



Sudan University of Science & Technology
College of Graduate Studies
Deanship of Development & Quality



Impact of Implementing Quality Management System in Healthcare Sector

(Case Study: Omdurman Military Hospital)

أثر تطبيق نظام إدارة الجودة في القطاع الصحي

دراسة حاله: مستشفى السلاح الطبي ام درمان

A thesis submitted in partial fulfillment for requirement of M.Sc. degree in total
quality Management & excellence

By:

Mishkat Ahmed Ibrahim Abdelrahman

Supervisor:

Prof. Ali Abdelrahman

January 2018

Dedication

To the Soul of my father

My mother

My brothers & sisters

My daughters

My friends

Acknowledgements

I wish to thank Prof Ali Abdelrahman for his valuable guidance while developing this thesis. Your, dedication and commitments enabled me to learn a lot and to be able to come up with this thesis.

I also wish to thank my family for their endurance and perseverance as I took time to develop this thesis.

Finally I wish to thanks my friends and classmates for their inputs and encouragements.

God bless you all

Thank you

ABSTRACT

Background: There is pressure for hospitals to adopt tool that can help them address the challenges facing the delivery of health care services. Quality management systems (QMS) are being adopted for this purpose. However, there is limited studies' on their effect on patient care

Objectives: To establish the determinants of quality management system uptake in hospital setting and effect of implementing QMS on patient care at Omdurman Military Hospital.

Methods: This was a cross sectional research which utilized quantitative and qualitative research methods. A sample of 40 persons working at the maternity department.

Data was collected using Questionnaire.

RESULTS

The aim for quality management system was to standardize (p-value less or equal 0.05) and if it's more than 0.05 it will be not effected while if it's less or equal 0.05 it will become more effected.

According to the result of analysis the methods to measure the degree of satisfaction, Training of workers , Patient satisfaction , The training of workers according to their specializations, the policy of the hospital ,Documentation, The mission, vision and objectives, The preparation of hospital environment, All of that values are less than 0.05 that means they are affected.

The hospital encouragement of workers, The method of documentation and recording, The internal and external audit, The leader- ship care in monitoring the process, If the environment is good for all workers, If the vision known for all employees, The preventive measures, If the audit is regular, The methodology of

providing services, all of that values are more than 0.05 that means they are not affected.

The most effected one is the methods to measure the degree of patients and workers satisfaction but the less affected are the orientation of employees about the vision, the preventive measure, the audit regularity, and the methodology of providing services.

Conclusion and recommendations Quality Management system was implemented in Omdurman Military Hospital with the aim of improving service delivery. Understanding requirements of QMS are critical in its implementation. Use of performance indicators may provide reliable measure of the effect of QMS on quality of care.

Key words: Quality management systems, ISO 9001, Quality Care.

ملخص البحث

موضوع البحث:

هناك ضغط على المستشفيات لالزامها باخذ طريقه محدده تساعد في تقديم الخدمات الصحيه بصورة مثلى بناع على ذلك تم وضع نظام الجوده بالرغم من وجود بعض الدراسات السابقه في هذا المجال.

الاهداف:

تم وضع نظام الجوده بمستشفى السلاح الطبي لمعالجة العيوب السابقه التي كانت تؤثر على الخدمات المقدمه من المستشفى من طرق للعنايه بالمرضى.

المناهج:

اهتم البحث بنظام الكم والكيف في تطبيق نظام الجوده. فقد اختار الباحث اربعين شخصا من العاملين بالمستشفى وتحديدًا قسم النساء والتوليد وتم جمع المعلومات باستخدام الاستبيان.

النتائج:

تم استخدام نظام مربع كاي لتحليل القيم والقيمه المعنويه لهذا النظام 0.05 فالقيم التي تكون اقل من اوتساوي

0.05 هي اكثر القيم تأثيرا بينما تلك التي تكون اكثر من اوتساوي 0.05 اقل تأثيرا

وبناء على نتائج التحليل فقد كانت طرق قياس درجة الرضا للعاملين والمرضى اكثر القيم تأثيرا يليها تدريب

العاملين ،درجة رضا المرضى عن الخدمات ،تدريب العاملين على حسب تخصصاتهم ،سياسة المستشفى

،سجلات المرضى ،الرؤيه والرساله واهداف المستشفى وتهيئة جو المستشفى ،كل هذه القيم كانت مؤثرة لانها

اقل من (0.05)

تحفيز العاملين بالمستشفى ،السجلات والملفات ،الفحص الداخلي والخارجي ،اهتمام القائد بقياس العمليات

،مدى المام العاملين برؤية المستشفى ،الطرق الوقائيه ،انتظام الفحص والتدقيق وطرق توصيل الخدمات

،جميعها كانت اكثر من (0.05) مما يعني انها قيم غير مؤثره .

عليه فقد كانت درجة قياس رضا المرضى والعاملين اكثر القيم تأثيرا على عكس مدى معرفة العاملين بالرؤيه

،اخذ التحوطات،انتظام الفحص وطرق تقديم الخدمات.

الخلاصه والتوصيات:

تم تطبيق نظام الجوده في مستشفى ام درمان العسكري بهدف تطوير الخدمات المقدمه للمرضى والعاملين.
اهمية فهم نظام الجوده وتطبيقه بصوره صحيحه.
لابد من وجود نظام لقياس اداء العاملين .
تم استخدام نظام الجوده كاداة في قياس اثر تطبيق الجوده.

List of Contents

ITEMS	PAGE
Dedication	I
Acknowledgment	II
Abstract	III
ملخص البحث	V
List Of Contents	VII
List Of Figures	IX
List Of Tables	X
CHAPTER ONE INTRODUCTION	
1.1 Background Information	1
1.2 Problem Statement	2
1.3 Research Questions	2
1.4 Importance Of The Study	3
1.5 Research Objectives	3
1.6 Hypothesis	3
CHAPTER TWO LITERATURE REVIEW	
2.1 Introduction	4
2.1 Patient Centered Care	10
2.2 Effectiveness	26
CHAPTER THREE METHODOLOGY	
3. Methodology	31
3.1 Study Design	31
3.2 Study Area	31
3.3 Study Population	31
3.4 Exclusion Criteria	31
3.5 Study Duration	32
3.6 Data Collection Tools	32
3.7 Data Analysis	32
3.8 Data Presentation	32

3.9 Ethical Consideration	32
CHAPTER FOUR ANALYSIS AND RESULTS	
4.1 Analysis	33
4.2 Result	54
CHAPTER FIVE DISCUSSION , CONCLUSION& RECOMMENDATIONS	
5.1 Discussion	55
5.2 Conclusion	59
5.3 Recommendations	59
REFERENCES	60
ANNEXES	
Annexes 1 QUESTIONNARE IN ENGLISH	63

List of Table

Table	Page No
Table 1: The study according to age.	33
Table 2: The study according to gender.	34
Table 3: The study the hospital vision, mission and objectives	35
Table 4: The study about the employee's orientation of vision.	36
Table 5: The policy of the hospital.	37
Table 6: The leadership care in monitoring the process.	38
Table 7: The leadership care to put preventive measures.	39
Table 8: The documentation and records.	40
Table 9: The way of doing documentation and recording.	41
Table 10: The internal and external audit.	42
Table 11: The audit regularity.	43
Table 12: The hospital environment for the workers.	44
Table 13: The preparation of the hospital environment.	45
Table 14: The hospital encouragement for the workers to innovate.	46
Table 15: The periodic training for all hospital staff.	47
Table 16: The training continuously.	48
Table 17: The methodology of providing services.	49
Table 18: The degree of patients and workers satisfaction with services provided from the hospital.	50
Table 19: The method to measure the degree of patients and workers satisfaction.	51
Table 20: The reliability analysis	52

List of Figure

Table	Page No
Figure (A): The process-based quality management system.	6
Figure (B): Schematic representation of a single process within the system.	7
Figure (C): conceptual frame work	9
Figure 1: The study according to age.	33
Figure 2: The study according to gender.	34
Figure 3: The study the hospital vision, mission and objectives	35
Figure 4: The study about the employee's orientation of vision.	36
Figure 5: The policy of the hospital.	37
Figure 6: The leadership care in monitoring the process.	38
Figure 7: The leadership care to put preventive measures.	39
Figure 8: The documentation and records.	40
Figure9: The way of doing documentation and recording.	41
Figure 10: The internal and external audit.	42
Figure 11: The audit regularity.	43
Figure 12: The hospital environment for the workers.	44
Figure 13: The preparation of the hospital environment.	45
Figure 14: The hospital encouragement for the workers to innovate.	46
Figure 15: The periodic training for all hospital staff.	47
Figure 16: The training continuously.	48
Figure 17: The methodology of providing services.	49
Figure 18: The degree of patients and workers satisfaction with services provided from the hospital.	50
Figure 19: Distribution of study sample according to: does there are effective methods to measure the degree of satisfaction	51

CHAPTER ONE
INTRODUCTION

CHAPTER ONE

INTRODUCTION

1.1. Background Information

In today's world, delivery of health care is under immense pressure to improve efficiency and competitive advantages in relation to cost effectiveness and quality of care (Al-Najjar and Jawad, 2011, Wardhani *et al*, 2009). The reasons behind this movement are the increasing complexity of health care institutions, competition in the healthcare market, the ongoing process of (sub) specialization of health care providers, strengthening of the client position and increasing awareness on patient safety (Wardhani *et al*, 2009). These processes have resulted in the adoption of quality management system (QMS) in hospitals (van den Heuvel *et al*, 2005).

In Sudan, health care access, efficiency and quality of service delivery is a big issue and a challenge for many Sudanese .The National Health Sector Strategic Plan, 2005 (NHSSP) objective was to improve access, service quality, responsiveness, efficiency and effectiveness of the health care services. Evaluation of the NHSSP indicated a decline in the utilization of public health facilities leading to decline in national health indicators (Mwando *et al*, 2009).

To address the problems of health care delivery, a system approach and orientating system to the delivery and improvement of quality is recommended to meet the expectation of both the patients and healthcare workers (WHO, 2006).

The quality management concept and tools are being widely accepted in hospitals (Cerrillo *et al*, 2012), various reports on their success and failure have been noted. It is generally accepted that the failure is not due to the principles of QMS itself, but mainly due to ineffective implementation steps or strategies (Durai, 2011).

A study conducted at Red Cross hospital in the Netherlands, showed implementation of ISO 9000 standard resulted in increased patients focus, improved quality of care and improved patient safety (van den Heuvel *et al*, 2005). In another study conducted in Egypt (Magd, 2010) it was found that ISO helped manufacturing firms to meet and exceed quality levels of competitors. However, there was difficulty in implementing the standard due to lack of understanding of the standard.

There is lack of data on implementation of ISO in health care setting in developing countries (Wardhani, 2009). This is because the implementation of QMS originated in the manufacturing industry (Al-Najjar, 2011). However, Sudan is undergoing a quality revolution with an increasing awareness of competition worldwide, regionally and locally. In this regard, a few hospitals in Sudan have adopted quality management systems.

1.2. Problem Statement

Implementation of QMS concepts in health care, are with few exceptions a recent development .The number of ISO certified hospitals is also very low compared to manufacturing industries and thus limited empirical studies on the effectiveness of QMS in health care setting (Wardhani *et al*,2006) . This is particularly so in Sudan and especially in public hospitals. Omdurman Military Hospital was the first one of the public hospitals to implement QMS. It set the pace for other public hospitals which intends to adopt quality management systems. This study provides knowledge on the outcome of implementing quality management system on patient care in public hospitals in Sudan. It also addresses the determinants of quality management system in hospital settings.

1.3 Research questions

1. What is the impact of implementing quality management systems on quality of patient care?

2. What are the factors associated with the uptake of quality management systems in the hospital?

1.4 Importance of the Study:

The purpose of this study is to establish the outcome of implementing QMS on patient care and the factors associated with the uptake of QMS in ward setting

This study has contributed knowledge to the application of quality management system in maternity part in particular and in hospital setting in general

1.5 Research Objectives:

1.5.1 Broad Objectives

To determine the factors that influences the uptake of the quality management system in the hospitals and the impact of implementing the standard on the quality of patient care.

1.5.2. Specific Objectives

1. To establish impact of implementing quality management systems on quality of s patient care.
2. To determine factors associated with implementing QMS in the hospital.

1.6 Hypothesis

Implementation of quality management systems is associated with an improvement of quality of patient care.

CHAPTER TWO
LITERATURE REVIEW

CHAPTER TWO

2 LITERATURES REVIEW

2.1 Introduction

2.1.1 General

The adoption of a quality management system ought to be a strategic decision for an organization.

A robust quality management system can help an organization to improve its overall performance and forms an integral component of sustainable development initiatives. The design and implementation of an organization's quality management system is influenced by the context of the organization and the

Changes in that context, particularly with respect to:

- a) Its specific objectives.
- b) The risks associated with its context and objectives.
- c) The needs and expectations of its customers and other relevant interested parties.
- d) The products and services it provides.
- e) The complexity of processes it employs and their interactions.
- f) The competence of persons within or working on behalf of the organization.

2.1.2 The ISO Standards for Quality Management:

This International Standard is one of the three core standards in the ISO portfolio of quality management system standards.

2.1.3 ISO 9000 Quality Management Systems - Fundamentals and Vocabulary:

Provides an essential background for the proper understanding and implementation of this International Standard. The quality management principles described in detail in ISO 9000 was developed by ISO/TC 176, and

has been taken into consideration during the development of this International Standard.

These principles are not requirements in themselves, but they form the foundation of the requirements specified by this International Standard 9001 (this International Standard) specifies requirements aimed primarily at giving confidence in the products and services provided by an organization and thereby improving customer satisfaction (see clause 1 Scope). Its proper implementation can also be expected to bring other organizational benefits such as improved internal communication, better understanding and control of the organization's processes, and reduction in defects and waste.

ISO 9004 Managing for the sustained success of an organization - A quality management approach provides guidance for organizations that choose to progress beyond the requirements of this International Standard to address a broader range of topics that can lead to continual improvement of the organization's overall performance. ISO 9004 includes guidance on a self assessment methodology for an organization to be able to evaluate the level of maturity of its quality management system.

Other standards that have been developed to support the implementation of a quality management system include those in the ISO 10000 number range. These include guidelines on customer satisfaction, quality plans, quality management in projects, configuration management , measurement processes and measuring equipment , documentation, financial and economic benefits of quality management, and training, statistical techniques, the involvement and competence of people, selection of quality management system consultants and auditing of management systems.

Consistent and predictable results are achieved more effectively and efficiently when activities are understood and managed as interrelated.

2.1.4 Process Approach:

Processes that functioning as a coherent system. This International Standard promotes the adoption of a process approach when developing, implementing and improving the effectiveness of a quality management system, to enhance customer satisfaction by meeting customer requirements.

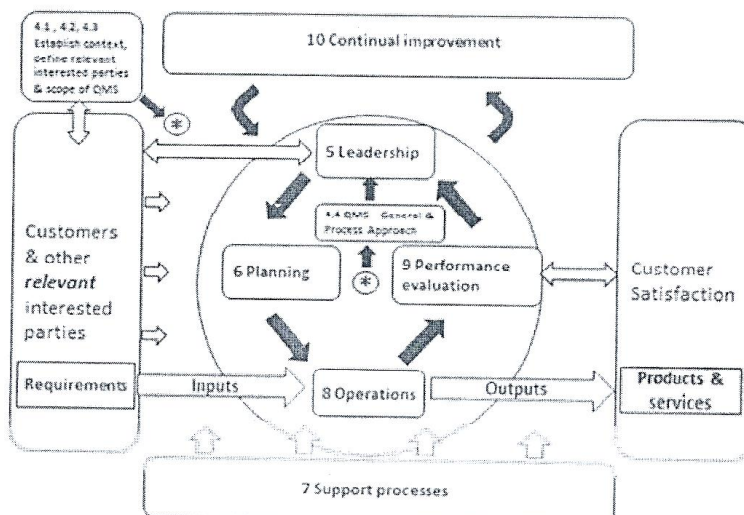
Clause 4.4 of this International Standard includes specific requirements considered essential to the adoption of a process approach.

The process approach applies systematic definition and management of processes and their interactions so as to achieve the intended results in accordance with the quality policy and strategic direction of the organization. Management of the processes and the system as a whole can be achieved using a “Plan-Do-Check-Act” (PDCA) methodology with an overall focus on “Risk based thinking” aimed at preventing undesirable outcomes.

When used within a quality management system, the process approach ensures:

- a) Understanding and consistently meeting requirements.
- b) Consideration of processes in terms of added value.
- c) The achievement of effective process performance.
- d) Improvement of processes based on evaluation of data and information.

Figure (A): The Process – based quality management system



2.1.5 Plan-Do-Check-Act Cycle

The methodology known as (Plan _Do_Check_Act) (PDCA) can be applied to all processes and to the quality management system as a whole. The clauses of this international standard broadly follow the PDCA cycle which can be briefly described as follows:

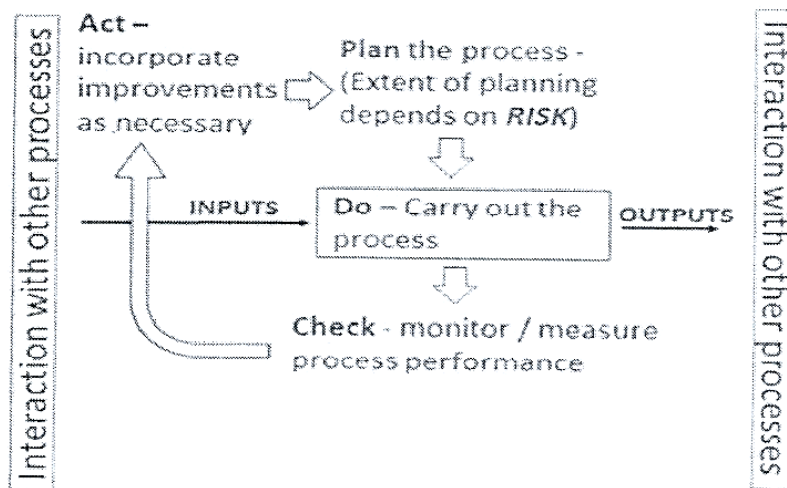
Plan: establish the objectives of the system and its component processes, and the resources needed to deliver results in accordance with customers' requirements and the organization's policies.

Do: implement what was planned.

Check: monitor and (where applicable) measure processes and the requirements, and report the results.

Act: take actions to improve process performance, as necessary.

Figure (B): Schematic representation of a single process within the system



2.1.6 “Risk-based Thinking”:

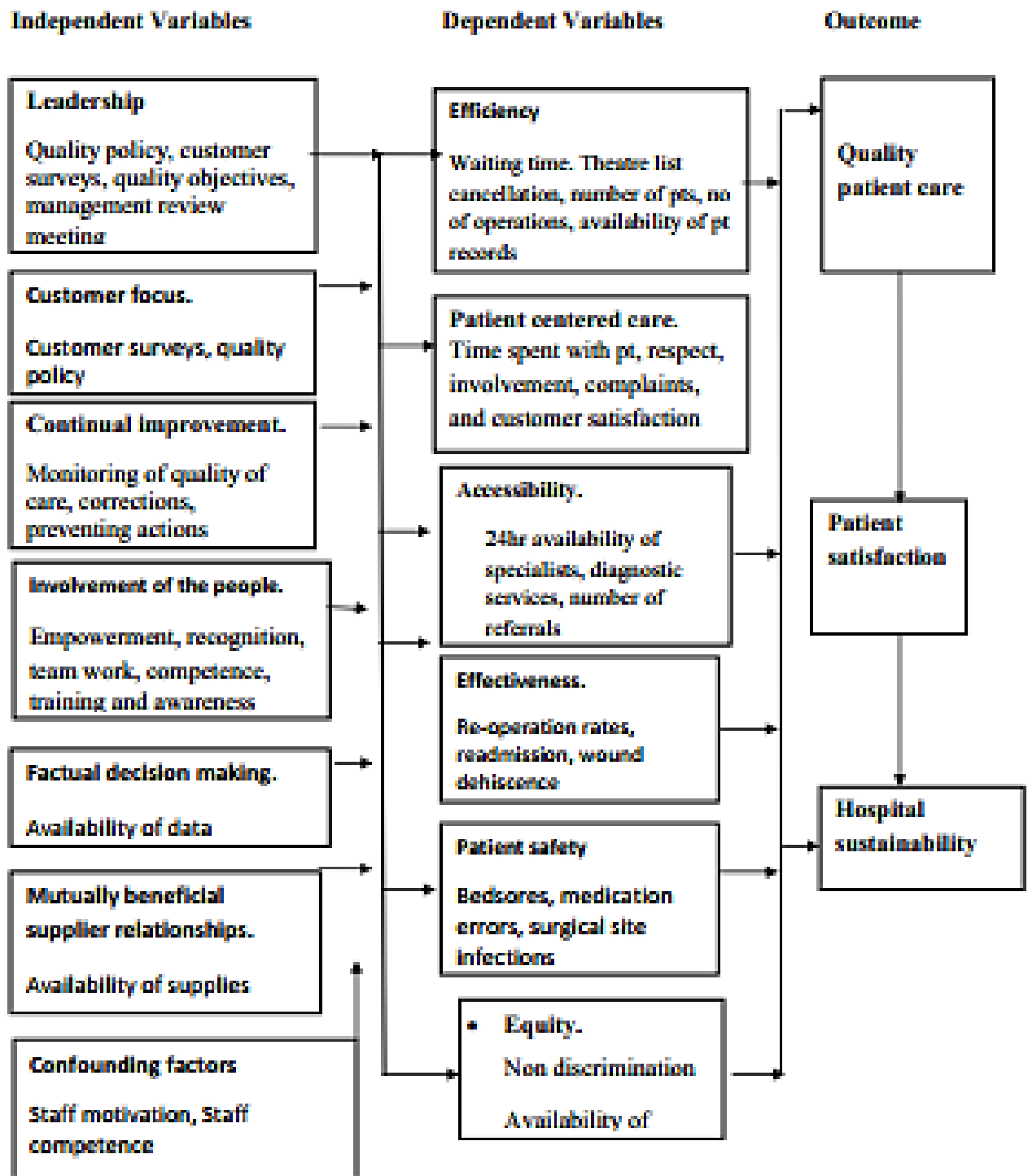
Risk is the effect of uncertainty on an expected result and the concept of risk-based thinking has always been implicit in ISO 9001. This International Standard makes risk-based thinking more explicit and incorporates it in requirements for the establishment, implementation, maintenance and

continual Improvement of the quality management system. Organizations can choose to develop a more extensive risk-based approach than is required by this International Standard, and ISO 31000 provides guidelines on formal risk management which can be appropriate in certain organizational contexts.

2.1.7 Compatibility with Other Management System Standards:

This International Standard has adopted the “high-level structure” (i.e. clause sequence, common text and common terminology) developed by ISO to improve alignment among its International Standards for management systems.

Figure (C): Conceptual frame work



2.2 Patient-Centered Care:

What does it take?

In its landmark 2001 report, *Crossing the Quality Chasm*, the Institute of Medicine (IOM) named patient-centered care as one of the six fundamental aims of the U.S. health care system. The IOM defines patient-centered care as: Health care that establishes a partnership among practitioners, patients, and their families (when appropriate) to ensure that decisions respect patients' wants, needs, and preferences and that patients have the education and support they need to make decisions and participate in their own care.

Studies show that orienting health care around the preferences and needs of patients has the potential to improve patients' satisfaction with their care, as well as their outcomes. Patient-centered care also has been shown to reduce both underuse and overuse of medical services.

Despite the recent prominence given to patient-centered care, and the growing evidence of its importance, the nation's health care system appears to fall short of achieving it. For example, according to a recent Commonwealth Fund survey of patients in five countries (Australia, Canada, New Zealand, the United Kingdom, and the U.S.), one-third of sick patients in the U.S. leave the doctor's office without getting answers to important questions. And across all countries in the study, one-third to one-half of respondents said their doctors sometimes, rarely, or never tell them about treatment options or involve them in making decisions about their care.

This paper was commissioned by The Picker Institute to explore what it will take to achieve more rapid and widespread implementation of patient-centered care in both inpatient and ambulatory health care settings. The Picker Institute was an early leader in developing surveys designed to measure patients' experience with their care. Since the late 1980s, the Picker surveys and those modeled after them, such as the Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys, have been used to gather information from

millions of patients in hospitals and physician practices in the U.S., Canada, the United Kingdom, Germany, and other European countries. After all this investment in measurement, a clear need remains to determine how such information can be used to actually make and sustain improvements in the patient's experience with care.

The aim of this paper is to summarize a consensus of opinions and perspectives from key health care leaders regarding what it will take to achieve high levels of patient centered care in the U.S. These opinions and perspectives were gleaned from a series of telephone interviews conducted by the author from June through September 2006.

Leaders were identified on the basis of their recognized expertise, either as leaders of organizations that have demonstrated measurable excellence in patient-centered care or as experts working to design and implement tools and strategies for implementing patient centered care. A total of 17 interviews were conducted, with the list of individuals included in Appendix A. The core questions that were probed in the semi-structured interviews are included in Appendix B. Throughout the interview process, the published and unpublished literature on patient-centered care, as well as relevant Web sites identified in the course of the interviews, were consulted as additional background and supporting information to the views expressed by the individuals interviewed.

Key Attributes of Patient-Centered Care

Increasingly, patients are asking to be partners in their care. A patient-centered health care system can help achieve that partnership in a variety of ways. Multiple models and frameworks have been developed for describing patient-centered care, with many overlapping elements. This section briefly summarizes three of the most influential models that form the foundation of approaches to patient-centered care in the U.S. today:

- (1) The Picker/Commonwealth dimensions

(2) The Institute for Family-Centered Care focus on collaborative partnerships, and (3) The Planetree model. It then presents results of a synthesis of key concepts cutting across these and other models.

Picker/Commonwealth Dimensions

The term “patient-centered care” was originally coined by the Picker Commonwealth Program for Patient-Centered Care, which later became The Picker Institute. This program conducted focus groups and national telephone interviews with patients and families to create the Picker survey instruments that measure the patient’s experience of care across the following eight dimensions:

1- **Respect for patient-centered values, preferences, and expressed needs**, including an awareness of quality-of-life issues, involvement in decision-making, dignity, and attention to patient needs and autonomy.

2- **Coordination and integration** of care across clinical, ancillary, and support services and in the context of receiving “frontline” care.

3- **Information, communication, and education** on clinical status, progress, prognosis, and processes of care in order to facilitate autonomy, self-care, and health promotion.

4- **Physical comfort**, including pain management, help with activities of daily living, and clean and comfortable surroundings.

5- **Emotional support and alleviation of fear and anxiety** about such issues as clinical status, prognosis, and the impact of illness on patients, their families and their finances.

6- **Involvement of family and friends** in decision-making and awareness and accommodation of their needs as caregivers.

7- **Transition and continuity** as regards information that will help patients care for themselves away from a clinical setting, and coordination, planning, and support to ease transitions.

8- **Access to care**, with attention to time spent waiting for admission or time between admission and placement in a room in the inpatient setting, and waiting time for an appointment or visit in the outpatient setting.

Institute for Family-Centered Care Model

The Institute for Family-Centered Care was founded in 1992 to ensure that principles of patient- and family-centered care are reflected in all systems providing care and support to individuals and families, including health, education, mental health, and social services.

According to the Institute, patient- and family-centered care is an innovative approach to the planning, delivery, and evaluation of health care that is grounded in mutually beneficial partnerships among patients, their families, and health care providers. The concepts of patient- and family-centered care include:

1- **Dignity and respect.** Health care practitioners listen to and honor patient and family perspectives and choices. Patient and family knowledge, values, beliefs and cultural backgrounds are incorporated into the planning and delivery of care.

2- **Information-sharing.** Health care practitioners communicate and share complete and unbiased information with patients and families in ways that are affirming and useful. Patients and families receive timely, complete, and accurate information in order to effectively participate in care and decision-making.

3- **Participation.** Patients and families are encouraged and supported in participating in care and decision-making at the level they choose.

4- **Collaboration.** Patients and families are also included on an institution wide basis.

Health care leaders collaborate with patients and families in policy and program development, implementation, and evaluation; in health care facility design; in professional education; and in the delivery of care.

The Planetree Model:-

The mission of Planetree, founded in 1978, is to serve as a catalyst in the development and implementation of new models of health care that cultivate the healing of mind, body, and spirit; that are patient-centered, value-based, and holistic; and that integrate the best of western scientific medicine with time-honored healing practices.⁹ The nine elements of the Planetree patient-centered care model are:

- 1- Explicitly recognizing the importance of human interaction in terms of personalized care, kindness, and being “present” with patients.
- 2- Informing and empowering diverse patient populations through consumer oriented health libraries and patient education.
- 3- Integrating health partnerships with family and friends in all aspects of care.
- 4- Attending to the nurturing aspects of food and nutrition.
- 5- Incorporating spirituality and inner resources for healing into care of patients.
- 6- Incorporating massage and human touch.
- 7- Incorporating the arts (music, visual art forms) into the healing process.
- 8- Integrating complementary and alternative practices into conventional care.
- 9- Creating healing environments through architecture and design.

Synthesis of Key Attributes

In order to identify similarities and differences across the varying definitions and descriptions of patient-centered care, Carol Cronin, an independent consultant under contract with the National Health Council in 2004, reviewed nine models of patient-centered care(including the three described above) to arrive at 45 concepts embedded in the definitions.

The following six elements appeared in three or more of the definitions or descriptions:

- 1- Education and shared knowledge (in five of the definitions)
- 2- Involvement of family and friends (in five of the definitions)

- 3- Collaboration and team management (in four of the definitions)
- 4- Sensitivity to nonmedical and spiritual dimensions (in four of the definitions)
- 5- Respect for patient needs and preferences (in three of the definitions)
- 6- Free flow and accessibility of information (in three of the definitions)

Clearly, there is no lack of definitions of patient-centered care, and there is substantial convergence and commonality across at least half a dozen key attributes.

According to one of the experts interviewed for this project, “We’ve gathered tons of data, done many focus groups: We know what patients want. The hard part is delivering it.” The next section will explore how close we are to getting there.

How Close Are We?

How close are we in the U.S. to achieving a health care system that delivers on the patient-centered aim called for by the IOM and so many others? This section briefly examines the range of perspectives offered by the various leaders interviewed for this project, and reviews some of the available empirical evidence based on national patient experience surveys.

Leader Perspectives

Opinions of leaders interviewed ranged from a mildly optimistic assessment of the progress that has been made toward patient-centered care to a conviction that the system is utterly failing to deliver on this key aim. For example, one expert suggested that “we’ve made a lot of progress...a lot has been mainstreamed since the first national Picker Commonwealth study in 1989.” But most others were less optimistic about the system as a whole, offering comments such as:

How close are we? Not even close. There are a few promising innovators and early adopters out there, others on the way. Many are way behind.

About 80 percent to 95 percent are someplace in between.

We're not even close to a tipping point. I've never seen us so far from our customers.

The most consistent perspective that emerged among the leaders interviewed is that remarkable progress has been made in a relatively small number of organizations, but that the vast majority of hospitals and medical practices fall far short of achieving high levels of patient-centered care. A large number of the most innovative organizations mentioned include children's hospitals or other programs with an emphasis on pediatric care.

Empirical Evidence

Empirical evidence based on surveys of patients' health care experiences provides another, more quantitative assessment of progress. As noted earlier, rigorous and standardized evaluations of patients' experiences are now gaining increasing traction in the U.S.

Factors Contributing To Patient-Centered Care

The previous sections have defined what patient-centered care is and reviewed some of the evidence regarding how close we are to achieving it in the nation as a whole. This section summarizes seven key factors identified through the project interviews and literature review that contribute to patient-centered care at the organization level. These factors are:

- (1) Leadership
- (2) a strategic vision clearly and constantly communicated to every member of the organization
- (3) involvement of patients and families at multiple levels
- (4) care for the caregivers through a supportive work environment,
- (5) systematic measurement and feedback
- (6) the quality of the built or physical environment, and
- (7) supportive technology.

Leadership

According to the majority of individuals interviewed for this project, the single most important factor contributing to patient-centered care, whether in the hospital or in the ambulatory care setting is the commitment and engagement of senior leadership at the level of the CEO and board of directors. The organizational transformation required to actually achieve the sustained delivery of patient-centered care will not happen without top leadership support and participation. In the words of one observer, “There is no chance to succeed without it, and maybe not even with it.”

The importance of leadership has been well documented in the literature on organizational development. The noted organizational theorist Edgar Schein has identified the close connection between leadership and culture in an organization, suggesting that:

Organizational cultures are created by leaders, and one of the most decisive functions of leadership may well be the creation, the management, and if and when that may become necessary, the destruction of culture. Culture and leadership, when one examines them closely, are two sides of the same coin and neither can really be understood by itself.

Jack Silversin and his colleague, Mary Jane Kornacki, nationally recognized experts on physician culture, have applied these concepts specifically to health care organizations through a model of organizational change that focuses on the elements of leadership, shared vision, culture, and the concept of an explicit “compact” between management and the medical and supervisory staff. According to Gary Kaplan, MD, CEO of Virginia Mason Medical Center in Seattle, Washington, leaders must become “change managers” that help transform the traditional, implicit compact between physicians and the organization from one based on “entitlement, protection, and autonomy” to one focused entirely on “putting the patient first.” In the case of Virginia Mason, Dr. Kaplan applied Silversin’s framework to the creation of both a leadership

compact and a physician compact that clearly delineate mutual responsibilities and expectations regarding patient entered care. These compacts became the cornerstone of a wholesale transformation of the medical center from a culture focused on accommodating physicians to one directed toward placing the patient at the center. While organizational change of such magnitude cannot be attributed to a single individual alone, Dr. Kaplan's leadership was instrumental in guiding board members, senior executives, and medical staff to embrace a new vision.

A Strategic Vision Clearly Communicated

With exceptional, committed leadership in place, the organization needs to develop a clear vision and strategic plan for how patient-centered care will fit into its priorities and processes on a daily operational basis. Experts interviewed for this project emphasized the importance of articulating a vision and mission statement with clear, simple elements that can be easily repeated and embedded in routine activities that all staff members carry out.

Management consultant Kathleen Jennison Goonan, MD, Executive Director of the Center for Performance Excellence, describes the importance of achieving a "line of sight" that is always visible from "the boardroom to the bedside," meaning an ability to communicate the leadership's strategic goals systematically throughout all levels of the organization. Goonan cites SSM Health Care, 2002 winner of the distinguished Baldrige Award in health care, as a "practice leader" in this area. For example, SSM has standardized all of its meetings so that all sites follow the same protocols that include constant reminders of the organization's mission and values. According to Goonan, who bases her consulting work on the Baldrige model, such standardization of processes helps "translate vision into ways people behave. . . . All successful organizations do this."

Involvement of Patients and Families

In patient-centered care, if patients are to be truly involved, so must their families. These are broadly conceived as close friends and significant others, not just family relatives, who can provide vital support and information throughout the care process. According to Bev Johnson, president of the Institute for Patient- and Family-Centered Care, patients and families should be involved in care at several levels, consistent with the IOM's recommendations in the *Crossing the Quality Chasm* report. The first level is the point of care delivery, where patients and families can contribute to the process of gathering information about perceptions of care and assist in analyzing and responding to treatment strategies. The second level is the clinical microsystem, where patients and family advisers should participate as full members of quality improvement and redesign teams, participating from the beginning in planning, implementing, and evaluating change.

The third level is the organization leadership, where the perspectives and voices of patients and families are vital to quality improvement, planning, and policy and programmatic development. Patients and families should participate on key committees dealing with issues such as patient safety, facility design, quality improvement, patient/family education, ethics, and research. One example of patient and family involvement at this level is the patient and family advisory council. Such a council creates an opportunity for patients and families who represent the constituents served by the organization to become members of a permanent group that meets regularly with senior leaders. While they do not function as boards, patient and family advisory councils can play a vital role in problem-solving, since they often identify opportunities or solutions that professional managers may overlook. Finally, at the fourth level, the perspectives of patients and families are critical to the development of local, state, and national policies affecting the finance and delivery of care, and

should inform accreditation and licensing bodies, the design of reimbursement policies, and medical education curricula.

Supportive Work Environment: Care for the Caregivers

If health care organizations want to become patient-centered, they must create and nurture an environment in which their most important asset—their workforce - is valued and treated with the same level of dignity and respect that the organization expects its employees to provide to patients and families. The relationship between employee satisfaction and patient or customer satisfaction has been well documented.²¹ Experts interviewed for this project stressed the importance of hiring, training, evaluating, compensating, and supporting a workforce committed to patient-centered care. An important way to achieve this commitment and engagement is to involve employees directly in the design and implementation of patient-centered processes. According to Peter Coughlan, transformation practice leader at IDEO, one of the world’s most sought-after design consulting firms, health care organizations should strive to be “humancentered”, not just patient-centered, meaning that all stakeholders (including managers, medical staff, nurses, and other frontline staff) should be engaged in creating effective, responsive systems of care.

In a similar vein, Erie Chapman, president and CEO of the Nashville-based Baptist Healing Trust, suggests that the “single biggest responsibility of caregivers is to take care of people that take care of people.” He describes a “wave theory” of behavior that can contribute to a positive work culture, based on the premise that the majority of people in an organization or on a team model their own behavior in accordance with those around them. Positive behavior modeled by team leaders will encourage similar behavior in other team members, which will in turn contribute to the ability of the entire team to provide responsive, service-oriented care to patients and their families.

Systematic Measurement and Feedback

A frequently used axiom in health care quality improvement is, “You cannot manage what you cannot measure.” A major factor contributing to patient-centered care is the presence of a robust customer-listening capacity that enables an organization to systematically measure and monitor its performance. According to Kate Goonan, such a listening capacity should comprise a “balanced scorecard” that includes multiple measurements of performance, such as patient experience surveys, complaints, and “patient loyalty” assessments based on rates of voluntary disenrollment from a practice. Other important “listening posts” include walk-throughs, a process in which staff members play the role of patients and experience a service or procedure in the same way that patients and families do. The implementation of patient and family advisory councils, described above, provides another way to gather systematic feedback from patients.

The value of such measurement and feedback lies in using them to design and implement specific interventions or processes to improve the patient experience. Whether the intervention is large (for example, redesigning the appointment process in an office practice) or small (adding signs to help patients and families find their way through the building), it is vital to continuously measure the effect of the change to determine whether it is working and, if not, how to modify the process for a better result. The systematic use of measurement in planning an intervention, implementing it, reviewing its effects, and modifying it as needed constitutes the cycle of quality improvement often referred to as

PDSA, for “plan, do, study, act.” According to Peter Coughlan, the success of this process depends on having real-time feedback, in order to be able to trace results back to specific actions or processes that can be studied, altered if necessary, and spread throughout the organization if successful.

Quality of the Built Environment

One of the most important factors contributing to patient-centered care is the quality of the physical environment in which care is provided. Since its founding in 1978, Planetree has pioneered new approaches to architecture and design that recognize the vital link between physical space and the healing process. The Planetree approach to health facility design encourages settings that:

- Welcome the patient's family and friends.
- Value human beings over technology.
- Enable patients to fully participate as partners in their care.
- Provide flexibility to personalize the care of each patient.
- Encourage caregivers to be responsive to patients.
- Foster a connection to nature and beauty.

Over the past several decades, these design principles have been incorporated into a variety of health care settings, and have been shown to correlate highly with improved measures of patient experience and other important health and business outcomes.

In 2000, the Center for Health Care Design launched the Pebble Project as a research effort to systematically document the evidence that supportive and nurturing physical environments are therapeutic for patients, conducive to family involvement, promotive of staff efficiency, and restorative for workers under stress. By carefully documenting examples of health care facilities whose design has made a difference in the quality of care and financial performance of the organization, the Pebble Project intends to create a "ripple effect in the health care community" that will lead to more widespread adoption of such evidence-based design. Currently, more than 40 organizations are participating, and each is committed to systematic documentation of the results of its design innovations.

Preliminary data from these projects have shown demonstrable improvements in clinical outcomes, economic performance, productivity, and customer satisfaction.

Supportive Technology

A final contributing factor permeating virtually all of the above elements is supportive technology, especially health information technology (HIT) that engages patients and families directly in the care process by facilitating communication with their caregivers and by providing adequate access to needed information and decision support tools. Numerous applications of health information technology have emerged in recent years, from simple e-mail communication between patients and clinicians to more sophisticated patient Web portals that enable patients to interact with their physicians' electronic medical records.

Such applications range widely in complexity as well as in cost. Most of the experts interviewed for this project agreed that supportive information technology is generally underused and that organizations at the forefront of developing patient-centered HIT applications are demonstrating that they can enhance physician-patient partnerships in care. The key to success is to make adoption easy for both patients and clinicians, and to implement applications gradually in order to avoid fears that new technology will abruptly undermine the quality of the patient-caregiver interaction.

Models of Success

The factors contributing to patient-centered care outlined in the previous section can be found at work in a small but growing number of hospitals and medical groups across the country. This section briefly highlights several examples to illustrate how most or all of the factors identified can be applied in an integrated, comprehensive way to achieve high levels of patient-centered care, as well as other important health care and business outcomes.

MCG Health System

The MCG Health System (MCG), in Augusta, Georgia, provides a remarkable example of what can be achieved in a large academic health system over a relatively short period of time. MCG includes an adult and a children's medical center, both of which are affiliated with the Medical College of Georgia. In 1993, MCG began a process of transforming its organizational culture, starting with the development of its new children's hospital.

An internal assessment revealed that the care delivered addressed primarily the needs of providers and did not adequately respond to patients' and families' needs and concerns.

Senior leaders at MCG made a commitment to improving patient-centered care in its new pediatric inpatient units. The ensuing transformation, which evolved to include adult health care services and medical education as well, comprised the following key elements:

- **Leadership.** According to Pat Sodomka, senior vice president for patient- and family-centered care at MCG, "Leaders are the guardians of the ideals related to the patient experience of care." The commitment and participation of senior leadership were instrumental in initiating and sustaining the organization's commitment to patient-centered care.

- **Strategic Vision:-**

In 1993, hospital leaders convened a visioning retreat, where participants developed a philosophy and values statement for the new MCG Children's Medical Center and built a consensus for patient- and family-centered concepts and priorities. Attendees included hospital- and community-based physicians, other clinical staff, administrators, and families.

- **Involvement of Patients and Families:-**

Focus on involving patients and families have been the cornerstone of the MCG transformation. MCG began by establishing the Family-Centered Care Steering Committee, which included staff, faculty, and families.

Training sessions were held to help committee members learn how to work collaboratively. The original committee evolved into the Family Advisory Council, which continues to provide guidance for policy and program development. More than

125 patient and family advisers are currently involved in collaborative endeavors at MCG. Another example of including patients and families is the MCG policy of inviting families to stay with their loved ones , especially in the intensive care unit.

• **Supportive Work Environment:-**

Patient-centered behaviors among the MCG workforce are both modeled and rewarded. Staff members are integrally involved in all aspects of organization planning and process design. The MCG human resources department ensures that new employees possess attitudes and skills consistent with patient- and family-centered care. Behaviors for customer service and for patient- and family-centered care have been defined, and both sets of behaviors are included in position descriptions and MCG’s performance-review system.

• **Systematic Measurement and Feedback:-**

MCG’s efforts to advance patient- and family-centered care have been closely monitored through several measurement activities. Through the patient and family councils, the efforts of the director of Family Services Development, and a program called “Speak Up!”, leaders regularly receive patient and family input on the experience of care. Patient feedback is also obtained through independent surveys, and the results are compelling: MCG Children's Medical Center has consistently ranked in the 90th percentile or higher among more than 50 children’s hospitals in a national survey of patient satisfaction.

• **Quality of the Built Environment:-**

Patients and family members were integrally involved in the architectural design of the new Children’s Medical Center, collaborating with architects,

physicians, nurses, and others. Patient perspectives also were incorporated in the redesign of several areas in the adult hospital, including the mammography area of MCG Breast Health Services, a PET/CT unit and the Neuroscience Intensive Care Unit. The redesign of these units created warm and welcoming spaces to help increase patient comfort, privacy, and convenience.

Since the transformation process began in 1993, patient- and family-centered care has become the core business model for the entire organization, leading to positive results on each one of MCG's fundamental business metrics: finances, quality, safety, satisfaction, and market share. MCG has been recognized as a pioneer in patient- and family-centered care by the American Hospital Association and the Institute for Family-Centered Care, and was recently featured in the PBS series *Remaking American Medicine*.

2.3 Effectiveness

A primary prescription that policy makers and practitioners have offered for meeting the challenges facing the National Health Service is the development of multidisciplinary team working. The importance of team working in health care has been emphasised in numerous reports and policy documents on the National Health

Service. One particularly emphasised the importance of team working if health and social care for people are to be of the highest quality and efficiency:

"The best and most cost-effective outcomes for patients and clients are achieved when professionals work together, learn together, engage in clinical audit of outcomes together, and generate innovation to ensure progress in practice and service."

Over the last thirty years this has proved very difficult to achieve in practice because of the barriers between professional groupings such as doctors and nurses. Other factors such as gender issues also influence team working. For example, G.P.s are predominantly men while the rest of the primary care service population is predominantly women; community mental health

psychiatrists are predominantly men, whereas the rest of the population of community mental health teams is predominantly women, and in hospital settings the ranks of consultants continue to be largely made up of men. Other factors which impede the creation of effective multidisciplinary teams include multiple lines of management, perceived status differentials between different professional groups, and lack of organizational systems and structures for supporting and managing teams.

The Health Care Team Effectiveness Project was commissioned by the Department of Health. The overall aim of the research described here was to determine whether and how multidisciplinary team working contributes to quality, efficiency and innovation in health care in the NHS.

The objectives of the research were to establish:

- which team member characteristics such as age, gender, occupational group, experience, qualifications, and team size, influence how well the teams work together;

- how team working processes, such as participation, reflexivity, communication, decision-making and leadership contribute to the effectiveness of teams, particularly the quality of health care and the development of innovative practice;

The research programme was carried out over a three year period by a team of researchers based at the universities of Aston, Edinburgh, Glasgow, Leeds and Sheffield. During the course of the study information on team working was gathered from some 400 health care teams. This involved consulting over 7,000 NHS personnel and a large number of NHS clients. Five national workshops were held with key representatives from primary health care and community health care. A wide range of research methods was used, including questionnaire surveys, telephone interviews, in-depth interviews, observation, focus groups and video and audio tape recordings of meetings

The research was carried out in two stages: quantitative data collection from 100 primary health care teams (PHCTs), 113 community health care teams

(CMHTs) and 193 secondary health care teams (SHCTs), and in-depth work with a sub-sample of teams.

Key findings

Effectiveness

Quality of teamworking is powerfully related to effectiveness of health care teams:

- The clearer the team's objectives
- The higher the level of participation in the team
- The higher the level of commitment to quality
- The higher the level of support of innovation

The more effective are health care teams across virtually all domains of functioning

Innovation

Quality of team working is powerfully related to innovation of health care teams:

- The clearer the team's objectives
- The higher the level of participation in the team
- The higher the level of commitment to quality
- The higher the level of support of innovation

The more innovative are health care teams across virtually all domains of functioning

Mental Health

Those working in teams have much better mental health than those working in looser groups or working individually. The benefits appear to be due to:

- Greater role clarity
- Better peer support

Those working in teams are also buffered from the negative effects of organizational climate and conflict.

The better the functioning of team with respect to:-

- Clarity of objectives
- Levels of participation
- Commitment to quality
- Support for innovation

The better the mental health of team members across all domains of health care.

Organizational performance

There is a significant and negative relationship between the percentage of staff working in teams and the mortality in these hospitals, taking account of both local health needs and hospital size. Where more employees work in teams the death rate is significantly lower (calculated on the basis of the Sunday Times Mortality Index, Dr Foster; deaths within 30 days of emergency surgery and deaths after admission for hip fracture).

Retention and turnover

Within health care, those working in well functioning teams are more likely to stay working in their settings than those working in poorly functioning teams.

Leadership

In Community Mental Health and Primary Health Care, where there is no clear leader/co-ordinator or where there is conflict over leadership *team objectives are unclear*, and there are:-

- *Low levels of participation*
- *Low commitment to quality*
- *Low support for innovation*
- *Poor team member mental health*
- *Low levels of effectiveness and innovation*

Communication

Communication, integration and regular meetings in PHC and CMC health care teams are associated with higher levels of effectiveness and innovation, yet the quality of meetings (particularly in Primary Health Care) is often poor.

Professional diversity

Diversity of professional groups in Primary Health Care is clearly linked to levels of team innovation. In newly formed Community Mental Health Teams, this relationship does not appear.

CHAPTER THREE
METHODOLOGY

CHAPTER THREE

3 METHODOLOGY

3.1 Study Design:

This the evaluation descriptive study carried out through questionnaire using the Quality Management System

3.2 Study Area:

The study Conducted in Sudan medical military hospital in Maternity department

This department has:

- ICU (Intensive care unit).
- Western word
- Eastern word
- Private word
- Delivery room
- One theater with three operating rooms

Omdurman military hospital: located in Khartoum state (in Omdurman). It's the major hospital for military cover patients and their families. The patients can be referred to from other military hospitals in Sudan. The services of this hospital are not only confined to the employees and their families but also to the public Sudanese residents.

It's located along the road leading out of Khartoum toward Omdurman.

It contains all medical departments; one of these departments is the maternity department which study conducted in it.

3.3 Study Population:

A Total coverage of population: Key persons of maternity department who agree to participate on the research were included during the research period.

3.4 Exclusion Criteria:

All staff working less than two years

3.5 Study Duration:

The study was conducted during the period from 9/2015-9/2016

3.6 Data Collection Tools:

-QUESTIONNAIRE (based on QMS)

3.7 Data Analysis:

Done by CHI SQUARE

3.8 Data Presentation:

Data was presented in the simple tables and figures

3.9 Ethical considerations Participation is questionnaire consent from the department members

CHAPTER FOUR
ANALYSIS AND RESULTS

4.1 Analysis

Table (1): Distribution of study sample according to (Age):

Age	Frequency	Percent (%)
<20	1	2.5
21-30	18	45.0
31-40	10	25.0
41-50	7	17.5
51-60	4	10.0
Total	40	100.0

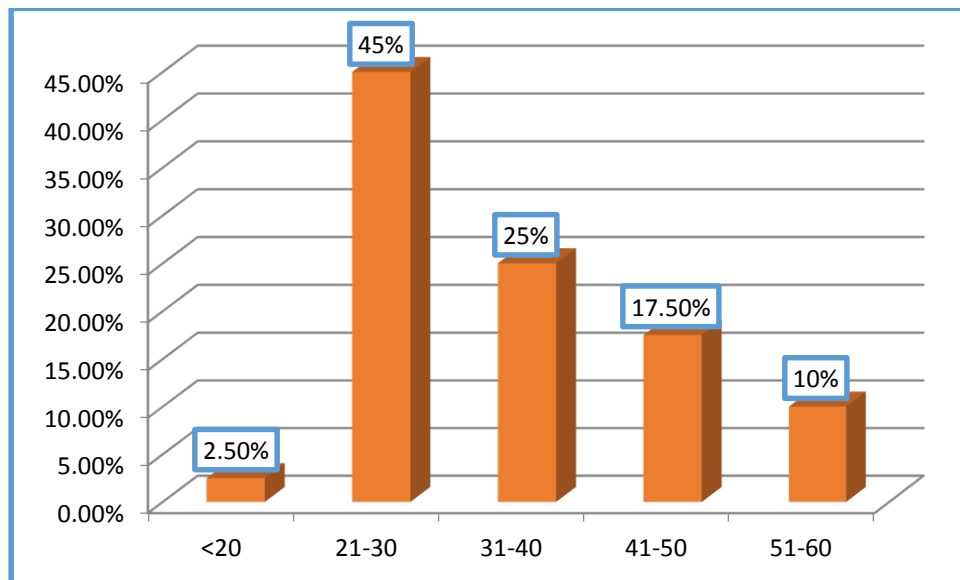


Figure (1): Distribution of study sample according to (Age):

Statistics of Age

Mean	33.4250
Median	32.0000
Mode	23.00
Std. Deviation	11.01721
Minimum	18.00
Maximum	60.00

Table (2): Distribution of study sample according to (Gender):

Gender	Frequency	Percent (%)
Male	14	35.0
Female	26	65.0
Total	40	100.0

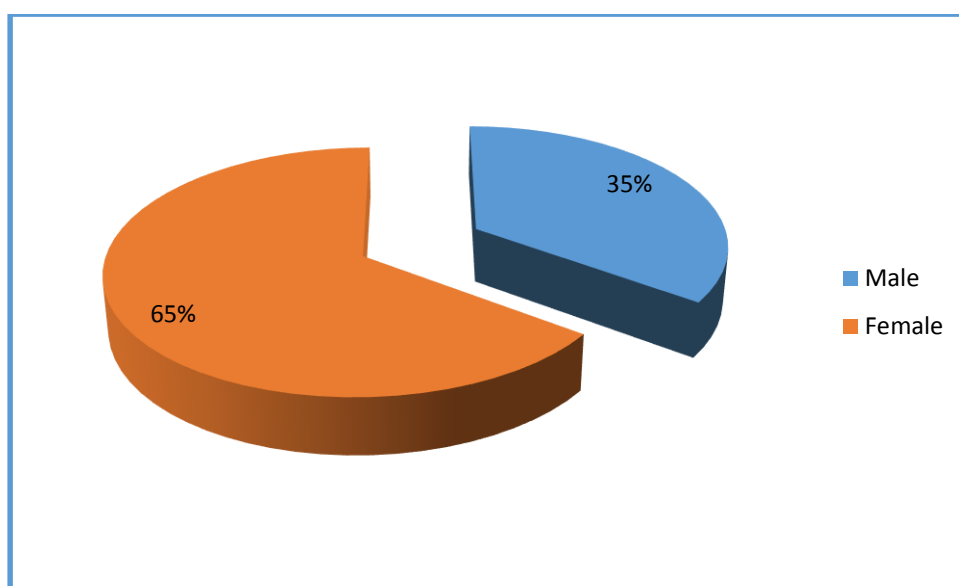


Figure (2): Distribution of study sample according to (Gender):

Table (3): Distribution of study sample according to:

Does the hospital have clear and specific vision, mission and objectives?

q1	Frequency	Percent (%)
Yes	27	67.5
No	13	32.5
Total	40	100.0

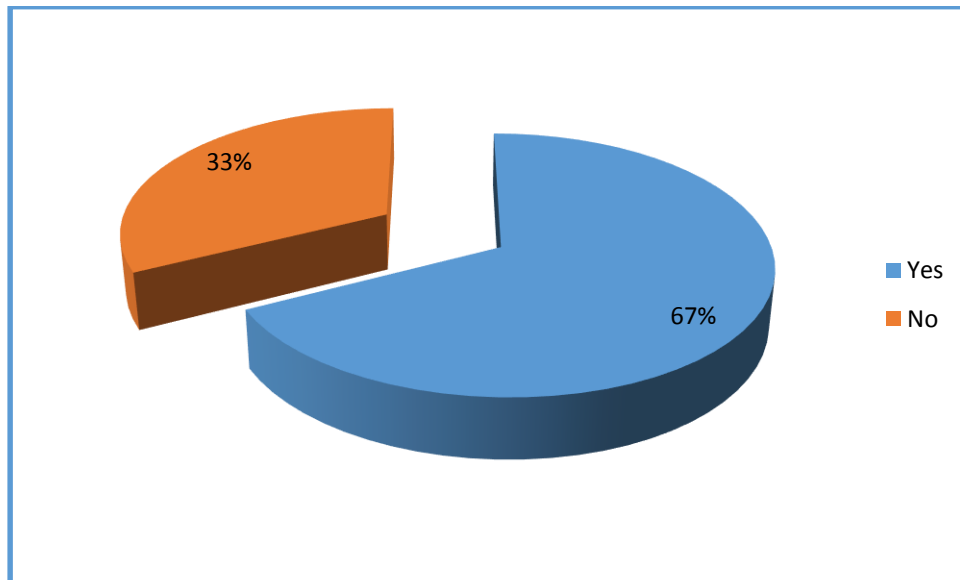
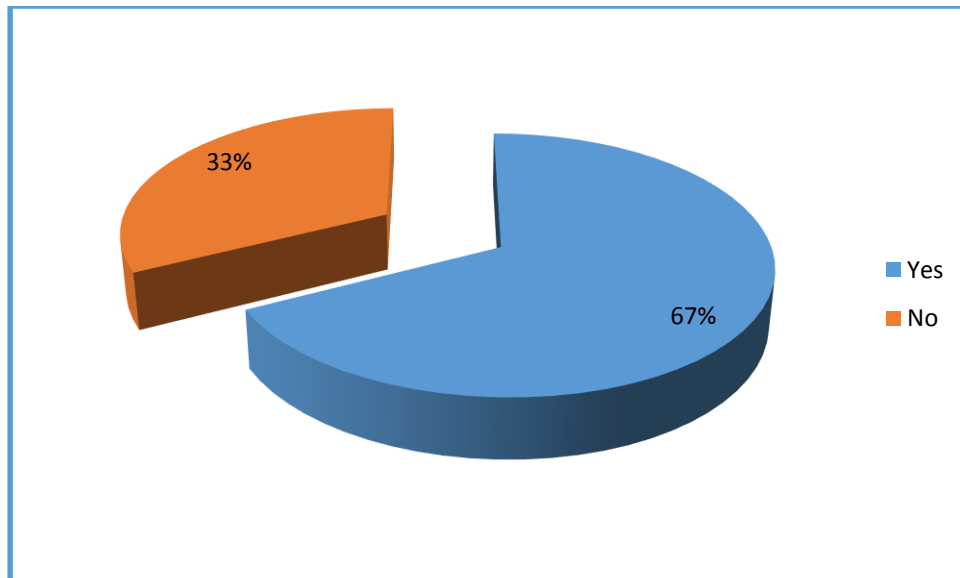


Figure (3): Distribution of study sample according to:

Does the hospital have clear and specific vision, mission and objectives?

**Table (4): Distribution of study sample according to:
Does the vision known for all employees?**

q2	Frequency	Percent (%)
Yes	27	67.5
No	13	32.5
Total	40	100.0



**Figure (4): Distribution of study sample according to:
Does the vision known for all employees?**

Table (5): Distribution of study sample according to:

Does the hospital have policy to adjust the different processes within the hospital?

Q3	Frequency	Percent (%)
Yes	29	72.5
No	11	27.5
Total	40	100.0

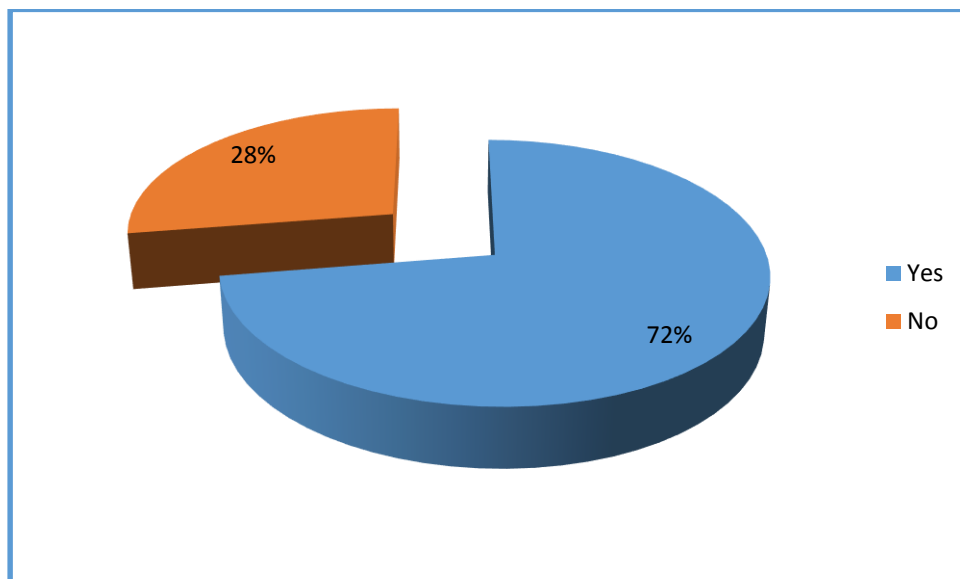
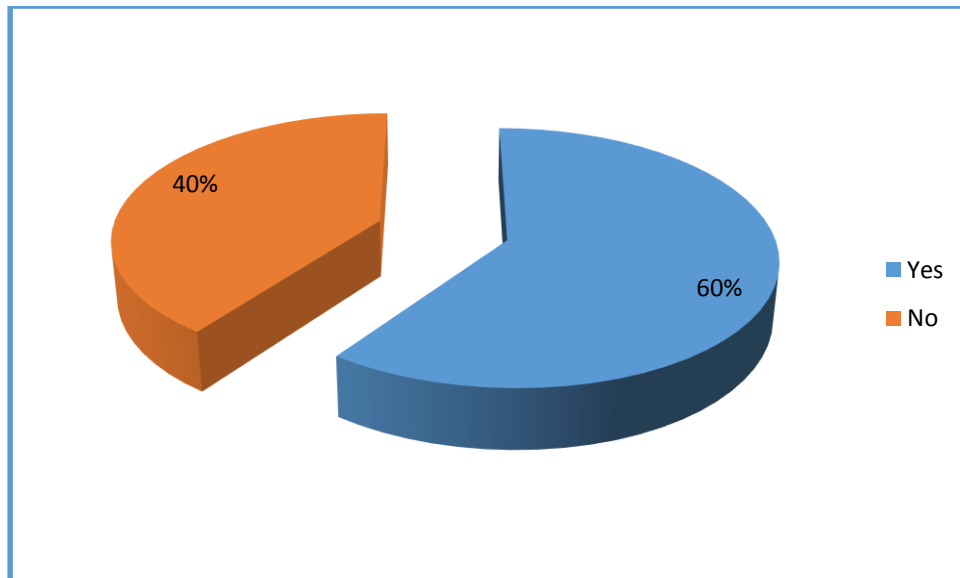


Figure (5): Distribution of study sample according to:

Does the hospital have a policy to adjust the different processes within the hospital?

**Table (6): Distribution of study sample according to:
Does the hospital leadership care in monitoring the processes?**

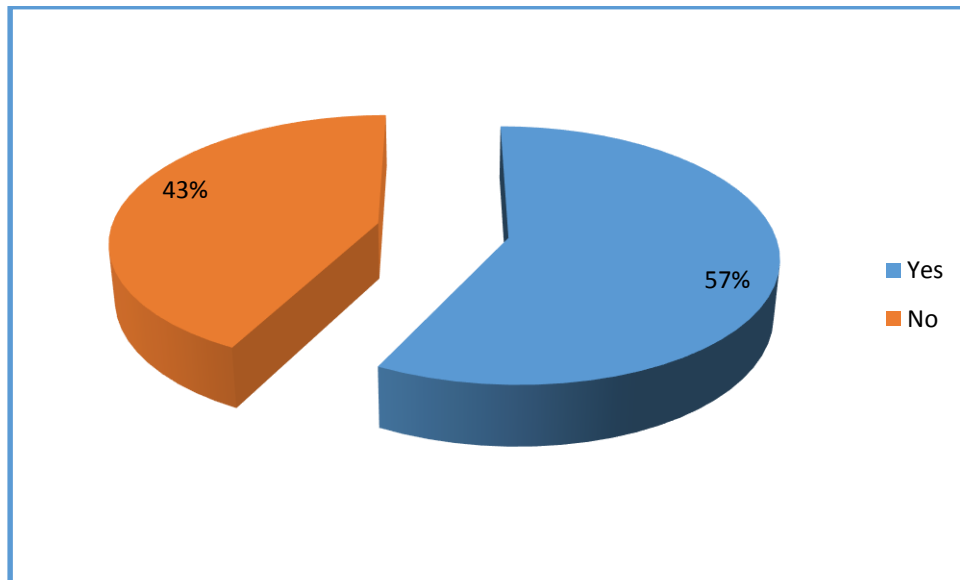
Q4	Frequency	Percent (%)
Yes	24	60.0
No	16	40.0
<i>Total</i>	<i>40</i>	<i>100.0</i>



**Figure (6): Distribution of study sample according to:
Does the hospital leadership care in monitoring the processes?**

**Table (7): Distribution of s study sample according to:
Does the leadership is cared to put preventive measures?**

Q5	Frequency	Percent (%)
Yes	23	57.5
No	17	42.5
Total	40	100.0



**Figure (7): Distribution of study sample according to:
Does the leadership is cared to put preventive measures?**

Table (8): Distribution of study sample according to:

Does the hospital have documentation and recording of all processes and procedures?

Q6	Frequency	Percent (%)
Yes	28	70.0
No	12	30.0
Total	40	100.0

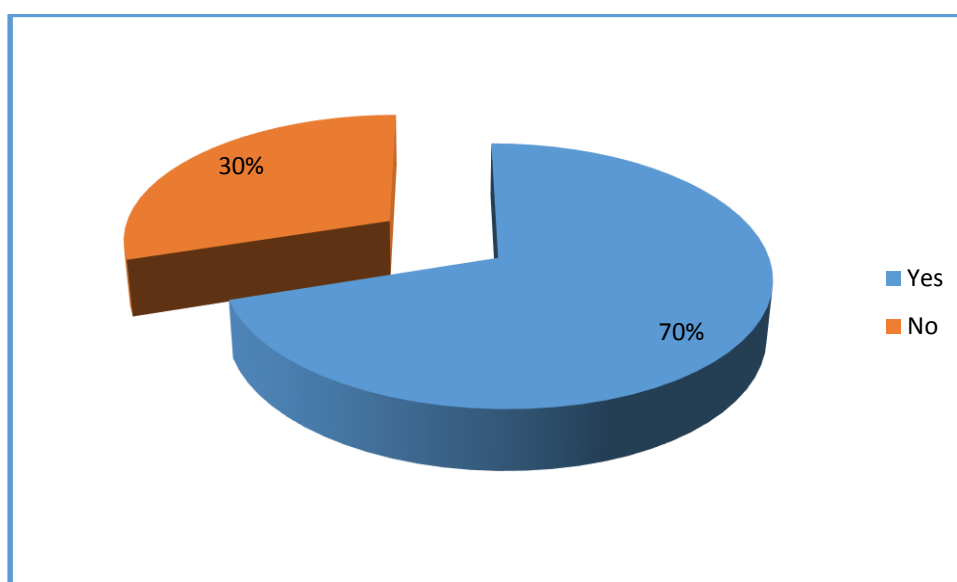


Figure (8): Distribution of study sample according to:

Does the hospital have documentation and recording of all processes and procedures?

Table (9): Distribution of study sample according to:

Does the documentation and recording is happened in perfect way?

Q7	Frequency	Percent (%)
Yes	15	37.5
No	25	62.5
Total	40	100.0

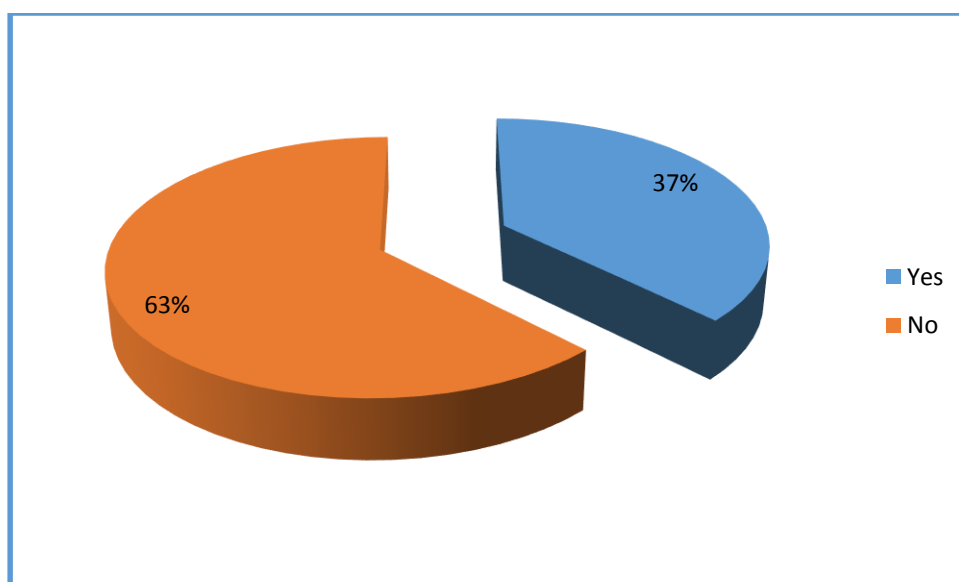
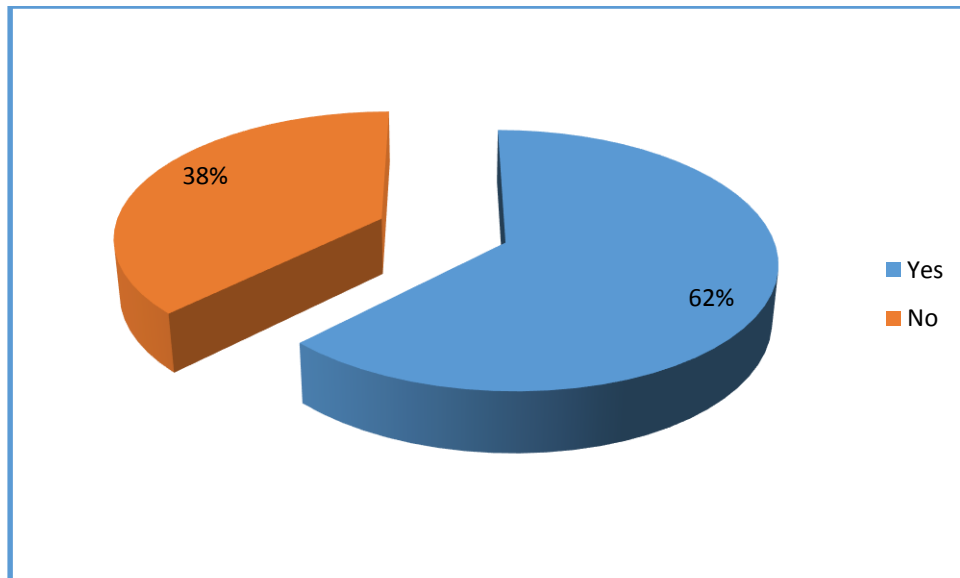


Figure (9): Distribution of study sample according to:

Does the documentation and recording is happened in perfect way?

**Table (10): Distribution of study sample according to:
Does there are internal and external audit?**

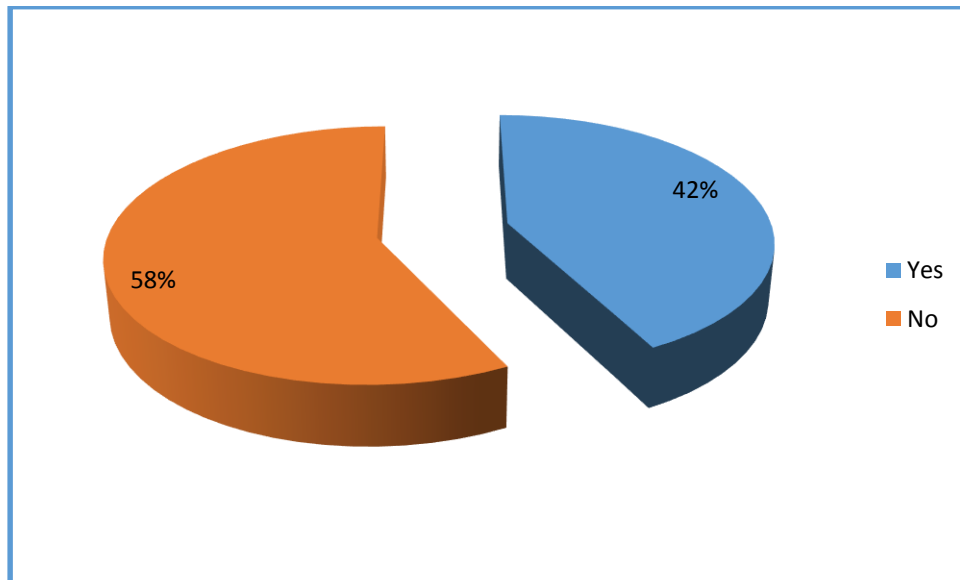
Q8	Frequency	Percent (%)
Yes	25	62.5
No	15	37.5
Total	40	100.0



**Figure (10): Distribution of study sample according to:
Does there are internal and external audit?**

**Table (11): Distribution of study sample according to:
Does this audit is regularly?**

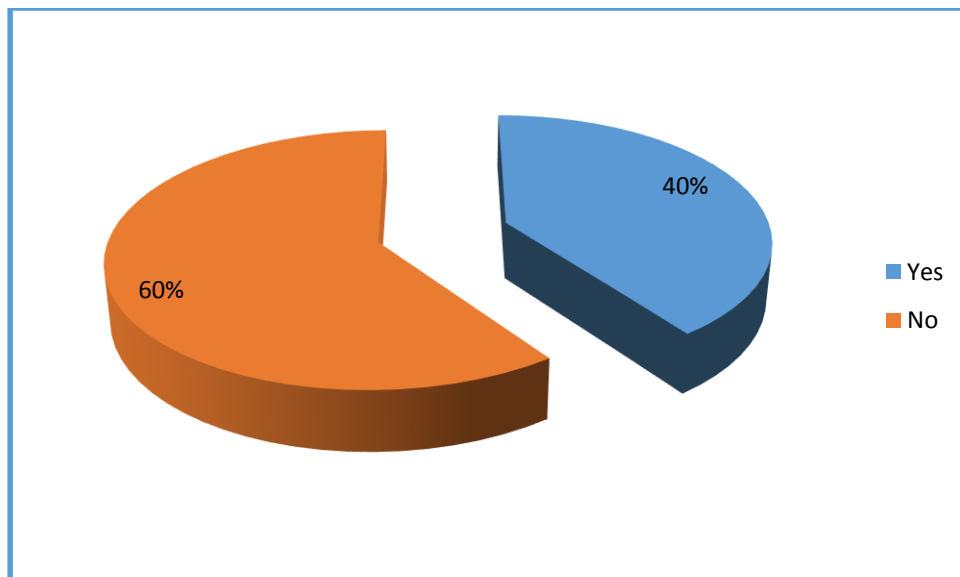
Q9	Frequency	Percent (%)
Yes	17	42.5
No	23	57.5
Total	40	100.0



**Figure (11): Distribution of study sample according to:
Does this audit is regularly?**

**Table (12): Distribution of study sample according to:
Does the hospital have good environment for all workers?**

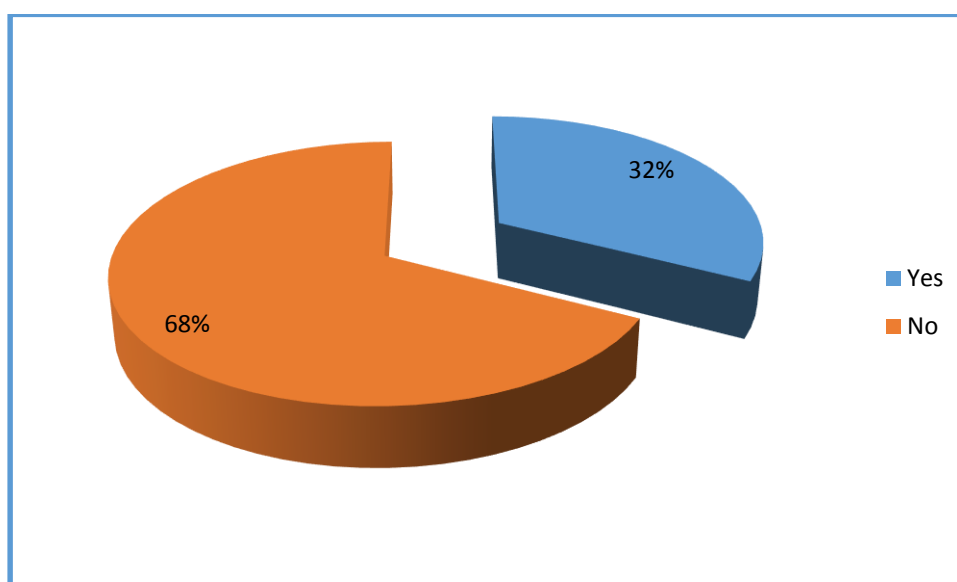
Q10	Frequency	Percent (%)
Yes	16	40.0
No	24	60.0
Total	40	100.0



**Figure (12): Distribution of study sample according to:
Does the hospital have good environment for all workers?**

**Table (13): Distribution of study sample according to:
Does the hospital environment is attractive and prepared for all workers?**

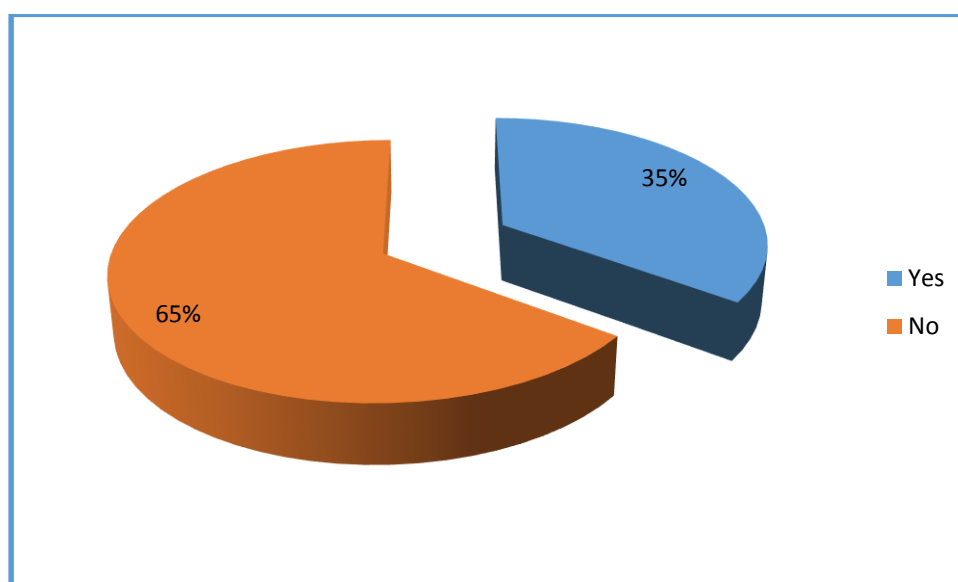
Q11	Frequency	Percent (%)
Yes	13	32.5
No	27	67.5
Total	40	100.0



**Figure (13): Distribution of study sample according to:
Does the hospital environment is attractive and prepared for all
workers?**

**Table (14): Distribution of study sample according to:
Does the hospital encourage the workers to innovate?**

Q12	Frequency	Percent (%)
Yes	14	35.0
No	26	65.0
Total	40	100.0



**Figure (14): Distribution of study sample according to:
Does the hospital encourage the workers to innovate?**

Table (15): Distribution of study sample according to:

Does there is periodic training for all hospital staff aims to efficiency according to their specializations?

Q13	Frequency	Percent (%)
Yes	11	27.5
No	29	72.5
Total	40	100.0

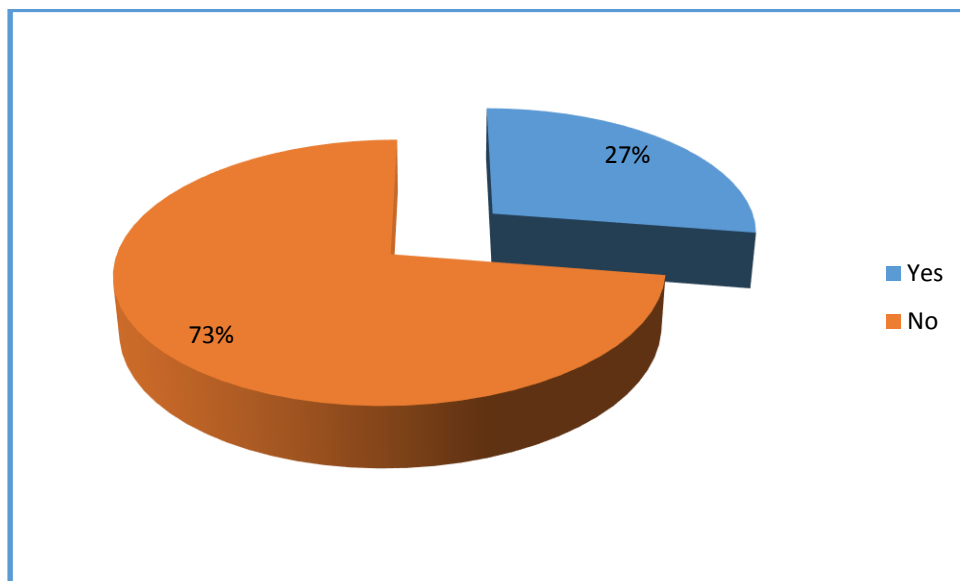
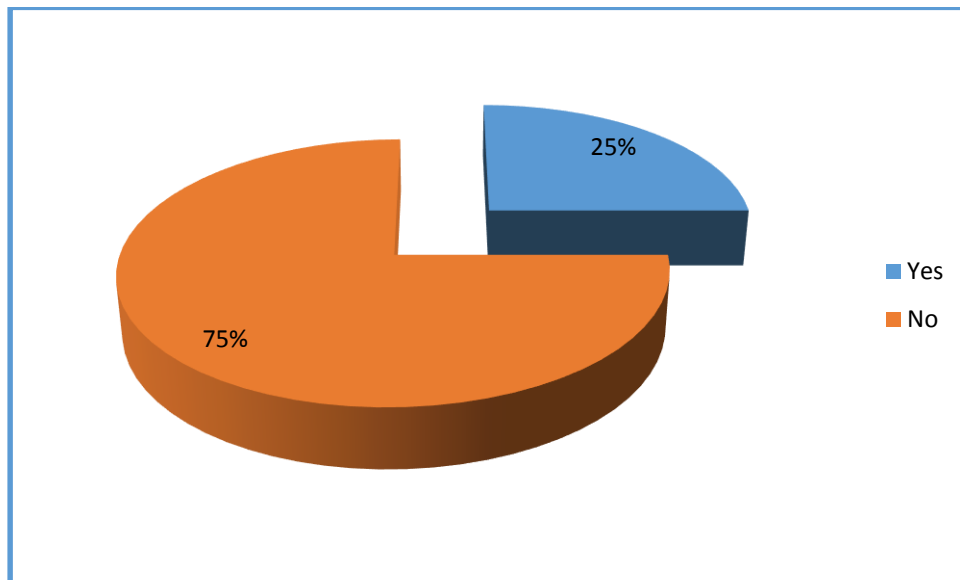


Figure (15): Distribution of study sample according to:

Does there is periodic training for all hospital staff aims to efficiency according to their specializations?

**Table (16): Distribution of study sample according to:
Does that training is continuously?**

Q14	Frequency	Percent (%)
Yes	10	25.0
No	30	75.0
Total	40	100.0



**Figure (16): Distribution of study sample according to:
Does that training is continuously?**

Table (17): Distribution of study sample according to:

Does the hospital have scientific methodology in providing services in accordance with the standards?

Q15	Frequency	Percent (%)
Yes	17	42.5
No	23	57.5
Total	40	100.0

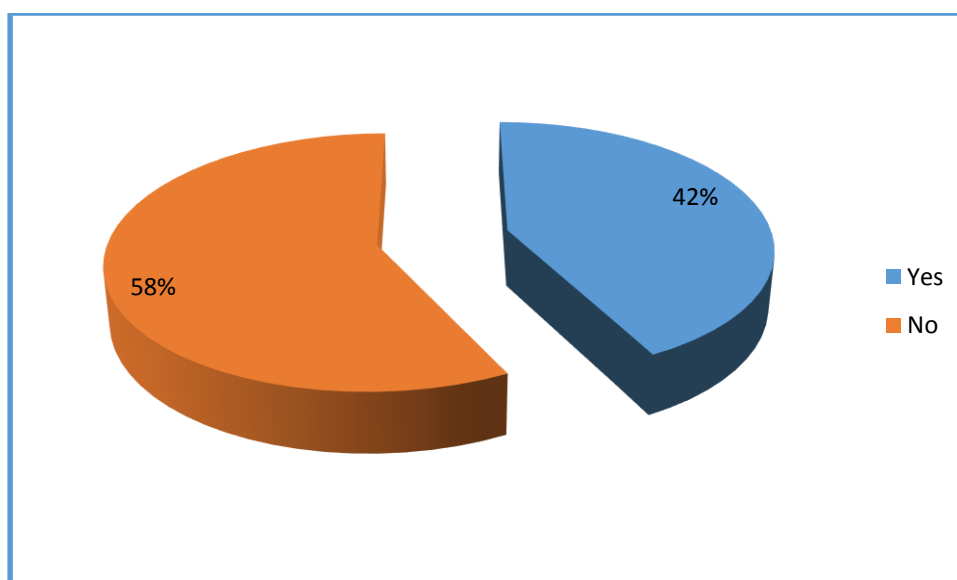
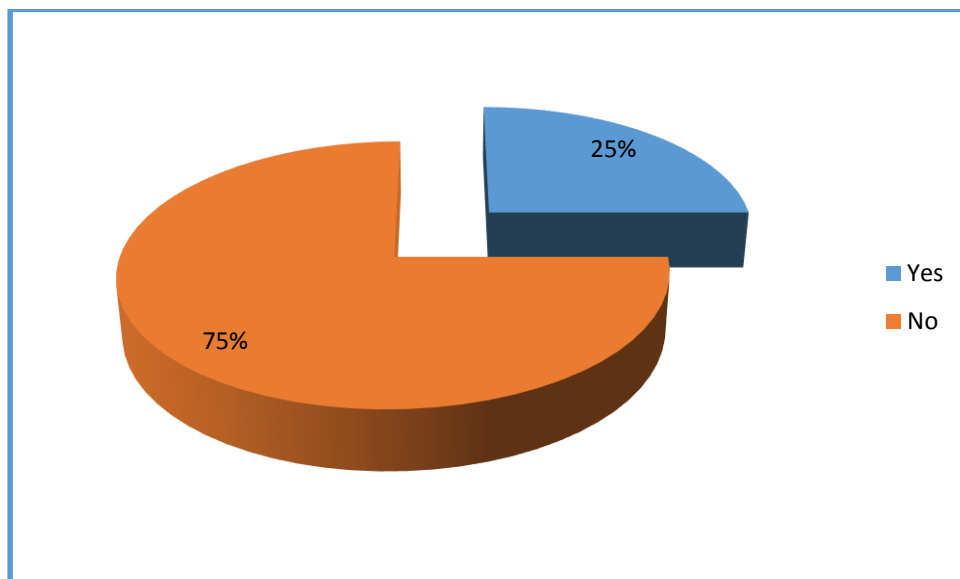


Figure (17): Distribution of study sample according to:
Does the hospital have scientific methodology in providing services in accordance with the standards?

**Table (18): Distribution of study sample according to:
Does a patient have high degree of satisfaction with the services provided
from the hospital?**

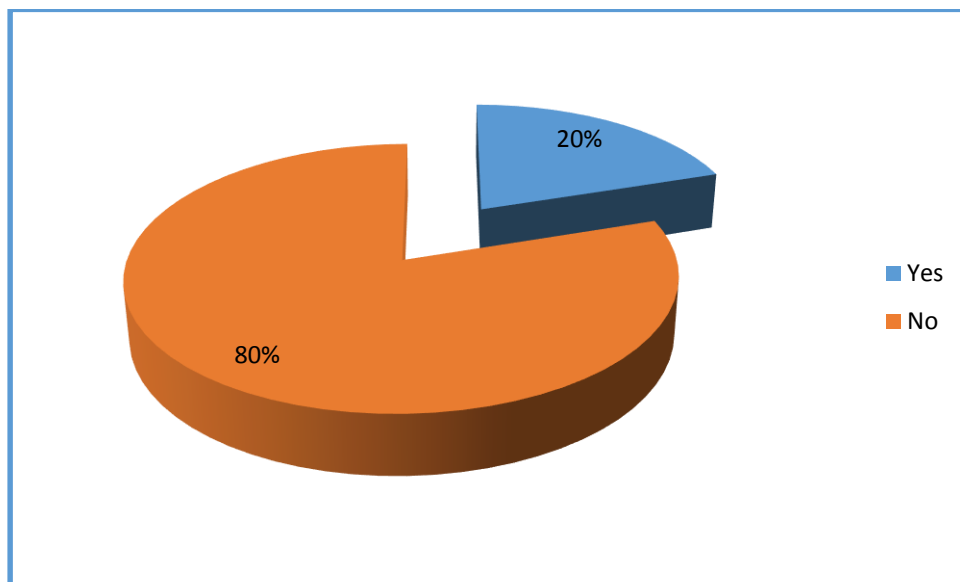
Q16	Frequency	Percent (%)
Yes	10	25.0
No	30	75.0
Total	40	100.0



**Figure (18): Distribution of study sample according to:
Does a patient have high degree of satisfaction with the services provided
from the hospital?**

**Table (19): Distribution of study sample according to:
Does there are effective methods to measure the degree of satisfaction?**

Q17	Frequency	Percent (%)
Yes	8	20.0
No	32	80.0
Total	40	100.0



**Figure (19): Distribution of study sample according to:
Does there are effective methods to measure the degree of satisfaction?**

Table (20): Reliability Analysis – Scale (ALPHA):-

Alpha value is = (0.875), so the Reliability percent is = (87.5%)

Test of the question:-

<i>No</i>	<i>The question</i>	<i>Chi-value</i>	<i>P-value</i>	<i>Mode</i>
1	<i>Q1-does the hospital a clear and specific vision, mission and objectives?</i>	4.900	.027	1
2	<i>Q2-does that vision known for all employees?</i>	.900	.343	2
3	<i>Q3-does the hospital has a policy to adjust the different processes within the hospital?</i>	8.100	.004	1
4	<i>Q4-does the hospital leadership care in monitoring the processes?</i>	1.600	.206	1
5	<i>Q5-does the leadership is cared to put preventive measures?</i>	.900	.343	1
6	<i>Q6-does the hospital have documentation and recording of all processes and procedures?</i>	6.400	.011	1
7	<i>Q7-does the documentation and recording is happened in perfect way?</i>	2.500	.114	2
8	<i>Q8-does there are internal and external audit?</i>	2.500	.114	1
9	<i>Q9-does this audit is regularly?</i>	.900	.343	2
10	<i>Q10-does the hospital have good environment for all workers?</i>	1.600	.206	2
11	<i>Q11-does the hospital environment is attractive and prepared for all workers?</i>	4.900	.027	2
12	<i>Q12-does the hospital encourage the workers to innovate?</i>	3.600	.058	2

13	<i>Q13-does there is periodic training for all hospital staff aims to efficiency according to their specializations?</i>	8.100	.004	2
14	<i>Q14-does that training is continuously?</i>	10.000	.002	2
15	<i>Q15-does the hospital has scientific methodology in providing services in accordance with the standards?</i>	.900	.343	2
16	<i>Q16-does patients have high degree of satisfaction with the services provided from the hospital?</i>	10.000	.002	2
17	<i>Q17-does there are effective methods to measure the degree of satisfaction?</i>	14.400	.000	2

4.2 Result

The aim for quality management system was to standardize (p-value less than or equal 0.05) and if it's more than 0.05 it will be not effected while if it's less than or equal 0.05 it will become more effected.

According to the result of analysis the methods to measure the degree of satisfaction

(P-value 0.000), training of workers (P-value 0.002) , patient satisfaction (P-value 0.002), the training of workers according to their specializations (P-value 0.004) ,the policy of the hospital (P-value 0.004) ,documentation (p-value0.011), the mission, vision and objectives (P-value0.027), the preparation of hospital environment (P-value 0.027) all of that values are less than 0.05 that means they are effected .

The hospital encouragement of workers (P-value 0.058) ,the method of documentation and recording (P-value0.114) ,the internal and external audit (P-value0.114) , the leader ship care in monitoring the process (P-value 0.206) , if the environment is good for all workers (P-value 0.206) , if the vision known for all employees (P-value 0.343) ,the preventive measures (P-value 0.343) , if the audit is regular (P-value 0.343) ,the methodology of providing services (P-value 0.343) all of that values are more than 0.05 that means they are not affected.

The most effected one is the methods to measure the degree of patients and workers satisfaction but the less affected are the orientation of employees about the vision, the preventive measure, the audit regularity, and the methodology of providing services.

CHAPTER FIVE
DISCUSSION, CONCLUSION &
RECOMMENDATIONS

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion

5.1.1 Introduction

In this chapter, the main findings of the study are discussed in relation to previous studies and possible implications. The chapter ends with conclusion and recommendation derived from the study

5.1.2 Motives for Seeking ISO Certification

There are many reasons why institutions seek to be ISO certified. Sampaio (2010) classified the motives for seeking ISO certification as internal or external. He concluded that internal motivations are related to genuine desire to improve the organization performance. Organizations that seek ISO certification due to external motives have a limited view of the QMS scope and are unlikely to achieve improvement. Organizations that seek ISO certifications as internal motives are committed to continual improvement of their internal process and thus achieve success

5.1.3 Critical Factors in Implementing QMS

The main critical factors identified in this study are staff commitment, understanding of the ISO and management involvement. This is similar to previous studies that have identified management commitment and people involvement (Wahid and corner, 2009). Others have been the size of the organization, training, physician involvement and availability of resources (Wardhani et al, 2009). The staff at Omdurman Military Hospital did not think that recognition and reward were critical factors while Tsai et al (2012) suggested that the results of providing incentives and rewards could result in better results for the implementation of QMS.

5.1.4 Challenges in Implementing QMS

This study identified that no employee's orientation, lack of understanding of the standard as the main challenges, lack of leadership commitment, lack delivering services to the patients, Lack of training was responsible for the lack of understanding of the standard. These findings support the work of Simerdi (2010), Wahid and Corner (2009) and Francois et al, (2003) who found lack of understanding of ISO which was related to lack of training as the main challenge. Previous study (Heras et al, 2008) identified management involvement and commitment, training, staff involvement and availability of resources as the main challenges to implementing of QMS

5.1.5 Effect of Implementing QMS on Patient Care

The current study indicates improved quality of care following implementation of QMS. There was improved efficiency as a result of improved documentation and retrieval of records. Consequently there was no loss of patient's records which is a recognized cause of delays and inefficiency (Puri et al, 2012). Similar study by Tsai et al (2012) has reported improved efficiency following implementation of QMS in hospitals. Proper documentation and record keeping is one of the requirements of ISO standard (clause 4.2) of ISO 9001:2008.

Improvement on effectiveness may be related to QMS that requires personnel to be competent on the work they do (ISO 9001; 2008 clause 6.2.1)

Patient satisfaction is important in health care. This is because it increases patient's compliance to treatment and also the likelihood of return visits. Hospitals may spend a lot of time and money addressing patients' complaints. Previous studies by van den Heuvel et al, (2005), Tsai et al, (2012) showed improved patient satisfaction following implementation of QMS. ISO requires organizations to monitor and act on customer complaints and take corrective and preventive action (ISO 9001:2008).

This study has shown increases accessibility of care following implementation of QMS. Patients are seen by respective specialist. The ISO standard requires personnel performing work to have necessary training and competence (clause 6.2.1). Interdepartmental consultations are completed within 24hrs which ensures no delays and that care is continuous. Delays in interdepartmental consultation are a cause of low patient satisfaction. (Saleh and Hatan, 2012)

This study indicated improved patient safety. Hospitals pose threat to patient safety when there are surgical sites infections and bed sores (Sandra et al, 2012). Improved patient safety in ISO certified institutions is related to documented procedure that ensures there is no variability of provision of care hence reduced risk. These procedures define and control the work to be done and indentify who and how it should be done (Cerrillo, 2012). This is also attributed to periodic maintenance and calibration of equipments which are requirements of ISO 9001:2008 (clause 7.6). Previous studies by Cerrillo et al (2012) and Buciuniene et al (2006) reported improved patient safety after implementation of QMS.

Mwando et al (2009) noted a greater access and utilization of health services by the wealthy more than the poor. Puri et al (2012) studied out patient satisfaction and quality of care in India. He found the poor had a longer waiting time than the rich while the educated were able to get faster consultation than the uneducated. This study showed that the very poor have their cost for services waived. While this is a government requirement, QMS requires institution to meet the statutory requirements (clause 1.1a). The use of work procedures ensured that provision of services did not vary according to ones experience. By emphasizing documented procedures, QMS eliminates the likelihood of variability in quality of care provided.

This study indicates that the effect of QMS was affected by change in management and industrial action. This is reflected by drop in the customer satisfaction levels, increase in complains among other indicators. None of the

previous studies that were reviewed had noted external forces that may influence the implementation of QMS. However its known management commitment is critical to the implementation of QMS and lack of resources may hinder implementation of the standards.

The benefits of ISO are both tangible and intangible and may take several years to manifest (Baric et al, 2007). Zaramdini notes that the benefits of ISO relate to internal operations and include improvement to quality of processes and procedures.

5.2 Conclusions

The following conclusions were made from this study:

1. Quality management systems were implemented at Omdurman Military Hospital with the aim of improving the quality of patient care.
2. The critical factors that were considered in implementing QMS were staff understanding the ISO standard.
3. The main challenge faced in implementing quality management system was the leadership commitment and internal and external audit
4. There was improved documentation, patient centered care accessibility and safety of patients, staff training and orientation.
5. Quality management system can be successfully implemented in Omdurman Military Hospital.

5.3 Recommendations

A larger study using performance indicators and involving entire hospital is needed. This would give more generalizable results than this study that has used one unit in the hospital. A detailed review of events that may have resulted in decline in unit performance is needed to evaluate and take preventive actions.

5.3.1 Future Research

Studies may be conducted to compare hospitals implementing QMS and those that have not. Other studies may compare hospitals that have implemented ISO and those that have implemented other standards.

5.3.2 Study Limitations

The study is limited to maternity department of a single hospital hence making it difficult to generalize the findings.

References

1. Al-Najjar,S.A. And Jawad,M.K. "ISO 9001:Implementation,Barriers And Misconception; An Empirical Study." *International Journal Of Business Administration* 2, No. 3 (2011): 121-131.
2. Baric,D.,Brkic,K.,Satlic,Z. et al."Implementation and Further Development of Quality Management System According to ISO 9001:2000 Standard at the Department of Cardiac Surgery", Duprava University Hospital, *Poslovnalzvorst Zagreb God I (2007)Br 1*.
3. Cerrillo, M.R., Diaz,E.F., Romero,A.I. and Ana-Poza,M. "Implementation Of Quality Management System According to ISO 9001 Standard in a Hospital-Changes and Achievements".*International Journal of Health Care Quality Assurance* 25, No. 6 (2012): 498-508.
4. Durai A.K. And Balashkrinan V. "A Study on ISO 9001 Quality Management System Certification-Reasons Behind Failure of ISO Certified Organizations." *Global Journal of Management And Business Research* 11, No. 9 (2011).
5. Francois,P., Peylin,J.C.,Toubal et al. "Evaluating Quality Manangement Systems In A Teaching Hospital Clinical Departments." *International Journal For Quality In Health Care* 15, No. 1 (2003): 47-55.
6. Heras,I., Cilleruelo,E. And Iradi,J. "ISO 9001 and Residential Homes for the Elderly: A Delphi Study." *Managing Service Quality* 18, No. 3 (2008): 272-283.
7. International Organization for Standardization. "ISO" (2007). www.iso.Org (Accessed July 11, 2012).

8. Magd, H. "Quality Management Standard Implementation in Egypt: ISO 9000 Perspectives." *Global Business and Management Research, An International Journal* 2, No. 1 (2010): 57-68.
9. Mwando, A., Rukwaro, E., Onguti, E. et al. *Improving Access, Quality and Efficiency of Health Care Using Capitation As The Payment Mechanism for Outpatient Services in Kenya*. Nairobi: Morans Publishers, (2009).
10. Puri, N., Arun, A., K. and Kaushal, V. "Outpatient Satisfaction and Quality of Health Care in a North Indian Medical Institute." *International Journal of Health Care Quality Assurance* 25, No. 8 (2012): 682-297.
11. Sampaio, P., Pedro, S. and Rodrigues A.G. "ISO 9000 Certification Research: Questions, Answers And Approaches." *International Journal of Quality and Reliability Management* 26, No. 1 (2009): 38-58.
12. Sandra, V. Jacques, J., Koen, H. et al. "Retrospective Medical Evaluation: Reliability In Assessing Causation, Preventability and Disability of Adverse Events." *International Journal of Health Care Quality Assurance* 23, No. 8 (2012): 649-662.
13. Simeidi, S. "ISO 9001 Implementation Studies on Small Medium Enterprises, Motives, Problems And Benefits." *Standardisasi* 12, No. 13 (2010): 197-201.
14. Tsai, T., P., Chen, H., C., Pai, J., Y. "The Evaluation of Implementing ISO 9000 Quality Management System in Medical Setting- A Study from Teaching Hospital." *African Journal of Business Management* Vol 6 No 6 (2012) 7779-7787.
15. Van Den Heuvel, J. Bogers, J.J.C., Does, R.J.M.N et al. "An ISO 9001 Quality Management System In A Hospital: Bureacracy or Just Benefits?" *International Journal of Healthcare Quality Assurance, Vol. 18 No. 5, (2005): 361-369.*

16. Van Den Heuvel, J., Bogers, J.J.C. And Does, R.J.M.N *et al.* "Quality Management: Does It Pay Off ?" *Quality Management In Healthcare* 15, No. 3 (2006): 137-149.
17. Wahid, R. And Corner, J. "Critical Successful Factors and Problems in ISO." *International Journal of Quality And Reliability Management* 26, No. 9 (2009): 881-893.
18. Wardhani, V., Utarini, A., Van Dijk, J.P. Et Al. "Determinants of Quality Management Systems In Hospitals." *Health Policy* 89 (2009): 239-251.
19. WHO. *Quality of Care: A Process of Making Strategic Choices In Health System*. Geneva: WHO, 2006.
20. Zaramdini, W. "An Empirical Study on the Motives and Benefits of ISO 9000 Certification: The UAE Experience." *International Journal Of Quality And Reliability Manangement*, 24, No. 5 (2007): 472-491.

Appendix

Demographic information

Age

Sex: male () Female ()

Questionnaire

Q1-does the hospital have a clear and specific vision, mission and objectives?

YES () NO ()

Q2-does that vision known for all employees?

YES () NO ()

Q3-does the hospital has a policy to adjust the different processes within the hospital?

YES () NO ()

Q4-does the hospital leadership care in monitoring the processes?

YES () NO ()

Q5-does the leadership is cared to put preventive measures?

YES () NO ()

Q6-does the hospital have documentation and recording of all processes and procedures?

YES () NO ()

Q7-does the documentation and recording is happened in perfect way?

YES () NO ()

Q8-does there are internal and external audit?

YES () NO ()

Q9-does this audit is regularly?

YES () NO ()

Q10-does the hospital have good environment for all workers?

YES () NO ()

Q11-does the hospital environment is attractive and prepared for all workers?

YES () NO ()

Q12-does the hospital encourage the workers to innovate?

YES () NO ()

Q13-does there is periodic training for all hospital staff aims to efficiency according to their specializations?

YES () NO ()

Q14-does that training is continuously?

YES () NO ()

Q15-does the hospital has scientific methodology in providing services in accordance with the standards?

YES () NO ()

Q16-does the patients have high degree of satisfaction with the services provided from the hospital?

YES () NO ()

Q17-does there are effective methods to measure the degree of satisfaction?

YES () NO ()