new personnel with a positive attitude to quality assurance	23.2	76.1	142
2. Training new professionals in quality improvement methods	29.6	69.7	142
3. Continuous education takes place based on priority in quality policy	24.6	74.6	142
4. Professional are encouraged to develop themselves in their profession	30.3	69	142
5. Participation in quality improvement project is required	19.7	79.6	142
6. Conducting training needs assessment	14.8	84.5	142

Table 5-26 Hospital management and involving professinal in quality activites

Indicator	Yes %	No %	No. of responses
1. Management give incentives	20.3	79.7	133
2. There is a monthly reward for staff	7.5	92.5	133
3. Management indicates what is expected from profession with respect to QA	6.8	93.2	133
4. Management checks whether professionals stick to commitment	12.8	87.2	133
5. Systematic feedback to professionals about results achieved	6.1	93.9	132
6. There is public recognition of good services by management	29.3	70.7	133
7. Monitoring department action plan	19.7	80.3	132
8. No incentive used to improve quality	64.2	35.8	134
9. Sanctions	6.9	93.1	130

5.1.2.2.4 Quality organizational structure

In this study six indicators were used to assess the quality organizational structure from national level downwards to hospital level. Three of the indicators were concerned about quality structure outside the hospital (e.g. at ministry, governorate and district level) and the other three concerns the quality structure inside the hospital.

As shown in Table 5-27, nearly two-thirds of the respondents reported that there were no quality team or committee within the hospital organizational structure at all levels, while the other third distributed their responses between either 'yes' or 'don't know'.

Regarding quality structure outside the hospital, at least eighty percent of the respondents reported either there was no quality team or committee at ministry, governmental, or district level or they did not know (see the Table 5- 27).

Table 5-27 Quality organisation structure

Indicators	Yes %	No %	Don't know %	No. of responses
1. QA team or committee at MoH level	21.7	37.5	40.8	120
2. QA team or committee at governorate level	11.2	44	44.	116
3. QA team or committee at district level	3.5	48.2	48.2	114
4. QA team or committee at facility level	32	46.9	21.1	128
5. QA team or committee at sub-facility level (department or unit level/lab or ward)	21.8	62.2	16	119
6. QA co-ordinator in each department or unit	15.8	63.2	21.1	114

5.1.2.2.5 Patients Involvement

Eight indicators were used to ask the respondents for their opinions on the extent to which patients are involved in QA activities (see Table 5-28). Only three indicators received more than 20% in support of their existence. These were 'having box for patients' complaints' (25%), 'participation in discussion of the patient's rights' (29%), and 'involvement in quality improvement project' (23%).

Table 5-28 Patient involvement in quality assurance activities

Indicator	No	Depends on the subject	Always	No of responses
	%	%	%	
1. Involvement in developing quality criteria	83.8	12.3	2.3	130
2. Participation in developing standards and protocols	83.6	10.2	4.7	128
3. Participation in meeting/ talking about results of satisfaction survey	82.9	13.2	2.3	129
4. Involvement in quality committee	92.1	4.8	1.6	126
5. Involvement in quality improvement project	75.8	17.2	5.5	128
6. Having box for patients' complaints	73.7	14.3	10.5	133
7. Participation in regular patient satisfaction survey	83.8	10.8	3.8	130
8. Participation in discussion of the patients rights	69.9	20.3	8.3	133

5.1.2.2.6 Quality improvement procedures

The original closed-ended question had been changed to an open-ended question to avoid the social desirability bias, as found from the pilot study findings. The question asked 'if there is any quality improvement procedure being used or implemented' and if so what they were. The findings showed that 100 out of 137 (73%) respondents reported that there was no quality improvement method being applied. For those who reported there was, most of their responses referred to morning meetings and morning rounds, but this was not considered to be a systematic

approach for assuring or improving quality. Respondents were also asked if any databases for quality indictors were being developed for monitoring quality performance, and 90% of the respondents reported that no quality indicators were being used.

5.1.2.3 Developmental stage of quality management system

So far, the findings of the different components of quality management system have been described collectively at the hospitals under study. The following section presents the quality system developmental stages using the Dutch method[10].

Cross-tabulation were performed to identify whether there were any significant differences in the responses of the professional staff versus the administrative staff on quality system components in the hospitals studied. Analysis of the findings showed that there were no statistically significant differences in the responses of the professional staff views versus the administrative staff views across all the QA components indicators, (see appendix 5-8). It was therefore decided to consider the respondents as one group in any further analysis.

A matrix, including the quality system component indictors by the developmental stages was developed. These stages include stage zero, stage one, stage two, stage three, and stage four, and fifty percent was the cut-of-point for stating whether the indicator existed or not (see Appendix 5-9).

---

[10] Dutch method consists of three stages ranging from stage (0) to stage (3). Each stage has a set of indicators, and these indicators refer to the QA development components. These components are: quality assurance documents, standards and protocols, human resource management, quality organization structure, patient involvement, and quality improvement techniques.

In stage zero, which was labelled as 'pre-existing', the hospital had no formal or deliberate strategy for quality management and QA.

In stage one ('orientation and awareness'), whilst there were no systematic activities for quality assurance, there was a state of awareness about quality of health care and QA. In this stage the professionals were seen to be mainly responsible for quality assurance.

In stage two ('preparation stage'), the hospitals should create the conditions necessary for systematic quality assurance and improvement activities, for example, systematic training and education on quality methods for management and professionals, and the development of quality policy and standards.

In stage three ('implementation'), the hospitals should develop different kinds of quality improvement projects and experiments for the purpose of learning lessons.

Finally, at stage 4 ('establishment') the hospitals should establish quality assurance as an integral part of the process of health care delivery.

Thus, the findings from the study survey demonstrated quite clearly that the hospitals were seen to be still at the very early stages of quality management system development.

5.1.3 Qualitative Findings

This section shows the results of the qualitative data analysis resulting from the analysis of interviews with key informants at policy level, that is, the Ministry of Health level. The results are shown in the form of thematic findings as a result of using the conceptual framework. This framework analysis was based on prior areas of questioning, emergent issues and relevant concepts which were sought from the literature. The details of the methods used and process of the analysis are described in the Methodology chapter (Section 4.2).

The analysis findings were grouped under major themes and concepts arising from analysing the transcripts of interviews with the key informants. For each theme, an operational definition was given and under each category or sub-heading, the findings were summarised and supported by quotations taken from the transcripts. The findings are presented under the following eight main themes headings:

- Quality policy,
- Quality standards,
- Quality culture ,
- Quality organization,
- Quality monitoring,
- Quality initiatives and priorities,
- Quality responsibility, and
- Quality challenges and opportunities.

5.1.3.1 Quality policy

In this study *"quality policy"* refers to any or all of 'quality vision', 'quality plan', 'quality policy document', 'quality strategies and activities', 'political commitment' and 'managerial support' towards quality improvement.

5.1.3.1.1 Vision

The vision is a statement that describes the purpose of quality policy or any other mechanism for improving health care quality, particularly where values and priorities are mentioned implicitly or explicitly.

Most of the informants who were interviewed stated that the quality of health care was no a priority and there was not clear vision on quality improvement, especially amongst the leaders. Furthermore, some interviewees in addition felt that they did not have clear vision on quality improvement; there was no serious recognition of quality importance and priory given for quality. The interviewee's comments were:

> *"The Ministry does not have a vision on quality and what the policies of quality assurance are" [3]*
>
> *"...some health leaders don't have a clear vision on the importance of quality issue; this requiring us to raise the awareness of quality culture amongst the health leaders" [7]*
>
> *"First and foremost the importance of quality needs to be recognized... then we should have a vision... or.... mission or... specific polices on quality"* [1]
>
> *"Ministry of Health does not have a clear vision on quality assurance ...what the Ministry doing is only supervision and evaluation" [2]*

Other interviewees thought that a quality issue is still a rhetoric issue without clear vision and straightforward strategy for implementation.

> *"What I feel is that there is not a clear vision about where we want to go" [5]*
>
> *"There is not a quality vision but there is a general talk about quality and it's importance and this is still theoretical but there is not a straightforward mechanism on how to assure or improve the quality" [4]*

5.1.3.1.2 Commitment

This category includes commitment that reflects any intention, priority, directions, or concerns towards assuring and improving health care quality. In theory, quality is a major issue in most of the Ministry policy documents, but often commitment in terms of allocating resources for managing quality or having a budget for quality is missing. Interviewees acknowledged that:

> *"...We need to have a political support, a moral support, and a logistics support, but all of these none exist"* [1]
>
> *"At Ministry level there is not support and real political commitment towards quality assurance ...and there is not a budget in name of quality management Department"* [2]

Some other interviewees indicated that the kind of verbal commitment they currently have is not enough:

> *"...type of commitment is a small verbal commitment. As a result of that, quality committees and quality working groups are formulated and usually end up with recommendations without implications in terms of the financial commitment and other required resources... "[3]*

One key informant stressed that in addition to the lack of real commitment, there was no competent management:

> *"There is a verbal commitment but this commitment has not been translated into clear mechanism committed by all... the problem is managerial one not financial ... you might have provided the money but it might be misused due to lack of the competent management" [4]*

Senior appointments at higher ministry level often have little involvement on quality issues. One interviewee commented that such appointments are given without concern for quality criteria; they have no responsibility for quality and often therefore have no concern for the quality of services they run. This interviewee said:

> *"The appointment at top level such as deputies minister are made without adherence to clear quality criteria like duration of experiences at the ministry and so on, but according to other criteria such as personal and social considerations and even the relatives" [2]*

This reflected in the comments of another interviewee who said there was no real political commitment at government level towards quality concern - what exists is only rhetoric lip-service:

> *"Government expresses its concerns and commitment on any public concern by just producing policy document without translating into practice. For example government express its concern on poverty by producing a poverty reduction strategy papers (PRSP) and creating an organizational structure in a number of Ministries. Likewise, Ministry of health expresses its concern on improving quality by setting up a quality management department at Ministry level and forget the rest of quality management requirements toward implementing quality activities" [5]*

5.1.3.1.3 Quality plan

While some interviewees commented favourably that a national health quality plan had been drafted at Ministry level, some had serious reservations about its practicality and feasibility to be in place:

> *" ... the quality plan was too ambitious, if you read it you will find it jumps over Yemeni situation in somehow... as I told you it is one of the initiatives that ended up with theoretical document without translating in to practice, unfortunately"* [6]
>
> *"The national health quality plan is not clear..." [5]*
>
> *"Implementing a national heath quality plan needs actual commitment from the executive parties...it is really good and valuable plan but the problem is we need to train people on quality methods and teamwork skills" [7]*

5.1.3.1.4 Quality policy documents

What policy documents had already been produced that included concerns about quality of services? Are there guidelines or directions which should be complied with by both individuals and institutions in a health system in order to improve quality?

The interviewees had different views on the existence of such documents. Some were of the opinion that quality policy is a substantial part of the health sector reform strategy documents. Here are some examples of their responses:

> *"The existing heath sector reform strategy (HSRS) is a document on quality policy" [4]*
>
> *"The most important document on quality issue is the health sector reform strategy that developed in 1998 but due to the many turnover of ministers the document has been put on the shelf" [2]*

"Quality as a policy, it is exist in the fifth plan for health development where there is detailed what kind of steps to follow in order to implement quality assurance" [1]

One the other hand, some interviewees thought that whilst there was no specific written quality policy document or manual on quality, there were some programmes that made implicit reference to the concept of quality:

"I have never seen written policies on quality but there are projects or programs either belong to donors or Ministry of health...for example, donors supported projects such as SIP of GTZ [11] and the Reproductive Health Department in the Ministry of Health " [3]

"As far as I know, there is not a quality assurance manual at ministry level but in the Reproductive Health Department, we have developed a manual for assuring quality in Reproductive Health Services and Family Planning but it still needs to be revised and refined " [4]

"There is not a simple and straightforward quality manual and I think we have to have a team from the professionals and mangers and specialist on quality... quality is a science and art but unfortunately we think anybody can work in quality"[7]

5.1.3.1.5 Quality strategy

Are there quality strategies and/or activities that the Ministry of Health is implementing in trying to ensure or improve health care quality? Without citing specific examples, one interviewee thought quality activities should be incorporated into the Ministry's programs and projects, taking into consideration the need to identify who is responsible for quality performance at Ministry level:

"We encourage integrate the quality into ministry's programs and project activities but there should be one responsible part for co-ordinating quality and the activities of quality should go through it" [1]

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[11] GTZ: is a Germen project providing assistance to the Ministry of Public Health and Population, and SIP is a project that stands for a services improvement program which is also sponsored by GTZ.

The interviewee went on to add that there was a need to strengthen capacity building and skills of quality co-ordinators at provincial level:

> *"...through it...integrating quality into the organizational structure of health originations via appointing quality coordinator at provincial level...improving the capacity of the coordinators and encouraging the innovative approach as quality is innovation" [1]*

5.1.3.2 Quality standards

'Standards' refer to any statement, guideline, and protocol developed or adapted to be used for quality improvement health care services delivery system.

The analysis of the content of the transcripts showed that there were different views regarding standards of health care delivery system. The vast majority of the interviewees thought that the problem was not with having standards but are in 'scattering and disharmony of the existing standards', 'the ambiguity of standards', 'no monitoring and updating for the existing standards', 'lack of effective management at facility level to enforce applying standards', 'and 'the standards' are not comprehensive to cover all aspects of health care delivery system aspects not only the clinical aspect'.

> *"Before talking about quality, we should have standards... we can't jump to talk about quality while we do not have standards ... the standards standardizing are essentials ... the issue is whether or not we have standards but the existing ones are disharmonized and are scattered and misplaced in more than one places... they are not standardized under name of Ministry of Public Health and Population ... it is supposed to provide our service via a standardized standards manual of ministry ..." [6]*
>
> *"Lack of the clear and straightforward standards... and if they are available, they are just putting on the shelf like books on the library, nobody comply with them ..." [7]*

One interviewee reasoned that the poor application and compliance with quality standards was due to a lack of good management at facility level:

> "*Health workers are not complied with standards although the standards are available. For example, we have standards for infection control like instructions for how to use the autoclave but they don't comply with the instruction provided.... the reason for that in my opinion is lacking of having a rigorous management at facility level ... in addition there is not effective performance assessment* " [4]

Another reason may be due to the fact that the standards are not comprehensive and do not cover all aspects of the health care delivery system:

> "*There are no standards covering all aspect of health services aspect technically, financially, and managerially...*" [2]

Others argued for the importance of having internal quality monitoring systems in addition to the external quality monitoring and assessment:

> " *we monitoring the applying the standards at facility level by central monitoring and supervision but I think it should be an internal monitoring and supervision system at facility level to make sure that the standards are being applied" [4]*
>
> *"Quality cycle based on four main steps: setting standards, training, and supervision and taking action.... With the necessity of having external and internal assessment ..." [7]*

Regarding communication standards, one interviewee said that communicating standards to users was given by training them:

> "*We communicate standards to user by conducting a training workshops to train them and after that giving them copies from these standards but unfortunately they keep these copies at home not at workplace and this is an indication of lacking of responsibility feeling"[4]*

Concerning the updating of standards, one respondent reported that they usually are updated by contracting with consultants and experts:

> *"We update standards by contracting with express and consultants externally or internally, then discuss their recommendations at workshop with the responsible persons of reproductive health in attending of the expert or the consultant to take the notice and then approve the developed ones" [4]*

5.1.3.3 Quality culture

'Quality culture' includes quality concepts, quality awareness, and a way of thinking and behaving towards quality concerns of health care.

5.1.3.3.1 Quality concept

Quality was addressed with some difficulty during the interviews and, unsurprisingly, many different views were expressed about the concept of quality. Some interviewees emphasized that quality should be used as an indicator of work performance, making the point that efforts should focus on the practical aspects of quality improvement rather than giving any effort to the theoretical aspects of quality. The interviewees' comments were:

> *"For me, quality is a concept and you should monitor your performance accordingly even with your work at office i.e. it is a concept that you perform you job using quality indicators ...." [5]*

> *"I think we could start practical steps if we tried to focus on what we can do based on our available resources at facility level rather than stick to the rhetoric concept of quality" [6]*

One interviewee thought that quality was such a new concept that the quality infrastructure should be built first before expanding on the concept behind quality:

> *" Quality is new concept,...so when you start with high education and the infrastructure is weak, the understanding and the real benefit will be limited ...education and raising awareness should focus on the concept and what the quality requirements are as you know the concept is new at health field in general, forget the industry ..." [1]*

Similarly, another interviewee said adopting quality concept needs time to involve and educate a whole generation within the community in order to believe and demand quality of services provided

> *"Quality needs to have a generation to adopts the idea ... change the concepts within the community... the client himself should start appreciating the issue...provider himself should feel he is not only required to do the job and that's it but it should be convinced from inside that doing a good quality will reflect positively on benefit of both clients and providers..." [5]*

From a different slant, one interviewee felt strongly to ensure quality, and the financial situation of health professionals should be rectified:

> *"To assure quality, first and foremost rectify the financial situation of health workers so that s/he will work effectively and efficiency, then set out few standards and indicators, train users and assess the performance.... and the most important is the psychological stability for health workers"[7]*

He added that "...*we should not be too ambitious starting with a big project I can't make quality once for all; it is a long journey and needs gradual steps" [7]*

In the same vein the next interviewee emphasized the need for adequate resources on which to build quality improvement:

> *"Quality assurance means for me "guarantee stamp". For instance, how I can assurance quality inside the dressing room? First I should have clean place then give me the materials like autoclave, surgical materials and alike ... give me resource according what I need not more nor less" [1]*

5.1.3.3.2 Quality awareness

Many different opinions were received on raising awareness of quality ranging from educating people on quality concept to having a quality forum. A selection of theses views are given here:

> *"It is essential to elaborate what do these quality concepts mean, why we use this way instead of other one... why we are concerned on privacy, confidentiality, dignity of patients and so on."* [6]

> *"Quality awareness is important as there are many of those who working at ministry level they don't know the correct concept of quality even those who are decision and policy makers like the general director of most of directorates and the directors of the health programs... I feel happy when I heard somebody implementing quality activities even I am not involved."[1]*

> *"Quality concerns all whether you are politician, health provider, and client. Quality is the issue which exist on the back of mind of all us but who make it out." [3]*

> *"To raise quality awareness, I suggest setting up a forum. This forum should held every month or every other month where in this forum quality problems and issues should be discussed and presented in addition to present the successful quality stories or project from different provinces so that the quality awareness will be enhanced."[7]*

One interviewee stressed on the importance of a participatory approach and on team work in building quality awareness:

> *"The problem is we are not aware of the importance and practicing of the participatory approach at work, i.e. all the responsible parties should be involved instead of work individually so the culture is we are not against quality but culture of involving and participating others in the work" [3]*

Some interviewees thought that the level of detail needed about quality culture level differs according the different management level:

> *"I think for policy and decision makers, knowing the basics and quality principles,...all are convinced without go in detail ... those who are at decision making level, it isn't necessary to be experts on quality rather than knowing the principles and basics of quality concepts and methods to get convinced and to support those who are professionals and working at the field of quality assurance" [6]*

> *"The quality should not be restricted to the health facility level but should be comprehensive starting from the top i.e. ministry and downwards, ... how I can make quality at a facility while there is not quality at ministry... who is going to monitor and supervise people ... what about the quality at other departments like financial affairs these people will not understand the quality and it's requirements so we need to create quality culture at all levels starting at central level at least amongst the health leaders"[7]*

On then other hand, one interviewee said that quality awareness was nearly absent in the whole health care system: *"Quality awareness is mostly absent at all health care level" [3*]

5.1.3.4 Quality organization

Quality organization describes quality objectives, quality resources, training and capacity building, and any other organized activities relating to the implementation of quality management in the organization or health system.

5.1.3.4.1 Quality objective

Interviewing with the key informants showed that there were no clear objectives for quality assurance at ministry level. One interviewee said:

"The main goal is the contentious improvement of health services quality ... we have specific objectives but they are not fixed, i.e. when we achieved them, we may change them to other ones" [1].

He added that although the QA Department at the ministry had been established with specific objectives, these objectives did not reflect the departments' ambitions:

"...yes quality assurance department becoming has objective after issuing the ministerial decree of quality program even the decree didn't reflect our ambition ..." [1].

Another interviewee commented that the staff of Quality Assurance department in the Ministry level is not competent:

"...Quality Department staff have cloudy vision and don't have clear strategies in quality assurance... yes right they has set up a department for quality but unfortunately the cadre in the quality department is not distinguish , they don't have good background we got stuck with them many times... they don't have vision" [5]

On the other hand, it is understandable that there is no clearly stated aim and specific objective for the Quality Assurance Department and it seems that there is an overlapping between the quality objectives and quality activities. Another interviewee said:

"We aim at holding a workshop on standards and indicators in ordered to acquaint the participants what is the standard and indicator... then move on to develop specialized quality systems for therapeutic services as we in quality department restricted to secondary level and above although we are supposed to work on primary level as well but what can we do this is the desire of the political decision makers at ministry" [1]

5.1.3.4.2 Quality resources

It was found that the allocation of resources for quality improvement activities had a different outlook. In general the analyses showed that the available resources for quality assurance activities at ministry level were limited. The interviewees' views were:

> *"Quality assurance department doesn't have the essential resources for facilitating work of department such as fax...We are four employees: public health lab technician, Hospital administration, clinician and legal affairs" [1]*

While one interviewee said: *"We as a new program doesn't require highly qualified persons but in the future the quality will become a complex issue and as we will be working on more specialized issue...we now only working on raising quality awareness."[1]*

5.1.3.4.3 Training and capacity building

Many interviewees were dissatisfied with the level of training being done at ministry level. Their comments were:

> *"... Many training courses have been done at health ministry but the outcomes of theses training were zero, why? because we don't pay attention on innovative approaches of training but lecturing and that's it .... It is supposed to give trainees an opportunity for discovering their latent capabilities during the training days but the reality is the trainees got the handout and go back home ... most training course were in English language while the trainees are not good enough in English ... in addition the training contents doesn't not respond to your needs for instance I was in a workshop the subject was far away from what the lecturer was talking about" [1]*

"We should train people on how to manage a quality project, how to involve the stakeholders in quality activities and how to find out external resources for quality" [7]

"In 2003 we trained quality coordinators at province level as a step on creating quality network. ... these coordinators should get intensive training begin with introducing quality concept and method then move on specialized quality issues such quality in surveillance program, paediatrics and so on " [1]

5.1.3.4.4 Technical assistance and donors support

A similar level of dissatisfaction was expressed about the technical assistants and donors which reflected the views that such support was not efficient, not effective and not sustainable. One interviewee stated that:

"Yemeni health administration is not happy with donors work due to they work individually and separately from each other... for example GTZ initiated to introducing a project called SIP were introduced into 11 provinces, the project lasted for about one year, after training people and formulating the support teams and conducting many workshop, people started admiring the idea of the project, all the sudden the project stopped by GTZ because of having financial difficulties and the sudden stopping happened without co-ordinating or noticing the ministry of health... in fact we need effective and sustainable participation from donors as you know sustainability is one of quality dimension" [1]

Another interviewee commented:

"It seems the ministry of health deals with any technical assistance done by any consultant as a seasonal work when the consultant left no real commitment happens towards the outputs of the consults....the consultant does his job and the report put on the self without any action afterwards" [5]

Little benefit had been derived from the consultant's work on quality within the ministry. One interviewee commented on the national quality plan that was drafted by a particular consultant:

> "*Frankly we didn't implement any things from this plan... we did not get benefit from it although it was supposed to get benefit from it*" [1]

5.1.3.5 Monitoring quality

Monitoring quality refers to the mechanisms for monitoring and evaluating the quality performance using a set of indicators and information system. This theme will be presented under the following sub headings:

5.1.3.5.1 Quality indicators

Most interviewees confirmed that the monitoring process is important but there was no quality indictor at ministry level to monitor and assess quality of health care provided. Their comments were:

> "*...continuous monitoring is essential to provide decision making with information on all various problem in order to fix the deficiencies and identify the problems that prevent from improving of health services whether these problems were technical, managerial, or financial even the personal problems...*" [1]
>
> *"As far as I know there are not quality indicators being used to monitor quality at ministry level" [4]*
>
> *"We initiated to develop some quality indicators such as mortality rate, post-operation infection rate and submitted to the directorate of health information and statistics but they said these things are not feasible and achievable." [1]*

Another interviewee said they were about to test a set of indicators which had been developed recently:

> *"We are about to test set of indicators what developed at the workshop held on Kuwait where were selected 12 indicators at primary car level and these indicators have been endorsed by WHO/EMRO and the place of testing will be Lahjj province" [7]*

5.1.3.5.2 Information system

From the interviewees' views that were expressed, there were no effective monitoring system and reliable information system in place. One interviewee described the monitoring process as follows:

> *"There is not uniform format of monitoring plan at ministry level based on standardized standards and indicators...the supporting organization and donors monitor and supervise their activities using their own methods even the ministry's monitoring process in not well organized and not scientific as it does not use checklist of indicators... and the most important is you can't develop a checklist without training people how to apply it" [7]*

> *"We do not have monitoring plan but it is part of the whole plan of the quality program, the reason is that we don't have qualified supervisors for supervision so we need to train the supervisor on quality methods first. However, quality department conduct supervision by field visit using questionnaire for visiting and sometime we change the content of the questionnaire on the next visit" [1]*

> *"Monitoring and supervision process is performed by the central supervision and conducting some surveys and studies that aim partially to assess quality of health services" [4]*

> *"The quality monitoring process is not sustainable and effective due to lack of financial resources that exist on the hand of the financial directorate where it is hard to convince them to understand the important of monitoring*

and allocate resource for this purpose. For example if you want to visit a health facility in a remote area you may find you self obliged to shorten the time of the visit at expense of the quality of performing the monitoring and supervision process due to inadequacy of the resources" [2]

One interviewee described the health information system as being very fragmented and lacking in any quality indicators:

" ...for information system , it has many problems for example each program or project and each donors or supporters have their own information system ... some of them have tried to add some quality indicators within their project but there is not national information system has database for quality indicators."[6]

5.1.3.6 Quality initiatives and priorities

This theme refers to any thoughts, initiative or project being implemented by anybody at any level of the health system.

The key informants' views revealed that the quality priorities had so far been insufficiently articulated at the highest level, thus few initiatives could be identified. One interviewee said:

"Up till now we had not had a clear priories on quality assurance issue at Ministry level what we have is only the recommendations that written by the an international expert who drafted the national quality assurance plan in 2002" [3]

Nonetheless some individuals had set their priorities about emergency services as illustrated by this comment:

"We first will target the emergency services as we feel the quality of emergency service is weak after that move on the diagnostic services and therapeutic services ... these are within our objectives" [1]

5.1.3.6.1 Donors' initiative

Many of the quality initiatives that are ongoing have been initiated by donors. For example, GTZ had implemented a quality initiative on "service improvement program" (Siponen and Va?lima?ki). One key interviewee commented:

> *"Concerning quality there is some individual initiatives from donor side like SIP that aims to improve quality of therapeutic services at primary health facilities of 11 provinces by focusing on training in building capacity of professionals specifically doctors, lab. technician and pharmacists in addition to training on quality methods and concepts"* [2]

An interviewee from the SIP staff mentioned that this project had been conducted as a pilot project but it was not completed due to financial difficulties from the donor side:

> *"We were thinking that the SIP is a pilot project model funded completely from Germen project ... based on the outcomes of the project, the project will submit to provinces that participated in the project in particular and for ministry of health in general to generalize the idea of the project and apply it somewhere else" [5]*

5.1.3.6.2 Ministry's initiative

Initiatives within the Ministry of Health were instigated largely via the Department of Quality Assurance. At the beginning the main aim was to create a quality network by appointing a quality co-ordinator at provincial level. The idea was that each province would start to create a sub-network by appointing quality co-ordinators at district level and then at facility level. However, this initiative had failed due to many reasons such as lack of financial support for quality activities at provincial, district and facility level, in addition to the high turn over of the directors of the health facilities. The interviewees' comments were:

"Good initiatives have started at some hospitals but the continuous turn over of the directors of the health facility led to abortion of these initiative... for example if there is good hospital manger working well but due to he has some personal difference with others, he might get replaced by somebody else ... these caused disturbance in our program" [1]

5.1.3.6.3 Quality perspective

Some interviewees indicated of the importance of the role of patients or clients in improving quality of health care. Their comments were:

"Issue of the patient satisfaction is very important, nowadays many of quality assessment depends on patient satisfaction survey ...so it is necessary to involve patient or customer in order to identify their needs and expectations ... participation of community in quality assessment is very important as well to give you feedback. For example community survey, group discussion..." [7]

Another informant commented:

"So far our services are not client-focus and don't centre around the client satisfaction philosophy...we provide health services according our [professional] perspective while you can combine between the client perspective i.e. what he wants and how s/he thinks and our perspective... first and foremost we have to adopt patient satisfaction as policy then talk about it" [6]

One interviewee highlighted the link between the quality and patients' health rights via enhancing community participation:

"... community participation is a good means to let people know their health rights... for instance pregnant woman might go to a health centre and she doesn't know her health right who will let her know ...the health committee at the heath facility...another advantage of community participation is the health committee will work as a focal point and bridge between the health facility and the community served and this will reflect

positively in solving the health facility problem like the financial problems and will facilitate conducting the community base outreach services.. " [5]

5.1.3.7 Quality responsibilities

This theme describes the views of the key informants regarding the different roles and responsibilities of quality management at ministry level. The interviewees' views on quality roles and responsibilities were different, as highlighted below:

5.1.3.7.1 Planning and policy role

The interview findings suggested that the responsibility of planning for quality assurance at ministry level is not consolidated under the Department of Quality Assurance but is spread across many units such as the Health Policy and Technical Support Unit and the Reproductive Health Directorate. One interviewee stated that:

"According to the new bylaws of the health ministry, one of the main tasks of the 'health policy and technical support unit' is to develop a national health quality assurance plan ...the unit was given this task as it was, in the past, adopter of quality assurance issues with the health sector reform project that funded by European commission... setting up a national quality plan is a big task but the unit with cooperation with other departments within the ministry will act as the main brain and the think tank to gather all the thoughts across all sectors in the ministry as the quality is cross-cutting all sectors" [3]

Another interviewee echoed the views given above in that the national health quality plan that was drafted by the policy unit with support from the donors in the form of providing an international expert on quality did not make any huge contribution to developing quality within the Ministry of Health:

"We had not made a big contribution in the quality plan though many tasks were determined for who is responsible for, when, how and when but no one committed to. As a result, all these efforts went off" [6]

5.1.3.7.2 Regulatory role

One interviewee emphasized that the role of the ministry should be regulatory rather than detailed for quality supervision and evaluation:

> *"...the most important role of the ministry in quality should be the regulatory role in terms of licensing and accreditation ... if we could do that it would be enough instead of detailed supervision and evaluation"* [3]

A problem arises from the overlapping responsibilities between the Ministry of Health and the local council regarding the supervision on health services at facility level. One interviewee commented:

> *"There is an overlapping and sometimes conflict between local council and ministry of health concerning supervision on health service" [2]*

5.1.3.7.3 Co-ordination role

Good co-ordination and integration of quality activities would contribute to improving quality in health care services. One interviewee stressed:

> *"We suggested to integrate quality activities in all the health programs and projects instead of taking responsibility of quality management amongst all these projects and the quality management department take the supervision responsibility as the quality needs a big efforts not simple work, needs persistent and continuous work"* [1]

Another interviewee reasoned that the absence of co-ordination would lead to resource wasting and deterioration in quality of the programmes and projects services at the ministry level:

> *"There isn't coordination and integration between the health programs and projects particularly in the supervision process where each project works individually. As a result, limited resources are wasted and this will reflect negatively on the management quality"* [2]

There also appears to be a poor co-ordination with the donors and supporting organizations with the Ministry of Health:

> *"The problem is that there isn't good coordination with the donors and supporting organizations ,donors work individually and separately, all the sudden someday the donors may suspend their supports without thinking of the consequences but if there is good coordination the problems might disappear"* [1]
>
> *"There isn't coordination between donors on one hand and ministry of health on other hand especially regarding financial commitment when the donor going to withdrawal and hand over the project to the ministry" [5]*

5.1.3.8 Quality challenges and opportunity

This section summarizes the key informants' perspectives of the challenges and opportunities of improving quality of health care at the Ministry of Health. The findings demonstrated that there were some problems and constraints standing in the way of efforts towards quality improvement and some opportunities that could be deployed to improve quality. The views of the respondents are presented below.

5.1.3.8.1 Quality culture related problems

Findings from the interviews showed that some interviewees thought that a lack of existing appreciation and understanding of quality concepts among most of the health leaders might be one of the main obstacles of quality improvement:

> *"There is lack of quality appreciating and understanding amongst the top and middle management (general directors) at ministry and what is the potential benefits from quality methods .... If the top management understands the importance of quality, this will reflect positively on quality development... these need to make a real persuasion amongst top management on the importance of quality to make the middle management*

and downwards committed to quality...Lack of appreciating of health office officers and health facilities mangers for quality issues as well" [1]

"*Lack of the quality concept amongst the health leaders... they are unable to comprehend the concept, its importance and the quality methods... lack of institutional development ..."[7]*

The lack of quality awareness among community members was identified as another obstacle in setting up activities to improve:

"weak of citizen's awareness of their health rights that they expect to get from the health providers at health facilities... sometimes the patient himself cover the mistakes and deficiencies of the services providers for example pregnant woman may visit a health facility and her blood pressure wasn't measured and she didn't ask for that as she doesn't know this is her right to ask for" [4]

Another interviewee added that:

"The most important problem that prevent from improving the quality of health is lack of feeling of the responsibility among services provider and ministry pf health doesn't has clear vision on quality improvement and assurance" [4]

The lack of any mechanism and initiatives for institutionalizing quality culture was also seen as another core problem:

"*Lack of knowing what the real motivations towards quality ...and the essential thing is to give attention for spreading the quality culture in the health field" [1]*

"First we need to create quality culture, setting up institutionalizing quality system, allocate adequate resource for to establish the quality system and involve the entire stakeholder in the quality issues" [7]

5.1.3.8.2 Quality policy related problems

Some interviewees stated that there was an absence of a clear vision and policies on quality at ministry level and a lack of building consensus among the quality concerned parties are one of the main barriers of quality development initiatives.

> "*Lack of the having clear quality vision, quality* policies and strategies *at ministry level...*" [3]
>
> *"There is not consensus building and real commitment , lack of quality vision amongst some health leaders on important of the quality this call for creating a quality culture amongst the health leaders" [7]*

On the other hand some key informants thought that red tape and bureaucracy were one of the main problems for not developing an effective mechanism for ensuring quality health services:

> *"The problem is the red tape ... there is not budget in name of the quality management department" [1]*
>
> *"Lack of the sustainability in the activities, the follow up and monitoring function" [3]*
>
> *"The continuous turn over of the health facility mangers ... this disturb the Yemen health administration in general" [1]*
>
> *"The cooperation spirit is absent due to institutional and individual reasons" [6]*
>
> *"The instability of top position like the Minster where you can see that four ministers have already changed since 1994" [2]*
>
> *"Administrative aspect, I don't feel that the ministry has an organized and studied direction to adopt quality assurance in the health system and this is dangerous" [5]*

5.1.3.8.3 Quality responsibilities related problems

From the interviewee's point of view the role and responsibility of quality improvement is not well specified, especially in terms of advocacy and co-ordination of activities:

> *"There is a weak role from those who took the responsibility of quality management at ministry level. For example there was not advocacy, sensitization for quality... what is happing is just we have amount of money to support quality activities, we go and spent this money and that's it" [3]*

Another interviewee indicated the scattering of quality activities among the different departments at ministry level:

> *"The constraint is there are more than parties working on quality, this led to hamper implementing the quality plan developed by the consultant ... although we are the responsible department for quality program, there are other department authorizing themselves to work on quality" [1]*

Some interviewees pointed out that the monitoring and supervision system was not effective and the principle of rewards and punishment was also not in place:

> *"The issue of the monitoring and supervision, the principle of the reward and punishment is not exist... if a person does job perfectly or not nobody will reward him or punish him... you may say there is a need to increase the salary but if you increase it without matching in the performance improvement is wasteful for instance in some health facilities the increase in salary reached to 100% but is this increase lead to improvement of performance at least 10% ...NO" [6]*

> *"Ministry functions are overlapped between more than ministry financially ministry of finance, employment and human resource management is civil service ministry and some technical activities like health school belong to ministry of education, environmental health belong to municipality..." [2]*

5.1.3.8.4 Resources constraints

Whilst spreading quality awareness about quality amongst the health services staff and clients is an essential step in the quality improvement process, it was found that there were not enough resources allocated to do this task. The poor salaries of staff at facility level also made it difficult to persuade them that they have a responsibility for quality of the services they provided:

> "*No adequate resource allocated to spread the quality culture ... if we spread the good behaviour ,the bad one will disappear... analogously if we spread the quality and good performance the errors will get less*" [1]
>
> "*The most important problem, let's be realistic from the experience, is not the standards and the indicators and so on, there are main things in most of all the health facilities need to be addressed first and foremost is the staff are de-motivated and frustrated ... quality doesn't need frustrated worker , the quality needs those who are motivated and have clear vision... the main reason of these frustration are the socioeconomic status of staff and the low salary...the health workers are under pressure to work in more than place to improve their income so they will not time to participate in quality activities as quality needs participation and voluntary work how he will volunteer if he does not like to perform his basic work, of course we need to have standards and indicators but we should first look for the crucial things before start to training them and they are not mentally with you... I visited many of health facilities in Gulf region countries and I found the we are not less than them in furnishing the facilities but the remarkable thing is that there is punctuality, respect of the work and on top of that* the staff are very motivated" [7]

Another interviewee said the problem that most health facilities suffer from is a lack of infrastructure in terms of budgeting for quality and also a lack of qualified personnel in quality:

"Limitation of the resources particularly the financial resources where there is not budget in name of the quality management department" [2]

He added:

"Lack of qualified cadre on quality at Ministry of Health" [2]

5.1.3.8.5 Organization structure problems

The quality management structure within the Ministry of Health was found to be weak; the low status of the Quality Assurance Department in the ministry organizational structure both reflect and contributes to this weakness which is exacerbated by the poor institutional capacity of the ministry as a whole in addition to the lack of quality structure at facility level:

"The hierarchical structure of quality management department in ministry organization structure is weak" [2]

"The quality management department at the ministry - the cadre - I think is not distinguished I think if there were good cadre, we would have made a wide stride in quality issues at the countywide level" [5]

"There is not an effective organizational structure for quality at ministry and it needs to be activated" [7]

"The people capacity is limited at Ministry level...statistic say 84% of employees at ministry (headquarter) have just secondary school, that is, they are not specialized neither technically nor managerially, you may find nurses by experience, health educator without having the skills required ... so how can you make remarkable transformation in quality of health care and the people of this transformation are not exist" [6]

" ... appointing in leading position at Ministry level don't give attention to quality but it depends on personal consideration not according the job specification in addition the appointment at ministry usually make by civil service ministry and the role of ministry of health is very limited and weak as well" [2]

Other interviewees indicated a lack of quality structure at facility level:

"Lack of having quality department at facility level responsible for quality improvement what we have is only coordinators appointed at provincial level but they are not effective as there is not financial support for their activities" [2]

"Lack of feeling of responsibilities and the careless of the health workers at facility and absence of the principle of reward and punishment" [4]

5.1.3.8.6 Quality opportunities

Analysis of the findings showed that there were different opinions about joining Yemen to the Health Council of the Gulf Co-operation Council States. One informant thought the joining was a potential opportunity for quality improvement policy as this joining will put pressure on health leadership to improve quality of health care to reach the level of GCC States efforts in the quality improvement. On the other hand, another informant thought that the joining would be seen as trying to imitate others, forgetting the real situation of the basic steps of quality needs to be established. Here are their comments:

"Becoming a member of Health Council of Gulf Cooperation states will give the quality issue a special attention and concern from leadership in the Ministry of Health as the Gulf region countries have already made a wide stride in the quality issues especially in field quality training and equipping the health facilities" [2]

"Our participation in gulf council had made us to jump over our real situation as we try to imitate the others in their work ... It was supposed to establish the basic steps instead of passing our Yemeni real situation ...We should work on what it is available and possible in quality nothing else ...." [6]

5.1.3.9 Key findings summary

Box 5-1 Key findings summary

Quality policy

- The existence of a consistent and cohesive quality policy at national level is questionable and the existing commitment needs to move from verbal and rhetoric commitment to real commitment in terms of allocating resources for quality policy implementation. More importantly, policy makers should be involved in quality policy formation and implementation strategies.
- Although there is a national quality plan, there were a number of key informants who had some reservations in terms of its feasibility of implementation.
- So far there is no clear quality strategy for implementing any quality policy initiatives, even though a number of key informants have well defined views on the need for such strategies and the capacity development required to implement them.

Quality standards

- The existing standards are limited in terms of that they do not cover all aspects of health care delivery, and they are scattered and disharmonised. In addition they are not applied at facility level.
- The existing standards need to be gathered under the name of the Ministry of Health to be officially approved and an external and internal monitoring system need to be established in order to ensure compliance with standards at facility level.

Quality culture

- Many different views were expressed about quality concepts ranging from considering quality as an indicator of performance, and improving the infrastructure before expanding the conceptual behind the quality. Time is also a factor of quality, and it will take time to educate and involve the whole generation within the community in the belief and for them to demand themselves the quality of services provided.
- The quality health services are not yet client or patient focused and that raises concerns for patient satisfaction.
- It has been indicated for the importance of quality awareness amongst the health leaders at ministry level down to facility level in order to foster quality culture.

Quality organization

- Views on quality or organization found different quality objectives, quality resources, and the incompetence of the current quality staff in the Quality Assurance Department at Ministry level. The co-ordination in the current quality improvement activities was found to be nearly absent.
- There was dissatisfaction on the training outcomes being conducted by the Ministry of Health in terms of quality.
- There was an ineffectiveness of technical assistance given by donors in addition to unsustainability of quality projects that were supported by donors.

Quality responsibility

- The responsibility of quality management at ministry level is fragmented among the many departments involved with on quality issues and there were no co-ordination between these departments.
- The role of the Ministry of Health on quality needs to be determined with preference being restricted to regulation or supervision and evaluation roles (external assessment).

Quality initiative

- There were two main quality initiatives; one is a separate project that is being implemented by donor support (GZT-Germany) and the other is being implemented though the Quality Assurance Department within the Ministry of Health.
- The approach of the two initiatives is each a little different although both projects are vertical programs from ministry to facility level.

Quality challenges

- Cultural related problems
- Policy related problems
- Organizational and responsibility related problems
- Resources related problems

In summary, these finding are, in general, consistent with the survey findings of the professionals and managers views on the quality policy development at hospital level, as it was presented in the quantitative findings section and in agreement also with the evidence from the reviewed documents that were discussed in the country study chapter.

Chapter Six: Discussion

6 Overview

This chapter refers to the discussion of the principal findings that were revealed by the study. It is divided into two sections; Section 6.1 elaborates on the data quality assurance, including reliability and validity of the data collection methods and the study limitations and constraints. Section 6.2 presents the interpretations of the findings through two subsections: section 6.2.1 which discusses the findings of the patients' perceptions of health care services, and section 6.2.2 which discusses the findings of quality policy development. Subsequently, each section discusses the study objectives in turn, whilst paying attention to the key findings and comparing the results of the study with other studies in the literature as possible explanations and interpretations are explored.

6.1 Quality assurance of data

This section highlights the validity and reliability of the study methods, the limitations and constraints faced, the actions taken to improve the data collection process and the external validity of the findings.

6.1.1 Reliability and validity

In principle, validity and reliability are concepts concerned with the extent to which an instrument actually measures what it is supposed to measure and produces similar results on repeated application (Rubin, 1990a, Sitzia, 1999). Reliability is commonly measured by the internal consistency method that tests whether the items belong to scales that are correlated with each other. Statistically, Cronbach's Alpha coefficient is the statistical measure of a scale internal consistency; the more the items are correlated, the more the value of alpha increases. As a rule of thumb, if the alpha value is .6 or higher, the reliability of scale will be satisfactory (Bland and Altman, 1997). Nunnally

(1967) states that in the early stage of research on hypothesized measures of a construct, modest reliability of .6 or .5 are sufficient (Nunnally, 1967). Helmstader (1964) differentiates between whether a measure is intended to compare groups or to compare individuals. The former believes that a reliability of .50 is considered acceptable, while the latter recommends a minimum level of .90 is (Helmstader, 1964).

Validity is a multifaceted concept and is generally divided into two types: internal and external. Internal validity refers to what extent the subject components of the study appropriately cover. Conventionally, validity types refer to criterion validity, content validity and construct validity. Whilst the content validity can not be demonstrated by statistical tests, it is usually assessed based on the agreement among professionals about whether the components of the subject under study are covered in the scale. On the other hand, criterion validity is measured by comparing tested measures to a 'gold standard' measuring the same construct (Litwin, 1995, Streiner and Norman, 1995). Hence, patient satisfaction should be valid internally and externally. However, although the external validity is important, without good internal validation it is difficult to establish appropriate measures of different dimension of satisfaction (Pascoe, 1983).

In this study, the reliability coefficient for the quality dimensions of patient satisfaction scale was satisfied with Sizia's requirements for credible research (Sitzia, 1999). The content validity of the study questionnaire was assessed by consulting the contents of other existing questionnaires and their respective evaluations in the literature (Hendriks et al., 2002, Dufrene, 2000, Rubin, 1990a, Rubin, 1990b). Moreover, the construct validity has been assessed using the PCA and varmix rotation to identify the structure of quality dimensions and to assess the construct validity of the questionnaires, taking into account the criteria of applying factor analysis, such as the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of Sphericity (Tabachnick,

2001, Field, 2005). The following section presents the analysis of reliability and validity of the current study methods.

6.1.2 Reliability and validity of the patients' perception scales

There are many ways to measure patients' perception of health care quality, either quantitatively or qualitatively or both. In this study, patients' perception of hospital care quality was measured by two questionnaires; one for out-patients and the other for in-patients. Each questionnaire consisted of several items covering dimensions for all hospital care aspects. These items have been factorized to a form subscale and to assess their validity and reliability.

Table 6.1 shows the reliability coefficient for the quality dimensions sub-scales for hospital care, including out-patients and in-patients. In general, the levels of reliability coefficient were found to be satisfactory. Cronbach's alpha correlation coefficient exceeded the value of .60 for all dimensions except for the 'service responsiveness' dimension in the out-patients, and cleanliness and noise dimensions for the in-patients which had a reliability coefficient smaller than .60. This may have been because the scales had only two items in addition to the heterogeneity of the items within the scale.

In general, the reliability results can be considered satisfactory if the number of items in the sub-scales is taken into account. These results are consistent with those found in previous studies (Gonzalez et al., 2005, Dawn et al., 2003, Dufrene, 2000). Regarding the criterion validity, the questionnaire was limited due to a lack of an existing acceptable 'gold standard' measure for quality of health care services.

Table 6-1 Coefficient reliablity of quality perception quality Scales

Scale	Reliability coefficient
▪ ***Outpatient quality dimensions***	
Technical care quality (5)[a]	.70
Service availability (4)	.72
Continuity of care	.73
Doctor's manner and humanness (3)	.64
Services responsive	.48
▪ ***Inpatient quality dimensions***	
Technical care aspects	
Doctor's behaviour (6)	.89
Nurses behaviour (7)	.86
Nurses responsiveness (3)	.82
Doctor availability (4)	.83
Emergency services (3)	.72
Non-technical care aspects	
Environment and facility services (7)	.84
Food services (5)	.85
Housekeeping services (4)	.76
Cleanliness and noise (Pierce et al.)	.59

[a] Number of items.

6.1.3 Reliability of qualitative data collection and analysis

There are various ways for enhancing reliability of the qualitative research such as respondent validation, transparency of the analysis methods, and triangulation (Malterud, 2001, Mays and Pope, 2000). These criteria were applied to assess the approach used in this study. All the in-depth interviews were conducted by the principal investigator himself, using a standard topic guide. Various probing questions were used with different informants in order to explore and clarify the issues further.

- Respondent validation refers to the process of comparing the researcher's account of experiences or information obtained with the accounts of those who had been interviewed. A common mechanism is to feed back key points at the end of the interview, so that the participant has an opportunity to modify or confirm that the researcher has a true account of what was said; a feedback at the end of the interview was attempted in this study.

- Transparent analysis: qualitative analysis in this study used the framework approach. Thematic framework, coding index and coded text were developed manually and managed using Microsoft word processing. All individual interviews were transcribed into a Word file and saved on a disc. Independent coding of transcripts was not carried out in this study, but the principal investigator constructed matrices to explore the complete data set and identify a range of responses and possible explanation whilst interpreting the data.

- Triangulation: comparisons of the results in two or more methods is a way of ensuring comprehensiveness and understanding of the issues rather than a mere test of validity or reliability in qualitative research (Malterud, 2001). In this study, triangulation of qualitative data with quantitative measures gave a clear understanding of the situation for the quality policy development both at national and facility levels.

6.1.4 Other actions taken to improve quality of data collection

Further actions were taken to improve quality of data including:

- Conducting a training workshop for the data collectors in order to equip them with the skills required for the data collection and conducting a proper interview with each respondent.

- A pilot study was carried out to test the feasibility of the study methods and to ensure that the data collection methods were understandable to the respondents and also manageable for the interviewer.

- The respondents were assured of confidentiality at all times and of the anonymity of the data collected. Furthermore, the respondents were informed that the study was independent from the health facilities administration and that any information they gave would be confidential and used only for research purposes. Also, consent from the respondents and permission for conducting the study were obtained and the

purpose of the study and importance of the respondents contribution to improve quality of health care had been articulated.

- The researcher conducted a close supervision of the data collectors during the fieldwork to discuss any daily problems that may have occurred during the data collection process.

6.1.5 External validity

External validity refers to the generalisability of the study results to the wider target population. This was maintained by the following strategies:

1. Representatives of the study selected hospitals: The study included all the public hospitals that provided tertiary care in Sana'a city. Although the study population cannot be considered as representative of all public hospitals all over the country, the results could reasonably be regarded as an indication of what might happen in other public hospitals in the study country. Moreover, there were no data suggesting that the study sample varied from the general population attending for public hospital care. The general sample characteristics were found to be similar to the general population, (see appendix 6-1).
2. Reliability and validity of the method, as discussed earlier in the previous section, showed trustworthiness of the study findings.
3. The study used quantitative and qualitative methods aimed at findings from one method that could complement the other method, especially for the policy implication.

6.1.6 Limitations and constraints

- As in all studies, this study had a number of limitations that may have brought bias which influenced the ability to generalise. The study was limited to the period from April to July 2004, and there were no evidence that the patients attending hospital during this period were unrepresentative of the general patient mix at the hospitals. Therefore, there were some confidences that the data gathered would reflect the general patients' perception of quality of hospital care all over the country.
- The study was confined to Sana'a city, the capital of Yemen, and only covered the public funded hospitals. Hence, caution was taken in extrapolating these data to other hospitals outside Sana'a and even to other hospitals within Sana'a but outside the public sector.
- The data were collected during face to face interviews, yet there was a possibility that the responses may have been influenced by the interview setting or the interaction between the interviewer and the respondent. All interviewers were carefully trained in establishing a good rapport with the respondents and emphasis was given for the confidentiality of the data in order to reduce the possible influence of bias. Some patients refused to participate, and a common reason they gave was that they were in a hurry. It is not known what bias this may have had on the overall results but the number of refusals was small (N = 3) and it was anticipated that any bias would be equally small.
- Sufficient time was not available to organise direct observation technique for assessing quality of hospital care.

- **PCA limitation analysis** - the PCA has established the principle that there is a factor structure to the two questionnaires and has completed the first step of identifying what these components are. Also, the emerged components from PCA partially met the criteria of face validity as most of items, but not all of them, were in right place. Nevertheless, although the sample size met the criteria of more than 5 cases per items but not the more rigorous criteria of 10 cases per item, the emerged components should be interpreted with caution. Hence, it seems that there is a need for improving the face validity via adding some items to some appropriate components and applying a factor strengthening exercise, which will involve adding items to components with less than 5 items. In conclusion, in any future research it is recommended that the new questionnaires will need to be re-tested by giving them to new cohort of respondents and to test the factor structure using another statistical technique analysis called 'confirmatory factor analysis'; the face validity and strengthening exercise would automatically improve the poor Cronbach reliability coefficient obtained by PCA as long as the process is repeated until all Cronbach alpha coefficients exceed .07.

6.2 *Interpretation of Findings*

This section is divided into two sub-sections. The first part discusses the patients' quality perceptions of hospital care and the second part discusses the findings related to quality policy development.

6.2.1 Patients' perception of hospital care quality

Objective 1: To identify the patients' perspectives on the quality of hospital care in Yemen from both out-patient and in-patients' views

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There is a limited, though rapidly increasing, literature on patients' perceptions of health service quality in developing countries. Most studies of hospital quality focus on either out-patient services or in-patient services, but not both. The current study was attempted to explore and bring together the patients' perception of quality hospital care in both out-patient and in-patient settings. The following sub-sections addresses each of the study objectives in turn, discusses the key findings relevant to that objective and makes comparisons within the context of the existing knowledge gained from the literature.

6.2.1.1 Out-patient care

This section deals with patients' perception and their quality ratings of out-patient care, discussing patients' main quality concerns, the dimensions along which patients view the quality of out-patient care and the factors influencing patients' on the overall satisfaction with the quality out-patient care.

6.2.1.1.1 Patients' perceptions

An interesting way for defining perceptions of health care is to see it as the difference between the patient's expectations and their experiences. This difference might influence the patient's satisfaction on health care services (Thompson and Sunol, 1995a, Sofaer and Firminger, 2005, Sitzia and Wood, 1997a). For example, in the current study

patients' perceptions were assessed by measuring the difference between the patients' expectation and their actual experiences with nine types of out-patient services (see Table 5-3).

The study findings showed significant differences between patients' expectations and experiences concerning the elements of technical care and not the elements of the interpersonal aspects of care. The findings were found to be in line with previous studies that also reported failure of the health providers in meeting patients expectations (Joos et al., 1993, Peck et al., 2004, Williams et al., 1995, Zemencuk et al., 1999). This lack of concordance between patient and provider preferences is well illustrated by Cleary and his colleagues (Cleary et al., 1991b). The situation seems to be more noticeable in developing country health systems. For instance, Andaleeb (2001) argues that patients' perception on health services are largely ignored by health care providers in developing countries (Andaleeb, 2001b).

Why the difference between technical and interpersonal aspects of care? One explanation is that patients might have been more capable of articulating their desires about the interpersonal aspects of care. For example, they are more competent when asking for information or explanation about his/her problems rather than when asking about the technical aspects of care, such as physical examination, test, prescription, etc. William (1994) in his review of such findings pointed out that this kind of "taken for granted" behaviour might be due to either a lack of expectations or as a reflection of a passive role adopted in relation to the health professionals (Williams, 1994b).

Another explanation might be that the providers (especially doctors) perceived time constraints that may prevent them in sparing time to explain the technical aspects of care to their patients or they may feel that the services a patient might want are not necessary from a professional point of view (Joya K. roa et al., 2000).

It is worth mentioning that these differences were not significantly associated with patient characteristics such as age and education level. This lack of association matches the findings from other studies. For example, Joos et al (1993) found that neither the number of services that patients desired nor the proportion of desired services they received was significantly associated with the patient's age or educational level (Joos et al., 1993). It seems more likely, therefore, that the differences between technical and interpersonal aspects of care are due to characteristics of the services provided rather than to the characteristics of the patients themselves.

Hence, the interpretation suggests that it is important to increase the awareness of the health care providers about the patients' perception during consultation. Understanding this perception is crucial if patients are to be educated about the undesirability of undergoing treatment or tests that are not clinically required. This leads on to the wider issue of setting standards for what patients should be entitled to expect in their OPD care. This, of course, is now a major concern in many health systems undergoing health reforms, both in the developed and in the developing world.

6.2.1.1.2 Patients' ratings of out-patient care quality

The quality ratings given to the technical and organizational aspects of care were lower than the quality ratings given for the interpersonal aspects of care. For example, "drug availability", "extent of seeing the same doctor on each visit" and "follow up of the doctor on the previous visits" had the lowest scores and formed the main quality concern for the respondents. These findings resonate with much of the literature on quality of care in developing countries (Gadallah et al., 2003, Rao et al., 2006).

Patient dissatisfaction with the availability of drugs is a common theme in quality assessment studies in developing countries (Baltussen et al., 2002, Bassett et al., 1997b, Gadallah et al., 2003, Gilson et al., 1994, Hanson et al., 2005, Mashego and Peltzer, 2005, Dagnew and Zakus, 1997). Similarly, findings from previous studies showed that

the continuity of care in developing countries is another source of dissatisfaction with quality of services (Abd Al Kareem et al., 1996, Bernhart et al., 1999, Gadallah et al., 2003, Mansour and Muneera, 1996, Margolis et al., 2003, Mendoza Aldana et al., 2001, Westaway et al., 1998).

Thus, these findings add weight to the argument that "continuity of care" and "availability of essential services such as drugs" are the main quality issues in developing country public health care systems and should be seen as priority in any health care quality improvement initiatives.

In the current study, the favourability of patients' quality ratings of interpersonal care against technical care might be that the health professionals have expressed care and concern for their patients at the expense of the technical capabilities. As a result, patients would have appreciated the empathetic behaviour of health providers. Also, another explanation could be that the patients might have rated different aspects of care based on their current expectations and their previous hard experiences. As a result, those aspects of care which seemed more important to patients, such as technical aspects of care rated less positively as compared with the interpersonal aspects of care. Jung et al. (2002) indicated that the services which received low quality scores might be the most important from a patient's point of view and are more of a candidate to any quality improvement intervention (Jung et al., 2002).

The relatively greater satisfaction with interpersonal aspects of care exhibited in this study is also similar to findings from previous studies that have been conducted in other developing countries (Abd Al Kareem et al., 1996, Mendoza Aldana et al., 2001). Theses findings contrast with the findings from developed countries in which satisfaction with interpersonal aspects of care is often lower than with satisfaction with technical aspects of care. This contrasts between developing country and developed country settings which is intriguing and deserves further research and analysis. One

hypothesis is that it is due to the differences in the culture and the organizational structure of the health system. A more sociological hypothesis is that it reflects the changing power in relationships between patients and health professionals – in developed countries patients see themselves (and are being) seen as "clients" of the "service providers" rather than as passive recipients of what the health professionals think they need.

6.2.1.1.3 Quality dimensions of patient satisfaction with quality of out-patient care

The notion of patient satisfaction with the quality services as multi dimensional is increasing and receives much support from quality of care patient satisfaction studies that have been conducted in developing countries (Andaleeb, 2001a, Mostafa, 2005, Lawthers et al., 1999, Chahal et al., 2004). For example, multivariate analysis of a hospital study on services quality and patient satisfaction in Bangladesh produced five services quality factors, accounting for 69% of the variance of patient satisfaction. Those authors labelled these factors as 'responsiveness' (caring, helpful, courteous), 'assurance' (skilled staff, competence), 'communication' (explanation of tests, answering questions), 'discipline' (cleanliness of the facility and staff) and 'baksheesh' (no services without tips) (Andaleeb, 2000).

Chahal (2004) analysed the factors affecting patient satisfaction in public health care out-patient services. He reported four factors that were responsible for 51% of the overall variance. These factors have been labelled as 'behaviour of doctors', 'behaviour of medical assistant', 'quality of administration' and 'quality of atmosphere' (Chahal et al., 2004).

Similarly, in this study multivariate analysis using PCA produced five quality components accounting for 63% of the variance in the overall rating of out-patient services. These components were labelled as 'technical care quality' (waiting time, competence, courtesy, consultation time, cleanliness), 'availability of services' (lab

availability, services comprehensiveness, clinic hours, participation),'continuity of care' (seeing the doctor at each visit or follow-up),'doctor humanness' (courtesy, explanation, concern), and 'service responsiveness' (drug availability, thoroughness of examination). These dimensions shed light on important quality dimensions from the patients' view point. The β coefficient for the 'technical care quality', 'availability of services' and 'doctor humanness' were all significant for patients' satisfaction but the humanness was not as much significant as technical quality care and services availability, suggesting that technical and organizational structure dimensions of care were more important than interpersonal aspects for patients' satisfaction with quality of out-patient care. The higher coefficient for technical care quality and availability of services suggests that these dimensions are more important to patients than the interpersonal aspects reflected in the 'doctor's humanness' component. Whilst this is in agreement with some of the previous studies, other studies have reported that interpersonal aspects of care, such as courtesy, respect, friendliness and communication are the most powerful predictors of overall patient satisfaction (Mendoza Aldana et al., 2001, Westaway et al., 1998).

Again, there seems to be a difference between developing and developed countries which could be attributed to the differences in patients' priorities for quality improvement of health care. Westaway et.al (2003) indicated that quality of technical aspects and services availability of health care in the developing country context has the greatest impact in patients' satisfaction where poor management, professional sdemeanour and performance have all been criticized (Westaway et al., 2003).

It is worth mentioning in this study, that none of the quality dimensions were related to the characteristics of the patients who were interviewed, but they were associated with services characteristics such as "waiting time" and "consultation time". This lack of socio-demography effects contribute to a low source of error (Sitzia, 1999) and the

association with service characteristics might indicate that these subscales hold promising benefit from assessing quality of care from a patients' perspective.

Thus, one could argue that these study findings, in addition to other study findings provide support to the concepts of multi-dimension of patients' satisfaction and service quality (Sitzia and Wood, 1997a, Ware et al., 1983), and provides additional evidence for Donabedian's distinction between the interpersonal and technical aspects of the health care process in quality assessment (Donabedian, 1988).

6.2.1.2 In-patient care

This section discusses the study findings of the patients' perspective on in-patient services, including emergency department service, admission service, nurse's service, doctor's service, food service, housekeeping service and hospital environment services, in addition to discussing the quality dimensions and predictors of the satisfaction with the overall quality on hospital care.

6.2.1.2.1 Patients' quality ratings on in-patient care

In general, the low degree of satisfaction found in this study is in agreement with the results of other similar studies in developing countries (Attal, 2003a, Bahrampour A. , 2005, Bernhart et al., 1999, Jabnoun and Chaker, 2003, Lim and Tang, 2000, Chahal et al., 2004, Attal, 2003b) that has revealed a continuous deterioration in public health care services. In these studies, the authors have noted that satisfaction with quality of public hospital care is low. For example, Attal (2003) reported in her study of quality assessment of birth care in public and private hospitals in Sana'a city in Yemen that women were not satisfied with the quality of hospital birth care. On the other hand, this finding contrasts with other previous studies which reported a high overall satisfaction (Williams and Calnan, 1991).

However, reporting of high overall satisfaction ratings can not be taken as an indication that patients have had good experiences in relation to a specific service while the dissatisfaction may trigger an indication of a minimum level of negative experience which is more valuable than obtaining consistency of expressed satisfaction (Williams et al., 1998, Sitzia and Wood, 1997b). In addition, such a high satisfaction does not necessarily contribute to quality improvement but it may contribute in maintaining the status quo that hinder improvement efforts and innovative change on the one hand, and undermine the potential usefulness of the satisfaction surveys for planning interventions to improve quality of care on the other hand (Williams, 1994a, Carr-Hill, 1992).

The present study revealed low ratings of service quality, and this might be due to the methods used of asking respondents for rating quality instead of asking them about their satisfaction. Moreover, the patient's perspective in this study was investigated as a multi-dimensional concept, with respondents first being asked to rate the individual aspects of care before being asked for an overall rating for the whole hospital services. Furthermore, the respondents were asked to rate the ***quality of services received*** rather than report on ***their satisfaction with the service***. Hence, the respondents might have been freer to criticize quality of services received.

This is consistent with Williams and Clanan's argument of investigating service quality in a more detailed and specific dimension which can, in itself, reveal greater levels of expressed dissatisfaction (Williams and Calnan, 1991). Hence, this methodological tool may account for the relatively lower levels of satisfaction expressed in this study.

The study findings demonstrated low quality rating of emergency services, in particular 'perceived waiting time' and the 'explanation provision about the condition'. These quality concerns are in line with previous emergency service quality studies (Yildirim et al., 2005, Taylor and Benger, 2004, Sun et al., 2001, Trout et al., 2000, Al-Almaie, 1998a, Al-Almaie, 1998b). The relatively high ratio of patients to staff in ED might

obviously contribute to these two particular concerns which dominate patients' quality issues. Other possible explanations might be that the emergency staff are not equipped with communication and management time skills. From the literature, it has been reported that customer services training and communication skills workshops, including information provision, can improve the overall satisfaction and patients' perception on the quality of care in ED settings (Taylor et al., 2006, Mayer and Cates, 1998, Krishel and Baraff, 1993, Lau, 2000).

With regards to the patient's quality perception of nursing care, the findings revealed that 'frequency of nurses stopping by room to check patient condition', 'explanation about condition and procedures', 'ease of communication with nurse' and 'emotional support given' were the main quality issues for in-patients. The literature identifies the clear communication and information giving as a big influence on patient's perception of nursing care quality (Cleary and McNeil, 1988, Johansson et al., 2002). Uzun (2001) reported that in a setting where nurses communication of information to patients was low, patients' scores for quality of nursing care were also low (Uzun, 2001) .

Concerning patients' perception of doctor's quality care, the study findings revealed that patients in general have rated doctor care quality more favourably than any other aspects of in-patient care. This favourability was reported in previous patient satisfaction surveys that found patients were often more sympathetic with doctors' care quality. However, patients were least satisfied with quality of technical care aspects such as 'availability of doctors when needed, 'instruction given on discharge for self-care and follow-up' and 'frequency of doctor's visits'.

The study findings of patients' quality perception of non-medical aspects of hospital care demonstrated that food service and housekeeping were important quality concerns amongst the non-clinical services of hospital care. Within the food service, 'food temperature' followed by the 'food quality' and 'utensils used for servicing meals' were

the main sources of dissatisfaction with the quality of the food services. In accordance with previous studies, low food temperature was found to be a potential reason of dissatisfaction with quality of food service (Stanga et al., 2003, Hwang et al., 2003).

For these study findings, possible explanations for dissatisfaction with quality of food service due to temperature might be the delays between preparing the meal and delivery of the food at the bedside, in addition to the food trolley which might not be good enough in keeping food warm for a reasonable period of time.

With regards to housekeeping services, patients were least satisfied with the 'cleanliness of toilets/bathroom' and with the 'time for cleaning their rooms'. This is consistent with the findings from the out-patient survey as discussed earlier. Furthermore, the research shows that the service setting is one of the important determinants of perceived quality and patient satisfaction (Fottler and Ford, 2000, Hall and Dornan, 1988b). Cleanliness is an important attribute of perceived service quality and is an influential factor on the level of patient satisfaction (Carey and Seibert, 1993, Goupy et al., 1991, Oz et al., 2001, Tengilimoglu et al., 1999, Westaway et al., 2003) and it could be an important determinant of patient's health seeking care (Ginsburg et al., 1997).

6.2.1.2.2 Quality dimensions of patient satisfaction with quality of in-patient care

Many studies have demonstrated the multi-dimensional nature of in-patient satisfaction with the quality of health care (Gonzalez et al., 2005, Jenkinson et al., 2002a, Abd Al Kareem et al., 1996, Yildlz and Erdogmus, 2004, Zineldin, 2006, Naceur and Mohammed, 2003, Sitzia and Wood, 1997a). The patients satisfaction and perceived quality with hospital care do not only reflect their experience but also their expectations and values (Sitzia and Wood, 1997a, Thompson and Sunol, 1995a). In this regard, the results of the current study were in line with previous studies.

The multivariate analysis produced a factor solution with nine quality dimensions/ components for hospital care; six components related to clinical aspect care and four components of non-clinical aspect of care, with 68% and 62% variance explained respectively. This is similar to the percentages of variance explained that were reported in previous satisfaction studies in developing countries. For example, Yildlz and Erdogmus (2004) reported seven factors accounting for 68.03% of variance in satisfaction with quality of hospital care (Yildlz and Erdogmus, 2004). Naceur and Mohammed (2003) reported 58.3% of variation in the overall hospital service quality (Naceur and Mohammed, 2003), and Mostafa (2005) reported 67% of the variance explained in satisfaction with quality of Egyptian hospitals care (Mostafa, 2005). The medical care, nursing care, and hotel services all have important roles in explaining the variations, and these results are in agreement with most previous findings (Berg and Yuval, 1998, Guirguis et al., 1992, Hall et al., 1993, Yildlz and Erdogmus, 2004)

Regression analysis was employed to identify the key influential factors of satisfaction with the overall quality of hospitals care. In out-patients, the final model explained 38% of the variance with important contributions from 'services availability' (.41) and the 'doctor's technical care quality' (.39) (see Table 5-8). For in-patients, the model accounts for 51% of the variance in overall satisfaction; the most important contributions coming from 'doctor service quality', 'nurses service quality', 'doctor availability', 'hospital housekeeping services' and 'hospital food services' (see Table 5-19).

In summary, the study findings revealed that neither the out-patients nor the in-patients are very content with the quality of the hospital care. Also, a number of quality issues were identified that need urgent action in order to establish a quality assurance system that will help in improving quality of care. These issues can be divided broadly into

clinical care aspects and non-clinical care aspects. Within each type of care, there are technical and interpersonal aspects of care that require attention.

Interestingly, most of the quality issues identified in this study are amenable to improvement since they pertain to characteristics of the service and the health providers' behaviour. Hence, quality improvement can be achieved through making changes to organizational and structural aspects of health care and brought about by introducing a quality assurance system.

Overall Conclusion

The above discussion suggests that patients' perception of quality care is a practical means for monitoring quality care performance and in identifying quality improvement opportunities as patients are concerned about quality improvement issues.

6.2.2 Interpretation of quality policy development findings

Objective 2: To explore and describe quality policy development at national and facility level.

As no research on the quality policy development has been carried out in Yemen, neither at national level nor facility level, one objective of this study was to explore and describe the quality policy perspective at two levels: the policy makers' perspective at national level and the professionals and managerial perspective at institutional level, i.e. hospital level. Thus, the findings here represent the views of key informants at national level and the views of professionals and managers who were working at the hospitals studied during the study. The following sections discuss the findings, subsequently at national level and followed by facility level. The discussion basically focuses on the main findings as revealed by the study.

6.2.2.1 Quality policy development at national level

'Quality policy development' refers to any and all of 'quality vision', 'quality commitment', 'quality plan,' 'quality policy document', and 'quality strategy'. Broadly speaking, the informants' views revealed that the situation of quality policy development at national level is questionable in terms of quality vision, the leadership commitment, and implementation of the quality plan, quality policy document, and quality strategy improvements. The following are selected typical quotations from the transcripts which illustrate the views of some key informants regarding quality policy at national level.

> *"The Ministry does not have a vision on quality and what the policies of quality assurance are" [3]*
>
> *"At Ministry level there is not support and real political commitment towards quality assurance ...and there is not a budget in name of quality management Department"* [2]
>
> *" ... The quality plan was too ambitious, if you read it you will find it jumps over Yemeni situation in somehow... as I told you it is one of the initiatives that ended up with theoretical document without translating in to practice, unfortunately"* [6]
>
> *"As far as I know, there is not a quality assurance manual at ministry level but in the Reproductive Health Department, we have developed a manual for assuring quality in Reproductive Health Services and Family Planning but it still needs to be revised and refined "* [4]
>
> *"We encourage integrate the quality into ministry's programs and project activities but there should be one responsible part for coordinating quality and the activities of quality should go through It "[1]*

Hence, one can argue that the policy makers and senior management still view the idea of quality as a policy 'lip service'. Quality of services will not be improved if no priority is given to this at national level. Necessary actions are required to develop a quality policy that guide the improvement of services at all levels of the health care system.

In the literature reviewed, research shows that one of the requirements for institutionalising quality assurance policy is in enhancing the 'internal enabling policy environment elements' which include policy, leadership, core values and resources (Silimperi et al., 2002). Hence, there is a need for a quality policy environment that explicitly recognizes the importance of quality for reaching

organisational or system goals and provides support, guidance, and enforcement for QA implementation. As identified in the literature review, leadership is seen as being critical in helping a health organisation have a clear vision for the future, to promote a learning environment and to model the desired core values that should characterise the organizational quality culture. Deming (1986), in his 14 points, stressed an importance of having a vision and leadership commitment. He suggested that without this commitment the quality would not succeed (Deming, 1986). Empirically, evidence has showed that securing leadership commitment is a major contributing factor in succeeding QA programs in developing countries (Manaf, 2005a, Legros et al., 2002, Bouchet et al., 2002). However , Al-Assaf (2002) commented that securing the commitment of the leaders of an organisation should happen eventually, but it should not be the deciding factor for proceeding with the implementation of quality as the leadership in the health care arena change frequently (Al-Assaf, 2002).

Quality commentators argue that having a national health quality plan in a developing country is a necessity as a plan can indicate the way forward and pick out subjects for action regardless of particular individuals, provided that the plan is suited to the culture and special circumstances of a particular country (Ovretveit, 2004). This study revealed that the Ministry of Health has developed a national health quality plan (NHQP). Key informants though have their reservations about it's practicality and feasibility to put the plan into practice. " ... *the plan was too ambitious, if you read it you will find it jumps over Yemeni situation in somehow... it is one of the initiatives that ended up with a theoretical document without translating in to practice, unfortunately"* [6]. Consistently with the literature, it has been articulated that having or announcing a policy is not enough to guarantee its full implementation and achieving effectively its indented objectives (Palfrey, 2000).

It is likely that a lack of progress on implementing the national quality plan is due to the weak institutional capacity within the Ministry of Health and the lack of regulation or legal framework to enforce the implementation of this plan.

These findings suggest that effective quality policy development requires what is called 'organisational readiness' which demands at least three steps prior to initiating quality improvement strategy. These steps include strengthening the 'strategic leadership', 'vision perspective', and 'positive environment' for the development of a quality culture (Penland, 1997). Otherwise, organisations that are not clear about their future direction and have a negative environmental culture should first embark on educational and developmental activities that foster positive strategic leadership, vision and mission formulation and quality culture building. Hence further study is recommended to assess the leadership style exist at national level and what it's effect has on quality policy development.

Conclusion

The findings of this study indicates that policy environment at national level needs to be improved by creating the organisational readiness for change and the leadership that recognises explicitly the importance of quality and is committed to translate this policy into action.

6.2.2.2 Hospital quality management system development

This section discusses the quality management systems (QMS) development at hospital level. The findings represent the views of the professionals and managers about quality management system development components at the hospitals under study. The findings presented in the Results chapter highlight the components of the QMS in terms of the existence of 'quality policy documents', using standards and protocols, quality assurance activities and human resources management, organisation structure of

quality management, patient participation in quality assurance activities, and using quality improvement procedures.

Overall, the findings demonstrate quite clearly that the quality management systems have not yet been introduced into the Yemeni hospital management. Nevertheless, these findings resonate with the situation at national level, where it is clear that no national quality policy is being followed.

Hence, the results suggest that the lack of a national quality policy might be one of the reasons for hospitals not developing their quality management system. In the literature, research has shown that the existence of a national quality policy or general quality legalisation has influenced health facilities in developing their quality management system (Sluijs and Wagner, 2003), and specifically if they have specific obligations and financial stimulation not just a general framework legislation (Wagner et al., 2006).

Conclusion

There is a need for developing legislation or law that requires health facilities to introduce quality assurance system into their process of delivering health care and as means for monitoring, assessing and improving quality performance of health care services.

6.3 Study findings implication

Patients' perception of quality of hospital care is a practical and easy QA method for monitoring, assessing, and improving quality of care, especially for the limited resources in developing countries which can not afford other intensive –resources QA methods. This method can help health providers in monitoring and assessing health services quality performance. Interestingly, in this study most of the patients' concerns about quality of hospital care were found to be similar in both out-patients and in-patients settings.

Thus, patients' perception of quality methods could help in developing quality improvement action that could make a difference in quality of hospital as a whole, not only on a specific part of hospital services. It is recommended that health providers in developing countries use patients' perception as a QA method. This approach is an efficient method since it is not resources-intensive when compared with other quality assurance methods.

The study findings suggest that quality policy development at national and facility level has to have interrelationship and interdependency in order for the policy to be developed. Hence, to introduce quality assurance system into a health facility, it would be useful for the national quality policy developed to be linked with introducing a quality assurance system at facility level. Otherwise, any quality policy developed initiative at national level will not have a consequence on developing quality assurance system in health facilities. There is still a need for further research on this subject to find out the mechanisms for linking national quality policy development with the introduction of quality assurance system at facility level.

Chapter Seven: Conclusion and Recommendation

7 Overview

In this chapter an overall conclusion of the study findings is given initially followed by three subsequent sections. Section 7.1 presents the conclusions concerning quality policy development at national policy level and quality management at hospital level. Section 7.2 presents the conclusions concerning patients' quality perception of hospital care including out-patients and in-patients settings. The conclusions and recommendations are presented together according to the study objectives. Section 7.3 concludes by providing direction for the future research that is needed.

7.1.1 Patients' quality perceptions of hospital care

The objective: To identify the patients' perspectives on the quality of hospital care in Yemen from both out-patient and in-patients' views

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7.1.1.1 Out-patient care

- ❖ The patients' perception of the overall quality of hospitals' out-patient care is poor. Quality of out-patient care aspects needs to be improved from the patients' perspectives. The main patients' quality concerns are:
  - Availability of the drugs
  - Extent of seeing the same doctor at each visit
  - Follow up by doctor on the previous visit
  - Clinic hours
  - Waiting time in the clinic
  - Availability of services.
- ❖ The main quality dimensions which affect the overall quality ratings of out-patient care are the technical and organisational aspects of out-patient care, such

as 'continuity of care' and 'availability of services'. The patients' perceptions of care are not taken into consideration during the time of consultation with doctors.

Recommendations:

- There is a need to establish an urgent quality improvement initiative to tackle the patient quality concerns, especially in ensuring the availability of drugs and continuity of care.
- Set standards and indicators of waiting time and consultation time at out-patients' clinics to improve efficiency and effectiveness of the out-patient health services.
- Set standards for what patients are entitled to expect from OPD and what professionals should do to improve both the patient's perception and professionals' quality performance. This might be done, for example, by the development of a patients' right charter.
- Increase professionals' awareness about the importance of patients' perception of quality of health care services during consultation time and how to manage patients' perception when there is an unnecessary treatment need from the professional's point of view.
- Establish a continuous medical education programme to train professionals how on to assess patients' perception and how to use these findings in setting priorities for quality improvement.
- Hospital management could use patients' perception of health care as a practical QA tool for monitoring and assessing the quality of services and identifying quality improvement opportunities. For example, the patients consider the availability of drugs and continuity of care as important aspects of the quality of health care.

- The quality policy development should be given priority in the development of the quality policy and in implementing quality improvement initiatives.
- Set standards and guidelines for improving doctors' competency in thoroughness of examination and diagnostic skills in addition to training nurses and other staff about the importance of interpersonal aspects of care.

7.1.1.2 In-patient care

The quality of in-patient care was assessed by exploring the in-patients' perceptions of their experiences whilst in hospital, including the emergency services, admission procedure services, medical care quality, nursing care quality, food services quality, housekeeping services quality, and hospital environment and facility quality.

- ❖ Patients' perception of the overall quality of hospital in-patient care is poor and many aspects of in-patient care needs to be improved from the patients' point of view.
- ❖ The quality of emergency services in terms of total waiting times and information given to patient are main quality concerns that need improving.
- ❖ Patients are not satisfied with quality nursing care in terms of 'nurses' frequency to check patient', 'ease of communication with nurse' and 'emotional support given to patient'.
- ❖ The technical aspects of medical care are more important to patients' than interpersonal aspects including, specifically, 'availability of doctor when needed', 'frequency of doctor visit', and 'instruction given on discharge for self-care and follow-up'.
- ❖ Patients are dissatisfied with quality of non-clinical services, especially food services and housekeeping services.
- ❖ The main quality determinant dimensions of in-patient care are services that need to be improved, for example, doctor services quality, nurse services

quality, availability of doctors, and responsiveness of nurse, housekeeping services and food services.

Recommendations:

Based on the conclusions mentioned above and the results discussed in preceding chapters, it is recommended that the following would improve quality of hospital care:

- Hospital management should use patient feedback as a quality indicator of hospital performance, and disseminate this feedback to the hospital staff. This technique might motivate hospital staff to recognise their shortcomings and motivate them to improving their performance.
- Ensure that good quality hospital care should include improving both clinical and non-clinical aspects of hospital care. This requires the development of quality standards covering clinical and managerial aspects of care. However, introducing these standards into practice should be gradual and based on a planned and systematic approach that aims at monitoring, assessing and taking action to improve quality performance.
- There is a need to establish a national quality system linked with a quality management system at hospital level, otherwise there will be huge a gap between any quality policy at national level and quality performance at facility level. For example, one possible option for monitoring and assessing quality is conducting a national patient satisfaction survey as a national quality assuring policy. Furthermore, each hospital should adopt this quality policy for measuring service quality performance. In this case, each hospital might use a different strategy for measuring patients' perspective such as establishing complaints and suggestions system, conducting focus group discussions with patients and users of care, or conducting a regular patient satisfaction survey.

- It could be useful to establish a national independent organisation for accreditation. This organisation should assess hospitals independently against standards that have been internationally accepted and adapted and modified according the local conditions and requirements.
- In the emergency service, there is a need to set standards and indicators for emergency services such as the total time spent in emergency and quality and quantity of information given to patients. Introducing a triage system would be a useful strategy for improving time management in the emergency department. In addition, training emergency staff on the principles of customer services could improve their skills and knowledge on how to recognise patients as customers who have certain needs and desires to be fulfilled (Mayer and Cates, 1998).
- Customer service training and communication skills workshops are needed to introduce into hospital as instrumental tools for improving professionals skills in patient communication and as a means for identifying the quality improvements activities.
- Improving technical and organisational aspects of hospital care should be the first priority in any quality improvement initiative, and setting standards for non-clinical hospital services is recommended

7.1.2 Quality policy development

The objective: To explore and describe quality policy development at national and hospital level.

- ❖ The policy environment for developing a coherent quality policy at national level is not promising. The evidence shows a lack of a clear strategic vision for quality improvement and an absence of a serious commitment to quality improvement activities. In addition, the Ministry's institutional capacity for translating the health policy documents into practice is weak.
- ❖ Quality management in public hospitals is missing, as evidenced by the absence of indicators of quality system components. Hence, quality policy development needs a national policy environment with a leadership that believes in the importance of quality in health system performance and provides political support, guidance, and enforcement for introducing quality assurance systems in health care facilities.

Recommendations

1. Strengthen the national policy environment to create the organisational readiness for change and spread the 'quality culture' among the policy makers to develop a leadership that has the strategic perspective on quality improvement.
2. Expose the leadership at national level to an intensive quality training programme to persuade the policy makers and health planners of the potential benefits of quality assurance methods in improving efficiency and effectiveness of health care services.
3. Securing a political commitment of leadership which is necessary for succeeding quality policy initiative to be in place provided that the commitment should be translated into action in terms of allocating resources for quality activities,

thereby spreading the quality culture and then institutionalising the quality assurance activities.

4. Link the process of policy development with establishing a national quality assurance system which would be responsible for monitoring and assessing quality performance.
5. A documented quality policy at national level is an essential requirement to guide the introduction of quality assurance into public funded hospitals.
6. There is a need to produce regulations and a legal framework for enforcing the introduction of a quality assurance system into public funded hospitals.
7. Increase awareness of hospital administrative and professional staff to the potential benefits of introducing a quality assurance system into hospital management.
8. There is a need for further study to be carried out to explore the factors that hinder and facilitate the links between quality policy at national level and quality management system at facility level.
9. In the absence of an established quality assurance system in hospital, it would be useful to encourage professionals to adopt the self-improvement quality, using patient satisfaction and quality perception as driving forces for identifying the quality improvement opportunities.

7.2 Converging Conclusions

With reference to the overall aim of the study in providing a framework and evidence base for policy makers and health providers in Yemen to develop policy and strategy for a quality improvement initiative in health care, the quality policy devolvement at national level has been explored, the quality management system at public hospitals have been assessed, and the patients' perspective on quality of hospital care has been identified. Hence, as based on the study findings, the overall conclusion is that a well documented quality policy at national level has not yet been developed, and is still a 'lip service' by policy makers and senior management; indicators of existence of a quality management system in public hospitals are missing; and patients' perception of the overall quality of hospital care is poor. It seems that having a clear national quality policy is a pre-requisite for guiding and encouraging public hospitals to introduce quality improvement initiatives and improve patients' quality perception and satisfaction.

In summary, the overall conclusion can be expressed as actions required at policy, provider, and patient level to fill the gaps between policy development and implementation levels, as presented in the following diagram (see box 7-1).

Box 7-1 Framework for basic quality assurance actions requred at both national and institutional levels

Level	Actions required
National	1. Developing a quality strategic vision 2. Setting priorities for quality improvement 3. Producing a clear documented quality policy 4. Increasing quality awareness (culture) among policy makers 5. Securing leadership commitment and support for quality 6. Improving organisational readiness for change 7. Allocating resources for quality activities 8. Producing a legal framework for introducing QA system into health institutions 9. Developing patient right's charter 10. Establishing a national independent accreditation organisation 11. Conducting an annual national patient satisfaction survey
Institutional	1. Setting priorities for hospital quality improvement 2. Strengthening hospital management leadership capacity 3. Linking the quality management system with the national quality policy 4. Setting standards and indicators for hospital care quality 5. Introducing hospital quality management systems 6. Spread quality culture among administrative and professional staff 7. Encouraging adopting self-improvement quality 8. Conducting periodic patient perception/satisfaction survey 9. Conducting customer service training and communication skills Worksop

7.3 *Future research*

- This study has dealt only with patients' perspective, and it would be interesting to compare theses perceptions with the providers' perceptions. Also the study findings show that patients are more concerned about the quality of technical aspects of hospital care than with the interpersonal aspects of care. It might be useful for the policy implications to conduct a patient perspective study at primary health care level to verify the concerns differentiation.
- In order to successfully implement quality policy along the lines suggested in these conclusions and recommendation, it would be useful to carry out a study to find out what are the hindering and the facilitating factors for introducing a quality assurance system into hospital.

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APPENDICES

Appendix : 4-1: Out-patient Perspective Questionnaire

Name of hospital :	Interview starts at:
Name of clinic:	Interview finishes at:
Place of interview:	Interview period :
Date :	

Verbal consent

Say: my name is …… we are conducting a study to assess quality of health care at Yemeni public hospitals. We need to speak to as many people as possible to learn from their own opinion and experiences about things that need to be improved. The study is conducting independently and has no relation with hospital.
As a user of out-patient clinics, we would like to know your views about quality of outpatient care.
I will not record your name and anything you mention will be strictly confidential. Also, you are not obliged to answer any questions you don't want to and you may withdraw from the interview at any time.
The interview will take less than 15 minutes of your time. Your frank opinion will help to improve the health services.

-Would you like to take part in the interview? □Yes □No

Instruction to the interviewer:

- Ask if the responder has any questions. Respond to question as appropriate, then continue.
- Please circle or recode the relevant answer for each question. When there are several option, read the question or phrase and option to the responder and ask him or her to choose the one that best fits her or his experience.
- Than the responder at the end of the interview.

Respondent's characteristics

1. **Sex:** □ male □female

2. **Age:** _____

3. **What** was the last level of education you have had the opportunity to complete?

□Illiterate □ Read and write □ Primary School

□Secondary school □ University and above

Visit's characteristics

1. **How** many times did you visit this hospital for yourself during the past 12 months?

□ ..... **visit**

2. **Do** you consider this hospital the main source for your medical care?

□Yes □No

3. **How** much time did you wait in the clinic before seeing the doctor?

□ Less than half an hour □Between half an hour and one hour

□ Between one hour to one and half hours.

□ Less than two hours □More than two hours

4. **How** much time did you spend with doctor?

□Less than 5 minutes □5-9 minutes □10 or more minutes

5. **What** was the main reason for this visit?

□Acute illness □Chronic illness □Injury or accident

□Maternal care □Child care □Check-up

□Dental care □Other .....

Type of services

-**Now** I will ask you about some medical care services. For each service please indicate whether it was desired by you and whether it was provided to you.

Type of service	Desired		Received	
	Yes	No	Yes	No
1. Complete examination				
2. Specific medication				
3. Laboratory test				
4. X-ray examination				
5. Referral to specialist				
6. Referral to admission				
7. Explanation about your condition or treatment				
8. Reassurance and relieve your worry				
9. participation in decision about your care				

Quality of out-patient services

We would like you to rate certain aspects of the services you received today in terms of excellent, good, acceptable and poor

Aspect of care	Excellent 3	Good 2	acceptable 1	Poor 0	Not applicable 99
1. Courtesy of doctor					
2. Doctor's concern about you as person					
3. Doctor's explanation about your illness					
4. Advice given by doctor about prevention					
5. Doctor's giving you a chance to participate in care plan					
6. Doctor's thoroughness' in examination					
7. Time spent with doctor					
8. Competence of doctor in diagnosis and treatment					
9. Courtesy of nurse and other staff					
10. Clinics hours					
11. Waiting time in clinics					
12. Availability of drugs					
13. Availability of laboratory facilities					
14. Availability of comprehensive services					
15. Extent of seeing the same doctor					

each visit					
16. Follow up doctors on the previous visit					
17. Cleanliness of the clinic					
18. Adequacy of number of chairs in waiting area					
19. Overall quality rating of services					

Lastly, do you have any comment or would you like to mention any other aspect of service that we did not ask about?

.....

.....

Appendix 4.2: In-Patient Perspective Questionnaire

Name of hospital :	Interview starts at:
Name of ward:	Interview finishes at :
Place of interview:	Interview period was:
Date :	

Verbal consent

Say: my name is ..... we are conducting a study to assess quality of health care provided at Yemeni public hospitals. We need to speak to as many people as possible to learn from their own opinion and experiences about things that need to be improved in hospital care. The study is independent and has no relation with hospital management.

We would like to know your view about service quality of in-patient care during your experience in the hospital. Your name will not be recorded and any thing you mention will be strictly confidential. Also, you are not obliged to answer any questions you don't want to and you could withdraw from the interview at any time. The interview will take less than 15 minutes of your time. Your frank opinion will help to improve the health services.

-Would you like to take part in the interview? □**Yes** □**No**

Instruction to the interviewer:

- Ask if the responder has any questions. Respond to question as appropriate, then continue.
- Please circle or recode the relevant answer for each question. When there are several options, read the question or phrase and option to the responder and ask him or her to choose the one that best fits her or his experience
- Thank responder at the end of the interview

Respondent's characteristics

1. **Sex:** □ male □female

2. **Age:** _____

3. **What** was the last level of education you have had the opportunity to complete?

□Illiterate □ Read and write □ Primary School

□Secondary school □ University or above

Characteristics of services

1. **Were** you admitted through the emergency room (ER) or out-patient department
   □Through ER □ Out-patient department

2. **If admitted** through ER:
   2.1: How long did you wait before being seen by a doctor?
   [ ]
   2.2: How long did you stay in the ER before get admitted?
   [ ]

3. **If admitted** through OPD :
   3.1: How many days did you wait for admission to hospital?
   [ ]

4. How long was it between admission office and arrival to your room?
   [ ]

Quality of in-patient care

-Now we would like you to rate different aspects of your hospitalization services in terms of excellent, good, acceptance, poor and not applicable

In-patient care aspects	Excellent 3	Good 2	Acceptable 1	Poor 0	Not applicable 99
• **Emergency Room**					
1. Time waited in ER until being attended by a doctor					
2. Attention of ER staff					
3. Explanation about patient's condition					
4. Total time spent in ER					
• **Admission office**					
5. Time taken to complete admission procedures					
6. Courtesy of admission staff					
7. Comfort and cleanliness of admission waiting area					
• **Food services**					
8. Taste of food					
9. Temperature of food					
10. Quality of food					
11. Utensils used for serving food					
12. Time of serving meals					
• **Housekeeping services**					
13. Cleanliness of room					
14. Cleanliness of toilet /bathroom					
15. Cleanliness of linen and sheets					
16. Time of cleaning room					
• **Environmental And Facilities**					
17. Noise level during daytime					
18. Noise level during night					
19. Condition of toilets and bathrooms					
20. Comfort of bed					
21. Room temperature					
22. Room ventilation					
23. Room light					
• **Nursing care: nurse**					
24. Courtesy of nurses					
25. Skills of nurse in your care					
26. Frequency of nurse to room to check your condition					
27. Promptness of nurses in responding to your calls					
28. Promptness of nurses in responding to your demands					
29. Emotional and psychological support provided by nurses					
30. Attention of nurses to your privacy					
31. Carefulness and gentleness of nurses in handling you					

32. Nurses explanation about your condition and treatment procedures					
33. Carrying out doctor's orders					
34. Ease of communication with nurses					
• **Medical care: Physician**					
35. Courtesy of doctors					
36. Concern of doctors about you as a person					
37. Thoroughness of doctors in examination					
38. Competence of doctor in diagnosis and treatment					
39. Frequency of doctors' visit					
40. Availability of doctors when needed					
41. Respect by doctors to privacy					
42. Doctor's explanation and answering questions about illness					
43. Instructions given by doctor on discharge for self-care and follow up					
44. Overall rating of hospital services					

Patient expectations and status improvement

38. **Compared** to the services you actually received at the hospital, before admission to hospital did you expect:

□Better service □ Same standard services □Worse services

39. **-As result** of your hospital treatment, do you think your condition

□Improved a great deal □Improved a little □Did not improve at all

40. **-Would you** recommend the hospital to your family or friends if they need hospital care?

□ Yes □ Probably □ No

Lastly, do you have any comments or would you like to mention any other aspect of service that we did not ask about?

Appendix 4-3: Number of Questionnaires distributed, questionnaire returned and response rate by study hospital.

Hospital name	Questionnaire distributed	Questionnaire returned	Response rate (%)
Al-Thawra	100	40	40
Al-Kuwait	80	45	56
Al-Jumhori	70	35	50
Al-Sabeen	50	30	60
Total	300	150	50

N.B: The difference in number of questionnaires is reflecting the size of managerial and professional staff cover in each hospital.

Appendix 4-4: Manager and Professional Questionnaire

Questionnaire No.----------

Responder code----------

Hospital code----------

Date handed in --------/----------/----------

Date collected -- -----/--------/----------

INTRODUCTION:

We are carrying out a study on quality assurance of health care in collaboration with the Liverpool School of Tropical Medicine (LSTM) to provide framework and evidence base to inform health policy makers and health providers to introduce assurance in public hospitals in Yemen. As part of this project, this study is to assess the existing quality assurance systems in hospitals. We are interested in knowing your knowledge and experiences so far about quality assurance and improvement activities that are carried out in the hospital.

We would like to reassure you that the information collected is strictly confidential and your name is not recorded. Also, you are not obliged to answer questions if you do not want to. If you have any questions or queries, you can contact me through the following contact address:

Researcher's Name

Khaled Al-Surimi

Contact no: 71733230

Email: **alsurimi@liv.ac.uk**

Thank You for Your Cooperation In Advance

RESPONDENT CHARACTERISTICS

Profession

Manager
Specialist
General Practitioner
Nurse
Dentist
Pharmacist
Technician
Other (specify):----------

Post

Director General (DG)
Deputy DG
Head of Department
Other (specify:----------

Sex □ Male □Female

Age group (please circle a number as appropriate)
20-30
31-40
41-50
51-60
61+

QUALIFICATION AND EXPERIENCES

Your degree/qualification----------

Year of graduation ----------

How long have you been working in this facility ----years----------months?

Have you received any training while working in this facility

□**Yes** □**No**

-If yes, did the course involve any topic about quality assurance/improvement?

□**Yes** □ **No**

-If yes, specify the name of the topics----------

.....

Do you have a logbook for your activities in this hospital?

□**Yes** □**Sometimes** □**No**

QUALITY POLICY DOCUMENTS

1. Does your hospital have one or more of the below mentioned documents?

Document type indicate	Yes	In development*	no
1. Mission Statement: the vision and priorities of the hospital			
2. Product Description: detailed description of the care for different patient population			
3. Quality Profiles: concise description of quality characteristics, quality standard and protocols of health care delivery			
4. Quality Policy Document: a description of the aims of quality assurance, the desired level of care delivery and the ways of the hospital for achieving these goals			
5. Quality Action Plan For whole hospital: written document with measures for planning and implementation of action to realize quality goals.			
6. Quality action plan for **some hospital department**			
7. Quality action plan for **every department**			
8. Annual Quality Report: a report on all activities that were performed to ensure the quality of care and the results of the activities			
9. Quality manual: a description of all procedures that the hospital uses for applying quality assurance and the persons who are responsible for the compliance of with procedures			

*** In development means** one or more persons of the facility who are working on the development of the document?

STANDARD AND PROTOCOLS

2. What kind of standard and protocols do professionals use in your hospital? **(More than one is allowed)**

1. Standard and protocols for specific treatment /intervention
2. Standard and protocols for patients education
3. Standard and protocols for restricted medical action
4. Standards and protocol for infection control
5. Standards and protocol for patient safety
6. Standard and protocol for critical moment (standing orders) in service provision
7. Standard and protocols for specific target groups and diagnosis
8. Standard and protocol for patient routing from intake to discharge
9. Standard and protocol for co-operation with other health facilities

HUMAN RESOURCES MANAGEMENT

3. Does your hospital have or make special provisions for implementing quality assurance/ improvement activities? **(More than one answer is allowed)**

1. Training management staff
2. Training professional staff
3. Allowing professionals to participate in QA activities within regular hours
4. Appointing a quality co-ordinator
5. Setting up a steering committee
6. Set up quality working groups
7. Allocating budget for quality activities
8. Supporting quality by consultants
9. Regular quality meeting **(monthly)**
10. Monitoring QA activities by senior management.
11. Monitoring QA activities by MOH group or committee
12. Other (specify).....

3. Is the quality assurance policy implemented through human resources management? **(More than one answer is allowed)**

1. Selection of new personnel with positive attitude to quality assurance
2. Training new professionals in quality improvement methods
3. Continuous education takes place based on priorities in quality policy
4. Professionals are encouraged to develop themselves in their profession
5. Participation in quality improvement project is required
6. Conduting training needs assessment.

3. **How** does the management stimulate the professionals to be involved in quality assurance / improvement **(more then one answer is allowed)**

1. Hospital management gives incentives
2. There is monthly quality rewards for staff
3. The management indicates what is expected from professionals with respect to quality assurance
4. Stimulation is not necessary as professionals pay enough attention to quality assurance/improvement
5. Management checks whether professionals stick to quality commitments
6. Systematic feedback to professionals about results achieved
7. There is public recognition of good services by management
8. There is quality monitoring action plan
9. Sanctions, namely.....

QA STRUCTURE

4. Is there any of quality structure in your hospital or outside the hospital?

Structure indicator	Yes	No	I don't know
1) There is a QA team or committee at MoH level			
2) There is a QA team or committee at Regional level			
3) There is a QA team or committee at District level			
4) There is a QA team or sub-committee task force at hospital			
5) There is a QA team or committee at sub hospital level (e.g. departmental or unit level as lab/ward or out-patient department			
6) There is quality co-ordinator for each department			

PATIENT INVOLVEMENT

5. In what way are patients involved in quality assurance or improvement activities in your hospitals

Patients involved in	No/does not apply	Depends on the subject	Always
1) Developing quality criteria			
2) Developing standard and protocols			
3) Meeting about results of satisfaction survey			
4) Quality assurance committee			
5) Quality improvement project			
6) Patient's complaint			
7) Conducting regular patient satisfaction survey			
8) Discussing patients' rights			

QUALITY IMPROVEMENT ACTIVITIES

6. Do you use any techniques or procedures of quality improvement in the hospital? (e.g. Medical audit, formulating committees, patient satisfaction survey …etc)

□Yes □ No

If yes could you please list these techniques?

.....
.....
.....
.....

7. Are there records kept in any database on quality indicators? (e.g. client satisfaction, complaint register, adverse effects, etc)

□Yes □No

-Finally in your opinion, what are the four greatest obstacles facing the hospital right now to improve quality of health care and what do you suggest to resolve it?

No.	Problem	Suggested Solution
1		
2		
3		
4		

Thank you for your time spent in completing this questionnaire

Note:
PLEASE KEEP THE FILLED QUESTIONNAIRE WITH YOU IN THE ENVELOPED PROVIDED UNTIL I COME TO COLLECT IT MYSELF OR THE RESEARCH ASSISTANT.

Appendix 4-5: In-Depth Guide Interview

Verbal consent

My name is … doing a PhD at Liverpool school of Tropical Medicine, Liverpool University. The PhD topic is about quality assurance of health care. Yemen is a case study. The aim of the study is to develop a framework for a quality assurance initiative for the health care of the health system.

You have been selected as a key informant at Ministerial level. Knowing your knowledge and experiences about quality assurance of health service is very important. We would like to assure you that the finding will handle confidentially and for the purpose of the research only.

Quality policy

1. What does quality means to you?
2. Do you have a quality assurance policy in Health Ministry?
3. What type of quality assurance documents do you have in the Ministry?
4. Do you have a written mission statement on quality for Health Ministry?
5. What is the mission of Health Ministry?
6. Do Health Ministry have a clear vision on how to Assure quality of health care?
7. What kind of a political commitment in Health Ministry for assuring quality
8. Dose the Ministry of health have a quality assurance manual?
9. Are there any quality indicators used by Health Ministry to assess and improve health care quality?

Organization of QA structure (QAS)

1. Is there QA Department in Health Ministry?
2. What is the structure of QA at Ministerial level?
3. What are the main functions or terms of reference for QA department?
4. What are the allocated resources for QA Department?
5. What kind of QA activities is health ministry implementing?
6. What is the relationship between QA department and other departments at ministerial level?

Quality Supervision & Monitoring (S&M)

1. Do you have there a S&M plan for quality assurance of health care?
2. Does health Ministry have a health information system including indicators related to quality?
3. Have you ever developed a written action plan for the supervision and monitor?

Human Resource Management (HRM)

1. What activities related to human resource development could help improve the quality of health service?
2. Does the idea of quality assurance appears in policy for human resources?
3. Is there any kind of training programme given on QA?
4. Does the programme have a training manual on quality assurance?
5. Do you regularly conduct need assessment of training?

Quality Standards and Protocol

1. Do you have standards and protocols for health services delivery?
2. What kind of standards and protocol do you have?
3. Who is responsible for developing the standards and protocols in your department?
4. Who developed these standards Ministry of Health or somebody **else?**
5. How do you communicate the standards to the health staff in hospitals and health facilities?

Patient Participation (PP):

1. Do you think patient participation in quality assessment is important?
2. **If yes,** what are the reasons behind not existence of participation?
3. What kinds of participation could users (patients) be involved in when assessing quality?
4. Are patient surveys useful for assessing quality?

Lastly, in your opinion what are the main challenges constrain implementing the QA activities?.....
.....
.....
.....
.....
.....

Thank you for your time spent in completing this interview

The researcher,
Khaled Al-Surimi

Appendix 5-1: Distribution of the Patients' Response on Out-Patient Quality Indicator

Aspect of care	No. of responses	Excellent 3	Good 2	Acceptable 1	Bad 0	Score
		No.	No.	No.	No.	
Courtesy of doctor	120	39	56	18	7	**68.6**
Doctor's concern about patient as a person	120	29	64	23	4	**66.1**
Doctor's explanation about medication use	119	24	53	26	16	**57.1**
Doctor's giving patient chance to participate in care plan	118	28	48	29	13	**59.0**
Doctor's thoroughness in examination	116	16	22	53	25	**40.6**
Time spent with doctor	119	24	40	40	15	**53.8**
Competence of doctor in diagnosis and treatment	117	25	50	34	8	**59.5**
Courtesy of nurses and other staff	118	24	51	22	10	**55.4**
Clinic hours	117	13	42	40	22	**45.3**
Waiting time in clinic	116	16	33	39	28	**43.6**
Availability of drug	120	5	12	14	89	**15.0**
Availably of laboratory facilities	119	21	29	25	44	**40.9**
Availability of comprehensive services	120	22	32	42	24	**47.8**
Extent of seeing the same doctor each time	120	11	19	27	63	**27.2**
Follow up of doctor on previous visit	120	12	21	26	61	**28.9**
Cleanliness of clinic	119	27	55	27	10	**61.1**
Adequacy of number of chairs in waiting area	116	10	27	36	43	**34.5**
Overall quality rating of services	120	16	48	50	6	**53.9**

Appendix 5-2: Rotated Component Matrix [A] of PCA for Outpatient Care

Quality scale items	Component				
	1	2	3	4	5
Waiting time in clinic	.735				
Doctor's competence	.651				
Nurse and staff courtesy	.625				
Being time spent with doctor	.480			.386	
Clinic cleanliness	.419	.406			
Lab. Availability		.782			
Comprehensive services availability		.687			
Clinic hours		.672			-.340
Doctor's courtesy			.675		
Chairs not adequate	.419		-.619		
Doctor's explanation			.611		
Doctor's concern	.482		.590	.301	
Patient participation in the care plan		.506	.535		
Seeing the same doctor each time				.837	
Follow up by doctor on previous visit				.806	
Drug availability					.799
Thoroughness in examination				.338	.630

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 6 iterations.

Appendix 5-3: Association of Respondents' Demographic and Services Characteristics with the Quality Scores of Quality Dimensions of Outpatient Care

Characteristics	Quality component dimensions				
	Technical care quality	Availability of services	Continuity of care	Doctor's behaviour	Service responsiveness
Sex					
Male	-.04	.16	-.10	-.15	-.09
female	.03	-.13	.01	.12	.07
Age					
<20	-.17	-.06	.06	-.13	-.11
20-30	.09	.02	.07	.05	-.02
>30	.10	.05	.01	.11	.17
Education level					
Illiterate	.16	-.28	-.11	-.08	.23
Primary education	.03	.13	-.13	.15	-.08
Secondary and above	-.23	.20	.27	-.06	-.19
Source of care					
Yes	.14	-.23	-.09	-.11	-.02
No	-.11	.22*	.06	.10	.03
Utilization pattern					
One visit	.05	.01	.02	.11	.19
Two visits	-.17	.08	.09	-.07	-.14
Three and more visits	.08	.02	-.03	-.07	-.07
Waiting time (hour)					
No waiting	-.84**	-.27	.01	.02	.07
< half hour	-.27**	-.11	.11	.11	.18
Half –1 hour	.39**	.34	-.14	-.10	-.05
>1hours	.40**	.04	.02	-.09	-.44
Consultation time				.	
<9 minutes	-.01	.05	.-01	-.14	.05
>10 minutes	.03	-.11	.02	.33*	-.12
Illness type					
Acute	-.27	-.10	-.06	.04	-.07
Chronic	.20	.22	.08	-.02	.03
MCH	-.07	-.06	-.06	-.06	-.02
Other	.29	-.09	.06	.03	.12

***P<.01**

**** P<000**

Appendix 5-4: Rotated Component Matrix of PCA [A] for the Non-Technical Aspects of Inpatient Care

Quality scale items	Component			
	A	B	C	D
Time taken to completion admission procedure	.690			
Room ventilation	.682		.396	
Noise level during night	.635			
Room light	.632		.416	
Courtesy of admitting staff	.622	.363		
Room temperature	.599		.402	
Time of cleaning room	.458		.322	.427
Food temperature		.866		
Food quality		.812		
Food taste		.675		
Time of serving meals		.653		
Utensils used for serving food		.621	.467	
Cleanliness of room			.756	
Comfort of bed			.619	
Comfort and cleanliness of admission waiting area			.600	
Cleanliness of linen	.320		.542	
Cleanliness of toilet and bathroom			.419	.726
Noise level during daytime	.529			.635

[a] Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 13 iterations.

Appendix 5-5: Rotated Component Matrix of PCA [A] for the Technical Aspect of In-Patient Care

Quality scale items	A	B	C	D	E
Concern of doctors about patient as a person	.819				
Thoroughness of examination	.811				
Courtesy of doctors	.725				
Regard by doctors to privacy	.716				
Competence of doctors in diagnosis and treatment	.710				
Carrying out doctor's orders	.460		.361	.404	
Carefulness and gentleness of nurses in handling patient		.767			
Emotional support provided by nurses		.744			
Easy of communication with nurses (common language)		.721		.329	
Attention of nurses to the patient's privacy	.333	.623			
Courtesy of nurses	.341	.602			
Nurses explanation about condition and procedure		.549			
Skills of nurses in patient care		.528	.428		
Promptness of nurses in responding to calls			.849		
Frequency of nurses' stopping by room to check patient's condition			.762		
Promptness of nurses in responding to patient's demand			.724		
Doctors' explanation and answering questions about illness	.353			.734	
Frequency of doctors' visits		.394		.662	
Instruction given by doctors on discharge for self-care and follow up	.317			.618	
Availability of doctors when needed		.490		.600	
Time waited in ER until attended by a doctor					.819
Total time spent in ER					.781
Attention of ER staff			.325	.315	.659

[a] Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 6 iterations.

Appendix 5-6: Association of Respondents' Demographic and Service Characteristics with the Quality Dimensions of Non-Technical Aspects of Hospital Services

Characteristics	Quality dimensions components			
	Environment and admission services	Food services	Housekeeping services	Cleanliness and noise
Sex				
Male	.26*	-.02	-.11	-.40
female	-.22	.01	.09	.32*
Age				
<20	-.14	-.26*	-.01	.09
20-30	.15	-.15	-.23	.04
>30	.04	.33*	.16	-.06
Education level				
Illiterate	.10	.24	.01	.14
Primary education	-.04	-.10	-.08	.01
Secondary & above	-.08	-.24	.11	-.20
Mode of admission				
Emergency	.10	-.01	-.15	.01
Out-patient	-.10	.01	.15	-.01
Waiting time in ER until to be seen by doctor				
< half an hour	.14	.07	.05*	-.02
Half – 1 hours	.04	-.21	-.20	-.32
>1 hour	-.02	-.01	-.72*	.45
Total time spent in ER				
<1 hour	-.25	.07	-.04	.28
1 hour- 4 hour	-.23	.12	-.10	-.17
>4 hours	-.48	-.47	-.53	-.29
Waiting time for admission through out-patient				
One day	.32	.01	.18	-.78*
2 days	-.05	-.02	.22	-.08
3-5 days	-09	-.55	-.10	.74*
> 5 days	.11	.06	.07	.19*
Time interval between admission and arrival to bed				
< half an hour	.32	-.18	.28	-.10
> 1-2 hours	-.05	.39	.15	.38
> 2hs	-.18	-.01	-.18	-.28
Expectation about care				
Better services	.01	.06	-.14	.20
Same standard	-.08	-.35*	.24	-.18
Worse services	.15	.26*	.02	.20
Improvement of condition				
Improved a great deal	.21*	.02	.03	-.01
Improved a little	-.25	.04	-.05	.10
Did not improve at all	-.22	-.35	.05	.51
Recommendation				
No	-.17	-.07	-.54*	.05
Probably	-.17	-..23	.33	-.17
Yes	.08	.08	.17*	.05
Ward type				
Medicine	.09	.04	-01	-.28*
Surgery	.19	.18	-.11	-.08
others	-.25	-.19	.11	.31*

*p≤ .05

Appendix 5-7: Association of Respondents' Demographic and Service Characteristics with the Quality Dimensions of Non-Technical Aspects of Hospital Services

Characteristics	Medical service quality	Nursing service quality	Availability of Nurses	Availability of doctor	Emergency services
Sex					
Male	-.15	.20*	-.12	.22*	.15
female	.12	-.17	.10	-.18	-.12
Age					
<20	-.29	.08	.13	.10	.05
20-30	.01	-.13	-.28	-.08	.18
>30	.15	.06	.20	.08	-.21
Education level					
Illiterate	.17*	.08	.34*	-.18	-.07
Primary education	-.34*	.05	.06	.14	-.05
Secondary & above	.43*	-.24	.59*	.12	.15
Mode of admission					
Emergency	-.13	.13	-.21	-.03	.05
Out-patient	.13	-.13	.21*	.03	-.05
Waiting time in ER until to be seen by doctor					
< half an hour	-.24	.11	-.15	.02	.58*
Half – 1 hours	.35	.22	-.35	-.07	-.59*
>1 hour	-.29	.06	-.17	-.31	-.63*
Total time spent in ER					
<1 hour	-.05	.18	-.30	-.23	.55*
1 hour- 4 hour	.06	.08	-.31	.31	-.16
>4 hours	-.75	.10	.21	-.28	-.71*
Waiting time for admission through OPD					
One day	-.09		29	-.18	-.02
2 days	-.27	.13	-.02	-.12	-.08
3-5 days	.04	.55*	.50	-.05	-.03
> 5 days	.54	-1.04*	.01	.32	-.08
Time between admission and arrival to bed					
< half an hour	.10	-.20	.13	.24	.24
> 1-2 hours	.37	.21	.29	-.14	-.03
> 2 hours	-.10	.06	-.11	-.08	-.11
Expectation about care					
Better services	.11	.17	-.07	.04	.26*
Same standard	.02	-.22	-.04	.06	-.21
Worse services	-.18	.07	.12	-.04	-.28*
Improvement of condition					
Improved a great deal	.16	.24*	-.12	.27*	.05
Improved a little	-.18	-.28*	.09	-.24*	-.01
Did not improve at all	-.26	-.29	.48	-.77*	-.43
Recommendation					
No	-.33	.18	-.74*	-.11	.07
Probably	-.40*	-.13	-.11	-.41*	.02
Yes	.17*	.02	.13*	.14*	-.01
Ward type					
Medicine	-.01	.17	-.01	.05	-.14
Surgery	-.18	.02	-.01	.04	.21
others	.17	-.17	.02	-.09	-.08

*p≤.05

Appendix 5-8: Example of some items of quality system component indicators representing percentage of responders who said 'Yes' for each item comparing administrative versus professional views and study hospital.

Selected quality component systems indicator	Administrative %	Professional %	P-values
Quality policy indicators			
1. Written mission statement	24	27	.65
2. Product/service description	35	24	.39
3. Quality profile	14	16	.20
Standards and protocols			
4. Standards and protocols for specific treatment	36	37	.87
5. Standards and protocols for patient education	7	13	.31
6. Standards and protocols for restricted medical action	16	14	.72
Quality management			
7. Administrative staff training	34	42	.31
8. Professional staff training	37	49	.14
9. Professional participation in QA	13	10	.59
Quality policy and HRM			
10. Selection of new personnel with positive attitude to QA	23	25	.71
11. Training new professional on QA methods	31	28	.74
12. Continuous education take place based on priorities in Q policy	32	19	.07
Hospital management and quality improvement			
13. Management gives incentive fro quality	23	18	.53
14. There is monthly rewards for staff	11	4	.17
15. Management indicates to what is expected from professional regarding QA activities	9	6	.49
Quality management structure			
16. There is QA team/group at hospital level	37	28	.21
17. There is QA team/group at department l level	24	20	.24
18. There is QA co-ordinator in each department	21	11	.16
Patient involvement in			
19. Developing standards and protocols	6	4	..94
20. Quality committee member	0	2	.12
21. There is box for patient complaints	12	11	.93

PAGE NUMBERING AS ORIGINAL

Appendix 5-9: Developmental Stages of Hospital Quality System Matrix

Focal areas/stages	QA-documents	Process control based on standards	Human resources management	*QA-structure*	QI- procedure	Patient involvement
Stage: 0 Pre-existing	None	None	None	None	None	None
Stage: 1 orientation	-Mission statement -Product description	Standard for: -Specific treatment	Encouraging professional development		-Using care plans -Peer review	-Patient is not involved
Stage :2 Preparation	-Quality policy -Institutional quality plan -Quality profile	Standards for: -Patient education -Specific target group -Unforeseen activities -Medical aids	-Training staff -Training professionals -Participation during working hours -Management indicates activities -Conducting training needs assessment.	T-here is a AQ team or committee at MoH level	-Complaints registration -Forming committees -Job assessment interview	-Discussion of results -Discussion of the targets achieved
Stage 3 Implementation	-Quality plan for some department -Quality plane for all departments	Standards for: -Critical moments -Cooperation with other Organization -standards and protocols for infection control -standards and protocols for patient safety	-Management monitors -Specific criteria for selection of new staff -Regular (monthly) quality team meeting -There is monitoring of QA Activities by senior management	-There is a QA team or committee at regional level	-Satisfaction research -Needs analysis	Sometimes involved in: Committee -QI-projects -Development of criteria/protocol
Stage 4 Establishment	-Annual quality report Quality manual	Standards for : -Routing patient	-There are monitoring of QA activities by MoH group of committee -There is QA monitoring team at MoH level. -There is monthly reward fro staff There is public recognition of good services by management -Monitoring department action plan	T-here are a QA team or sub-committee task force at hospital -t-here are a QA team or committee at sub hospital level (i.e. departmental or unit level as lab/ward or OPD).	-Management information system -Internal audit -Accreditation	Systematic involvement in: -Committee -QI-projects -Development of criteria/protocol -Patient right

MoH: Ministry of Health

Arabic versions of study instruments

ضمان جودة نوعية الرعاية الصحية في المستشفيات اليمنية من وجهة نظر المرضى في العيادات الخارجية

اسم المستشفى.....اسم العيادة.....التاريخ:.....

اسم الباحث:.....

مكان المقابلة.....:

وقت بداية المقابلة: .....

وقت نهية المقابلة:.....

مدة المقابلة.....

المقدمة:

نحن نقوم بتنفذ دراسة حول جودة خدمات الرعاية الصحية المقدمة في المستشفيات اليمنية بهدف التعرف علي رضا المستفيدين عن الخدمة.

تهدف الدراسة الي معرفة رضا المستفيدين حول جودة نوعية الخدمة المقدمة من اجل تزويد متخذي القرار الصحي بعلومات عن رضا المستفيدين. كما نود التاكيد ان هذه الدراسة تنفذ بصورة مستقلةعن ادارة المستشفيات مما يتح لك التعبير عن ارائك وتجربتك بصراحة كما نؤكد لك ان المعلومات سوف يتم التعامل معها بصورة سرية ولاغراض البحث العلمي. كما ان لك حرية عدم الاجابة عن اي سؤال لاتريد الاجابة عنه كما يحق لك الانسحاب من المقابلة متي ماشئت. مدة المقابلة لن تزيد علي 15 دقيقة.

في الاخير اود التاكيد ان اجابتك الصريحة سوف تساعدنا كثيرا في معرفة حقيقة واقع جودة الخدمة في هذا المستشفى.

اسم الباحث:
خالد الصريمي
كلية الطب الاستوائي- جامعة ليفربول
بريطانيا

البيانات شخصية

1. الجنس □ذكر □انثى
2. العمر: .....
3. المستوي التعليمي
التعليم الاساسي-□ يقرا ويكتب-□ امي-□
□الجامعةفاكثر □ التعليم الثانوي

خصائص الزيارة

1. كم مرة زرت العيادات الخارجية في هدا المستشفي خلال 12 شهر الماضية ( ) زيارة
2. هل يعتبر هذا المستشفى المصدر الاساسي لخدمتك الصحية □ نعم □لا
3. كم وقت انتظرت قبل دخولك الي عيادة الطبيب؟
□-من نصف ساعة الى ساعة □-اقل من نصف ساعة
□-من ساعة ونصف الي اقل من ساعتين □- من ساعة الي ساعة ونصف
□- ساعتين او اكثر
4. كم كان وقت المعاينة في العيادة من قبل الطبيب؟
10 دقائق فاكثر دقائق9-5□- □-اقل من 5 دقائق
5. ما هو السبب الرئيسي للزيارة:
□-اصابةاو حادث □-مرض مزمن □ مرض حاد(مفاجئ)
□-فحص دوري عام □-رعاية طفل □-رعايه اثنا الحمل او بعد الولادة
□ غيره ادكرها:.....

نوع الخدمة المقدمة:

الان اوريد ان عرف منك نوع الخدمات التي كنت " **ترغب في الحصول عليه**" والخدمات التي فعلا "**حصلت عليها**"

نوع الخدمة	الرغبة في الحصول		الحصول الفعلي	
	نعم	لا	نعم	لا
1. الفحص الطبي الشامل				
2. دواء محدد				
3. فحص مخبري				
4. فحص اشعة				
5. تحويل الي اخصائي				
6. الدخول الي المستشفى				
7. شرح الحالة المرضية والعلاج من قبل الطبيب				
8. تطمينك من قبل الطبيب				
9. رغبتك في المشاركة في مناقشة حالتك المرضية مع الطبيب				

جودة نوعية الخدمة المقدمة:

الان اريد ان ترتب جودة نوعية الخدمات التي حصلت عليها من وجهة نظرك وفق الترتيب التالي:

نوعية الخدمة	ممتازة 3	جيدة 2	مقبولة (متوسطة) 1	سيئة 0	لاتنطبق
1. احترام الطبيب لك					
2. الاهتمام من قبل الطبيب					
3. شرح حالتك الصحية من قبل الطبيب					
4. اتاحة الفرصة لك لشرح حالتك الصحية					
5. شمولية الفحص الطبي من قبل الطبيب					
6. كفاية الوقت مع الطبيب في العيادة					
7. قناعتك بكفاءة الطبيب التشخيصية والعلاجية					
8. احترام الممرضة/الممرض وبقية العاملين الصحيين لك					
9. عدد ساعات الدوام في العيادة					
10. وقت الانتظار قبل الدخول الي العيادة					
11. توفر الادوية					
12. توفر خدمات المختبر					
13. شمولية الخدمات في العيادة الخارجية					
14. ما مدي توفر امكانية مراجعة نفس الطبيب في كل زيارة					
15. المتابعة من قبل الطبيب؟ في الزيارات السابقة					

16. النظافة العامة في العيادة					
17. كفاية عدد الكراسي في صالة الانتظار					
18. التقييم العام للخدمات					

□ واخيرا هل لديك اي تعليق او راي حول اي خدمات اخري لم يتم ذكرها

نعم **لا**

↓

نعم ماهي تلك الخدمات

.....

.....

.....

.....

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.....

.....

ضمان جودة نوعية الرعاية الصحية في المستشفيات اليمنية من وجهة نظر المرضى في الاقسام الداخلية.

التاريخ .....اسم المستشفى:..... القسم:.....

اسم الباحث.....:

مكان المقابلة:.....

وقت بداية المقابلة: .....

وقت نهاية المقابلة:.....

مدة المقابلة..... .....

المقدمة:

نحن نقوم بتنفذ دراسة حول جودة نوعية خدمات الرعاية الصحية المقدمة في المستشفيات اليمنية بهدف التعرف علي رضا المستفيدين عن الخدمة. تهدف الدراسة الي معرفة رضا المستفيدين حول جودة الخدمة المقدمة من اجل تزويد متخذي القرار الصحي بعلومات عن رضا المستفيدين وجودة نوعية الخدمة المقدمة.

كما نود التاكيد ان هذه الدراسة تنفذ بصورة مستقلة عن ادارة المستشفيات مما يتح لك التعبير ن ارائك وتجربتك بصراحة كا نؤكد علي ان المعلومات سوف يتم التعامل معها بصورة سرية ولاغراض البحث العلمي. ;كما ان لك حرية عدم الاجابة عن اي سؤال لاتريد الاجابة عنه كما يحق لك الانسحاب من المقابلة متي ماشئت. مدة المقابلة لن تزيد علي 15 دقيقة.

في الاخير اود التاكيد ان اجابتك الصريحة سوف تساعدنا كثيرا في معرفة حقيقة واقع جودة نوعية الخدمة في هذا المستشفى.

اسم الباحث:
خالد الصريمي
كلية الطب الاستوائي- جامعة ليفربول
بريطانيا

البيانات شخصية

1. الجنس □ ذكر □ انثى
2. العمر:.....
3. المستوي التعليمي

□-التعليم الاساسي □-يقرا ويكتب □-امي

□-الجامعة فاكثر □-التعليم الثانوية

خصائص الزيارة

1. كيف تم ادخالك الى المستشفي:

1.1 □ الى السؤال رقم (3) .....من خلال العيادات الخارجية انتقل

1.2

1.3

□ عبر الطوارئ : كم من الوقت انتظرتك قبل معاينة الطبيب لك

[ ]

2. قبل ادخالك الي المستشفى: كم بقيت منتظر في الطوارئ

[ ]

3. الدخول عبر العيادات الخارجية من خلال موعد سابق

[ ] ايام

3. **عند الدخول:** كم كان وقت الانتظار بين قسم الدخول والوصول الي الغرفة

[ ]

جودة نوعية الخدمة المقدمة

الان اريد من خلال تجربتك في المستشفى ترتيب جودة نوعية الخدمات التى تلقيتها: حسب الترتيب التالي:

نوع الخدمة	ممتازة 3	جيدة 2	مقبولة 1	سيئة 0	لاتنطبق 99
▪ غرفة الطوارئ					
1. وقت الانتظار حتي معاينة الطبيب لك					
2. اهتمام العاملين بك في الطوارئ					
3. شرح حالتك من قبل العاملين في الطوارئ					
4. مدة وقت الانتظار في الطوارئ					
قسم الدخول والخروج					
5. وقت الانتظار لاتمام اجراءات الدخول					
6. مدي احترام موظفي قسم الدخول					
7. النظافة وتوفر وسائل الراحة في قسم الدخول					
خدمات التغذية					
8. ذوق الطعام					
9. حرارة الطعام					
10. وجودة ونوعية الطعام					
11. الادوات المستخدة لتقديم الوجبة					
12. وقت تقديم الوجبات					
خدمات النظافة					
13. نظافة الغرفة					
14. نظافة الحمامات					
15. نظافة السرير والملايات					
16. وقت نظافة الغرفة					
المحيط العام والخدمات العامة					
17. مستوى الهدوء خلال وقت الدوام					
18. مستوى الهدوء خلال الليل والمساء					
19. حالة جرس طلب التمريض					
20. راحة السرير					
21. درجة حرارة الغرفة					
22. تهوية الغرفة					
23. اضاءة الغرفة					

جدمات التمريض					
35. احترام الممرضة/ الممرض لك					
36. مهارات التمريض في العناية الطبية					
37. تردد الممرضة علي الغرفة للاطمان عليك					
38. الاستجابة الفورية من قبل التمريض للمنادة					
39. الاستجابة الفورية من قبل التمريض لطلبك					
40. الدعم النفسي والعاطفي لك من التمريض					
41. التقدير والاحترام لخصوصيتك					
42. الدقة والطف من قبل التمريض					
43. شرح الممرضة/الممرض لحاتك واجراءات تنفيذ خطة العلاج					
44. تنفيذ اوامر الطبيب					
45. سهولة التخاطب مع الممرض/ الممرضة					
2. الاطباء					
35. احترام الاطباء					
36. الاهتمام والعناية من قبل الاطباء					
37. شمولية الفحص الطبي من قبل الطبيب					
38. كفاءة الطبيب التشخيصية والعلاجية					
39. تردد الطبيب المعالج لزياتك					
40. توفر الطبيب عند الحاجة					
41. احترام الطبيب لخصوصتك					
42. شرح الطبيب لحالتك والاجابة علي تساؤلاتك					
43. تعليمات الطبيب عند الخروج حول الرعاية الذاتية والمراجعة					
44. التقييم العام لخدمات المستشفى					

1. مقارنة بالخدمات التي تلقيتها في المستشفى. **قبل دخولك الي المستشفي مادا توقعت:**
2. □ خدمات افضل □ نفس الخدمة □ خدمات ردئة

3. كنتيجة للعلاج في المستشفى: **هل حالتك الصحية :**
4. □ تحسنت كثيرا □ تحسنت قليلا □ لم تتحسن على الاطلاق

5. هل توصي احد الاقرباء بالدهاب الي هَدا المستشفى لتلقي العلاج:

□ نعم □ احتمال □ لا

- **واخيرا** هل لديك اي تعليق او راي حول اي خدمات اخري لم يتم ذكرها

↓□ نعم □ لا

نعم ماهي تلك الخدمات.....

.....

.....

استبانة العاملين المهنين والادراريين الصحيين Professionals Managers

رقم الاستبيان:----------
--
رمز المستجيب:----------

اسم المستشفى----------

رمز المستشفى----------
--

المقدمة

تهدف الدراسة الي تطوير اطار مفاهيمي لضمان جودة نوعية الخدمات الصحية والذي سوف يساعد السياسين الصحيين ومتخذي القرار في التعرف علي السياسات الاستراتجيات الملائمة لتنفيذ برامج ضمان جودة نوعية الرعاية الصحية في النظام الصحي تتميز بالاستمرارية , الفعالية و الكفاءة.

معرفتنا لتجربتك ورايك حول نشاطات ضمان الجودة في المستشفي مهمة ونؤ كد لك بان المعلومات سوف تعامل بسرية تامة ولاغراض البحث العلمي:

ادا لديك اى استفسارحول موضوع الدراسة او اسئلة البحث يمنكنك الاتصال بي من خلال العنوان التالي:

البريد الالكتروني: alsurimi@liv.ac.uk

تلقون: المنزل : 01/ 310651

السيار 71733230

شكرا لتعاونك معنا مقدما

اسم الباحث: خالد الصريمي
كلية الطب الاستوائي- جامعة ليفربول
بريطانيا

1. البيانات الشخصية:

المهنة

- اداري
- اخصائي
- طبيب عام
- ممرض/ ممرضة
- طبيب اسنان
- صيدلاني
- فني
- غيره اذكرة.....

. الوظيفة

- مدير عام
- ريس قسم او وحدة
- غيره اذكرة.....

.الجنس **ذكر** **انثى**

العمر .....

. الموهلات العلمية و الخبرات الدراسية

- المؤهل ادراسي .....
- سنة التخرج.....
- مدة العمل في المستشف الحالي:.....

. .هل تلقيت اي نوع من التدريب خلال عملك في المستشفى

نعم **لا**

اذاكانت الاجابة (نعم) : هل احتوى التدريب علي موضوعات عن ضمان وتحسين جودة الخدمةالصحية

نعم **لا**

اذا كانت الاجابة(نعم): اذكر اسم المواضيع عن الجودة.....

.....

.....

.هل تدون جميع نشاطاتك اليمية في السجل المخصص لذلك(مثل السجل الطبي,.....)

نعم **احيانا** **لا**

2. سياسة الجودة

1: هل يوجد لدي المستشفى واحد اواكثر من وثائق سياسة الجودة المذكورة ادناة:

7.3.1 نوع الوثيقة	لا	تحت الاعداد	نعم
رسالة المستشفي: بيان مكتوب عن الرؤي المستقبلية متضمنة مجال الخدمات الصحية وفق الاولويات الصحية			
وصف المنتج: يوجد وصف تفصيلي لمختلف الرعاية الصحية المقدمة في المستشفى والفئات المستهدفة من الخدمة الصحية			
خصائص الجودة الشاملة: وصف مكتوب متفق علية يوضح خصائص الجودة النوعية والمعايير القياسية والبرتوكولات الازمة لتقديم الخدمة الصحية			
وثيقة سياسة الجودة وجود وثيقة تشمل:وصف الاهداف العامة لضمان الجودة ,المستوى المرغوب الوصول الية والطرق الاستراتيجات المؤدية الي تحقيق الغاية المطلوبة			
الخطة التنفيذيةللمستشفى ككل : وثيقة مكتوبة تحتوي علي الاجراءات التخطيطية والتفيذية الازمة لتحقيق النتائج المرغوبة علي مستوي المستشفى ككل			
الخطة التنفيذية لبعض الاقسام: توجد خطة تنفيذية لنشاطات ضمان الجودة النوعية علي مستوي بعض الاقسام			
الخطة التنفيذية لكل الاقسام: توجد خطة تنفيذية لنشاطات ضمان الجودة النوعية لكل قسم			
التقرير السنوي: تقرير تقرير يحتوي علي جميع الانشطة المنفذة بغرض ضمان الجودة النوعية مع الاشارة الى مستوي نتائج تلك الانشطة المنفذة			
كتاب دليل الجودة: يوجد دليليحتوي علي وصف شامل لجميع الاجراءات المستخدمة من قبل المستشفي والاشخاص المعنيين بغرض ضمان الجودة النوعية في الخدمات المقدمة			

ملاحظة: تحت الاعداد: تعني هناك شخص او اكثر في المستشفي يعملون علي تطوير الوثيقة المطلوبة

3. الادلة الارشادية والمعايير القياسية

2. ماهي المعايير القياسية والبرتوكولات المستخدمة من قبل المهنيين في المستشفي (ممكن اختيار اكثر من اجابة)

- لاتوجد معايير وبرتوكولات
- المعايير والبرتوكولات الخاصة ببعض التدخلات العلاجية (standards for specific treatment)
- المعايير والبرتوكولات الخاصة بتوعية وتثقيف المرضى(patient education)
- المعايير والبرتوكولات الخاصة بالتدخلات الطبية الاستثنائية(restricted medical action)
- المعايير والبرتوكولات الخاصة بالحالات الحرجة(critical cases)
- المعايير والرتوكولات الخاصة بمكافحة العدوى في المستشفي (infection control
- المعايير والبرتوكولات الخاصة بفئة محددة من المرضى (specific target group)
- المعايير والبرتوكولات الخاصة بسير المريض من دخوله حتى خروجه patient route ing from intake to discharge)
- المعايير والبرتوكولات الخاصة بسلامة المرضى (patient safety)
- المعايير والبرتوكولات الخاصة بالتعاون والتنسيق مع المؤسسات الصحية الاخري

ادارة الموارد البشرية

4. هل توجد لدى المستشفى شروط خاصة تتعلق بادارة الموارد البشرية بغرض تنفيذ نشاطات ضمان الجودةالنوعية في الرعاية الصحية (ممكن اختيار اكثر من اجابه):

- o تدريب الموظفين الاداريين
- o تدريب العاملين المهنيي(professionals)
- o السماح للمهنيين الصحيين المشتركة في نشاطات ضمان الجودة خلال ساعات الدوام الرسمي
- o تعيين منسقي الجودة في المستشفى
- o تشكيل/تكوين لجنة تسيير انشطة ضمان الجودة في المستشفى
- o تشكيل/تكوين مجموعات العمل في المستشفى
- o تخصيص ميزانية لانشطة ادراة ضمان الجودة
- o دعم انشطة ضمان الجودة باستشاريين
- o الاجتماع الدوري(الشهري) لفريق الجودة
- o متابعة ومراقبة انشطة الجودة من قبل الادارة العليا في المستشفى
- o اشراف ومتابعة انشطة الجودة من قبل لجنة /فريق عمل في وزارة الصحة
- o غيرهاذكره.....

4.2 : هل تنفذ سياسات ضمان الجودة في ادارة الموارد البشرية؟ (ممكن اختيار اكثر من اجابة)

- o اختيار الموظفين ذو المواقف والاتجاهات الايجابية تجاه ضمان الجودة
- o تدريب المهنيين الصحيين على طرق واساليب ضمان الجودة
- o تنفيذ برنامج التعليم والتدريب المستمر وفق اولويات سياسة ضمان الجودة
- o تشجيع المهنيين الصحيين في التنمية الذاتية في مجال تخصصاتهم
- o تشجيع المشاركة في مشاريع وبرامج تحسين الجودة في الخدمة الصحية
- o التقييم الدوري للاحتياجات التدريبية للعاملين
- o لا تنطبق

4.3 : كيف تحفز ادار المستشفى العاملين في المشاركة في نشاطات ضمان وتحسين الجودة؟ (ممكن اختيار اكثر من اجابة)

- o تعطي الادارة في المستشفى حوافز في مجال الجودة
- o تخصيص ادارة المستشفى جائزة الشهريةة في مجال الجودة
- o تشير ادارة المستشفي الي النتائج المتوقعة من قيل العاملين الصحيين بالرجوع الي سياسة ضمان الجودة
- o التحفيز غير ضروري لان العاملين لديهم الرغبة الذاتية في نشاطات ضمان الجودة
- o تتحقق الادارة من مدى التزام العاملين بسياسة ضمان الجودة
- o التغذية الراجعة من قبل الادارة للعاملين الصحيين عن النتائج المتحققة في مجال الجودة
- o الاعتراف والتقدير من قبل الجمهور للخدمات الجيدة في المستشفي
- o من خلال خطة الاشراف والمتابعة قي المستشفى
- o من خلال العقوبات: اذكرها.....

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5. الهيكل التنظيمي لضمان الجودة

البنية الهكلية	نعم	لايوجد	لاادري
يوجد فريق / لجنة جودة علي مستوي الوزارة			
يوجد فريق / لجنة جودة علي مستوي المحافظةاو المنطقة			
يوجد فريق / لجنة جودة علي مستوي المديرية			
يوجد فريق / لجنة جودة علي مستوي المستشفي			
يوجد فريق / لجنة جودة علي مستوي الاقسام في المستشفى(العيادات الخارجية, الاقسام الداخلية, المختبر,.....)			
يوجد منسق جودة على مستوي القسم او الادارة			

6. *اشراك المستفيدين(المرضى) في نشاطات الجودة*

ما هي الطرق والاساليب المتبعة من قبل ادارة المستشفى في اشراك المنتفعين من الخدمة في نشاطات ضمان وتحسين الجودة؟

مجال المشاركة	لايطبق	حسب الموضوع	دائما
المشاركة في تطوير مؤشرات ضمان الجودة			
المشاركة في تطوير المعايير والبرتوكولات			
المشاركة في مناقشة نتائج دراسات رضا المستفيدين			
المشاركة في عضوية لجنة ضمان الجودة في المستشفى			
المشاركة في مشاريع تحسين الجودة في المستشفى			
وجود صندوق الشكاوي في المستشقى			
تنفيذ دراسة رضا المستفيدين بشكل منتظم			
المشاركة في مناقشة حقوق المرضى			

7. نشاطات واساليب ضمان وتحسين جودة خدمات المستشفى

6.1 هل يطبق المستشفى اي نشاط من نشاطات واساليب ضمان وتحسين الجودة مثل (التدقيق الطبي, تشكليل اللجان. دراسة رضا المرضى,.....).

ادا الاجابة (نعم) ادكر الانشطة أو الاساليب المتبعة في المستشقى:

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6.2 هل توجد سجلات في اي قاعدة بيانات تحتوي علي مؤشرات الجودة (مثل مؤشرات رضا المستفيدين, سجل الشكاوي , التاثيرات الجانبية للتدخلات التشخيصية او العلاجية وغيرها من المؤشرات)

□نعم □لا

8. اخيرابرايك ماهي اهم اربع مشاكل رئيسية تواجة ادار المستشفى وتعيق تحسين نوعية الخدمات الصحية وماهي الحلول المقترحة؟

التسلسل	المشكلة	المقترحات

شكرا عل تعاونِك في الاجابة على الاسئلة
جميع الاجابات سوف تعامل بسرية تامة والاغراض البحث فقط

من فضلك تذكر ان تضع الاستبان في المغلف المرفق وسوف اتي شخصيا لاخذها او الاتصال بي عل العنوان التالي:

تلفون: المنزل :
السيار :