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Assessment of Service Quality Provided at Al Naser Ophthalmic Hospital

Amani Akram Habib

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Prepared By

Amani Akram Habib

Bachelor of Optometry- Islamic University of Gaza

Supervisor: Prof. Sanaa Abou-Dagaa

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Dedication

I dedicate this work to my parents who give me unlimited love & support, to my husband "Ismail" who shared with me happiness and hard times.

Thanks are also extended to my brothers and sisters, to all my friends and my beloved ones with whom I spent the lovely times and learned a lot.

Also, I dedicate this work to my valuable and precious country "Palestine" as a small contribution to the sea of sacrifices exerted to gain its liberation.

Amani A. Habib

Declaration

I certify that this entire thesis, submitted for the Degree of Master, is the result of my own work, except where otherwise acknowledged, and that this study (or any part of the same) has not been submitted for a higher degree or qualification to any other university or institution.

Signed……..

Amani A. Habib

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Firstly and finally holy thanks to Allah who inspired me with the needed patience and power to accomplish this work.

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Abstract

Performance assessment is just the starting point for quality improvement, inspire raising questions, improving data collection procedures, understanding results, and identifying actions for improvement. It should be embedded in a comprehensive quality improvement strategy and used as a quality management tool for the evaluation and improvement of hospital services.

This is the first study aims to assess the current service quality provided at Al Naser Ophthalmic Hospital (NOH). The study appraises service quality from staff, patients and managers perspectives, explores quality performance standards at NOH and assess quality of provided services using Performance Assessment Tool for Quality Improvement in Hospitals (PATH). Moreover it identifies strengths and weaknesses areas in the light of quality performance indicators, and provide NOH with a flexible and comprehensive framework for the assessment of hospital performance.

The study is a quantitative and qualitative cross sectional analytical descriptive one. The target populations was the working staff, discharged patients, key managers, and medical records at the hospital. Main study's tool was PATH with sub dimensional modifications. Different sub-tools were used. Self administered questionnaire, designed for staff where instrument reliability test (Cronbach's Alpha) was high; ranged from (0.924) to (0.848), with 85.83% response rate (103 employee). Questionnaire designed for discharged patients' interviews where instrument reliability was moderate and ranged from (0.705) to (0.611), with 92% response rate (230 patients). Questions for mangers discussion group(5 key managers). Final tool was records review for hospital statistics and annual reports and 3checklists for (350) patients' files (inpatients' files and outpatient's files). Statistical Package for the Social Sciences Program (SPSS) has been used for data analysis.

The study revealed different strengths and weakness areas regarding sub dimensional indicators. Clinical effectiveness and safety showed strengths areas regarding good effective visual outcome of cataract surgeries and low 30 day readmission rate (0.96%), while indicators flagged with inadequate effectiveness was reported in ECCE to Phaco rate, rate of intraoperative acquired infections (acute endophthalmitis rate), low day surgery rate (8.92%). Documentation indicator showed good results regarding cataract surgical file, while moderate results regarding files for patients whom admitted for medical treatment were reported. Moreover outpatient glaucoma files showed weaknesses regarding documentation of essential measures and parameters.

Efficiency dimensions showed inefficient service in respect to rate of attendance to appointments (63.31%), while surgical cancellation rate was accepted (16.14%), and high efficient care regarding low length of stay (2.25 days).

Responsive governance dimension showed that quality improvement was included at NOH's structure, but performance indicators and measurements were inadequate, while good responsive quality activities was reported regarding patients and provided service and less responsiveness for staff needs.

Staff orientation dimension showed many weakness areas regarding lack of training expenditure, inadequate work conditions regarding (enabling healthcare/work circumstances managerial practices, and training) from staff perspectives, while (72.4%) exposed to work related injuries and safety related practices was not fair enough to keep staff safe during care delivery. Moreover high burnout status was reported among about half of NOH's staff regarding emotional exhaustion domain and depersonalization. Strength areas reported regarding low rate of excessive working hours, low turnover rate, and low absenteeism rate among the majority of staff members .

Patient centerednes dimension reported strengthens areas where patient perspectives showed adequate access to care and adequate meeting of expectations.

The status of service quality at NOH is acceptable, but it still needs efforts to enhance the situation through developing a culture of measurements and using of performance indicators, monitoring, and continuous quality improvement. In addition NOH management has to enhance responsiveness regarding staff as well as for the patients to provide high quality care.

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List of abbreviations

CIHI	Canadian Institute for health information
COAG	Council of Australian Governments
COPE	Client Oriented Provider Efficient
DM	Diabetic Maculopathy
DP	Depersonalization
EE	Emotional Exhaustion
ECCE	Extra Capsular Cataract Extraction
ESCRS	European Society of Cataract and Refractive Surgery
GDP	Gross Domestic Product
GG	Gaza Governorates
GS	Gaza Strip
IOM	Institute of Medicine
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
LOS	Length Of Stay
MOH	Ministry of Health
NGO	Non-Governmental Organizations
NICE	National Institute for Health and Care Excellence
NOH	Al Naser Ophthalmic Hospital
PATH	Performance Assessment Tool for Quality Improvement in Hospitals
PCBS	Palestinian Central Bureau of Statistics
PCR	Posterior Capsular Rupture or vitreous loss or both
PDR	Proliferative diabetic retinopathy
PHACO	Phacoemulsification
PNA	Palestinian National Authority
QI	Quality Improvement
RA	Reduced Accomplishment
RCOphth	Royal College of Ophthalmologists
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
WHO	World Health Organization

Chapter 1: Introduction

1.1 Background

Over the past decades, improving quality in healthcare has evolved rapidly, and heath care systems all over the world seeking toward providing best quality care. A wealth of knowledge and experience in enhancing the quality of health care has accumulated globally. This evolution referred to many factors as the large number of field experiences that have taken place in many countries worldwide and in a variety of different areas and specialties in healthcare delivery; the increasing complexity of healthcare delivery and with that the emerging needs for efficient and cost-effective care, the increased expectations of our customers; and lastly, the advances in our knowledge on improvement, management, and clinical practice (Massoud, *et al*. 2001).

World Health Organization (WHO) defines quality as the achievement of the desired objectives in the most efficient and effective manner, with the emphasis on satisfying the customer or the consumer (WHO, 2004-c). Performance assessment is just the starting point for quality improvement (QI); inspire raising questions, improves data collection procedures, understanding results and identifying actions for improvement (Berwick, James & Coye, 2003). It should be embedded in a comprehensive quality improvement strategy and used as a quality management tool to be used by hospital managers for the evaluation and improvement of hospital services (Massoud, *et al.* 2001).

Regarding Palestinian health care system, building an effective and sustainable quality system that covers all aspects of the delivery of health services was one of the most important strategic goals in last Ministry of Health (MOH) strategic plan; it came as a response to the needs of citizens through the provision of providing high quality, adequate, and satisfactory services within the current available resources (MOH, 2014-2018).

Performance assessment of provided service at governmental hospitals will contributes to achieving this strategic goal where hospitals have a central role in achieving health care systems goals (Mc Kee & Healy, 2002); and it is essential to track hospitals performance, assessment of provided service quality, and enhance continuous responsive quality improvement activities.

Al Naser Ophthalmic Hospital (NOH) is the only specialized hospital that provides eye care at MOH. Since its establishment in 1965, NOH has shown development in many areas, and new unique subspecialties in ophthalmic care involved in the range of the provided services (MOH, 2012), but the service quality has not been comprehensively assessed through performance indicators, therefore this study will assess service quality provided at NOH from different perspectives; staff, patients and managers. Moreover the study will explore to which extent the hospital performance indicators is aligned with international standards, and finally hospital will be provided with a comprehensive framework for the assessment of hospital performance.

1.2 Research Problem

Al Naser Ophthalmic Hospital (NOH) provides primary, secondary, and tertiary eye care in addition to emergency eye care to all Gaza Strip Governorates, while it is working with limited building capacity, limited workforces. In response to population needs, the range of provided services at NOH is increasing and new subspecialties in eye care included with latest advanced technological applications (NOH, 2015). Ocular service demand increment reported in annually NOH's reports; increased number of patients in the last two years in comparisons to 2012, 112156 patients (NOH, 2014), 114094 patients (NOH, 2013), 71235 patients (NOH, 2012-b) resulting in increased load on hospital to response to citizen needs. As there are no previous studies conducted to assess the overall service quality in such settings, it is vital to track the hospital performance through exploring the alignment of service quality with agreed international standards and compare it in order to identify strengths and gaps areas in service. The study will aid the hospital in framing its performance in a well-defined performance indicators framework through PATH tool (WHO, 2007-c) which was tailored to NOH's context.

1.3 Justification of study

Quality will be the cornerstone metric of organizational performance in the coming years so that hospitals management needs to concentrate on continuous performance assessment for quality of care as we have no time and no sufficient resources to provide poor quality services, and our Palestinian people deserve best quality care. Ensuring consistency in the quality of care provided to people with eye disorders is vital, it must be comprehensive, encompassing eye-health promotion, prevention, treatment and rehabilitation (WHO, 2007-a).

NOH is in continuous response and change to meet population requirements through introducing new subspecialty in eye specialty with new up-to-date technologies equipment with brilliants supportive staff. As there are no studies focusing on assessment of overall quality of performance at NOH; the researcher will assess it using PATH tool modified to NOH context and the results will be introduced as a comprehensive framework for performance measurements, which will be a base line for the current status and for future QI activities. The study will identify flags areas through performance indicators to enhance QI process at the hospital and it could be a starting point for quality committee team activities at NOH. The study might arise questions for future researcher's clinical, surgical and administrative studies.

At higher level, MOH could use findings as a source of information for hospital performance evaluation process, and to keep eye services in a state of alignment with an international standards. In addition to that findings may help for future planning for eye services in Gaza Strip, as blindness and visual impairment were significantly associated with higher medical care expenditures and a loss of quality-adjusted life years (Frick, *et al*. 2007).

1.4 Aim of the study

This study aims mainly to assess service quality provided at NOH through tracking essential performance indicators, with a future approach of improving quality of care and developing a culture of measurements, monitoring, evaluation and continuous quality improvement.

1.5 Study objectives

- To appraise service quality from staff, patients and managers perspectives.
- To explore quality performance standards at NOH and assess quality of provided service according to WHO agreed standards using Performance Assessment Tool for Quality Improvement in Hospitals.
- To identify strengths and weaknesses areas in the light of quality performance indicators.
- To provide NOH with a flexible and comprehensive framework for the assessment of hospital performance.

1.6 Research questions

1. What is the perception of staff of service quality at NOH?
2. How do patients perceive the quality of service provided at NOH?
3. What is the managers' perception of quality of service provided at NOH.
4. What is the current situation of quality of care provided at NOH in relation to quality performance indicators? and to which extend they are in line with PATH dimensions?
5. What are the strengths and areas for potential improvement according to related indicators ?
6. What are the challenges that face the implementation of quality programs and PATH standards?

1.7 Study context

1.7.1 Gaza Governorate demographic characteristics

The Gaza Strip (GS) is a small piece of land located in the southern area of Palestine (Anexx1). According to the Palestinian Central Bureau of Statistics (PCBS) at the end of 2015 the total number of inhabitants was 1,850,559 with high population density; more than 5,070 individuals per square kilometer (PCBS, 2016). This high population density resulted in high demands for health care services and possible work overload for health care providers in this crowded area.

The Gaza strip is divided into five governorates: North Gaza, Gaza City, Mid Zone, Khnunis and Rafah (Palestinian Water Authority, 2013) characterized by less wider spaces and less remote areas compared with the West Bank; resulting in better geographical accessibility for the healthcare services.

1.7.2. Socio-economic situation

Economic situation at the GS continued to decline within the last 10 years due to the strict siege imposed on Gaza since June 2006. The occupation, conflict, siege, closures and frequent wars have left the high densely populated Gaza governorates (GGs) in a state of severe vulnerability (MOH, 2014). The siege affected the delivery of health services in a negative way, where availability of drugs followed by computerization and health information system were the most negatively affected (Shamia, 2016). Moreover the siege

that has greatly harmed the health system at two levels; the provision of health services inside Gaza and access to treatment outside Gaza (MOH, 2014).

PCBS indicators showed that at the end of 2015 unemployment rate for population aged 15 years and over was 41%, while the poverty rate was 38.8% in 2011 (PCBS, 2016). The intense siege has taken the humanitarian situation to an unprecedented level, with widespread absolute poverty and an inability of civil society organizations and formal authorities to meet even the basic needs of the population (MOH, 2014).

The Gross Domestic Product (GDP) in the GS was estimated at $ of United State of America (USA) 1,7 billion in 2014, while the annual GDP for Gaza per capita in 2014 was 971.1$. The main sources of livelihood in the GS are employment at the services sector (mainly at government, UNRWA and NGOs), rain-fed agriculture, livestock rearing and fishing (PCBS, 2016).

1.7.3 Health care system

Palestinians health care system is still fragmented system, facing continuous challenges due to political circumstances, siege, conflicts and wars, which causes continuous drainage of current limited resources. Moreover internal Palestinian Governmental fragmentation, cause poor coordination between stakeholders which by common sense is reflected on MOH's facilities in terms of lack of resources, poor resources allocation and low responsive governances.

Palestinian health sector includes three main levels of care of the primary, secondary and tertiary health care. United Nations Relief and Works Agency (UNRWA), Non-Governmental Organizations (NGO) and the private for-profit service providers all share in the provision of health services at different levels with the governmental health sector MOH (MOH, 2014).

Total Expenditure on Health in 2014 was 1,391.4 (Million USD), and share of Gross Domestic Product in 2014 was 11% (PCBS, 2016). MOH is the responsible body for the leadership and organization of the work of the Palestinian health sector, through well management of the health sector and ensure the necessary resources needed for sustainability and development. MOH is also responsible for policy development, the legislation, laws and plans, activation of partnerships between the various partners in the sector and with other sectors and optimal management and investment of available

resources (MOH, 2014). According to PCBS the total number of governmental hospitals in 2014 was 26, while total number of non-governmental hospitals was 54. Moreover total number of beds 5.939 with 2.6 mean duration days (PCBS, 2016).

The NGOs sector also plays a vital role in complementing the work of the MOH, including providing tertiary services-sometimes expensive services that are usually not provided by the MOH. NGOs play an important role in promoting accessibility to vulnerable and marginalized people and contribute to bridging the gaps and the perceived inequalities in the health system (Abu Hamad, 2009-a).

1.7.4 Ocular care services

Eye services developed gradually at MOH, it was provided within a small department at Al Shefaa Hospital till 1972, then Al Naser Ophthalmic Hospital (NOH) was established to deliver ocular services to citizens from all over GGs (NOH, 2012-a). Regarding MOH hospitals, ocular services provided in an expanded manner through mainly two hospitals, (NOH) & Europian Gaza hospital (EGH) (MOH, 2012). NOH is the central hospital for eye care in Gaza Strip, it provides surgical and clinical services in addition to emergency and primary care (NOH, 2012-a), while at EGH eye services provided through ophthalmic department in the hospital which was established in 2001 to serve south Gaza strip. Both hospitals services delivered through ophthalmologist, residents, optometrists in addition to supporting nursing staff, anesthetists and pharmacists (MOH, 2012).

1.7.5 Study setting, Al Naser Ophthalmic Hospital (NOH)

NOH is the only specialized governmental surgical and clinical hospital which provides eye services for citizens for all GGs, and it was accredited as a training center for specialty of Ophthalmology by the Palestinian Medical Council (NOH, 2012-a). NOH consists mainly from two parts; clinical and surgical, in addition to emergency department. According to NOH (2014) annual report at the end of 2014 the hospital provided services for total 112156 patients. Emergency department at NOH provides patients with primary care in addition to emergency care due to lack of primary eye care centers at GGs. It received 71655 patients (Male - 39823), (Female - 31831), distributed among GGs as the following: North Gaza 18149, Gaza 48993, Middle zone 3656, Khanyounes 579, Rafah 278. Total number of 40501 patients received services at NOH out clinics (Male - 18922),

(Female - 21579), distributed as the following among GGs: North Gaza 10132, Gaza 22380, Middle zone 5273, Khanyoness1705, Rafah 1011. These numbers

At the beginning of 2015 NOH outpatient clinic starts operating by specialized units system. Six new diagnostic units involved in ophthalmic service in addition to general ophthalmic unit. The new six operated units are Cataract unit, Glaucoma unit, Retina unit, Cornea unit, Oculoplastic unit, and Pediatric and Squint unit. In addition to that is the laser department which provides service mainly for diabetic patients, while diagnostic procedure department and optometry department provide service for almost all previously mentioned units.

NOH includes optometrists which emerged in ocular services at MOH in 2008, making ocular care in line with the highest international ocular health facilities where care provided comprehensively through ophthalmologists and optometrists. Optometry department consists of two refraction units, pediatric and squint unit, contact lenses unit, prosthesis unit and diagnostic unit (NOH, 2012-a).

Surgical department consists of three major operation rooms and one minor operation room, at the end of 2014 NOH provided (Minor operations 11228), (Major operations 4388). Total number of admitted patients was 5676, while total number of discharged patients was 5379.

Regarding NOH staff, NOH has the following professionals: 36 Nurses, 30 Physicians (optjalmoologists and residents doctors), 13 Optometrists, 4 Pharmacists, 1 anesthetists specialists, 4 anesthetists technicians, in addition to 38 employee working in administrative department (NOH, 2014).

Both outpatient department and inpatient surgical department at NOH work on daily basis from 7.30 am till 2.30 pm through appointment system for five days a week. Many appointments for consulting visits, follow up appointment, diagnostic examinations and planned surgical admissions are distributed over the working days of the week. At 2012-2013 outpatient department pass through building rehabilitation project and many modifications of hospital structure was done. Moreover building extension from Psychiatric Hospital at this period helped to increase archive and clerical work areas (NOH, 2014).

1.8 Operational definitions

1.8.1 Quality of health care services

Quality is the degree to which health care services for individuals and populations increase the likelihood of desired outcomes and are consistent with current professional knowledge (Institute of Medicine, 2001).

1.8.2 Effectiveness and safety

Effectiveness defined as the success of a hospital to produce clinical outcomes in accordance with the current state of medical knowledge and to achieve these results for all patients that may potentially benefit from it; this includes conformity with and results of care processes and appropriateness of care, while safety is related to the application and promotion of structures and processes in the hospital, for which evidence demonstrates prevention or reduction of risks (WHO, 2007-c). At this study safety is measured simultaneously with others dimensions as it is a transversal dimension.

In this study clinical effectiveness and safety dimensions will be measured simultaneously through the following indicators: 30 day readmission rate, day surgery rate, rate of hospital acquired infections (endophthalmitis) and intra-operative surgical complication rate (cataract surgery), while effectiveness of care will be measured through Extra capsular cataract extraction (ECCE) to phacoemulsification (Phaco) cataract surgery rate, visual outcome post laser therapy for diabetic maculopathy (DM) & proliferative diabetic retinopathy (PDR), visual outcome of cataract surgeries, and documentation status.

1.8.3 Efficiency

Efficiency addresses the optimal use of resources to achieve maximum output and includes productivity, the use of health technologies to achieve best possible care and the appropriateness of interventions (WHO, 2007-c).

In this study efficiency dimension will be measured through the following indicators: Length of stay, attendance to appointments in clinic, and surgical cancellation rate.

1.8.4 Patient centeredness

Patient centeredness puts the patient in the center of service provision and evaluates the services provided against the needs and expectations of patients, family and caregiver. This includes client orientation (prompt attention, access to supportive networks, communication processes) and respect (patient autonomy, confidentiality, dignity) (WHO, 2007-c).

In this study patient centeredness will be measured through the following indicators: Patients' expectations and patients' access to care. Some of accessibility sub indicators e.g. physical, informational, medical and financial access, while expectation indicators were process of care, treatment and consultation and treatment outcome.

1.8.5 Staff orientation

Staff orientation dimension refers to the extent to which staff is appropriately qualified to carry out their tasks, have possibilities for continuous learning, work in a supportive environment and are satisfied with their work (WHO, 2007-c).

In this study staff orientation and safety dimension will be measured through the following indicators: Training expenditure, absenteeism rate, excessive working hours, staff burnout, staff turnover rate , work-related injuries, and work conditions.

1.8.6 Responsive governance

Responsive governance embraces the extent to which the hospital relates to community health needs, ensuring continuity of care and the provision of health services irrespective of ethnical group, physical, cultural, social, demographic or economic characteristics with sub dimensions are the hospital community integration and the hospital's public-health orientation (WHO, 2007-c).

In this study responsive governance is measured through: existence of quality structure and measurements in the hospital and responsive QI activities.

1.8.7 Acute postoperative endophthalmitis

Postoperative endophthalmitis is an inflammatory condition of the eye, presumed to be due to an infectious process from bacteria, fungi or, on rare occasions, parasites that enter the eye during the perioperative period (Barry, *et al.* 2013).

1.8.8 Day surgery rate

At this study day surgery rate is the number of procedure which were performed with intention of no overnight stay (same day separation), over the total procedures performed in the hospital, where the patient does not stay for more than twelve hours, while cut-off may be extended to 23 hours.

1.8.9 30-Day Readmission rate

Urgent non-elective return for care (surgical or medical) for the same or related admission cause is counted as a readmission, if it occurs within 30 days of discharge date.

1.8.10 Length of stay (LOS)

LOS is defined as the number of days of hospitalization (admission and discharge date count for one day) (WHO, 2009). At this study it is measured by dividing the total number of night stayed by all inpatients during a year by the number of discharges.

1.8.11 Surgical cancellation rate

Cancellation on the day the patient is due to arrive; after the patient has arrived in hospital, or on the day of scheduled operation, or on hospital bed in surgical theater. This includes telephone cancellations made on the day of their operation or day of admission

1.8.12 Absenteeism rate

At this study long term absenteeism rate is referred as failure of employees to report for work more than 30 days to 1 year when they are scheduled to work, or absence with approval but without replacement (e.g.) maternity vacations without replacement. It is measured through dividing (number of days of medically or non-medically justified absence for 30 days or more, excluding holidays, among NOH's staff), on (total equivalent full time staff * number contractual days per year for a full-time staff).

1.8.13 Burnout

Burnout is a syndrome of emotional exhaustion (EE), depersonalization (DP), and reduced personal accomplishment (RA) that can occur among individual who do people work of some kind (Maslalach & Jakson, 1986).

Chapter2

Literature review

In this chapter, the researcher illustrates the study's conceptual framework, quality dimensions used for performance assessment for hospital quality and different sub dimensional performance indicators. It also demonstrates definition of each dimension followed by indicators description, importance, and way of measurement. In addition, it provides different relative studies regarding used indicators.

2.1 Conceptual framework

A wide range of methods and tools to assess quality and promote QI has been used by many governmental associations and professional bodies, while several distinct dimensions of quality that vary in importance depending on the context in which a performance measurement effort takes place has been used. Different perspectives on health care quality lead to different expectations and different methods of quality measurement.

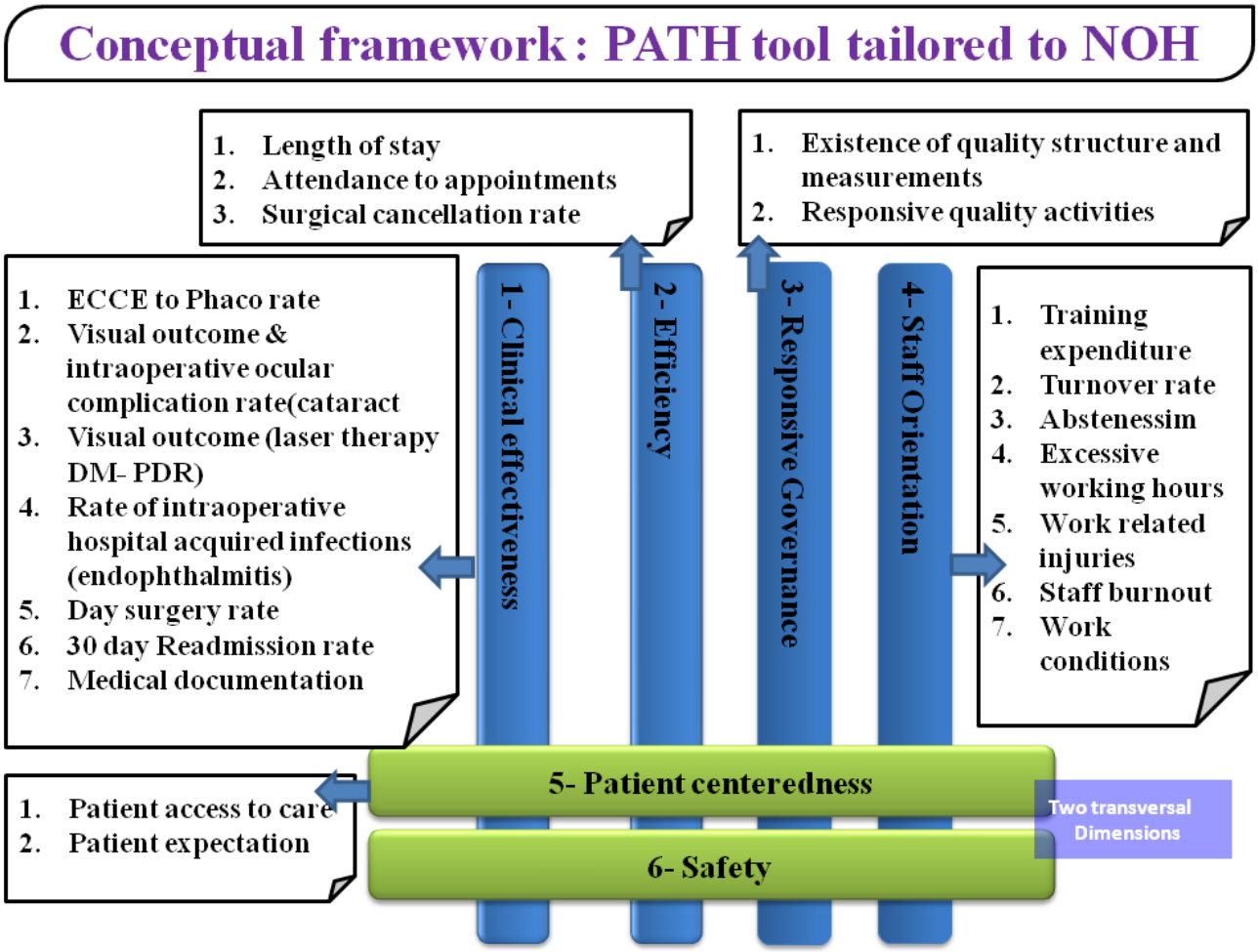
Through reviewing the literature of health quality measures and hospitals performance assessment frameworks to build study conceptual framework, most recognized quality measurement dimensions were build on the six quality dimensions of Institute of Medicine (IOM); effectiveness, efficiency, equity, patient centeredness, safety, and timeliness (Corrigan, 2005). Many frameworks like (Chen & Wang, 2015), (CIHI, 2013), (Stelfox & Straus, 2013), (Liu & Itoh, 2012), (Kelley & Hurst, 2006), (Williams, et al. 2005) and (Veillard, et al. 2005) were reviewed, and it was obviously that PATH framework provides a comprehensive tool for hospital quality assessment.

PATH was initiated by the WHO Regional Office for Europe in 2003, and used dimensions were appropriate for clinical care and for management services that support service delivery. Moreover most PATH dimensions ranked to be the most commonly used as effectiveness, efficiency patient centeredness and safety (Kelley & Hurst, 2006). In addition PATH tool adds staff orientation dimension, which is considered as a success key to providing quality care, as staff involvement is successful and empowering way to achieve organizational goals (Dieleman & Harnmeijer, 2006).

The six adopted dimensions are; clinical effectiveness, safety, patient centredness, responsive governance, staff orientation, and efficiency. Two transversal perspectives

(safety and patient centredness) cut across four dimensions of hospital performance (clinical effectiveness, efficiency, staff orientation, and responsive governance), for instance, safety relates to clinical effectiveness (patient safety), staff orientation (staff safety), and responsive governance (environmental safety) when patient centredness relates to responsive governance (perceived continuity), staff orientation (interpersonal aspect items in patient surveys), and clinical effectiveness (continuity of care within the organization) (Arah, *et al.* 2003).

Figure (2.1) illustrates study's conceptual framework, which is built up on the six adopted PATH's dimensions. PATH tool was tailored to NOH's context by the researcher through adding different sub dimensional indicators related to ocular care.



Figure(2.1): Conceptual Framework : Path tool tailored to NOH

(Modified by the researcher)

The main idea of PATH Tool is performance against key indicators. It provides a multidimensional approach to hospital performance assessment that makes the most of the large amount of data that is currently collected but very little used (WHO, 2007-c). PATH tool captures performance aspects in six strategic dimensions and provide tools to support hospitals in assessing their performance, questioning their own results, and translating them into actions for quality improvement.

Many indicators from PATH were selected, while others tailored indicators formulated during two planned meetings with NOH's general manager. Indicators were selected based on the importance and usefulness, potential impact on quality, burden of data collection and data availability. The dimensions outlined in the research conceptual framework include almost every aspect of hospital performance and these dimensions come into play as clients, health providers, and health care managers.

2.2 Quality

Quality care means excellent care, which all patients expect and deserve. It simply means the achievement of the desired objectives in the most efficient and effective manner, with the emphasis on satisfying the customer or the consumer (WHO, 2000). Quality is a multi-faceted concept which can be defined in different ways; it means providing the best possible care available to the patient from the provider's perspective, while it means to provide effective care in a cost-conscious environment that may include the rationing of health care from the perspective of the administrator, and from patient's perspective it means getting care when and where they need it and from whomever they choose to cure their condition in the fastest possible way (WHO, 2004-c).

Brown, *et al*. (1992) define quality from the three perspectives as the following:

1- Client perspectives: the client mean care meets their perceived needs, and is delivered courteously and on time. The client wants services that effectively relieve symptoms and prevent illness. The client's perspective is very important because satisfied clients are often more likely to comply with treatment and to continue to use primary health services, so the dimensions of quality that relate to client satisfaction affect the health and well-being of the community.

2- Providers perspectives: From the provider's perspective, quality care implies that he or she has the skills, resources, and conditions necessary to improve the health status of the

patient and the community, according to current technical standards and available resources.

3- Managers perspectives: While quality care requires that managers are rarely involved in delivering patient care, although the quality of patient care is central to everything they do. Health care managers must provide for the needs and demands of both providers and patients. Also, they must be responsible stewards of the resources entrusted to.

2.3 Quality assessment & quality improvement

Quality assessment in health care compares performance with expectations, standards, goals, and identifies opportunities for improvement; does not impose solutions, does not require any declared intention or ability to take corrective action, and relies upon available measurements (WHO, 2003).

Performance assessment is just the starting point for QI, it is not an end in itself and it should lead to learning, rather than punishment, performance assessment should inspire raising questions, improving data collection procedures, understanding results and identifying actions for improvement (Berwick, James & Coye, 2003). It should be embedded in a comprehensive QI strategy and used as a quality management tool to be used by hospital managers for the evaluation and improvement of hospital services as it identifies where gaps exist between services actually provided and expectations for services and lessens these gaps not only to meet customer needs and expectations, but to exceed them and attain unprecedented levels of performance (Massoud, *et al.* 2001).

The key elements to QI are a change (an improvement) and a method (techniques and tools); it is about change and action based on experience, where individuals and teams combine a threshold for action with a readiness to develop and test ideas, and to make changes main domains of quality improvement were identified (Atkinson, *et al.* 2010);

1- Setting standards: This incorporates the process of defining expectations, levels of practice or outcomes.
2- Measuring for quality: A process through which performance is reviewed, practice is assessed and outcomes are evaluated.
3- Quality improvement: An active process that involves taking action, making changes and measuring progress towards an agreed aim.

2.4 Assessment of hospital performance

Satisfactory hospital performance was defined as the maintenance of a state of functioning that corresponds to societal, patient, and professional norms, while high hospital performance should be based on professional competencies in application of present knowledge, available technologies and resources; efficiency in the use of resources; minimal risk to the patient; responsiveness to the patient; optimal contribution to health outcomes, in addition within the health care environment, high hospital performance should further address the responsiveness to community needs and demands, the integration of services in the overall delivery system, and commitment to health promotion and their performance should be assessed in relation to the availability of hospitals' services to all patients irrespective of physical, cultural, social, demographic, and economic barriers (Veillard, *et al.* 2005).

Over the past several years, much energy has been put into creating numerous frameworks to assess health systems and health organizations performance. In order to deliver and manage quality, it is necessary to measure it, which demands a conceptual framework within which to understand the term (Arah, *et al.* 2003). Before assessment can begin we must decide how quality is to be defined and we also need detailed information about the causal linkages among the structural attributes of the settings in which care occurs, the processes of care, and the outcomes of care; structure describes the context in which care is delivered, including hospital buildings, staff, financing, and equipment, while process denotes the transactions between patients and providers throughout the delivery of healthcare and finally, outcomes refers to the effects of healthcare on the health status of patients and populations (Donabedian, 1988).

Depending on the context in which a performance measurement effort takes place several distinct dimensions of quality that vary in importance are recognized. IOM framework for assessment of healthcare quality is mainly six dimensions: Effectiveness, Efficiency, Equity, Patient centeredness, Safety, and Timeliness (Corrigan, 2005), and these dimensions are widely used in formulating many conceptual frameworks for assessment of performance of health systems and health organizations.

The Organisation for Economic Co-operation and Development (OECD) Health Care Quality Indicator (HCQI) Project includes the following dimensions for performance assessment: effectiveness, safety and responsiveness or patient centeredness (Kelley &

Hurst, 2006). For improving America's hospitals the joint commission on accreditation of healthcare organizations (JCAHO) helps hospitals to make a significant impact on patient outcomes through performance measurement and a new focus on accountability measures, – measures of evidence-based care closely linked to positive patient outcomes, this new approach categorizes performance measures into accountability and non-accountability measures (JCAHO, 2010). Council of Australian Governments (COAG) in the National Health Reform Agreement identified Effectiveness, Safety and quality, Patient experience, Equity Access, Efficiency as main dimensions for performance assessment of Australian Hospital Networks (COAG, 2011). Recently Canadian Institute for health information (CIHI) formulated a performance measurement framework for Canadian hospitals which aligns with the health system performance measurement framework and the key dimensions of both was strongly based upon the WHO PATH framework (CIHI, 2013).

The WHO strategic orientations are encompassed into the six interrelated dimensions of the PATH conceptual model, namely: clinical effectiveness, safety, patient centredness, responsive governance, staff orientation, and efficiency, these dimensions build a comprehensive operational model, shaped on the conceptual model, with indicators assessing dimensions and sub dimensions of performance (Veillard, *et al.* 2005).

2.5 Quality dimensions in PATH tool

2.5.1 Clinical effectiveness

Clinical effectiveness refers to the success of a hospital to produce clinical outcomes in accordance with the current state of medical knowledge and to achieve these results for all patients that may potentially benefit from it; this includes conformity with and results of care processes and appropriateness of care (WHO, 2007-c); it is the degree to which desired results (outcomes) of care are achieved (Massoud, *et al.* 2001).

Brown, *et al.* (1992) explained that quality of health services depends on the effectiveness of service delivery norms and clinical guidelines, while assessing the dimension of effectiveness answers the questions; "does the procedure or treatment, when correctly applied, lead to the desired results?" and "is the recommended treatment the most technologically appropriate for the setting in which it is delivered?".

Since resources allocated to health care are limited specially in hard setting such as the setting in GGs; effective practices and techniques should be used, where assessing

effectiveness should compares two things that have the same effect or the same purpose; combining both the clinical and economic aspects of health care and this occurs by determining the medical practices and techniques that, first, actually help improve health and, second, make good use of resources (Madore,1993). Future studies should focus on what types of spending are most effective in improving quality and what types of spending represent waste (Hussey, *et al.* 2013).

2.5.2 Efficiency

Efficiency defined as addresses the optimal use of resources to achieve maximum output and includes productivity, the use of health technologies to achieve best possible care and the appropriateness of interventions (WHO (2007-c), while it was simply defined as a system's ability to function at lower costs without diminishing attainable and desirable results (Donabedian, 2003).

To improve quality of care through increasing efficiency eliminating or minimizing poor care resulting from ineffective norms or incorrect delivery, and reducing costs by analyzing efficiency and using health program with the most cost-effective intervention (Brown, *et al.* 1992). A key issue in efficiency measurement is whether the outputs are comparable, particularly on quality in addition to the way in which inputs are measured may influence the way the results are used for example efficiency measures that count physical inputs help to answer questions about whether the output could be produced faster, with fewer people, less time from people, or fewer supplies, moreover efficiency measures that use financial inputs help to answer questions about whether the output could be produced less expensively whether the total cost of labor, supplies, and other capital could be reduced through more-efficient use or substitution of less costly inputs (Hussey, *et al.* 2009).

2.5.3 Responsive governance

Responsive governance embraces the extent to which the hospital relates to community health needs, ensuring continuity of care and the provision of health services irrespective of ethnical group, physical, cultural, social, demographic or economic characteristics (WHO, 2007-c). Capturing the patients' perspective of health care and working staff is becoming increasingly important as health systems strive to be more responsive to the needs of the people using their services. Responsiveness is an intrinsic goal within context

of health system, and addressing the legitimate expectations of people is at the heart of the stewardship function of health systems (Valentine, Murray & De Silva, 2000).

Responsiveness includes patients needs as well as caregivers needs, where for a clear sense of priorities or purpose managers must focus on the various dimensions of quality to help to set administrative priorities; they must provide for the need and demand of both providers and patients, considering the need of multiple client in addressing questions about resource allocation fee schedule staffing pattern and management practices (Lazakidou 2011).

Responsiveness is fundamental, because it relates to basic human rights and making measurable progress in responsiveness could be achieved without major investment training health care staff to be more responsive to the basic right of individuals to be treated with dignity requires a minimal expenditure of money (Valentine, Murray, & De Silva, 2000), so that developing a strategic performance measurements system may contains the most important financial performance indicators, as well as non-financial performance indicators that are able to examine the quality of the provided services, the satisfaction of internal and external customers, as these indicators play the role of key performance indicators (Grigoroudis, Orfanoudaki & Zopounidis, 2012).

2.5.4 Staff orientation

Staff orientation refers to the extent to which staff is appropriately qualified to carry out their tasks, have possibilities for continuous learning, work in a supportive environment and are satisfied with their work, and this dimension includes indicators on the working environment, prospects and identification of individual needs, health promotion and safety initiatives and staff health related behavior and health status (WHO, 2007-c).

Client Oriented Provider Efficient (COPE) series for improving quality in health emphasis that health care staff experience a wide range in the quality of their work environment, in the information and training they receive, and in the equipment and supplies available to the all elements that staff need if they are to provide quality services (COPE, 2013).

Just as the health care system must respond to the patient's perspectives and demands, it must also respond to the needs and requirements of the health care provider and in this sense, health care providers can be thought of as the health care systems internal clients. They need and expect effective and efficient technical, administrative, and support services

in providing high-quality care (Brown, *et al.* 1992). To increase productivity, competence and responsiveness of health workers through initiate specific interventions to more comprehensive approaches that combine aspects such as training, supervision and the provision of medical care and guidelines (Dieleman & Harnmeijer, 2006). Work engagement of staff, in all its various forms, is seen as a key factor in promoting organisational effectiveness, whether that means patient experience, quality and safety outcomes, or efficiency and financial performance (West, *et al.* 2011).

2.5.5 Patient centered care

Patient centeredness puts the patient in the center of service provision and evaluates the services provided against the needs and expectations of patients, family and caregiver. This includes client orientation(prompt attention, access to supportive networks, communication processes) and respect (patient autonomy, confidentiality, dignity) (WHO, 2007-c). Patient centeredness encompasses qualities of compassion, empathy, and responsiveness to the needs, values, and expressed preferences of the individual patient (IOM, 2001). Patient centered care services are health care services designed to meet clients' needs and expectations with full consideration of medical standards to assure safety and continuity of care (Massoud, *et al.* 2001) and assures access of individuals to the kind of care that suit them (Davis, *et al.* 2005).

Seeking forward patient centered care will be of great effect on improving quality of care as shown in different studies; it promoting positive outcomes for patients, organizations, and healthcare professionals (Lusk, *et al.* 2013). Centered communication correlated with the patients perceptions of finding common ground in addition, positive perceptions were associated with better recovery from their discomfort and concern, better emotional health 2 months later, and fewer diagnostic tests and referrals (Oates, *et al.* 2000), it also related to a significantly decreased annual number of visits for specialty care, less frequent hospitalizations, and fewer laboratory and diagnostic tests (Bertakis & Azari, 2011).

2.5.6 Safety

It relates to the application and promotion of structures and processes in the hospital, for which evidence demonstrates prevention or reduction of risks (WHO, 2007-c). As a dimension of quality, safety means minimizing the risks of injury, infection, harmful side

effects, or other dangers related to service delivery, while it involves the provider as well as the patient. (Brown, *et al.* 1992).

Because there are many potential starting points for improvement efforts, a safety culture assessment can help an organization to identify areas that are considered more problematic than others, and can be used as diagnostic tools to identify areas for improvement (Nieva & Sorra, 2003). Unsafe health care remains a problem of immense magnitude worldwide and the past decade has witnessed remarkable progress towards improved patient safety, many gaps still exist and harm inflicted on patients by adverse health care events remains unacceptably high (WHO, 2011).

According to IOM the biggest challenge to moving toward a safer health system is changing the culture from one of blaming individuals for errors to one in which errors are treated not as personal failures, but as opportunities to improve the system and prevent harm (IOM, 2001). Clinical training and guidelines, information technology, organizational structures and industry regulations are being pushed in healthcare organizations to improve patient safety, the belief is growing that an institution's ability to avoid harm will be realized only when it is able to create a culture of safety among its staff (Nieva & Sorra, 2003).

2.6 Performance indicators

An indicator is a measurable characteristic of actual system performance that determines the extent to which desired outcomes are achieved, or the degree to which guidelines and standard operating procedures are adhered, in addition to their usage in monitoring the quality or appropriateness of important clinical and management activities (Brown, *et al.* 1992). Indicators intended to provide information for QI are used descriptively, as they provide a provisional and partial truth interpreted in the light of local circumstance, and act as a starting point for discussion between stake-holders (Freeman, 2002). Indicator measurement and monitoring serve many purposes. They make it possible to document the quality of care; make comparisons (benchmarking) over time; make judgments and set priorities; support accountability, regulation, and accreditation; support quality improvement; and support patient choice of providers (Mainz, 2003). While they are used as clues to performance, discussed and interpreted by clinicians and managers in the light of local contexts and with the aim of continuously improving the quality of clinical care and such approaches foster trust and communication between clinicians and managers,

with the result that they are better able to work through problems with care delivery and improve quality (Freeman, 2002).

Monitoring health care quality is impossible without the use of clinical indicators as they are creating the basis for quality improvement and prioritization in the health care system (Mainz, 2003). The importance of the development and use of indicators is an integral part of planning and designing health services (Klazinga, *et al.* 2001)

The PATH framework strongly emphasizes the internal use of indicators because 'neither the dynamics of selection nor the dynamics of improvement (through quality measurement) work reliably today (Veillard, *et al.* 2005).

2.6.1 Clinical effectiveness performance indicators

2.6.1.1 ECCE to Phaco rate

For a number of years, phaco has been the method of choice for cataract extraction in developed countries and with increasingly advanced microprocessors, Phaco can offer safe and elegant disassembly and aspiration of the lens and a rapid recovery for patients, and most physicians assumed that Phaco is firmly established as the gold standard for cataract treatment everywhere (Boughton, 2009).

To sort through the relative cost-effectiveness of both Phaco and ECCE, while it's an expensive surgery, the presumed cost-effectiveness of Phaco comes from its ability to return patients to work and to functioning lives much more quickly than conventional ECCE. Surgical complications and capsule opacity within 1 year after surgery were significantly less frequent, and a higher proportion achieved an unaided visual acuity of 6/9 or better in the Phaco group. In addition to more stable postoperative astigmatism in Phaco (Minassian, *et al.* 2001).

In addition a significant association between type of surgery and outcome of visual acuity as good visual outcome was noted in 80.1% of eyes operated by Phaco compared to 48.5% of eyes operated by ECCE procedure (Thevi, *et al.* 2014). The outcome measures of Phaco group patients as quality of life, treatment outcomes, and patients satisfaction were significantly improved more than who have undergone ECCE cataract surgery (Mendonça, *et al.* 2014), while better visual outcome and lower complication rate after Phaco procedures were reported in many trials (De Silva, Riaz & Evans, 2014).

2.6.1.2 Visual outcome and intra operative ocular complication rate (cataract surgeries)

Cataract is by far the main cause of readily curable blindness, while cataract surgical intervention can be one of the most cost-effective of all health interventions (WHO, 2007-a). Cataract is the first cause of blindness 51% (Pascolini & Mariotti, 2012). While in the rapid assessment project of avoidable blindness in the occupied Palestinian territories cataract was the dominant cause of blindness by 55.0% (Chiang, *et al.* 2010). WHO set a target for quality of cataract surgery outcome; if at least 85% of eyes achieve 6/18 or better presenting visual acuity postoperatively (Baltussen, *et al.* 2004).

Postoperative best-measured visual acuity was defined as the best corrected distance visual acuity measurement within 2 weeks and 4 months of cataract surgery when present and the best measurement of uncorrected distance visual acuity or pinhole visual acuity within the same period when best corrected distance visual acuity was absent (Day, *et al.* 2015). Visual acuity was measured using a Snellen tumbling 'E' chart, which 3 metre distance, and was measured in full daylight with available correction.

To monitor cataract surgery outcome, the Royal College of Ophthalmologists (RCOphth) formulated asset of quality standards for cataract surgery and maintaining a regular audit of pre and post operative visual acuity, and complication rate regarded posterior capsule rupture (PCR) during cataract surgery (Day, *et al.* 2015). The most associated ocular complication with cataract surgery were PCR, it has long been regarded as a benchmark for the quality of cataract surgery (Sparrow, *et al.* 2012), (Greenberg, *et al.* 2011).

Posterior Capsular Rupture or vitreous loss or both (PCR) were defined as unintentional communication with the posterior segment from the occurrence of any of the following intraoperative complications: PCR with or without vitreous loss, zonule rupture with vitreous loss, vitreous loss, vitreous to the section at the end of surgery, IOL into the vitreous or nuclear/epinuclear fragment into the vitreous or the performing of any of an automated anterior vitrectomy, secondary IOL or scleral fixed IOL during surgery (Day, *et al.* 2015).

2.6.1.3 Visual outcome post laser therapy for DM and PDR

Diabetic retinopathy is a potentially blinding disease in which the threat to sight comes through two main routes; growth of new vessels, and localised damage to the macula / fovea of the eye with loss of central visual acuity (The RCOphth, 2012). The reported prevalence of diabetic retinopathy (DR) in diabetics varies substantially between studies, but is probably around 40% (Bowling, 2016).

Diabetic retinopathy is a leading cause of visual impairment and blindness in developed countries due to (DM) and (PDR) (WHO, 2007-a). At the occupied Palestinian territories, diabetic retinopathy accounted for 8.3% of blindness, 14.1% of severe visual loss and 5.5% of visual impairment (Chiang, *et al*. 2010). Reduced visual acuity due to diabetic retinopathy is negatively associated with quality of life particularly in the advanced stages (Clarke, 2006).

PDR affects 5–10% of the diabetic population, characterized by neovascularization on or within one disc diameter of the disc and/or new vessels elsewhere in the fundus (Bowling, 2016), while diabetic Macuolopathy (DM) is a retinopathy which affects the macula separately (RCOphth, 2012). DM is the most common cause of visual impairment in diabetic patients (Bowling, 2016).

Laser treatments to the retina form a large part of the case load in a diabetic retinal clinic, and for both complications (DM) and (PDR) laser treatment offer proven treatment. Laser treatment pan retinal photocoagulation continues to be the mainstay of PDR treatment with intravitreal anti-VEGF injection and other modalities remaining adjunctive, while regarding (DM) until recently laser photocoagulation was the mainstay of treatment for DM, reducing the risk of visual loss by 50% overall compared with observation (Bowling, 2016). In the Early Treatment Diabetic Retinopathy Study, macular laser therapy for clinically significant macular edema approximately halved the rate of moderate visual loss, defined as doubling of the visual angle, and equating to a change from 6/6 to 6/12 or from 6/12 to 6/24 (Dowler, 2003). Pan retinal photocoagulation laser treatment reduces risk of vision loss in PDR (Ghanchi, *et al.* 2013).

2.6.1.4 Rate of hospital-acquired infections (post intraocular surgical intervention intraoperative course) – (Acute postoperative endophthalmitis)

Postoperative endophthalmitis is an inflammatory condition of the eye, presumed to be due to an infectious process from bacteria, fungi or, on rare occasions, parasites that enter the eye during the perioperative period (Barry, *et al.* 2013). Acute intraocular infection is invariably a severe event, as toxins produced by infecting bacteria and the host inflammatory responses cause rapid and irreversible photoreceptor damage, and ongoing effects can continue long after the ocular contents have been rendered sterile (Bowling, 2016). It is considered one of the most devastating complications after ocular surgery and treatment remains challenging (Behndig, *et al.* 2013), risk factors are difficult to establish but may include operative complications such as posterior capsule rupture, prolonged procedure time, combined procedure (e.g. with vitrectomy), clear corneal sutureless incision, temporal incision, wound leak on the first day, delaying postoperative topical antibiotics until the day after surgery, topical anaesthesia, adnexal disease and diabetes (Bowling, 2016).

Postoperative endophthalmitis is conventionally characterized as either acute, occurring within 6 weeks of cataract surgery or chronic, occurring after that period of time; the majority of patients with acute postoperative endophthalmitis present within 1-2 weeks after surgery, with signs and symptoms of rapidly progressive intraocular inflammation (Barry, *et al.* 2013).

The low rates of serious endophthalmitis infection after procedures is a target outcome indicator used to monitor ophthalmic surgeries. Contemporary reported incidence of acute endophthalmitis following cataract surgery varies substantially between studies, but is probably at least 0.1%, and due the low rate of endophthalmitis it is very difficult to establish the effectiveness of any preventative measure (Bowling, 2016).

2.6.1.5 Day surgery rate

A number of procedure were performed with the intent of day-surgery (no overnight stay) over the total procedures performed in the hospital, for selected tracer procedures; expressed as a percentage (WHO, 2009). It is a planned surgical procedures carried out in a hospital, where the patient does not stay for more than twelve hours, while cut-off may be extended to 23 hours in special extended care facilities (WHO, 2004-a).

Treatment of appropriate non-emergency cases by day surgery can be advantageous for health care providers and the communities they serve; more patients can be treated more effectively and more efficiently (Castoro, *et al.* 2007). Day surgery indicator is a multifunction indicator; indicates efficiency, clinical effectiveness patient orientation (WHO, 2009) and rationalization according to different dimensions was as the following:

- Efficiency: Cost-efficiency and optimal use of capacity, in a context of limited bed availability, increased one-day surgery will release inpatient beds for major cases and hence improve access and reduce waiting times. Inpatient days are highly resource intensive.
- Clinical effectiveness: Innovativeness and diffusion of technologies, where improvements in anesthetic drugs and procedures and in surgical techniques allowed more operations to be completed as day surgery cases. A prerequisite for increased use of day surgery is the development of less invasive surgery.
- Patient centeredness perspective on clinical effectiveness: Outcomes and patient satisfaction (faster recovery, focus on pain management): Risk of hospital acquired infection is reduced. Patient surveys indicate that the great majority of patients prefer to recover home rather than staying overnight in hospital (WHO, 2009).

The economic benefits of day surgery as including shorter hospital stays, which enables a higher number of patients to be treated, thereby reducing waiting lists, fixed scheduling, reducing cancellations by patients and thus more efficient theatre use, reduced disruption of patients' daily routines, with lower levels of absence from work or problems providing care for others, a decrease in both the time taken to perform surgical procedures and their cost, taking advantage of advances in surgical and anesthetic care and better use of high-cost operating room apparatus and supplies (Castoro *et al.* 2007).

2.6.1.6 30-Day Readmission rate

The percentage of readmitted patients is an important balancing measure to indicate if changes to patient flow through the system are negatively affecting care, while some readmissions are part of the planned care and are desirable, others may be indications of a quality issue related to shortened length of stay and premature discharge (WHO, 2007-d). Urgent readmission for surgical and medical non-elective return to an acute care hospital for any cause is counted as a readmission if it occurs within 30 days of discharge from the index episode of inpatient care, while an episode of care refers to all contiguous inpatient

hospitalizations and same-day surgery visits (CIHI, 2013). Readmission rates reduction has become an imperative among healthcare policymakers as unplanned hospital readmissions are common, costly, and largely preventable healthcare burden. In United States, it has shown that hospital readmissions contribute significantly to health care costs as readmissions account for an estimated 17.4 billion US$ in annual spending by Medicare (US) (Jencks, *et al.* 2009).

Readmissions to acute care facilities are increasingly being used to measure institutional or regional quality of care and care coordination readmission rates can be influenced by a variety of factors, including the quality of inpatient and outpatient care, effectiveness of the care transition and coordination, and the availability and use of effective community-based disease management programs (CIHI, 2013), while it is associated with indicators of substandard care during the index hospitalization, as unstable therapy at discharge, and inadequate post discharge care as a result it can prevented by 12% to 75% of all readmissions by patient education, pre discharge assessment, and domiciliary aftercare (Benbassat & Taragin, 2000).

2.6.1.7 Medical Documentation

Adequate and proper medical documentation is essential for quality of medical care and health care services reflecting the care that is provided to the client, to evaluate professional practice as a part of quality assurance mechanism such as performance reviews, audits and accreditation processes, legislated inspections and critical incident reviews. Documentation should be clear, concise, consecutive, correct, complete, comprehensive, collaborative, patient-centered and confidential (WHO, 2007-b).

Safety is essential for quality care and one of the main purposes of a health care record is to provide a means of communication to facilitate the safe care and treatment of a patient; they are considered as a documented account of a patient's history of illness; health care plans; health investigation and evaluation; diagnosis; care; treatment; progress and health outcome for each health service intervention or interaction (Australian Commission on Safety and Quality in Health Care, 2010).

Therefore monitoring medical and surgical pathways through tracking documentation is of great benefit. In this study cataract and glaucoma pathway will be reviewed through tracking documentation status.

Commonly accepted standards for medical record documentation recommended by National Committee for Quality Assurance-nonprofit American organization (NCQA) include the following:

- Each page in the record contains the patient's name or ID number, Personal biographical data include the address, employer, home and work telephone numbers and marital status. All entries in the medical record contain the author's identification. Author identification may be a handwritten signature.
- All entries are dated. Significant illnesses and medical conditions are indicated on the problem list. Medication allergies and adverse reactions are prominently noted in the record. Past medical history (for patients seen three or more times) is easily identified and includes serious accidents, operations and illnesses. Working diagnoses are consistent with findings.
- Treatment plans are consistent with diagnoses. Encounter forms or notes have a notation, regarding follow-up care, calls or visits, when indicated. The specific time of return is noted in weeks, months or as needed (NCQA, n.d).

2.6.2 Efficiency performance indicators

2.6.2.1 Attendance to appointment

Patient failure to attend hospital outpatient appointments has a significant impact on the ability of hospitals to provide efficient and effective outpatient services and it is a major source of potentially avoidable cost and resource inefficiency that impact on the health of the patient and treatment outcomes, Krishna & Amarjothi (2012) study shows that non-attendance at medical appointments is associated with increased patient morbidity, while Beecham (1999) estimated cost of about ($240 m) worth of appointment time is lost each year because of the patients in the UK who fail to keep appointments with their GPs.

Many factors that may lead to missed appointments were explained in recent studies. Gurol-Urganci (2013) review study reveals that main patient-related factors for missing scheduled appointments as: health beliefs; lack and difficulty of transportation; scheduling problems; health status; resistance to consultation; insurance status; and frustration with outpatient clinic organization resulting in long waiting times and discontinuity of care, while health system-related factors include: inadequate communication between healthcare providers and patients, which are worsened by patients missing appointments; waiting

times; quality of consultation; facilities in the waiting area; time interval between scheduling/referrals and appointments; administrative and/or clerical problems; and site of care. Cameron (2015) study participants suggested many barriers for attending to appointments such as: travel and parking issues; general 'access' difficulties; poor administration of appointment letters; conflicting priorities such as school, work or illness; lengthy waiting times; many scheduled appointments; and forgetting.

In relation to NOH's context, many of previous mentioned factors may lead to missed appointments such as extended waiting lists and scheduling problems, insurance status and decreasing financial care coverage and transportation financial burden especially for South GGs inhabitants. So that such an important indicator reflects health care from many aspects and need to be monitored to avoid wastage of resources and enhance better health outcome.

2.6.2.2 Length of stay (LOS)

LOS is defined as the number of days of hospitalization (admission and discharge date count for one day) for selected tracer conditions and procedures (WHO, 2009). It is generally measured by dividing the total number of days stayed by all inpatients during a year by the number of admissions or discharges (OECD, 2011).

At NOH context LOS measured through numbers overnight stay where patients occupy bed, receive meals and others related hospital hotel services till being discharged after mourning round of ophthalmologists.

LOS is a direct measure of efficiency and reflects appropriateness and has a very strong rationale, such as improving efficiency, improving integration and coordination of care, improving internal processes and improving clinical effectiveness, while from the point of view of indicator of efficiency, shorter is better, but very low median days may pose patients at risk (WHO, 2009). Nowadays the trend in the world is toward day care surgery with cost effective treatment and rapid return to home ambient; a shorter stay will reduce the cost per discharge and shift care from inpatient to less expensive post-acute settings (OECD, 2011).

Hospitals having long average length of stay are considered relatively inefficient in the use of resources and those with low length of stay considered to be efficient. Sometimes, however LOS is assumed to relate to quality, but if significantly lower than expected might

be considered indicative of poor quality care and may reflect prematurely discharging patients, while if poor quality of care causes complications, it would tend to extend length of stay and under this assumption, longer than expected LOS could be viewed as indicative of poor quality care (Thomas, *et al.* 1996).

Associations between reduced hospital LOS and 30-Day readmission rate is proved as over the 14 years, risk-adjusted 30-day readmission rates for all medical diagnoses combined decreased from 16.5% to 13.8%, while hospitals with mean risk-adjusted LOS that was lower than expected had a higher readmission rate, suggesting a modest tradeoff between hospital LOS and readmission 6% increase for each day lower than expected (Kaboli, *et al.* 2012). As a result LOS is a common outcome variable used to compare the performance between hospitals (WHO, 2009) and monitoring of LOS indicator is important and reflects quality of care from many aspects.

2.6.2.3 Surgical cancellation rate

A last minute cancellation is a cancellation on the day the patient is due to arrive; after the patient has arrived in hospital, or on the day of scheduled operation, this includes telephone cancellations made on the day of their operation or day of admission. An operation which is re-scheduled to a time within 24 hours of the original scheduled operation is considered as a postponement and not a cancellation Surgical cancellation is scheduled surgery which is not done at intended date (WHO, 2004-a).

Cancellation of planned surgeries is a known as quality problem in healthcare that has undesired consequences as it harms patients and wastes resources. High cancellation rates may indicate that scarce health resources are being used ineffectively, thereby increasing costs (Argo, 2009). Patients are directly affected by cancellations**,** they reacted negatively to the postponement/cancellation in the form of anxiety and disappointment (Ivarsson, Larsson & Sjöberg, 2004).

Cancellation rate reflects a well-managed preoperative preparation process as the introduction of preoperative preparation clinics for patients reduces cancellations on the day of surgery from 78% and 42% total cancellations (McKendrick, *et al.* 2014). Almost half of the cancellations were not due to medical reasons, and these cancellations could be reduced by better administrative and surgical planning and better communication with the

patient and/or his family (Chang, *et al.* 2014). Cancellation rates varies in different settings, from less than 1% to as high as 23%, (Chiu, *et al.* 2012).

2.6.3 Responsive governance performance indicators

2.6.3.1 Existence of quality structure & measurements

Quality management through implementing quality within hospital structure is essential and empowering point to achieve its goals. Quality will be the cornerstone metric of organizational performance in the coming years for all health-care organizations, so that we must begin to develop organizational structures that address this challenge from a management perspective (Glickman, *et al.* 2007). Continuous quality improvement or total quality control are names for a philosophy of management that aims to help organizations of all kinds improve performance through eliminating poor quality during production or delivery of the product or service rather than through trying to fix the results after the product has been made or the service given (James, 1989).

A QI strategy refers as an intervention aimed at making great advances in quality healthcare services (Lazakidou, 2011) and performance assessment is just the starting point for quality improvement. Effective organizational capabilities, such as leadership, human capital, information management systems and group dynamics (such as culture and incentive systems), are essential structural elements of quality improvement in a health-care organization and serve as the primary catalysts for process change (Glickman, *et al.* 2007). Characteristics of hospital leadership engagement in quality improvement are most likely to strengthen quality improvement activities, and better quality scores are associated with hospitals where the board spends more than 25% of their time on quality issues, receives a formal quality performance measurement report, and engages in a high level of interaction with the medical staff on quality strategy (Vaughn, *et al.* 2006).

Hospitals still facing significant challenges in implementing quality initiatives related to identifying priorities, developing sustainable processes and identifying the appropriate framework for successful implementation of quality-improvement initiatives (Glickman, *et al.* 2007). Developing a strategic performance measurements system may contains the most important financial performance indicators, as well as non-financial performance indicators that are able to examine the quality of the provided services, the satisfaction of internal and external customers, the self-improvement system of the organisation and the

ability of the organisation to adapt and change as these indicators play the role of key performance indicators (Grigoroudis, Orfanoudaki & Zopounidis, 2012).

2.6.3.2 Responsive QI activities

Translating performance indicators findings to quality activities through responsive governance where change is needed is the first step to quality improvement. Management approaches was a genuine attempt to change and improve the organization to focus efforts, to improve the quality of the products and service (Swayne, *et al.* 2012) .

Responsiveness is the ability of the government and other institutions to respond to population health needs at both the regional and local levels (Siddiqi, *et al.* 2009), and this come as a result of continuous monitoring of the arising needs and demands of clients and the overall demographically society changes to respond with needed services.

It is known that meeting client's needs is an important indicator for the extent of responsiveness of health care as well as it indicates involvement of clients in planning and evaluating health care services. Involving patients in the planning and development of health care is essential as evidence supports the notion that involving patients has contributed to changes in the provision of services across a range of different settings (Crawford, *et al.* 2002).

For care providers strategies to increase productivity, competence and responsiveness of health workers are important as those related to patients responsiveness, through initiating specific interventions such as the provision of performance-related allowances to more comprehensive approaches that combine aspects such as training, supervision and the provision of drugs and guidelines (Dieleman & Harnmeijer, 2006).

2.6.4 Staff orientation performance indicators

2.6.4.1 Training expenditure

Continuous development of the human resource of the organization is one of the requirements for a healthy and improving organization. Experts agree that investing in employees is highly predictive for ultimate success (WHO, 2004-a). Incentives and management related to human resources have an indirect impact on the use of other resources as well (WHO, 2000). Investment in human capital and treating it conceptually in the same way as physical capital, with education and training as the key investment tools

to adjust the human capital stock and determine the available knowledge and skills. (Saltman, & Ferroussier-Davis, 2000).

Inadequate knowledge, skills and inappropriate attitudes can all form obstacles to good health care so that emphasis on that advances in insights into treatment and diagnosis, as well as changes in roles and responsibilities, require continuous professional development among health workers, and a lifelong learning process must be developed at the start of a professional career in the health sector (Dielemann & Harnmeijer, 2006). In Reeves, *et al.* (2013) review study indicated that inter professional education produced positive outcomes in the following areas: diabetes care, emergency department culture and patient satisfaction; collaborative team behavior and reduction of clinical error rates for emergency department teams; collaborative team behavior in operating rooms; management of care delivered in cases of domestic violence; and mental health practitioner competencies related to the delivery of patient care. So that investment on this structural measure, will contributes in improving quality of provided care.

2.6.4.2 Excessive working hours.

Number of hours worked exceeding normal working hours, or the percent of weeks worked more than 48 hours during a specified period (WHO, 2007-d). This indicator is limit to nurses and nurse assistants, and lower rate of excessive hours worked are better. According to the European directive on working times, "*member states shall take measures to ensure that workers enjoy an average of weekly working period of not more than 48 hours, including the overtime for each seven-day period* " (DIRECTIVE, 1993).

Excessive working hours has an impact on staff health and satisfaction. They reflect overload, job strain and poor human resource planning. But they also have an impact on patient safety as evidence suggest that professionals that are tired make more errors. The EU's working directive has direct implications for the health sector (WHO, 2007-d). Many studies explain the effect of excessive working hours of health staff, and how it may lead to work related stress and affect care provider productivity where shift work and long work hours increase the risk for reduced performance on the job, obesity, injuries, and a wide range of chronic diseases. In addition, fatigue-related errors could harm patients (Caruso, 2014). Fatigued nurses also endanger others during their commute to and from work. The risks of making an error were significantly increased when work shifts were longer than twelve hours, when nurses worked overtime, working for ≥12

hours were more likely to report poor or failing patient safety, poor/fair quality of care, and more care activities left undone (Griffiths, *et al.* 2014), while more favorable staffing hours were associated with fewer fall incidents (Stalpers, *et al.* 2015).

2.6.4.3 Staff absenteeism

Absenteeism is referred as failure of employees to report for work when they are scheduled to work (WHO, 2004-a). Absenteeism by health providers is a frequently occurring phenomenon in many health facilities, especially in resource-poor areas (Dieleman & Harnmeijer, 2006).

Evidence suggests a high burden of absenteeism in hospitals with negative implications on work organization and patient care, where high burden on hospital functioning in terms of cost to compensate lost working hours, increased workload for the remaining staff, lost productivity, lower quality if highly skilled personnel providing essential services cannot be replaced (WHO, 2007-d). Staff shortages limit accessibility to health services, which in turn affect health outcomes (WHO, 2004-b), while patient satisfaction related to relationships with staff was significantly and negatively correlated with nurse short-term absenteeism for non-medical reasons and with nurse absenteeism starting at weekends (Duclay, *et al.* 2015), (Moret, *et al.* 2012). Moreover there is strong theoretical support and a demonstrated relationship with practice environment, job satisfaction, morale, job involvement (WHO, 2007-d). Factors predicting the rate of absenteeism include engagement, motivation involvement, physical violence from colleagues or patients a lack of equality and diversity training (West, *et al.* 2011).

Staff absenteeism rate classified according to absence period as the following: Short-term absenteeism from 1 to 7 days and from 2 to 7 days while long-term absenteeism more than 30 days to 1 year (WHO, 2004-a). Employees who are away from work on recognized holidays, vacations, approved leaves of absence, or leaves of absence allowed for under the collective agreement provisions would not be included.

2.6.4.4 Staff work-related injuries

Work related injuries vary according to healthcare facilities settings and type from work stress discomfort, trauma, needle stick injuries to severe infections (WHO, 2003), and may relate to other indicators like lack of training, burning out and excessive working hours where experiencing job-related injuries associated with lower levels of job satisfaction,

increased turnover intentions, and are less likely to recommend the facility as a place to work or seek care services in addition to that injury rates are related to employee ratings of injury prevention training, supervisor support, and employee engagement while injuries less like to occurs when care provides under supervisor support, employee engagement, and training (McCaughey, *et al.* 2014).

The occurrence of needle stick injuries was found to be quite common, a large percentage (79.5%) of health care workers reported having had one or more needle stick injuries in their career (Sharma, *et al.* 2010), while daily patient transfer was associated with increased risk for back injury among healthcare workers (Andersen *et al.* 2014) while surgeons are likely to be susceptible to stress, sharp injuries, burnout and psychiatric morbidities, substance abuse and musculoskeletal pain (Vijendren, *et al.* 2014).

2.6.4.5 Staff burnout

Burnout was originally conceptualized as a specific stress syndrome among health care professionals resulting from emotionally charged interactions with patients (Maslach, 1982). The most widely accepted definition of burnout which led to the establishment of the MBI stated that burnout is a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individual who do people work of some kind (Maslalach & Jakson, 1986). The MBI developed to measure burnout as a specific kind of occupational stress reaction among human service professionals.

The most popular scale for measuring burnout is Maslach's MBI theoretical framework (Maslach & Jackson, 1986). It recognizes a single syndrome defined by three components:

1. **Emotional exhaustion (EE):** manifests when individuals are unable to psychologically give of themselves to the degree expected of them, and are therefore behaviorally inapt at investing in effort towards performing.

2. **Depersonalization (DP):** involves withdrawal, and the distancing of oneself from colleagues and clients resorting to impersonal relationships and remote contact.

Reduced personal accomplishment (RA): results from negative self evaluations, and involves a decrease of productivity and the resignation of any effort to perform.

Many studies showed the effect of burnout on quality of care, leading factors of burnout, and organizational factors associated with burnout status. Unfavorable individual scores on psychosocial job characteristics and organizational factors are associated with higher levels of burnout and lower quality of care scores, while moderate support for a mediating role of burnout in the association between quality of work and quality of care was found (Van der Doef, *et al.* 2014). Nurses working shifts of ten hours or longer were up to two and a half times more likely than nurses working shorter shifts to experience burnout and job dissatisfaction and to intend to leave the job. Extended shifts undermine nurses' well-being, may result in expensive job turnover, and can negatively affect patient care (Stimpfel, 2012). Weak retention rates, high turnover, heavy workloads, low staffing levels and/or staffing shortages conspire to create a difficult working environment for health professionals, one in which they may struggle to provide high-quality care and which may also contribute to health professional burnout (Humphries, *et al.* 2014). Moreover EE and DP in nurses had a positive correlation with sharps injuries nursing administrators should pay more attention to clinically burned-out nurses, and provide more opportunity to nurses for training and education to reduce the prevalence of sharps injuries (Wang, *et al.* 2012).

2.6.4.6 Staff turnover

Staff stability is one of the most important factors to assure high quality, and cost effective care, and considerd as one of benchmark measuring quality of service (American Health Care Association, 2012). The costs and consequences of physician turnover are substantial and may include: (a) financial consequences, (b) effects on patient satisfaction, and (c) effects on the organization or practice as a whole, related to the experience of other healthcare providers, and effects on institutional public relations (Misra-Hebert, Kay & Stoller 2004). Minimum cost of turnover represented a loss of > 5 percent of the total annual operating budget (Waldman, *et al.* 2010). When hospitals turnover rate increases, it is commonly sense that productivity and knowledge will negatively be affected, while workload will increase for those of the team left while the position is not yet filled. Shortages of health care staff can be a symptom of low job satisfaction, poor management and lack of organizational support (Zurn, Dolea & Stillwell, 2005).

To reduce turnover and improve experiences for both employees and patients factors such as culture, training and employee engagement should be taken into consideration, where the extrinsic values encompass the tangible aspects of the job including wages, benefits

and bonuses, while the intrinsic values include status, recognition, personal and professional development opportunities (Cowin, 2002).

2.6.4.7 Working conditions

Quality of care for the patients starts with the care providers themselves and any quality improvement effort that does not consider the needs and assets of the employees is doomed to failure (WHO, 2004-a). Focusing on the staff work environment is an important component of caring for the caregivers. From the Provider's perspectives, quality care implies that he or she has the skills, resources, and condition necessary to improve the health status of the patient and the community, according to current technical standards and available resources, while provider commitment and motivation depend on the ability to carry out his or her duties in an ideal or optimal way (Lazakidou, 2011).

Healthcare organizations should be patient-centred, and they need to 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 them to provide to patients, so that as hospitals respond to patients, they must also respond to the needs of the health care provider (Shaller, 2007).

2.6.5 Patients centeredness performance indicators

2.6.5.1 Access to services

Accessibility to health services described as the degree to which healthcare services are unrestricted by geographic, economic, social, organizational, linguistic, or other barriers (Massoud, *et al.* 2001), clients have a right to services that are affordable, are available at convenient times and places, are fully accessible with no physical barriers, and have no in-appropriate eligibility requirements or social barriers, including discrimination based on sex, age, marital status, fertility, nationality or ethnicity, social class, religion, or sexual orientation (COPE, 2003). Four main characteristics for patient-centered access are availability of physical and financial affordability, appropriateness which means obtaining proper levels of care without affecting medical technical standards, access to preferred provider or specific medical service, and finally timeliness (Berry, *et al.* 2003).

2.6.5.2 Patient expectation

Expectations are often simply defined as individual's beliefs regarding desired outcomes (De Silva & Valentine, 2000). Health services exist to meet the health needs of clients, so the delivery of health services should be designed to meet those needs (Massoud, *et al.* 2001). Stakeholders need to understand the expectations underlying patient's views in order to interpret their feedback to respond accordingly. Thus, what people anticipate, or expect to receive, from their health care, compared with their perceptions of what they receive in practice, are potentially important in predicting patient satisfaction and dissatisfaction with their care, treatment and health outcomes (Bjertnaes, *et al.* 2012).

Patients' expectation domains suggested by WHO (2007-d) were; respect for patients' preferences and expressed needs, coordination of care and integration of services, information and education, physical comfort and pain relief, emotional support and alleviation of fears and anxieties, Involvement of family and friends, Transition to home and continuity of care, while expectation domains were summed by the six expectation type domains by Bowling, *et al.* (2012) review study; structure of health care, process of health care, doctor–patient communication style, treatment process – clinical procedures performed, doctor–patient approach to information, and health outcome expectancies.

To summarize, tailored PATH tool's six dimensions used for assessing NOH's hospital performance with various sub dimensional indicators. Core and tailored indicators regarding different areas are used to assess clinical, surgical, managerial, and patients as well as staff safety.

This comprehensive framework for hospital performance assessment could be a supportive tool in continuous quality improvement and in improvements in hospital accountability and performance management.

Chapter 3

Methodology

3.1 Study design

The design of this study is triangulated, descriptive, analytical, cross-sectional one to assess service quality provided at NOH using modified PATH tool. Methodological triangulation would provide combination between quantitative (patients interviews, self-administer questionnaire for NOH staff, record review and checklists) and qualitative paradigms (key managers small discussion group) to validate findings from one method with another. Cross sectional design reflects the existing facts at the same point of time of data collection.

3.2 Study populations

This study includes four types of populations:

1. Staff working at NOH, various care providers, ophthalmologists, optometrists, nurses, pharmacists and anesthetists in addition to administrative employee (120 employee).
2. Discharged patients from the hospital (250 patients).
3. Key managers for the small discussion group (5 managers).
4. Patient's medical files to track documentation status at NOH (350) in addition to hospital annual reports, data base statistics, surgical and medical records to extract related indicators e.g. readmission rate, length of stay, excessive working hours.

3.3 Study Setting

This study was conducted at NOH, including hospital outpatient clinics, surgical department and administrative department.

3.4 Study period

The study was conducted between June 2015 and March 2016.

3.5 Sampling

3.5.1 Sample calculation

- Staff sample included total population of care providers and administrative employee at NOH (120 employee).
- Patient sample calculated according to University of Florida formula; average monthly discharged patients in the hospital are 450 patient (NOH, 2014) so sample size for ±5%, and ±10% precision levels where confidence level is 95% and P=.5 is (220) patients.
- Key managers sample included total 5 key managers at NOH, hospital manager, medical manager, administrative manager, nurses manager and out clinic manager.
- According to University of Florida formula; to review records and documentation status; sample size for ±5%, and ±10% precision levels where confidence level is 95% and P=.5 is 350 patients medical files, which was a representative sample for total 1911 patients files.

3.5.2 Sampling process

3.5.2.1 Staff Sample: Staff sample included (total population) of all staff at NOH (care providers professionals and administrative employee) working at the hospital for self-administer questionnaires.

3.5.2.2 Patient Sample: Purposive sampling technique was used to select discharged patients in 2015. Patients who were admitted for any medical cause or for planned surgical admission was included in the sample.

3.5.2.3 Key Manager Sample: A non-probability purposive sample of five key managers was selected. The idea of including this sample is to dig deep and understand in-depth the perspectives about quality, quality structure, performance measurements, and responsive activities for QI. The qualitative component will be carried out after the quantitative one in order to explore issues that arise from the quantitative study.

3.5.2.3 Records review sample:

A. Patients' files: A sample of 350 patients files distributed between inpatients and outpatient files. According to the total number of each file type; the percentage of each sample was as the following: 20% for medical treatment admissions files, 35% for surgical files (cataract surgeries), and 45% for out clinic (Glaucoma unit).

Inpatient file sample: Purposive surgical sample was chosen for cataract surgical files as they make the main bulk of surgical files with a percentage of (45%) of total surgeries, followed by random cataract file sample selection. While random sample from files of any type of patients' files who admitted for medical treatment.

Outpatient file sample: Random sample from glaucoma files unit.

B. Hospital records: Hospital annual report, hospital data base and statistics, surgical and medical records were reviewed from 1st of January 2015 to the end of the year for some indicators and for less period for others according to burden of data collection of the indicators.

3.6 Eligibility criteria

3.6.1 Inclusion

1. **Staff:** Fixed contract employee after one year of employment.
2. **Patient**: admitted at NOH for one day or more for medical and planned surgical admission causes, who were discharged from the beginning of 2015 and during the data collection period.
3. **Key managers:** Top managers who occupying managerial positions in the hospital during study period.
4. **Records review and medical file:**

- Hospitals annual report 2015, surgical and medical records and statistics 2015.
- In patient (cataract surgical files, and any type of medical admission files), while outpatient file (Glaucoma clinic files) for patients who received care during 2015.
- Eligible cataract operations were those performed using Phaco or ECCE and where the primary intention was cataract surgery.

3.6.2 Exclusion

1. Staff

- Employee working for less than 1 year with unfixed employment contract.

2. Patients

- Uncooperative old ages patients
- Age group under 15 years

3. **Managers**: Managers occupying position for less than 1 year at NOH.

4. **Record review and checklists**

- Combined cataract surgeries for both surgical documentation review and cataract surgeries outcome.
- Glaucoma medical files for patients who start follow up at advance stage, and files of children with congenital glaucoma.
- Laser therapy combined with other medical or surgical interventions.

3.7 Study instruments

At this study PATH tool (Performance Assessment Tool for Hospital quality) utilized as the main research tool in addition to other supportive tools as the following:

1- Staff's questionnaire (Annex 2), which was self-administered and consists from 4 parts:

- The first part includes data regarding socio- demographic variables of the health providers and hospitalization information
- The second part explores working conditions (Enabling care delivery circumstances – Managerial Practices – Training).
- The third part is related to work-related injuries part.
- The fourth part has to do burnout scale (MBI) (Maslach & Jakson, 1986).

2- Patients' questionnaire (Annex 3), for discharged patient interviews, and it consists from three parts:

- The first part consists of questions related to socio-demographic data about patients and hospitalization related questions.
- The second part explores patient access to care (physical- financial- information- medication).
- The third part explores patient expectation (process of care-consultation and treatment – treatment outcome).

3- Small discussion group questions (Annex 4), those questions asked by the researcher in a small group discussion with key managers focusing on perception of quality, existence of quality structure and measurements in the hospital and responsive QI activities.

4- Record review for hospital statistics records and annual reports to extract related indicators and 3 checklists to extract data from inpatient and outpatient files (Annex 5,6,7), which was constructed as the following:

- The first checklist was formulated for in patients' files (cataract surgical file), where it was divided into different items regarding different sheets in the files. Admission sheet and discharge sheet were divided into sub items, as they are the most important sheets in the files; they containing the main bulk of patient's healthcare information. Other sheets as anesthesia report, vital signs, preoperative checklist, consent form, and medical cardex were overall checked regarding documentation status of total items.
- The second checklist was formulated for in patients' files (medical admitted patients' files), where it was divided same way as the surgical checklist but anesthesia report, vital signs, preoperative checklist, consent form was not included.
- The third checklist was formulated for outpatients' files (Glaucoma file), where checklist's items were extracted regarding items of NOH's glaucoma clinic sheet.

3.8 Pilot study

A pilot study was carried out on 15 patients and 15 employee to examine the validity and reliability of the study instruments and check the appropriateness of wording. In addition, 20 medical files were checked for the possibility of extraction form the files. As a result of the piloting, further improvement and some modifications were introduced in the tools.

3.9 Data Collection

The first component of data collection was self-administer questionnaires for NOH's staff, which took place within 4 weeks. The second component was interviews with discharged patients, which took place within 10 weeks. The third component was record review and checklists; hospital statistics, annual reports, surgical and medical records followed by observation checklists to extract needed data from patient medical files, all was conducted in 4 months. The fourth component of the data collection was small discussion group with key informants. Semi-structured questions were designed and questioned for top managers by the researcher. Notes were taken through the interviews and recorded to allow further information collection.

In-depth discussion group interview was conducted after the end of quantitative data collection. Table (3.1) showed study indicators.

Table (3.1) Indicators with related dimensions data source and data collection tool

Dimension	Indicator	Data source	Data collection tool
Clinical effectiveness and safety	ECCE to Phaco rate	Surgical records	Record review
	Visual outcome post (laser therapy DM & PDR)	Patient medical files	Record review
	Rate of hospital-acquired infections (endophthalmitis)	Surgical & medical admission records Patients' files	Record review
	Visual outcome and complication rate (Cataract surgeries)	Surgical records+ Patient files	Record review
	Day surgery rate	Surgical records Hospital annual record	Record review
	30 day Readmission rate	Hospital electronic data base Patients files	Record review
	Medical documentation	In patients' file (surgical and medical) admission Outpatient file	Checklists
Efficiency	Length of stay	Hospital annual reports	Record review
	Attendance to appointments	Hospital annual reports	Record review
	Surgical cancellation rate	Hospital annual reports	Record review
Responsive governance	Existence of quality structure and measurements	Key managers	Key manager discussion group
	Responsive QI activities	Key managers	Key manager discussion group
Staff orientation and safety	Training expenditure	Key managers	Key manager discussion group
	Turnover rate	NOH's personnel affairs records	Record review
	Absenteeism rate	NOH's personnel affairs records	Record review
	Excessive working hours	NOH's annual report	Record review
	Work related injuries	Staff members	Staff questionnaire
	Staff burnout	Staff members	Staff questionnaire
	Work conditions	Staff members	Staff questionnaire
Patient centeredness	Patient access to care	Discharged patients	Patient interview questionnaire
	Patient expectations	Discharged patients	Patient interview questionnaire

3.10 Data entry and analysis

3.10.1 Quantitative part

Statistical Package of Social Science (SPSS) program version 20 was used for data entry and analysis. Entry models were designed after over viewing of the questionnaires and checklists, variables were coded and entered. Data cleaning was done through checking out the questionnaires for any suspected or missed values.

Means and Standard Deviations (SD) of continuous numeric variables were computed, and then recoded in according to suitable categories. Descriptive statistical analysis was made by comparing frequencies and percentages of different variables.

Independent t-test and one-way ANOVA (include Scheffe- Post Hoc) test was used to examine the relationships between independent (categories) and dependent variables (numeric scores). The independent t-test was used to compare two means of independent variables and the one-way ANOVA tests to compare means of one independent variables with more than two categories. P value was regarded as statistically significant < 0.05.

3.10.2 Qualitative part

Open coding thematic analysis method was used to analyze the transcripts of the key manager small discussion group. The researcher obtained the main findings from the transcripts of the discussion followed by categorization of related ideas. Comparison and integration between the quantitative and the qualitative findings was done for deep understanding and rationalization of both findings.

3.11 Scientific rigor

3.11.1Quantitative part (questionnaire and checklists)

3.11.1.1 Validity

Data collection tools were reviewed by ten different experts (annex 8) with different background to ensure the face and content validity and to evaluate its relevance to the study objectives. Almost all comments were taken to consideration. Also, a pilot study was conducted before the actual data collection to examine staff and patients responses to the questionnaire and how they understand them. In addition, a pilot study on patients' medical files was carried out to examine the formulated checklists and the extent they are

suitable to extract needed data. This would enhance the validity and standardization of the instruments in the field.

3.11.1.2 Reliability

To assure instruments reliability, training on data collection and the way of asking questions was designed to ensure standardization of questionnaire filling. Moreover, to ensure the quality of data collection, entering the data directly after being collected, in order to allow possible interventions needed to assure data quality or to re-fill the questionnaire.

The reliability of questions was tested by using the reliability coefficient "Cronbache" Alpha test. The overall reliability co-efficient for staff questionnaire was 0.924 with total items of 46 for 1st scale that exploring work conditions and work related injuries, while the second scale of Maslach which exploring employee burnout status was .848 with 22 total number of items. Regarding patients reliability factors Cronbach's Alpha ranges from 0.611 for 1st scale, (Yes - No) for access part, while for 2nd Likert's scale for expectation part the scale reliability was 0.705 with total 14 items. The validity of the qualitative key managers discussion group data was assured by going back to respondents to make sure that the analyzed data was correctly interpreted and low inference description by using description phrased congruent with respondent's responses.

3.11.2 Qualitative part (small discussion group)

A peer check review done through health experts to revise group discussion questions to assure covering all dimensions. Then, a member check will be done to assure accuracy and transparency of the transcripts during the discussion group. Prolonged engagement to probe for answers and cover all discussion dimensions properly. In addition, recording the discussion would enhance tracking up facts and re-check the accuracy of the transcripts.

3.12 Response rate

From 250 surveyed patients, 230 patients agreed to participate in this study, which represented 92% of the study sample. On the other hand, 103 health care providers from 120 agreed to participate in this study, which represented 85.83% of the study sample.

3.13 Ethical Considerations

An ethical approval was asked for from School of Public Health at Al-Quds University and Helsinki Committee, (annex 9). Also an official administrative letter was obtained from MOH to conduct the study at the NOH (annex 10). To guarantee participants rights, a covering letter indicating that the participation is voluntary and confidentiality will be assured for all of them. Staff and patients and was asked for their agreement to participate in the study while key informants were asked for their permissions to record the small discussion group.

3.14 Limitations of the study

- Insufficient statistical hospital records.
- Inadequate postsurgical information in the hospital.
- Lack of studies on ocular health and ocular disease prevalence at Palestine.

Chapter 4

Results and discussion

4.1 Introduction

This chapter presents the study findings; it shows main findings of the statistical analysis, and the answers to the research questions. Moreover, the study results discussed and argued in the light of the previous studies.

1 The first part includes statistical description of the study samples characteristics; staff, patients, managers and medical files.
2 The second part includes descriptive and inferential statistics findings of staff, patients, and managers perspectives regarding the quality of care, followed by description of files' documentation status.
3 The third part includes different performance indicators findings followed by a comparison with PATH standards and national standard for each indicator to answer what is the current situation of quality of care provided at NOH.
4 The fourth part will highlights on strengths and weaknesses regarding findings of quality performance indicators at NOH to make a baseline for future potential quality improvement interventions.

4.2 Study samples characteristics

4.2.1 Staff sample characteristics

In this part a description of staff's socio-demographic characteristics respondents was illustrated. Respondent staff at NOH included health care providers from various professionals; (physicians, nurses, optometrist, pharmacists, anesthetists), in addition to the administrative employee. Total respondents were 103 employee.

Table (4.1) showed that total percentage of males respondents were (66%), while (34%) were females. Respondents age ranged from (25-58) years; mean age was 37.38 with ± 8.35 SD.

Table (4.1): Distribution of surveyed staff by characteristics variables (N= 103)

Variables	**Freq.**	**%**
Gender		
Male	68	66
Female	35	34
Age		
30 years and less	30	29.12
31- 40 years	33	32.03
41 years and more	40	38.83
Mean= 37.38 Median= 35.0 SD= 8.35		
Marital status		
Married	87	84.46
Other (single, widow, divorced)	16	15.53
Profession category		
Physician	25	25.2
Nurse	30	29.1
Pharmacists, Optometrists, Anesthetists	18	17.5
Administrative	29	28.2
Place of residency		
North Gaza	22	21.4
Gaza	52	50.5
Middle Zone and South Gaza governorates (Khanyounis & Rafah)	29	28.15
Educational level		
Diploma	30	29.1
Bacalor	51	49.5
High studies (Master, PHD)	22	21.4
Years of experience in current hospital		
Less than 5 years	27	26.2
5 – 10 years	39	37.9
Over 10 years	37	35.9

The largest age group was 41 years and more, which represented 38.83% of the sample, while the second highest age group was (31-40) years representing (32.03%) of the study respondent population, followed by (29.12%) of 30 and less age group. Regarding marital status (84.5%) were married, while others were (15.5%) (Single, widow, divorced).

Regarding professionals distribution, the highest was nurses with (29.1%), followed by administrative employee with (28.2%) and physicians (25.2%), while other professionals were (17.5%) (Optometrists was (61.11%), Pharmacists was (22.22%), Anesthetists (16.66%).

Regarding the place of residency (50.50%) of respondents were from Gaza, while (28.15%) from Middle Zone and South Gaza Governorates (Khanyounis & Rafah), while (21.4%) from north Gaza. The study findings shows different levels of experience among NOH staff; (26.2%) has less than 5 years experience, while (37.9%) has 5-10 years, and finally (35.9%) has an experience of 10 years and more.

4.2.2 Patient's sample characteristics

This part shows the distribution of total 230 surveyed patients by demographic characteristics and by hospital related variables. Table (4.2), (4.3) shows respondents' distribution regarding different variables. Gender distribution in patient sample was (47.4%) males and (52.6%) females, while respondents age ranged between 15-80 years old ($m = 50$, $SD \pm 18$). The highest age group was within the age group 61 years and more (36.52%); the second group was aged between 51- 60 years (21.30%). This rate of old age respondents came as a result of the highest rate of discharged patients after cataract surgeries (NOH, 2015), which is the highest age related ocular disease (WHO, 2007a). Moreover findings consistent with global estimates of visual impairment, where people with 50 years age and older, represent 65% of visually impaired, while they represent 82% of blind (Pascolini & Mariotti 2011).

With respect to respondents educational level, (23%) were university level education, 27.8% having secondary education, while (22.6%) had preparatory level of education, elementary (13.5%) and (13%) were illiterate. This relates to the nature of the study, which surveyed a specific group from general population.

Table (4.2): Distribution of surveyed patients by demographic characteristics (N=230)

Variables	Freq.	%
Gender		
Male	109	47.4
Female	121	52.6
Age		
35 and less years	58	25.2
36-60	88	38.3
61 and over	84	36.5
Mean= 50 Median= 55 SD= 18		
Material status		
Married	154	67
Other (single, divorced, widow)	76	33
Education level		
Illiterate & elementary	61	26.5
Preparatory	52	22.6
Secondary school	64	27.8
University	53	23
Place of residency		
Gaza city	113	49.13
Other GG (North Gaza, Middle Zone, Khanyounis Rafah)	117	50.86

Regarding place of residency (49.13%) of participants were living in Gaza, while (50.85%) were from other GGs. Even though the study was conducted at one place in Gaza city, but this pattern of respondents' distribution at NOH came as a result of being the only governmental hospital specialized for eye services in GGs. In addition it reflects improper geographical distribution of ocular care within MOH facilities, which put extra burden on patients regarding physical access to the hospital, and extra burden on NOH.

Table (4.3) shows of respondents by hospital related variables. Regarding type of admission was as the following: (82.2%) of respondent were admitted for surgical procedures, while (17.8%) were admitted for medical treatment.

Table (4.3): Distribution of respondents by hospital related variables (N= 230)

Variable	Freq.	%
1- Department		
Cataract	111	48.3
Retina	54	23.5
Cornea	34	14.8
Oculoplastic	31	13.5
2- Type of admission		
Medical treatment	41	17.8
Surgical procedures	189	82.2
3- Frequency of admission		
First time admission	176	76.5
Frequent admissions	54	23.5
4- Times or readmission		
1 time	176	76.5
Frequent times	54	23.5
Mean = 1.3 Times Median= 1 SD= 0.83		

Pertaining to frequent admission status, (75.5%) of respondents were admitted for one time, while (23.5%) were frequently readmitted. Regarding unit/ department; (48.30%) cataract, (23.50%) retina and glaucoma, (14.80%) cornea, (13.50%) oculoplastic. This is congruent with NOH (2015) annual report, where (45.12%) of discharged patients was due to cataract surgeries, which was the highest rate.

4.2.3 Manager's sample characteristics

The total number of managers' study sample at discussion group was 5 males' key managers. Three ophthalmologists (hospital general manager, medical director, out clinic department manager), nurse unit manager, and finally hospital administrative manager. (Annex 11) showed description of respondents managerial positions and educational degrees.

4.2.4 Medical file's sample characteristics

In this study the researcher reviewed a random samples of (350) medical files, which divided according to the number of files between inpatient (medical admissions and surgical admissions), in addition to outpatients medical file.

For inpatient medical files (122) cataract surgeries were selected to be the representative file for surgical department as it make the main bulk of surgical files at NOH, **while (70) medical admitted patient's files for medical treatment were checked.**

Regarding outpatient documentation in out clinic department, glaucoma clinic was the only clinic which has a well formulated files with special sheet designed for glaucoma patients. **A sample of (158) glaucoma patient medical files were checked.**

4.3 Staff's perspectives about quality of care

4.3.1 Descriptive statistics

4.3.1.1. Work conditions regarding (Enabling care delivery circumstances – Managerial Practices – Training)

Work conditions domain is divided into three sub-domains; enabling care delivery circumstances domain which including 17 items, managerial practices domain which includes 14 items, and finally training domain which includes 8 items and ends with an open question for any training needs suggestions. Total score reflecting health care provider's perspectives about working conditions. Questions were assessed according to a scale ranging from 1 for "Strongly disagree" to 5 for "Strongly agree". The highest means scores mean more positive perspectives, while the lowest indicate lower perspectives.

A- Enabling care delivery/work circumstances

This domain explores if care delivery/work circumstances at NOH are enabling for quality care. The first part estimates generally work circumstances regarding all professionals at NOH, while the second part explores specific healthcare circumstances where administrative employee were excluded.

Table (4.4) shows that the highest mean score was 3.17 (63.4) for availability of bath rooms and toilets for employee, while the lowest a mean score 2.23 (44.6) reported for the availability of specialized place for employee for rest and break times. These scores reflect inadequate circumestances where places specialized for staff biological rests are essential at the hospital, specially for staff with night shifts.

In this study ascore of (60) reported for the statment which exploring if care delivery/ work is done through known and written protocols, and (59%) reported that direct supervisors monitoring work protocols compliance. Generally the workload at governmental hospitals may be a barrier toward implementing protocols and standards of care, but lack of managment comittement regarding standarization of care may be the main gap.

Table (4.4) Staff's perceptions of enabling work circumstances

Statement		Strongly disagree	Disagree	NAD	Agree	Strongly agree	Total	Mean	100 points
1. All essential equipment & needs are available for care delivery/ work	N	10	42	19	30	2	103	2.72	54.4
	%	9.7	40.8	18.4	29.1	1.9	100		
2. Care delivery/ work done through known and written protocols	N	7	32	20	41	3	103	3.00	60
	%	6.8	31.1	19.4	39.8	2.9	100		
3. Direct supervisors monitor work protocols compliance	N	9	34	22	34	4	103	2.90	59
	%	8.7	33	21.4	33	3.9	100		
4. I receive on job support from my supervisors when I need	N	16	23	27	34	3	103	2.85	57
	%	15.5	22.3	26.2	33	2.9	100		
5. Number of working hours is suitable for provided services	N	11	32	12	42	6	103	3.00	60
	%	10.7	31.1	11.7	40.8	5.8	100		
6. There are opportunities for continuing education and development at NOH	N	19	34	22	24	4	103	2.61	52.2
	%	18.4	33	21.4	23.3	3.9	100		
7. Work place is clean, well ventilated and suitable for providing service	N	19	21	16	39	8	103	2.96	59.2
	%	18.4	20.4	15.5	37.9	7.8	100		
8. Bath rooms and toilets are available for employee	N	12	25	7	51	8	103	3.17	63.4
	%	11.7	24.3	6.8	49.5	7.8	100		
9. Drinking water and hotel services specialized for employee is available	N	20	22	13	41	7	103	2.93	58.6
	%	19.4	21.4	12.6	39.8	6.8	100		
10. There is a specialized place for employee for rest and break times	N	31	39	13	18	2	103	2.23	44.6
	%	30.1	37.9	12.6	17.5	1.9	100		
11. I am satisfied about care delivery/ work conditions	N	21	40	28	14	-	103	2.33	46.6
	%	20.4	38.8	27.2	13.6		100		
Overall								**2.79**	**55.8**

The study results are consistent with Al-Telbani & Radwan (2013) study findings which explored the relationship between the factors hindering QI and the implementation of QI, the study showed that (50.6%) reported that tasks are implemented in a hubhazardly and non uniform way, while (10.1%) stated that employees at their work setting are in line with standards implementation.

Regarding staff's satisfaction with enabling work conditions, ascore of (46.6) was reported, while (54.4) for avilability of essential equipment & needs for care delivery/ work were avilable. This is relatively consitient with Shamia (2016) study findings, where 71.5% of respondent reported that siege period negatively affected the avilability of equipments and medical supply qualtitively, while 63.7% reported qualitatively negative effect at MOH hospitals. Morover Shamia's study (2016) showed employee lacking of job

satisfaction are due to limited MOH capabilities in siege extended years and its effect on decreased work motivation.

Current critical MOH situation and devastating fragmentation contribute to the deterioration of enabling work conditions. NOH's medical director commented on the qualitative part…"*Improving enabling work conditions in current siege situation, where we lack resources, could be hardly achieved"*.

Such a situation of low satisfaction and lack of future development opportunities could affect staff performance; WHO (2000) emphasized that physicians, nurses and other health workers are not motivated only by present working conditions, income and management; based on past experiences they are also influenced by what they believe those conditions will be in the future.

The overall mean score for this domain was 2.79 (55.81). This indicates that work circumstances are not enough enabling conditions for providing best quality care/work.
To conclude NOH's has a complex situation as many governmental hospitals. In a such as situation physical resources could be hardly attained, while standardization of care and protocol compliance of best practices need at least essential equipments and medical supplies. Even management strategies for empowering and motivating employee could not help in such situation. Management's efforts clarified through manager's interview "*We tend to motivate employee through recognition, developing of work and distribution of ocular specialty regarding employee interests and abilities, but lack of incentives and rewards still major gap"* (Hospital medical director).

The following part at enabling work circumstances specialized only for health care providers (administrative employee was excluded) explore specific healthcare enabling work conditions. Items from (12-17) were calculated for total 76 health care providers. Table (4.5) shows that a score of (64.6) reported by respondent regarding ability to provide patients with best care, while (51.4) agreed that adequate patients' waiting areas was available for patients.

Table (4.5): Staff's perceptions of "specific healthcare" enabling work circumstances

Statement		Strongly disagree	Disagree	NAD	Agree	Strongly agree	Total	Mean	100 points
12. I easily refer patients for further testing and investigation within the hospital	N	3	13	18	41	1	76	3.31	66.2
	%	3.9	17.1	23.7	53.9	1.3	100		
13. I easily refer patient for further testing and investigation outside the hospital	N	7	32	19	17	1	76	2.64	52.8
	%	9.2	42.1	25	22.4	1	100		
14. Physical working conditions adequate to keep patient's privacy	N	16	16	16	27	1	76	2.75	55
	%	21.1	21.1	21.1	35.5	1.3	100		
15. Patient's waiting areas are adequate for patient's numbers	N	13	31	8	23	1	76	2.57	51.4
	%	12.6	17.1	40.8	10.5	30.3	100		
16. Patient entrance to departments and clinics is fluent	N	8	18	16	33	1	76	3.01	60.2
	%	10.5	23.7	21.1	43.4	1.3	100		
17. I am able to provide patients with best care at the hospital	N	5	17	15	33	6	76	3.23	64.6
	%	6.6	22.4	19.7	43.4	7.9	100		
Overall								**2.91**	**58.4**

Moreover (66.2) score reported by respondents about easily refer patients for further testing and investigation within the hospital, while (52.8) easily refer patients outside the hospital. Findings show better internal communication regarding patient referring for further testing and investigations than outside the hospital, but both means are still inadequate for providing high quality care. High quality and safe care depends on the ability of healthcare providers to communicate well with patients and with other health professionals (Canadian Patient Safety Institute, 2009).

Regarding availability of adequate physical working conditions to keep patients' privacy, a mean score of 2.75 (55) was reported indicating poor privacy at NOH, which is essential for delivering quality care. Moreover (60.2) of respondents reported that patient entrance to departments and clinics is fluently, and from daily field observation of the researcher; daily workload end by 12.30 PM, so that results could be expressed by irregular patient flow, which causes peaks of workloads specially in outpatient clinics department. Workflow needs to be modified and patient entrance needs to be distributed by time weighting on current hospital appointment system.

Total mean score of this part was 2.91 (58.4), indicating inadequate healthcare delivery circumstances from perspectives of physicians, nurses, optometrists, pharmacists, and anesthetists. Improper communication, inadequate waiting areas, and

lack of patient privacy which is not accepted, even though NOH have its special building structure and limited building capacity.

B- Managerial practices

This domain explores staff's perceptions regarding managerial practices at NOH. Table (4.6) below showed that the overall mean score of this domain was 2.98 (57.82); indicating moderate positive perception of staff regarding managerial practices.

Table (4.6) Staff's perceptions of managerial practices

Statement		Strongly disagree	Disagreed	NAD	Agree	Strongly agree	Total	Mean	100 points
1. Hospital administration makes job orientation when I received my work.	N	4	21	6	63	9	103	3.50	70
	%	3.9	20.4	5.8	61.2	8.7	100		
2. Hospital administration gives me the opportunity for creativity and development.	N	16	45	20	19	3	103	2.49	49.8
	%	15.5	43.7	19.4	18.4	2.9	100		
3. Hospital administration makes me motivated to work even in hard times	N	24	40	23	13	3	103	2.33	46.6
	%	23.3	38.8	22.3	12.6	2.9	100		
4. Hospital administration involves me in planning for work development.	N	26	34	26	14	3	103	2.35	47
	%	25.2	33	25.2	13.6	2.9	100		
5. Hospital administration delegate me for decision making in some work situations	N	16	30	25	24	8	103	2.78	55.6
	%	15.5	29.1	24.3	23.3	7.8	100		
6. My work is appreciated from hospital administration	N	24	29	23	23	4	103	2.55	51
	%	23.3	28.2	22.3	22.3	3.9	100		
7. I receive feedback of my job performance and how to overcome performance gaps areas	N	17	41	27	14	4	103	2.48	49.6
	%	16.5	39.8	26.2	13.6	3.9	100		
8. Hospital administration treat me with dignity and respect	N	11	14	23	40	15	103	3.33	66.6
	%	10.7	13.6	22.3	38.8	14.6	100		
9. Hospital administration accepts rational change of my shift on schedule after being decided	N	3	15	19	56	10	103	3.53	70.6
	%	2.9	14.6	18.4	54.4	9.7	100		
10. Hospital administrative asks regularly about my needs at work	N	19	40	20	21	3	103	2.50	50
	%	18.4	38.8	19.4	20.4	2.9	100		
11. Hospital administration legally accounts me for mistakes	N	2	10	13	54	24	103	3.85	77
	%	1.9	9.7	12.6	52.4	23.3	100		
12. Hospital administration enhances team working between different hospital department	N	13	23	29	35	3	103	2.92	58.4
	%	12.6	22.3	28.2	34	2.9	100		
13. I can access to hospital administration easily when I need	N	6	11	18	57	11	103	3.54	70.8
	%	5.8	10.7	17.5	55.3	10.7	100		
14. I am satisfied with managerial practices	N	29	29	27	18	-	103	2.33	46.6
	%	28.2	28.2	26.2	17.5	-	100		
Overall								**2.98**	**57.82**

Even though (70.8) score was reported for easily access to administration when they need, (47) for involvement in planning for work development, (49.8) the administration gives you the opportunity for creativity and development. These findings reflect dominant centralized management structure of MOH institutions, where the planning and decision making is carried out at the central higher or levels.

Al-Telbani & Radwan (2013) study findings showed much worse situation where (78.9%) of the participants believed that the values of achievements and innovations were not appreciated, and (77.1%) believed that the values of decision-making at their work setting are not consensus-based. On the other hand, decision making in the Palestinian health care system is widely subjected to cultural related factors as the predominant culture of centralization (Abu Hamad, 2009-b). Even though qualitative part describes another facts " *We include every professional group at the hospital in planning and work development, but we cannot involve every employee*" (Hospital medical director).

The highest score means were reported for being legally accountable for mistakes 3.85 (77), while the lower mean score of 2.33 (46.6) were reported for being satisfied about managerial practices, and for being motivated to work by the administration.

The study shows higher mean of putting blame on errors, and lower for satisfaction and being motivated to work by administration, and this is consistent with Palestinian Non Governmental Organizations (2009) findings which suggested that the supervision concepts are generally lacking in governmental health facilities and mostly focused on detecting errors and blaming employees rather than providing coaching, support and training.

Regarding enhancing team working between different hospital departments a mean score of 2.92 (58.4) was reported. These findings are supported through managers interview *" We support team working among different professional at NOH, but each group are searching for job autonomy, while others behave with superiority. Moreover different personal attitudes may be a barrier for collaborative team working"* (Nursing unit Director). These findings are relatively consistent with the findings of Abu Hamad (2011) who reported that the provision of healthcare services lacks the values of collaborative teamwork.

Qualitative part clarified the situation where the majority of managers agreed upon the negative impact of the political situation on employee, considering the political split and its effects on staff's attitude; "*Political fragmentation has negatively affected staff attitude, where in sometimes employee were noncompliance to hospital regulations, because of salaries shortage, lack of incentives or any reward actions*" (Hospital general director). "*It is difficult to gain staff satisfaction neither on work conditions or managerial practices. We cannot be responsive enough to their needs in the current critical MOH situation, moreover fragmented parities negotiating about care providers legality which for sure will affect the overall staff attitude*" (Hospital medical Director).

The researcher believes that no one can deny the effect of current status of argument between parities about legality of care providers at MOH. NOH's personnel affairs reported that (58.26%) of staff are employed through Gaza government employment, while (41.73%) employed through Ramalla government; this means that over the half of staff experience long term salary shortage and hard economic circumstances.

Moreover, poor enabling work conditions where essential needs are not available may contribute to such poor staff's perception regarding managerial practices and overall work conditions. These results may affect quality of care on long term, so MOH has to empower management through providing them with at least essential needs to satisfy staff and patients needs.

Moreover management at NOH must be willing and interested in communicating and sharing information with staff, delegating responsibilities, openly discuss mistakes, which requires an environment of trust, management skills and supportive supervision.

C- Training

This domain explores the provision of training at NOH. Table (4.7) showed that score of NOH staff receiving a regular training outside the hospital through MOH was (38.2), while receive regular training at the hospital was (39.2). The highest mean score at this domain was 3.28 (65.6%) regarding administration tracking of trained employee to ensure gaining benefits from skilled trainees which reflecting a good administrative efforts regarding investment in human capabilities to improve quality of care, but response for sharing gained knowledge and skills to non-trained was less than half (46.8) which indicates inadequate communication and skills of transferring among staff members.

Table (4.7): Staff's perceptions of training

Statement		Strongly disagreed	Disagree	NAD	Agree	Strongly agree	Total	Mean	100 points
1. I receive regular training at the hospital	N	33	47	17	6	-	103	1.96	39.2
	%	32	45.6	16.5	5.8	-	100		
2. I receive regular training outside the hospital through MOH	N	39	43	12	9	-	103	1.91	38.2
	%	37.9	41.7	11.7	8.7	-	100		
3. Training contributes to job performance improvement	N	28	34	18	21	2	103	2.36	47.2
	%	27.2	33	17.5	20.4	1.9	100		
4. Administration track trained employee to gain benefits from skilled trainees	N	13	13	18	50	9	103	3.28	65.6
	%	12.6	12.6	17.5	48.5	8.7	100		
5. Trained employee share gained knowledge and skills to non-trained	N	24	37	26	14	2	103	2.34	46.8
	%	23.3	35.9	25.2	13.6	1.9	100		
6. Training opportunities is equity distributed among different professionals	N	36	41	18	6	2	103	2.00	40
	%	35	39.8	17.5	5.8	1.9	100		
7. Administration ask regularly about my training needs at the hospital	N	30	33	26	13	1	103	2.24	44.8
	%	29.1	32	25.2	12.6	1	100		
Overall								**2.29**	**45.97**

Score of respondents agreement on that training contributes to job performance improvement was (47.2), and this could expressed through qualitative part findings where NOH's administrative manager commented… *"MOH training actually does not targeting our needs, while if we tend to track practical applicability of received training, we are holding back by poor limited technological progress & HIS infrastructure, at NOH"* . This is consistent with Al-Telbani & Radwan (2013) most of the interviewees agreed that training in the MOH is limited, not effective, and not based on the actual needs, while Abu Hamad (2011), revealed that the provided training at the MOH is frameless, and on the job training is either lacking or not well structured in most facilities, suggesting that surveyed programs for investment in human recourses.

The overall mean score for training domain was 2.29 (45.97%), indicating a weak staff perception regarding training. Management at NOH need to overcome the existing gaps through adopting effective strategy training programs. Efforts were clarified during manager interview "*We activate training and development committee for internal training at NOH; some professionals motivated and are working on providing theoretical courses followed by on job training activities specially for surgical skills, while other*

professionals showed no activities" (Hospital medical director). WHO (2000) emphases that continuing education and on-the-job training are required to keep existing skills in line with technological progress and new knowledge.

Staff's training suggestions: Last item at this domain was open ended question for suggestions of staff's training needs. Staff suggested needs and concerns were categorized as the following:

1. **Job / specialty specific:** Surgical skills, practical, clinical and diagnostic skills, recent diagnostic technology, ophthalmic nurse training, first aid and emergency.
2. **Management:** Team working, resources management, crisis management, quality improvement, human recourses development.
3. **Communication:** communication skills with patients, oral communication skills. One of respondents suggested "communication skill" training for managers to improve their communication with employee.
4. **Technology:** Basic computer skills, advanced software and IT skills, foreign language skills, and statistical analysis.

To conclude, staff perspectives regarding work conditions domain reported overall (53.19) score. Regarding enabling work circumstances sub domain total score of (55.81) was reported, while managerial practices reported a score of (57.82), and finally training reported (45.97) score.

These findings regarding work conditions showed inadequate setting for providing quality care at NOH, and patient safety may no longer be kept. The cumulative evidence demonstrates that work conditions are important in influencing patient safety and deserve careful attention from the healthcare professionals (Agency for Healthcare Research and Quality, 1999). Dubois & Singh (2009) review study reveals that in order to use human resources most effectively, organizations must also consider the institutional environments that frame health care workers' educational preparation, the system of professional regulation, organizational incentives.

4.3.1.2 Work related injuries

This part explores work related injuries among staff, related practices and procedures which enhance staff's safety. This domain consists of eight items, with the final open ended question to surveyed common work related injuries among staff.

As shown in table (4.8) below (73%) of staff exposed to work related injury (Needle stick injury, infections, trauma), while 2.35 (47) score was reported for documentation of injuries through safety officer at NOH.

Table (4.8): Staff's perceptions of work related injuries and related variables

Statement		**Strongly disagree**	**Disagree**	**NAD**	**Agree**	**Strongly agree**	**Total**	**Mean**	**100 points**
1. I have been informed about occupational disease that I may exposed to through my work	N	21	33	17	31	1	103	2.59	51.8
	%	20.1	32.4	16.5	30.1	1	100		
2. I received training to avoid work related injuries	N	22	44	13	23	1	103	2.38	47.6
	%	21.4	42.7	12.6	22.3	1	100		
3. I received all immunization required for health worker	N	23	38	11	25	6	103	2.54	50.8
	%	22.3	36.9	10.7	24.3	5.8	100		
4. Safety officer review compliance of health worker required immunization	N	26	34	19	20	4	103	2.43	48.6
	%	25.2	33	18.4	19.4	3.9	100		
5. Safety officer review compliance of work protocols to keep staff safety	N	18	41	27	13	4	103	2.45	49
	%	17.5	39.8	26.2	12.6	3.9	100		
	%	6.8	12.6	10.7	51.5	18.4	100		
6. Work related injuries documented through safety officer at NOH	N	29	32	20	20	2	103	2.35	47
	%	28.2	31.1	19.4	19.4	1.9	100		
7. Injured employee referred for further investigation after injury (Lab testing-Physical consultation)	N	22	26	27	28	-	103	2.59	51.8
	%	21.4	25.2	26.2	27.2	-	100		
Overall								2.47	49.4
Did you exposed to work related injuries: □ Yes (73%) □ NO (17%) **Type of work related injuries:** (55.33%) occupational stress, (34.95%) needle stick injuries, (18.44%) infections, (7.7%) trauma, others (4.58%)**.**									

About half of respondent staff have been informed about occupational disease that they may exposed to through the work with mean score 2.59 (51.8), 2.38 (47.6) received training to avoid work related injuries, while 2.54 (50.8) had received all immunization required for health worker, and 2.43 (48.6) reported that safety officer review compliance of health worker required immunization.

The findings showed that supervisory safety practices at NOH reported means less than (50), while (73%) exposed for work related injuries, where distribution of work related injuries among staff was as the following: (55.33%) of staff exposed to occupational stress, (34.95%) needle stick injuries, (18.44%) infections, (7.7%) trauma, while (4.58%) exposed to other work related injuries.

The overall score of this domain was 2.47 (49.4) which indicating poor perception of staff regarding safety practices. NOH need to enhance safety officer vital role regarding employee practices, promoting the staff to work safely and adopting the safety culture's requirements, training, and monitoring compliance of related protocols. Safety officer need to reinforce staff safe behaviors, participate in safety procedures and encourage their involvement in safety programs and initiatives. Supervisory safety practices have been found to decrease the number of minor injuries and positively influence staff safety culture perceptions (WHO Patient Safety Group, 2009).

4.3.1.3 Staff's burnout Status

This part surveyed the burnout status using MBI (Maslach & Jackson,1986). The 22-item version MBI is a three component conceptualization of burnout; comprising of nine measures for feelings of emotional exhaustion (EE), five measures of a tendency to depersonalize others (DP), and eight measures of diminished feelings of personal accomplishment in working with others (PA). Respondents are instructed to answer how many times they feel regarding each MBI statements. The scale used is 0 = never, through to 6 = every day. The MBI provides three scores that represent the sum of scores of the individual items pertaining to each of the three separate subscales. The total degree for each domain of MBI was counted for each case staff sample. Results are reported in terms of a high, average and low degree of burnout depending on the respective scores for each measure according to Veterinary Medical Association of Quebec (n.d.).

The findings of employee survey showed different levels of burnout among NOH staff regarding MBI's scale different domains. Table (4.9) below shows that high levels of burnout was reported regarding EE domain, followed by DP, while personal accomplishment RA showed less levels of burnout.

Table (4.9): Levels of burnout regarding Maslach's burnout inventory (MBI)

Dimension	**High level of burnout**	**Average level of burnout**	**Low level of burnout**
Emotional exhaustion	**More than or equal to 30**	**29-18**	**Less than or equal to 17**
	52.4%	24.3%	23.3%
Depersonalization	**More than or equal to 12**	**11-6**	**Less than or equal 5**
	42.7%	27.2%	30.1%
Personal accomplishment	**Less than or equal to 33**	**39-34**	**More than or equal to 40**
	35%	20.4 %	44.7%

A- Emotional exhaustion

Regarding EE table (4.9) above shows that levels of EE was as the following: (52.4%) of respondents experienced high level of burnout, (24.3%) experienced average level of burnout, while (23.3%) reported low level of burnout. This could be attributed to the nature of work related to the human services, where burnout is so prevalent within the

human services field is due to the high-stress work environment and emotional demands of the job (Ruotsalainen, *et al.* 2015).

Excessive workload at governmental hospitals may lead to such results, Maslach, Schaufeli, & Leiter (2001) emphasis that a mismatch in workload is generally found as excessive overload, through the simple formula that too many demands exhaust an individual's energy to the extent that recovery becomes impossible.

B- Depersonalization

Table (4.9) above shows that (42.7%) of respondents experienced high level of burnout regarding DP domain, (27.20%) experienced average level, while (30%) reported low level of burnout. This part indicates aspects of the relationship people have with their work, where DP is an attempt to put distance between oneself and service recipients by actively ignoring the qualities that make them unique and engaging people (Maslach, Schaufeli, & Leiter, 2001). Study results flagging with high percentages of staff experiencing DP feeling, which may reflect on patients and quality of provided care. Maslach, Schaufeli, & Leiter (2001) emphasis on that service recipients Their demands are more manageable when they are considered impersonal objects of one's work.

C- Reduced personal accomplishment

Table (4.9) shows that (35%) experienced high level of burnout regarding RA domain, (20.4%) experienced average level of burnout, while (44.7%) reported low level of burnout. Such rates of RA feelings could be attributed to a lack of performance feedback, absence of work achievements dissemination at NOH, lack of responsive incentives and rewards, and feeling of that their work is not being appreciated by the administration.

Maslach, Schaufeli, & Leiter (2001) expressed that a mismatch in control is generally related to the inefficacy or RA aspect of burnout, where mismatches in control most often indicates that individuals have insufficient control over the resources needed to do their work or have insufficient authority to pursue the work in what they believe is the most effective manner. In addition they highlighted on importance of rewards, where the lack of intrinsic rewards (such as pride in doing something of importance and doing it well) can also be a critical part of this mismatch. Lack of reward is closely associated with feelings of inefficacy.

In comparison to Abu Taha (2008) study findings, which explored the impact of job burnout on performance at Palestinian government hospitals in the Gaza strip; the findings showed that that the prevalence of job burnout was (69.64%), the highest score was reported for RA (70.96%), this is followed by EE (69.64%), while the lowest score was reported for DP (67.63%). In addition Abu Nasra (2014) study surveying burnout status among care providers working in intensive care units at MOH, findings showed that dimension of personal accomplishment reported the highest percentage of (62%), followed by the dimension of emotional exhaustion at percentage of 48.3%, while DP was the lowest at percentage of 26%. These findings may be attributed to similar context of MOH facilities, where high workloads at governmental hospitals and poor work conditions is the shared pictured.

To conclude survey results showed that about half of NOH's staff members are suffering from a high levels of job burnout. Many leading factors could express the situation; Maslach, Schaufeli, & Leiter (2001) raised the concept of mismatches where burnout arises from chronic mismatches between people and their work setting in terms of some or all of these six areas include the full range of organizational factors; workload, control, reward, community, fairness and values in addition to interaction of the six areas. Abu Nasra (2014) study findings showed multiple factors that contributed to burnout; the highest was work environment factors, followed by managerial support factor, work pressure factor, colleague's relations factor, and finally personal factors.

In this study results many leadings factors for burnout were raised. Leading factors which related to NOH special context may be increasing demand on service at the hospital with limited building capacity, lack of equipments and medical supplies, and lack of human recourses regarding some professionals. Moreover low satisfaction status of staff regarding work conditions and managerial practices, lack of training and development opportunities, lack of financial return and incentives, long-term salary shortages, and current poor economical settings are due to the current political fragmentation situation that may contribute to such burnout status.

Staff suggestions toward improving service quality provided at NOH:

Final question at staff survey questionnaire asked about suggestions to improve quality of care provided at NOH, and the following suggestions were categorized as the following:

1- Management oriented: Regularly circulation in management staff between different groups, increase team decision making, employee motivation, use incentives programs to improve performance, feedback for performance, modification of appropriate work protocols, regulate emergency work, enhance training, activate social activities and communication, and finally provide staff with recognition and respect.

2- Patient oriented: Regulating patient entrance by time, and activate appointment system by time access, community communication and heath education in various media means to increase patient awareness regarding rights and duets.

3- Work conditions oriented: Securing essential equipment (diagnostic, surgical, technological computers, web), area for employee rest, area for female rest to provide them with more privacy. Moreover regular salary was a major demand for large number of staff members.

4.3.2 Inferential statistics

Staff's perception regarding the quality of care shows different levels of significance in statistical analysis regarding different variables. Tables (4.10) (4.11) (4.12) (4.13), shows differences among variables and different perspectives domains, enabling work conditions, managerial practices, training, and work related injuries respectively.

1- **Age groups:** No statistical significance was found between age groups categories in care providers perception regarding enabling work conditions, managerial practices, training, and work related injuries; P value = (0.398, 0.341, 0.084, 0.484) respectively.

2- **Gender:** No statistical significance found between gender categories in care providers perception regarding enabling work conditions, managerial practices, training, and work related injuries; P value (0.160, 0.953, 0.258, 0.507) respectively.

3- **Marital status:** No statistical significance was found between marital status categories in care providers perception regarding enabling work conditions, managerial practices, training, and work related injuries; P value = (0.825, 0.875, 0.348, 0.381) respectively.

4- **Career: Different levels of statistical significance was between means of career categories were reported (p value = 0.002*, 0.041*, 0.349, 0.000*) regarding their perspectives about work conditions enabling working conditions, managerial practices, training, work related injuries, respectively.** Post Hoc tests (Annex 12) showed source of significance, and the results were as the following:

Statistical significance was found regarding enabling work conditions between the four professional categories means; (p value 0.002). Significance source was between administrative staff with higher mean score (3.07), and others (Pharmacists, optometrists and anesthetists) which reported the lower mean score (2.30).

Managerial practices domain showed differences in means between the four professional categories; moderate statistically significant (p value 0.041) reported with higher mean score for administrative staff (3.13), while lower mean score (2.62) reported by others (Pharmacists, optometrists and anesthetists). Training domain showed no statistical differences in means between the four professional categories were (p value 0.349).

Work related injuries domain showed statistically significant differences in means between the four professional categories (p value = 0.000). Source of significance was

among nurses and others (Pharmacists, optometrists and anesthetists). Higher mean score reported by nurse staff (2.99), while lower mean score (1.96) reported by others (Pharmacists, optometrists and anesthetists).

5- **Place of residency:** No statistical significance was found regarding place of residency categories regarding respondents perspectives about work conditions enabling working conditions, managerial practices, training, work related injuries; p value = (0.160, 0.953, 0.258, 0.553) respectively.

6- Years of experience at the hospital: No statistical significance found years of experience categories; P value ranges from (0.748, 0.997, 0.284, 0.283) (among different perspectives domains.

7- Degree of education: No statistical significance was found among different degrees of education categories; P value ranges from p value (0.562, 0.287, 0.491, 0.205) among different perspectives domains.

Table (4.10): Differences in care providers' perceptions about work circumstances regarding different variables (ANOVA- Post Hoc Test, T test)

Test	Independent variables		N	Mean	Test	Value	Sig.
T test	**Gender**	Male	68	2.86	T	1.416	.160
		Female	35	2.66			
	Material Status	Others (Single, Widow, Divorced)	16	2.76	T	0.223	.825
		Married	87	2.80			
	Governorate	Other GG	22	2.73	T	1.41	.160
		Gaza	52	2.71			
One way ANOVA – Post Hoc test	**Age**	30 years and less	30	2.69	F	.930	.398
		31- 40 years	33	2.74			
		41 years and more	40	2.91			
	Career	Physician	26	2.69	F	5.448	.002*
		Others	18	2.30			
		Nurse	30	2.90			
		Administrative	29	3.07			
	Educational Level	Diploma	30	2.88	F	.580	.562
		Bacalor	51	2.72			
		High education (MP-PHD)	22	2.84			
	Years of experience	less than 5	27	2.73	F	.291	.748
		5-10	39	2.76			
		over 10	37	2.86			

Table(4.11): Differences in care providers' perceptions about managerial practices regarding different variables (ANOVA- Post Hoc Test, T test)

Test	Independent variables		N	Mean	Test	Value	Sig.
T test	Gender	Male	68	2.89	T	.060	.953
		Female	35	2.88			
	Material Status	Others (Single, Widow, Divorced)	16	2.92	T	0.159	.875
		Married	87	2.89			
	Governorate	Other GG	22	2.80	T	.060	.953
		Gaza	52	2.79			
One way ANOVA – Post Hoc test	Age	30 years and less	30	2.94	F	1.088	.341
		31- 40 years	33	2.74			
		41 years and more	40	2.98			
	Career	Physician	26	2.70	F	2.856	.041
		Others	18	2.62			
		Nurse	30	2.99			
		Administrative	29	3.13			
	Educational Level	Diploma	30	3.01	F	1.264	.287
		Bacalor	51	2.91			
		High education (MP-PHD)	22	2.69			
	Years of experience	less than 5	27	2.88	F	.003	.997
		5-10	39	2.76			
		over 10	37	2.86			

Table(4.12): Differences in care providers' perceptions about training regarding different variables (ANOVA- Post Hoc Test, T test)

Test	Independent variables		N	Mean	Test	Value	Sig.
T test	Gender	Male	68	2.36	T	1.140	.258
		Female	35	2.18			
	Material Status	Others (Single, Widow, Divorced)	16	2.14	T	.960	.348
		Married	87	2.33			
	Governorate	Other GG	22	2.21	T	1.14	.258
		Gaza	52	2.32			
One way ANOVA – Post Hoc test	Age	30 years and less	30	2.13	F	2.545	.084
		31- 40 years	33	2.20			
		41 years and more	40	2.50			
	Career	Physician	26	2.18	F	1.110	.349
		Others	18	2.15			
		Nurse	30	2.30			
		Administrative	29	2.49			
	Educational Level	Diploma	30	2.30	F	.716	.491
		Bacalor	51	2.22			
		High education (MP- PHD)	22	2.46			
	Years of experience	less than 5	27	3.53	F	1.274	.284
		5-10	39	3.53			
		over 10	37	3.40			

Table(4.13): Differences in care providers' perceptions about work related injuries regarding different variables (ANOVA- Post Hoc Test, T test)

Test	Independent variables		N	Mean	Test	Value	Sig.
T test	**Gender**	Male	68	2.52	T	.666	.507
		Female	35	2.40			
	Material Status	Others (Single, Widow, Divorced)	16	2.65	T	.881	.381
		Married	87	2.44			
	Governorate	Other GG	22	2.60	T	.624	.553
		Gaza	52	2.46			
One way ANOVA – Post Hoc test	**Age**	30 years and less	30	2.39	F	.732	.484
		31- 40 years	33	2.41			
		41 years and more	40	2.60			
	Career	Physician	26	2.43	F	7.49	.000
		Others	18	1.96			
		Nurse	30	2.99			
		Administrative	29	2.31			
	Educational Level	Diploma	30	2.58	F	1.612	.205
		Bacalor	51	2.33			
		High education (MP- PHD)	22	2.68			
	Years of experience	less than 5	27	2.30	F	1.278	.283
		5-10	39	2.45			
		over 10	37	2.64			

4.4 Patients' perspectives about the quality of care

4.4.1 Descriptive statistics

In order to survey patients' perspectives about the quality of care; a questionnaire for patients interviews was designed with two main domains in relation to two indicators recommended by PATH (WHO, 2007-c) to measure patient centeredness; "patient's access" and "patient's expectations". Statistical analysis results were as the following:

4.4.1.1 Patient Access to health care

Patient access to health care was divided into four domains; physical, financial, information, and medication with total 17 items. The scores reflect patient's perspectives about access to care. Questions were assessed according to scale ranging from 0 "No" 1 "Yes" for 14 items, while from 0 "No" 1 "Yes" 2 for "some of them" and 3 for "most of them" for 2 items. Table (4.14) summarized the findings of different access domains.

A- Physical access

This domain explores if patients access physically to health care. Table (4.14) shows that the highest percentage (93.5%) of respondents moved easily within hospital buildings, while (80.4%) reported that they observed a directional signboards that helped them to move within hospital buildings. The overall summation of the domain responses was (85.75%) positively respond with "Yes", while (14.25%) negatively respond with "No". This indicates very good physical access to service, and came as a result of the small hospital's buildings nature. In addition availability of signboards make patients and their families health care access easier.

B- Information access

This domain exploring information access to health care. Table (4.14) shows that (95.7%) have been provided with the information related to the time of appointments and follow ups, while a percentage of (76.5%) have been provided with enough verbal information about the nature of the (Medical- surgical) procedure you received, and (60.4%) have been provided with written information or guidance related to the medical/surgical procedure.

Table (4.14): Distribution of surveyed respondents by access related variables

A- Physical access			
Statement	**Yes**		**No**	
	N	**%**	**N**	**%**
1. Did you move easily within hospital's buildings?	215	93.5	15	6.5
2. Are there directional signboards that helped you to move within hospital's buildings?	185	80.4	45	19.6
3. Did you easily access to the health services you need?	196	85.2	34	14.8
4. Were you able to access service at the scheduled time? /suitable time (medical admission)	193	83.9	37	16.1
B- Information access				
5. Have you been provided with the information related to the time of appointments and follow ups?	220	95.7	10	4.3
6. Have you been provided with enough verbal information about the nature of the (Medical- surgical) procedure you received?	176	76.5	53	23.0
7. Have you been provided with written information or guidance related to the medical/surgical procedure?	139	60.4	91	39.6
8. Did you get a prior notice of the expected length of stay?	94	40.9	136	59.1

C- Medication access

9. Did you find the prescribed medicine in the hospital pharmacy?

Yes all of them		No		Yes some of them		Yes most of them	
N	%	N	%	N	%	N	%
8	3.5	156	67.8	63	27.4	1	1.3

Statement	**Yes**		**No**	
	N	%	N	%
10. Were you able to afford paying for the medications that are not available in the hospital?	111	48.3	119	51.7
11. Did the physician clearly prescribe medication dose?	225	97.8	5	2.2
12. Did the physician notify you of the duration of taking medicine?	218	94.8	12	5.2
13. Did the physician ask you if you take other medications?	189	82.2	41	17.8

D- Financial access

14. Does health insurance cover the services you received at the hospital?

Yes all of them		No		Yes some of them		Yes most of them	
N	%	N	%	N	%	N	%
10	4.3	-	-	188	81.7	32	13.9

Statement	**Yes**		**No**	
	N	%	N	%
15. Did you pay any money in return for any service you received?	226	98.3	4	1.7
16. Were you able to meet the financial cost to access service?	95	41.3	135	58.7

In comparison to Abu Dagga (2014) study findings, the highest mean percentage was (84.4%) in providing patient instructions about follow up and appointments. One-third (33.1%) of respondents reported to high extent that they received necessary and adequate information, one half (64.4%) of respondents indicated that didn't receive any written information, while, most of respondents reported that they had received verbal information (33.6%) to high extent, 58.5% to some extent.

Regarding expected length of stay (40.9%) get a prior notice of the expected length of stay at the hospital. NOH showed better but inadequate results in comparison with Al Ron (2009) and Abu Dagaa (2014) findings (23%) of respondents were informed about their discharge plan in the first study, while (17.7%) were informed about date of discharge in the later. Abu Sada'a (2012) information and communication domain reported a mean 3.9767 (79.50%) of the perception level.

Findings at NOH indicate relatively good informational access but still need empowering regarding some areas. It is clearly that there is a gap in providing patient with needed information and instructions related to their health condition, while effective discharge planning begins by informing patients and their families with expected discharge day. These findings are consistent with Hesslinelik, *et. al.* (2012), which showed that most of the participants received insufficient instructions and unclear information related to their health condition, while Abu Hamad (2009) considered communication and information sharing as weakness points between health care providers and patients.

C- Medication access

This domain explores whether the study respondents were able to access to medication. When respondent were asked if they found the prescribed medicine in the hospital pharmacy; (67.8%) responded with "No", (27.4%) responded "Yes some of them", while less percentage (3.5%) reported " Yes all of them" and (1.3%) " Yes most of them". Unavailability of medicine at the hospital attributed to shortage of medicine supply at MOH facilities, and it came as result of long siege on GGs; put extra financial burden on patients, where (51.7%) of respondents cannot afford paying for the medications which were not available in the hospital.

These results are relatively consistent with Al Kishawi (2015) study findings about effects of essential drug shortages on tertiary healthcare services at governmental hospitals;

where (46.2%) of patients reported that they experienced drug shortage, (95.5%) reported that siege was the main reason for drug shortage, followed by (80.7%) due to internal political conflicts. Moreover Shamia (2016) study findings showed that Gaza siege negatively affected the availability of drugs at MOH hospitals. This drug shortage may affect quality of provided care at NOH. Al Kishawi (2015) study showed that (43.8%) of healthcare providers reported "frequent" increasing of readmission to the hospitals, increasing length of stay, increasing the costs and exposing patient to delays or even jeopardize their treatment, while 95.2% of patients perceived that the shortage exposed patients to complications, treatment delaying, stopping treatment and psychological effects, even death.

Higher scores in medication domain when respondents had been asked if physicians clearly prescribe medication dose with (97.8%) percentage, while (94.8%) received a notification about the duration of taking medicine. This is consistent with Abu Dagaa (2014) study findings; where providing patient instructions about medications reported mean score of (83.8%); the mean percentage about informing patient with dose of drug was 77.4%; frequency of ingestion (82.6%).

Total positive responses with "Yes" were (80.77%), while (19.22%) negatively responded with "No". These findings indicate very good access to medication through communication with care providers; reflecting their good commitment toward improving the quality of patient care, patient safety assurance before discharge, and tendency toward reducing readmission rates related to medication errors.

D- Financial access

This domain explores if patients were able to access financially to care. Health insurance service coverage was as the following; (81.7%) of respondents replied that health insurance cover "some" of received service, while 13.9 % cover "most of them", while total coverage were reported for (4.3%) "all of them". Total percentage of (98.3%) paid money in return for any service they received, while (41.3%) of respondents were able to meet the financial cost to access service. Total (85%) of respondents paid for surgical service (surgical accessories and surgical copayment fees) , (93.5%) paid for medication which was not available at NOH, (23%) paid for imagining, and 1.3% paid for registration, (3.5%) paid for other (e.g. medical reports).

Total positive Score at this domain was 69.8%, indicating moderate financial access to care.

To conclude on overall patient access, figure (4.1) shows that physical access reported the highest reported the highest positive score "yes" among the four accessibility domains with (85.75%) percentage, while the lowest score was (68.37%), reported by information access domain. Information access reflects inadequate communication among staff and patients, where communication is essential for workplace and for the delivery of high quality and safe work (Flin, Winter & Cakil Sarac, 2009), so NOH effort toward enhancing communication with patients, creating channels of information access like web access, written pockets of information and instruction regarding provided services.

Financial access is also inadequate, and it could be attributed to current situation of Gaza siege and shortage of equipments and medical supplies. Patients complaining inability of paying for services specially for surgical procedures, as insurance co-payment exceeds their financial ability in addition to the burden of paying for surgical disposables.

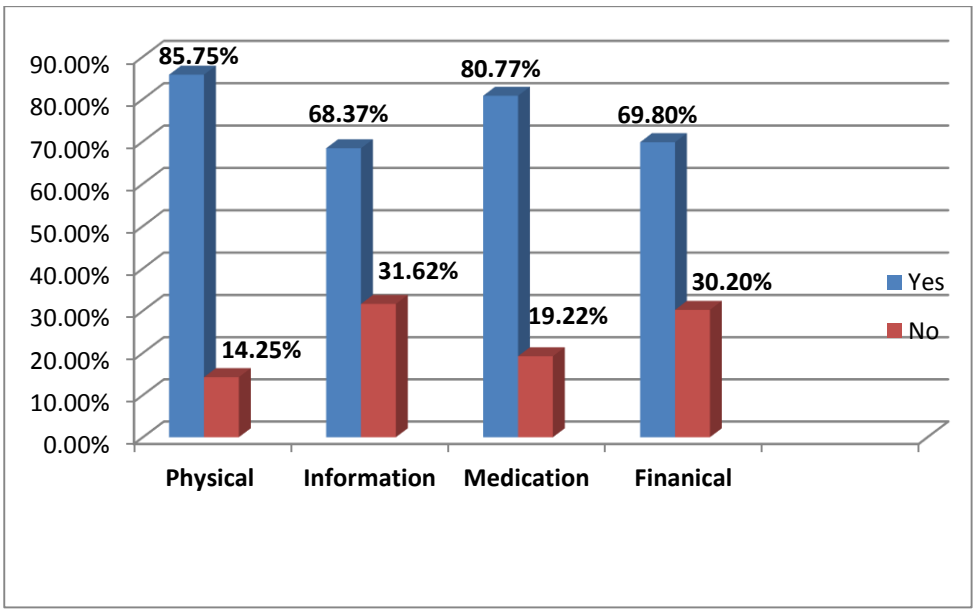


Figure (4.1) : Patients' response rate among different access domains

4.4.1.2 Patients' expectations

This part includes 14 items, which were divided into three sub components; "process of care, treatment and consultation and finally treatment outcome. The score reflecting patient perspectives about meeting their expectation. Questions were assessed according to a scale ranging from 1 for " Strongly disagree" to 5 for "Strongly agree".

A- Process of care

Responses regarding the process of care domain varies in means for different items. As shown in table (4.15) the highest score was (85.2), reported for being treated with respect and dignity by care providers, followed by (80.6) for feeling that care providers were knowledgeable about/understand patient health condition/problem. The lowest score (53.8) was reported regarding care provider introduction him/herself for patients. These findings reflect a good trust status and a good patient perception regarding care providers medical knowledge. Moreover the findings reflect a good degree or respect in communication between patients and care providers.

Mean score of privacy item was 3.16 (63.2) which is not accepted any way, as every patient has the right of receiving health care with full respect of privacy. When patients were allowed to answer the question about suggestion and recommendation toward improving quality of care, many females complain of being embarrassed of being tested in front of other patients, while others complain of being transported in surgical gown in open halls in front of males and families patients who are waiting for surgical entrance.

In comparison to Abu Sada'a (2012) study the highest level of patient perspective was expressed by the patients' toward the respect and privacy dimension (87.5%) while the lowest level was reported with the hotel services dimension (69.4%) reflecting better respect of privacy at EGH than at NOH. This could be attributed to the nature of NOH structure which has less building capacity than EGH.

Table (4.15): Distribution of patient's responses about meeting expectation

Statement		Strongly disagree	Disagree	NAD	Agree	Strongly agree	Total	Mean	100 points
A- Process of care									
1. Waiting time till receiving service after access was appropriate	N	11	50	14	133	22	230	3.45	69
	%	4.8	21.7	6.1	57.8	9.6	100		
2. Care providers introduced him/herself for you	N	3	148	2	71	6	230	2.69	53.8
	%	1.3	64.3	0.9	30.9	2.9	100		
3. Care providers were respectful and treat me with dignity	N	-	5	6	142	77	230	4.26	85.2
	%	-	2.2	2.6	61.7	33.5	100		
4. The doctor was knowledgeable about/ understand my health condition/problem	N	-	11	16	135	68	230	4.13	82.6
	%	-	4.8	7	58.7	29.6	100		
5. The doctor you saw involved you in decisions about your condition	N	2	54	3	148	23	230	3.59	71.8
	%	0.9	23.5	1.3	64.3	10	100		
6. Your privacy was respected during treatment period	N	8	85	7	120	10	230	3.16	63.2
	%	3.5	37	3	52.2	4.3	100		
7. You feel comfortable during length of stay at the hospital	N	2	32	14	164	18	230	3.71	74.2
	%	0.9	13.9	6.1	71.3	7.8	100		
8. Amenities of care were available at waiting halls	N	5	65	14	142	4	230	3.32	66.4
	%	2.2	28.3	6.1	61.7	1.7	100		
Total								**3.53**	**70.8**
B- Treatment and consultation									
1. I was given a full explanation about the benefits/side effects or complications/ risks of treatment / surgical procedures	N	-	113	5	96	16	230	3.06	61.2
	%	-	49.1	2.2	41.7	7	100		
2. I was given the opportunity to discuss and ask about my condition.	N	4	55	14	134	23	230	3.50	70
	%	1.7	23.9	6.1	58.3	10	100		
3. Highlight warning signs and problems before being discharged	N	1	44	1	150	34	230	3.74	74.8
	%	0.4	19.1	0.4	65.2	14.8	100		
4. Being informed where /whom to call in argent condition before follow up appointment	N	-	77	-	139	14	230	3.39	67.8
	%	-	33.5	-	60.4	6.1	100		
Total								**3.42**	**68.4**
C- Treatment outcome									
5. You expect treatment to result in an a reduction in symptoms/problems	N	8	22	48	112	40	230	3.91	78.2
	%	3.2	9.6	20.9	48.7	17.4	100		
6. Treatment outcome actually resulted reduction in symptoms/problems	N	1	13	7	192	17	230	3. 66	73.2
	%	0.4	5.7	3	83.5	7.4	100		
Total								**3.78**	**75.7**
Overall								**3.57**	**71.5**

Generally the overall mean score for process of care domain was 3.55 (71) which indicate a good positive perception of patients' expectation about process of care. In comparison to EGH Abu Sada'a (2012) study findings showed that the approach of care domain reported a mean 4.18 (82.2%) of perception level which means that patients have more positive perception about the approach of care at EGH than NOH's patients.

B- Consultation and treatment

Regarding consultation and treatment domain, table (4.15) above shows that the lowest score reported when patients were asked about receiving a full explanation about the benefits/side effects or complications/ risks of treatment/surgical procedures with (61.2) score, while the highest score was reported regarding highlight on warning signs and problems on discharge with (74.8). Moreover (67.8) score was reported regarding informing patients where /whom to call in urgent condition before follow up appointment. Results were inconsistent with Abu Dagga (2014) where (46.5%) of patients were not informed about dangerous symptoms that may occur at home & how to deal with it, while (12.5%) of patients were informed about means of communication and phone numbers. The findings indicate better communication on discharge process at NOH and this is consentient with Abu Dagaa (2014) findings with regard to hospital departments where findings show that the ophthalmic department elicited higher mean score (3.902) in the all perspectives and practices about discharge planning process than others.

The overall score of treatment and consultation was 68.4. This moderate score need empowerment through enhancing better communication with patients, which still inadequate in case of explaining the benefits/side effects or complications/ risks of treatment/surgical procedures. This could contribute in patients' health improvement and safety specially after being discharged.

C- Treatment outcome

Table (4.15) above shows that a score of (78.2) was reported for patients' expectation if treatment will result in a reduction in symptoms/problems, and (73.2) for agreement that treatment outcome actually resulted in reduction in symptoms/problems. The overall domain score a mean of 3.78 (75.7) reflects good patients' perception regarding the outcome of their treatment.

To conclude patients have a good positive perception about quality of care regarding patients' expectation indicator; reflecting a good quality care provided at NOH. Total expectation domains score was (71.53). Figure (4.2) shows that the highest mean score for meeting expectations of treatment outcome domain was 3.78 (75.7), followed by process of care which was 3.53 mean (70.7), and finally the lowest mean score reported for consultation and treatment with a mean of 3.42 (68.4).

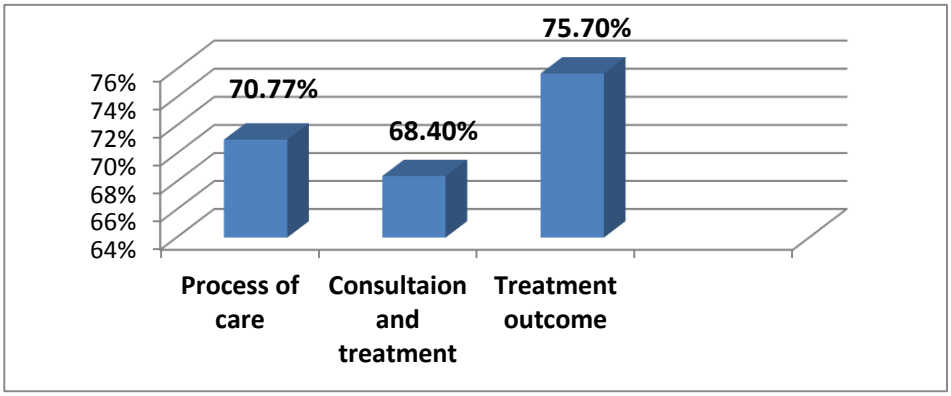


Figure (4.2): Degree of meeting expectations among different sub domains

In comparison to Abu Sada'a (2012) study meeting expectation domain reported a mean 4.0467 (80.90%) of perception level. This may be attributed to different setting of care, different capacities, and workloads between both hospitals.

The last part of questionnaire consists from four unconstructed different items. The first item explores to which degree the overall received service met patient's expectations. The second item explores the overall patient satisfaction status about received service. The third item allows patients to rank hospital from "Zero" to "Ten" as worst or best hospital. At the end of this part, the researcher records patient recommendations and suggestions toward service quality improvement at NOH, while any remarks on service, and any special positive or negative experiences were recorded.

Figure (4.3) shows the degree of meeting expectations of the overall received service where (48.7%) stated that service "accepted met" with their expectations, while (29.1%) "met a lot" and (6.1%) "totally met" with their expectations. Regarding overall satisfaction about service at NOH figure (4.4) show that; (58.7%) were "Satisfied", (19.10) were "very satisfied", 11.30% "Neutral" degree of satisfaction, while (8.30%) and (2.60%) reported "Not satisfied" and "Strongly not satisfied" respectively.

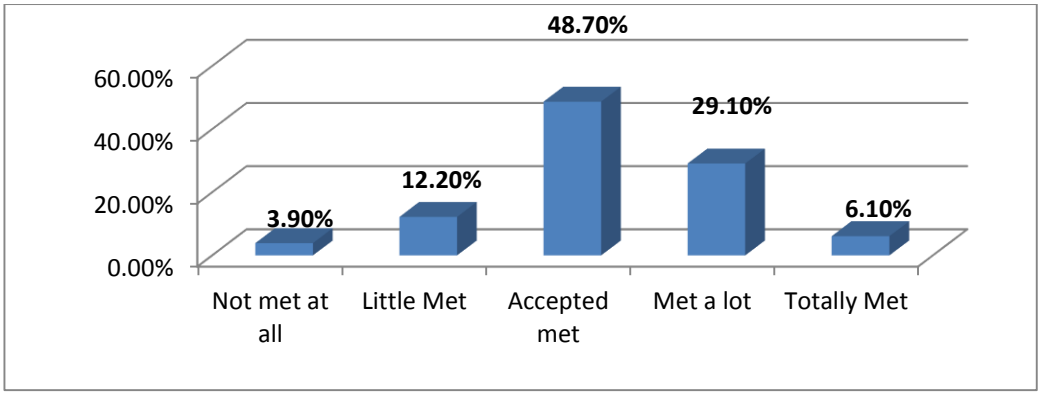


Figure (4.3) To which extend the received service met with patient's expectations

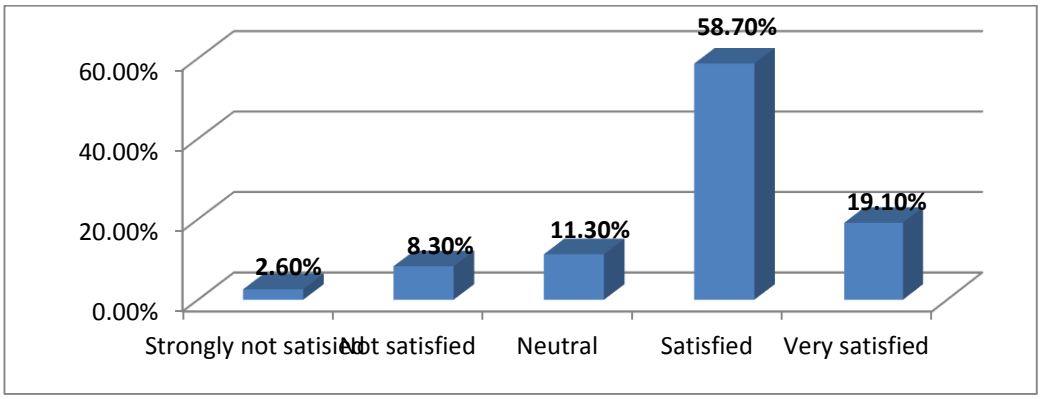


Figure (4.4) Patient Satisfaction status about provided service at NOH

Patients reported a good satisfaction with overall provided service, and this is congruent with their response and perspectives about access to care and expectation of care. Moreover figure (4.5) shows hospital ranking by respondents, where (80%) of respondent ranked NOH hospital as "seven" to "ten" out of ten.

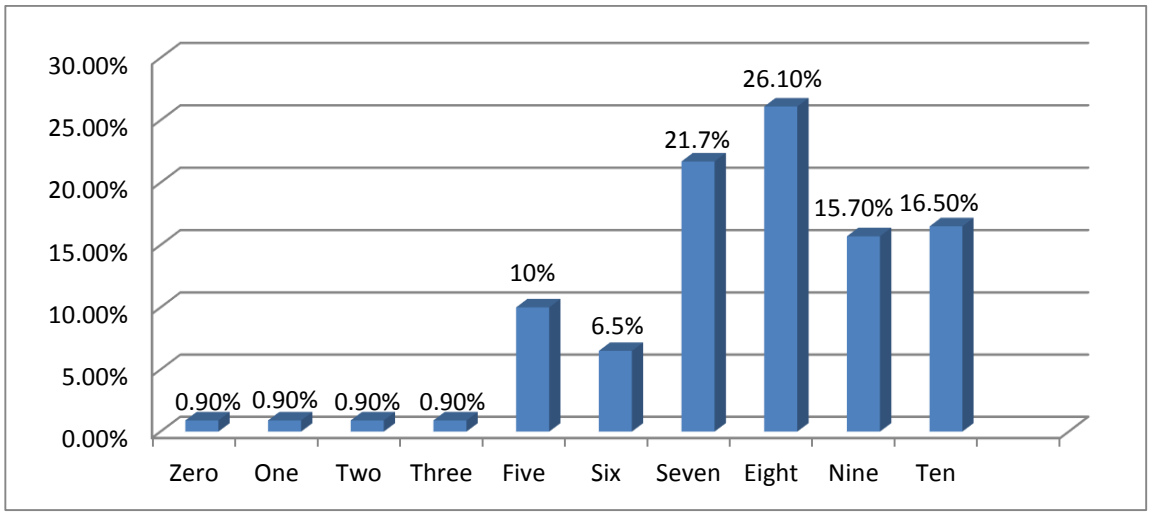


Figure (4.5) Hospital Ranking from patient's perspectives from "Zero" to "Ten"

Patients are the ultimate judge of patient centeredness and their perception impacts on compliance and ultimately outcomes, loyalty and recommendations to friends. Patients' assessments can guide quality improvement efforts, can be used to monitor impact of quality improvement initiatives and also constitute an accountability tool (WHO, 2007-d). Aiken, *et al.* (2012) reported that patients in hospitals with better work environments were more likely to rate their hospital highly and are more satisfied with service.

Patients' suggestions to improve the quality of care provided at NOH

To improve the quality of care, the patients listed the following:

- Provide them with prescribed medications, surgical supplies and accessories.
- Enhance privacy within hospitals departments.
- Enhance communication with patients through creating effective channels of communication.
- Avoid long waiting time at out clinic department, specially for patients came for follow up after surgical interventions.
- Increase hospital building capacities.

4.4.2 Inferential statistics

Patient expectations

Overall patients' perception score of meeting their expectations shows different levels of significance in statistical analysis regarding different variables. Table (4.16) below shows differences among variables.

Table (4.16): Differences in the overall patient's expectation score by relevant variables

Independent variables			N	Mean	Test	Value	Sig.
T test	**Gender**	Male	109	3.5662	T	0.634	.525
		Female	121	3.5277			
	Admission Type	Medical	41	3.2909	T	3.654	.000
		Surgical	189	3.6013			
	Material Status	Others (Single, Widow, Divorced)	76	3.5489	T	0.071	.944
		Married	154	3.5445			
	Governorate	Gaza	113	3.4804	T	2.160	.032
		Other GG	117	3.6093			
	Admission frequency	First time admission	176	3.5775	T	1.907	.058
		Frequent admissions	54	3.4431			
One way ANOVA	**Age**	35 and less	58	3.5924	F	1.095	.336
		36-60	88	3.4903			
		61 and more	84	3.5723			
	Educational Level	Elementary and less	61	3.4543	F	1.908	.129
		Preparatory	64	3.6473			
		Secondary	52	3.5412			
		University	53	3.5337			
	Department /Unit	Cataract	111	3.5830	F	1.958	.121
		Retina and Glaucoma	54	3.4339			
		Cornea	34	3.6429			
		Oculoplastic	31	3.5023			

1- **Gender:** Gender differences in means regarding gender were not statistically significant (p value = 0.525); this is consistent with Abu Sada'a (2014) where the differences in means regarding gender were not statistically significant (p value 0.925).

2- **Marital status:** Regarding the differences between patients' perception and marital there was no statistical significant difference (p value = 0.944) and this is consistent with Abu Sada'a (2012), where no statistical significant difference between patients' perception and marital (p value 0.956).

3- **Place of residency:** Patients' perception about expectations domain and place of residency, showed moderate evidence of statistically significant difference (p value 0 .032), where Gaza city respondents showed lower means score (3.4804) of perception than other GG mean(3.6093). Regarding expectation sub domains "consultation and treatment" statistical significant results reported; (P value 0.034), where other GG residents mean was(3.5299), while Gaza residents was (3.3230). These results are in line with Abu Sa'da (2012) study where there was no statistically significant difference between the domains of meeting expectation and place of residency (P value = 0.465), in addition his study showed that patient from Gaza city respondents reported higher mean score of perception than Khanyounis and Rafah residents.

4- **Level of education:** The statistical analysis showed that no statistical significant differences between respondent regarding level of education (p value .129). This finding was consistent with Abu Shuaib (2005) study, where there were no significant statistical differences between educational level and overall perspectives about hospitals services.

5- **Type of admission: Patient's expectation:** Overall patient's expectation domain regarding type of admission reported statistically significant differences (p value 0.001). To find the direction of these differences, Post hoc Scheffe test was performed and showed that patients who had been admitted to surgical departments elicited higher scores in perspectives; surgical admission mean (3.6013), while medical admission mean (3.2909). All sub domains of patient's expectation reported statistically significance levels between surgical and medical admitted patients and the results were as the following: Process of care (P value 0.007); surgical admission mean (3.5172), medical admission mean (3.3476).Consultation and treatment (P value 0.000); surgical

admission mean (3.5172), medical admission (3.0183). Treatment outcome (0.036 P value); surgical admission mean (3.8333), medical admission (3.6098).This is consistent with Abu Dagaa (2014) findings showed that patients who had been admitted to surgical departments elicited higher scores in perspectives about discharge plan process (mean=0.682), compared to other departments.

6- **Unit/ Department:** The statistical analysis showed no statistical significant differences between respondents regarding unit/department (p value 0.121), however cornea unit reported the higher mean of meeting patient's expectations (3.6429), while lower mean reported by retina unit (3.4339).

7- **Frequent admission:** Overall domain of patients' expectation shows weak level of significance (p value .058) regarding admission frequency, however Post-Hoc test showed statistically significant results in "treatment outcome" sub domain (p value 0.004). First time mean was (3.8551), while frequent admission was (3.5926). This is consistent with Abu Dagga (2014), where the differences in means regarding the frequency of admission were 0.720.

4.5 Managers perspectives

This part explores managers perspectives regarding quality of care, through small discussion group with 5 key managers at NOH. Moreover it explores to which extend NOH management is responsive governance regarding the following indicators "Existence of quality structure and measurements in the hospital" and "Responsive QI activities"

4.5.1 Existence of quality structure and measurements

4.5.1.1 Quality structure

To review quality structure at NOH, an in-depth discussion group with key managers started questioning about quality structure and the current quality committee at NOH "*Quality committee was formulated at NOH at the beginning of (2014) in response to general administration of Gaza hospitals. It includes all processionals working at NOH, and consists mainly from six sub-committees; (Patient safety, Infection control, Medical files and Health information system, Mortality and Morbidity, Rational use of drugs, Education and training)* " (Hospital general director).

Regarding QI polices, protocols, standards and performance indicators, all interviewed managers agreed on that current polices, protocols, and performance indicators are insufficient, but they cover critical areas at the hospital, "*Quality policies and protocols were developed at NOH in critical areas, as surgical department and emergency department, while some important performance indicators monitored monthly e.g. cancellation rate, attendance to appointments, lengths of stay, bed occupancy rate* " (Hospital medical director). This is consentient with Al-Telbani & Radwan (2013) where (75.3%) of the participants stated that management is focusing on satisfying emergency health needs rather than supporting the implementation of QI activities.

Regarding expenditure for QI, NOH general manager commented…"*There was no specialized expenditure at NOH regarding quality improvement activities. Many activities stopped due to lack of financial support "* (Hospital medical director).

In response to questioning about including QI in hospital strategic plan " *We plan to reach specific goals for QI, but the implementation of QI activities requires funds, and many activities stopped in the first stages e.g. (patient fall prevention, JCAHO accreditation for*

patient safety, and patient identification) due to lack of finical recourses" (Hospital general director).

Qualitatively, all managers agree that lack of financial support stop for many QI activities at the hospital, while the majority agreed upon the negative impact of the political situation on the implantation of QI activities, considering the political split and its effects on staff; "*Political fragmentation has negatively affected staff attitude even quality committee members, they lack motivation, because of salaries shortage, lack of incentives or any reward actions*" (Hospital medical Director). This is consistent with Shamia (2016) findings, where 68% of respondents agreed on that siege affected availability of adequate financial operating resources for hospitals, while 54.6% agreed on that donors fund does not oriented toward quality improvement at MOH.

Al-Telbani & Radwan (2013) study showed that financial support was one of the most arguable issues elicited through the in depth interviews, as most of the interviewees believed that money was not a barrier in the implementation of QI whereas fewer believed that money was the main driver in the implementation of QI activities.

4.5.1.2 Performance measurements

Through in-depth manager discussion different styles of performance measurements and protocols compliance monitoring were clarified. It was done regularly by check lists and performance indicators in some areas, while it was observed by habits in others. *"At nurse unit we monitor performance of each employee through direct supervision, where daily checklists monitor to which extent they comply with work protocols*" (Nursing unit director).

Regarding outpatient clinic department, NOH's medical director commented… "*At the end of 2015 we evaluate performance of diagnostic units from all professional perspectives through short questionnaire survey, to highlights on strengths and weakness areas. Based on baseline evaluation absence of medical file at out clinic was the main gap, which hold back any monitoring of process or outcome of provided care* ".

Absence of medical file at out clinic attributed to lack of administrative staff which is responsible for files extraction and distribution among clinics "*We lack human resources, and material resources to operate medical file at out clinics*" (Hospital administrative manager). Moreover he commented that… "*I am making daily rounds on employee offices*

and monitor work by (habit eye observation !!) Lack of head departments and adequate human resources among administrative staff put high burden on us regarding work monitoring or makings further work development at NOH " .

Regarding measurement through performance indicators, it was not adequate as perceived by the majority. Even though concept of quality measurements at NOH is applicable in few locations, but it is frameless and irregularly monitored. In addition service outcome measurements were absence regarding surgical department, outpatient clinic and emergency departments.

Researcher believe that the current situation is very complicated, where many factors may contribute to hindering performance monitoring at NOH. Lack of QI oriented training, lack of human and material resources and supporting funds which weaken QI activities. Moreover low satisfaction status of employee, lack of motivation and subsequent staff's attitude make employee less engaged and committed regarding QI activities.

Even though previously mentioned circumstances researcher believes that monitoring of performance need more management commitment and staff involvement more than money. Many performance indicators could be easily captured without financial support. At least NOH has to monitor if service quality still on proper track, through monitoring outcome of care provided to in patients and outpatients who already have medical file. Status of documentation, process and protocol compliance monitoring for in patients, outcome of different surgeries and operating theater performance can be easily captured. Moreover waiting time of patients at out clinic and emergency department, and weighting of clinical visits time at current appointment system, staff safety practices, performance, satisfaction and patient access to care all can be easily attained without money.

4.5.1.3 Quality committee activities

Through reviewing documented quality committee activities, documentation and reporting practices were not properly implemented, reflecting not well defined QI related structure, limited QI related activities, poor planning, and the not well standardized processes. Most quality improvement sub-committees work without performance indicators, while activities regarded QI were limited. Hospital general director commented ..." *We lack awareness of performance indicators importance, even though among NOH quality committee members; quality team member lack of adequate*

knowledge and training regarding QI, are not oriented to the concepts, principles, and tools of QI ", while medical director commented that …"*We lack leadership at the field for regular performance monitoring* ".

This is consistent with Al-Telbani & Radwan (2013) study findings which showed that lack of leadership has an important role to play in implementing QI, in addition the indicators as a measurement tool are still unrecognized in the MOH context, while well defined training strategies to build the capacities towards the QI concepts, principles, and tools still absence. Moreover study showed that (90.2%) of the participants stated that the shortage of quality expert trainers is clear, while (81.6%) of the participants stated that most employees are not well trained about QI concepts, principles, tools, and activities.

4.5.2 Responsive QI activities at NOH

The majority of interviewees agreed upon the fact that operate by specialized diagnostic unit system enhance team working between different health care providers, contributes in developing of clinical skills, and improve quality of care provided for NOH's patients."*At the beginning of 2015 NOH transformation from general ophthalmic hospital to specialized ophthalmic hospitals, operating with specialized units system, came as a response to patients needs at GGs, and in response to staff subspecialists interests"* (Hospital medical director). " *Each patient take sufficient time for consultation and checked twice through effective diagnostic clinics teams* " (Outpatient clinic director).

Moreover diagnostic procedures unit at NOH operating with latest advanced diagnostic procedures. "*Optical coherence tomography, Corneal topography inclusion in service increase quality of provided care at NOH, and enhance better medical decision making in many cases*" (Outpatient clinic director).

When managers are provided with patients survey results at this study, hospital medical director commented…"*We surveyed patient satisfaction status before operating the diagnostic units, where it reached 60%, while improvement appears clearly when comparing with this study results regarding access, meeting expectation, and overall general satisfaction status* ".

Regarding surgical department NOH management was responsive in many areas; monitoring of cancellation rate; increasing operating lists and call patients in advanced. Surgical complication rate monitored monthly through incidence reports, while all

operating rooms are under live cameras observation, which are connected to medical director office. "*Both incidence reports and live cameras were effective way to observe work at operations rooms, where we asked surgeons for any help or intervention in case of complication or in case of exceeding expected operation time*" (Hospital medical director).

Surgical department recently provide highly skills operations such as cross linking, corneal rings through cornea department. "*NOH provide patient with luxury highly skills operations, which were comparable with international outcome, while some cases results exceeded our expectations"* (Outpatient clinic manager). These findings congruent with the highest attendance rate which reported in cornea clinic (83.35%) at NOH's out clinic department.

As suggested by literature review, management must be responsive to staff needs as well as patients needs. Through qualitative in depth discussion with managers, hospital general director commented that… " *Safety officer at NOH held many QI activities regarding staff safety. Education activities, lectures, brochures and on job training on proper hand washing activities held in all hospital departments. Moreover medical waste management policy was developed at NOH* ".

While director of outpatient clinic department clarified that staff safety is apriority at the hospital " *We developed employee medical file, and at the end of 2015 infection control committee and safety officer communicated with MOH to provide all staff with needed immunization "*

"*Internal staff development and training activities programs for all professional was initiated at the hospital. Regular lectures, and on job training among physicians on surgical theater and at out clinic department is an ongoing process* (NOH medical director), while "*Nurse unit held courses, training activities and on job training through supervisors* " (Nursing unit director).

These qualitative findings showed the extent to which governance at NOH are responsive for patient needs at many areas, and to which extend the service is patient centered; indicating good quality of care provided at NOH from key managers perspectives. Moreover responsiveness regarding staff need empowering in many areas; training, communication, safety, and providing them with enabling work circumstances. All

interviewed managers attributed weak responsiveness to the limited resources "*We are responsive to staff needs as possible as it can, but limited resources still the major gap*". (Hospital medical director).

In summation, the following points summarized discussion of strengths, weaknesses that threatens provided service quality at NOH.

4.5.3 Strengths

Qualitatively, in the small discussion group were clear agreement on that there were definite opportunities to build upon the available strengths.

- Available medical team from various professionals (ophthalmologists, optometrists, pharmacists, nurses, anesthetists) which provide comprehensive ocular services.
- Available employee who attained high degrees studies regarding health management, crisis management, quality improvement, hospitals management.
- Providing ocular care through specialized diagnostic units.
- Providing patients with many high skilled operations.

4.5.4 Weaknesses

- Inadequate awareness of QI importance among different professionals at NOH.
- Lack of leadership at the field which empowering, coaching, guiding, and influencing the personnel to achieve.
- Managing change during QI process is not achievable, where staff strongly resisting any change at current circumstances.
- Inadequate number of human recourses in administrative staff, optometrists, anesthetists, and nurses.
- Lack of essential equipment, drug shortage, medical and surgical supplies.
- NOH low building capacity which not appropriate for provided service.
- Absence of medical file at out clinic department.
- Unplanned training provided through MOH.
- Siege continuation and political fragmentation, wars and political conflicts.

4.6 Medical documentation (checklists)

This part explores documentation status at NOH. The data was compiled and organized using 2 extraction sheet for inpatient (surgical and medical), and another special extraction sheet for outpatient medical file (Glaucoma).

Files were checked for availability and completeness of the data and whether the data contains a signature, with concern of doctors, optometrists, anesthetists and nursing writing. The researcher means by completeness, the available of complete documentation regarding the required parameters listed in every reviewed listed sheet.

After checking documentation status, results were generally compared with NCQA least recommended documentation parameters (NCQA, n.d). Moreover cataract care pathway at NOH was compared with recommended pathway of the RCOphth's Commissioning Guide: Cataract Surgery (RCOphth's, 2015-a). Glaucoma files was compared with best practice recommended by (NICE, 2009) for glaucoma management which was recommended recently by the RCOphth Commissioning Guide for Glaucoma (RCOphth, 2015-b).

4.6.1 Inpatient file

4.6.1.1 Surgical file

This part showed findings of documentation status regarding (122) cataract surgical file, and to which extend cataract surgical pathway generally congruent with international recommended cataract surgery guidelines. (Annex 13) summarized variables findings, which were as the following:

1- Registration form: Registration form was available in 100% of cataract surgical files, and complete in 88.5% of available files. Regarding signature status 100% name and signature was available, 91.8% out of them was clear.

2- Admission sheet: All patients files should contain admission sheet which filled by Board resident doctors. Admission sheet contains patients personal data, history of medical disease, chief complaints, ocular condition, diagnosis, preoperative medication, preoperative visual acuity, biometry and refraction status of the eye.

About 100% of files have admission sheet. Regarding items completeness; 97.5% of personal data were complete, 98.3% history of medical disease, 15.6% chief complaint, 100% ocular condition, 100% diagnosis, 100% preoperative medication preoperative, 100% visual acuity, 100% biometry, 17.2% refraction. Signature status by resident doctors in admission was available in 96.7%, and 94.05% were signed clearly, while optometrist signature for visual acuity and biometry was available in 90.98%, but 63.06% was not clearly signed.

In comparison to recommended cataract surgical pathway at the RCOphth's Commissioning Guide for Cataract Surgery (RCOphth's, 2015-a), main gaps in preoperative assessment phase were reported regarding proper documentation of complain, medical history and refraction status. Moreover diagnosis and evaluation of visual impairment is not adequate at NOH surgical file, where refractive status and full visual impairment examination were documented in out clinic file during follow up visits before surgery, which is not kept at hospital and data not documented at (inpatient) surgical files making such gap of preoperatively data in cataract surgical pathway. Visual function status is essential to comparing pre and post surgical refractive status and observing overall surgical outcome. Regarding ophthalmic examination (ocular examination) it was documented fully for all files with 100%, indicating excellent preoperative assessment.

3- Nursing notes (Preoperative checklists): Nursing care regarding patients preparation for surgery is documented in the pre-op check list at the day of the surgery. Nurse preoperative checklist was available in 100% of patients' files, where 83.6% are complete. Signature was available in 91.80% and clear at 71.42% of sheets.

4- Nursing notes (vital signs chart): A vital signs chart detects patient situation during hospitalization period. It was available in 100% of patient surgical files and was not complete in 68.9%. Signature was available in 90%, and 88.88% was not clearly signed.

5- Anesthesia report: Anesthesia report includes pre-op medications, complete checking of the patients, and classification of risk to anesthesia, which filled by anesthetists. It was available in 97.54% of files, but 64.7% are not complete. Signature was available in 87.70% of reports, and clear in 65.42% .

In comparison to the RCOphth's (2015-a) assessment phase on admission day and on surgery day was reflected in nursing and anesthetists notes. Major missing data was in patient identification part, while medical data was almost complete (general health evaluation including blood pressure check**,** note of current medication**,** record of allergies**.** The pre-operative checks include identification of the patient and the eye for surgery together with external eye examination are to ensure there is no ocular infection, and there was adequate pupillary dilatation before surgery**.** Fulfilling patient identification items in patients' files is essential to prevent medical errors or data exchange with other patients. Moreover enhancing better signature status among nurses and anesthetists is needed.

6- Consent form: It is mandatory for all admitted patients who intended to have invasive diagnostic or therapeutic interventional procedures to sign a consent form with clear explanation about the ongoing procedure and its complications. It should always be signed by the patient and the doctors. Consent form was available in 100%, but complete in 54.9.1% of files, which is not adequate percentage, where the accepted percentage is 100%. Signature was available in 62.29%, and 80.26% have clear names or signatures.

7- Cardex medication sheet: It contains medication recommended for patients and related instructions. It was available in 81.14%, available and complete in 17.17% in surgical files and signature available 77.86% and 68.42% of sheets were clearly signed.

8- Progress notes: Progress notes is one of the utmost important documentation paper in medical files and we rely on it in reviewing patient condition and in research purposes and should be written in clear and complete way and should be signed by clear signature and name. the study shows that 100% of the reviewed files have available progress note. Signature reported in 95.08%, 62.93% out of them were clear. Completeness was not reviewed as this part of the patient files is a free text page without items.

9- Discharge sheet: One of the most important documentation in patient's files is discharge sheet. It includes the clinical summary about the patients' history and clinical case. It also includes the investigations, operation done and case management, follow up date, recommendation and instruction provided, and post discharge medication. Moreover it is commonly used for research purpose specially in case of availability of ICD 10. Regarding the availability of discharge sheet in surgical files, it was available in 100% of surgical. Through reviewing discharge sheet items, the study findings were as the following:

A- Hospitalization and demographic information items: Hospitalization data were available and complete in 14.8%, available but not complete in 85.2%, demographic information available and complete in 10.7%, and available but not complete in 89.3%. Incompleteness in hospitalization data was noticed in referral site item, while address and occupation items were largely missing in demographic information part. This domain is considered as mandatory basic information for all discharged cases and should be completed 100% in all discharge sheets.

B- Heath information items: Discharge clinical summary in surgical file was available in about 100%, available and complete in about in 82%. Investigations was available 60.65% and complete in 70.0% of cases, while in 39.35% of cases were not mentioned at all. Researcher means by completeness in clinical summary is a presence of appropriate summary of the history, clinical condition on admission. Operation done item was available 98.7%, and complete 99.32%. Final diagnosis was available in 86.88 %, available and complete 98.11%. Treatment was available in 100%, available and complete in 98.4 % in surgical files. Follow up appointment was recorded in 65.57% of surgical files, available and complete in 92.92%. ICD10 in discharge summary in surgical files was available in 24.0%, while it was not available in 76.0% of cases and finally signature was available in 100%, available and clear in 82.0% of cases.

In comparison to the RCOphth's (2015-a), post surgery assessment is reflected through progress notes and discharge sheet; ensuring that the patient is comfortable and pain free. The eye is examined for clear cornea, deep anterior chamber, intraocular lens in place, round pupil, and fundus status. Moreover post-operative written instructions, medications, appointments and emergency contact details are all given to the patient.

At this stage data at NOH's surgical file was properly documented regarding clinical summery, operation done and final diagnosis. Main gaps postoperatively were noticed in fulfilling investigations item at discharge sheet which was almost completely filled at the progress note free text page. Follow up appointment was not adequately filled which is not accepted. Providing patients with full written instructions about follow up time/ place on discharge is essential to keep patients' safety. Moreover ICD 10 was largely missed at discharge sheet. Filling discharge sheet properly is essential in discharge process and monitor surgical pathway postoperatively. Moreover discharge sheet used for further follow up at out clinic, and for further research studies is also necessary.

4.6.1.2 Medical treatment files

This part shows the findings of documentation status regarding (70) patients' files who admitted for medical treatment, and to which degree are congruent with international recommended set of commonly accepted standards for medical record documentation, issued by (NCQA). (Annex 14) summarized variables findings, whereas the following:

1- Admission sheet: About 100 % of files have admission sheet. Regarding items completeness; 74.3% of personal data was complete, 55.7% history of medical disease, 48.6% chief complaint, 100% ocular condition, 100% diagnosis, 96.96% medication on admission, 100% visual acuity. Signature status in admission sheet was 97.14% available, 92.64% was available and clear.

Regarding NCQA's recommended documentation standards main gaps in fulfilling medical admitted patients' file was noted in filling patient's medical history, chief complaint and personal data items (age – address- gender), while admission investigations regarding ocular condition, diagnosis, visual acuity and medication on admission were properly documented. Percentages of documentation regarding admission sheet in surgical file is generally better than in medical admitted patients' file, reflect better admission process at this phase in patient's surgical admission's pathway than medical admission's pathway.

2- Nursing notes (vital signs chart): Regarding medical admitted patient's files nurse vital signs sheet were available in 92.8%, and complete in below the half with 38.46% percentage. Signature is available at 98.36%, but not clear in 94.1% of them not clear.

3- Progress Notes: In medical files 97.7% of progress notes were available in the file. Signature available in 92.85% and 86.15% were clear.

4- Cardex medication sheet: In medical admitted patient's files, 94.3% of cardex sheets were available, 69.69% were available and complete and signature was available in 94.28%, and clear in 92.42%.

Nursing notes, progress notes and cardex medication sheet reflect process of care during length of stay period at NOH. Main completeness gaps in these sheets were noticed regarding personal data filling (name- age- gender- address) and date, while medical data was filled properly in recommended items.

5- Discharge sheet: It was available in 100% of patient medical file. Through reviewing discharge sheet items, the study findings were as the following:

A- Hospitalization and demographic information: Hospitalization data was available and complete in 4.3%, available but not complete 95.7%, while demographic information was available and complete in just 31.4% of cases.

B- Heath information items: Clinical summery was available in about 97.7%, available and complete in about in 91.04% of cases. Investigations were available in 75.7%, and available complete in 92.45% of cases, while operation done item was available and complete in 65.71% of cases. Final diagnosis was available and complete in 64.3%. Treatment was available and 98.6%. Follow up appointment was available and complete in 68.6%. ICD10 was not available in 84.3%. Signature was available 95.71%, available and clear in 89.55% of cases.

Discharge process for medical admitted patient reflected through discharge sheet where many gaps were noticed regarding fulfilling recommended hospitalization and demographic data. Moreover health information items were not adequately documented regarding some items (final diagnosis, operation done- investigations – follow up appointments and ICD 10).

To conclude medical documentation at NOH's in patient settings need further improvement regarding the completeness of patient personal data to assure proper identification in every individual sheet at patients' file. Clinical and history summary should be clear and investigations should be completed. Follow update and use of ICD10 should be encouraged. NOH hospital need a system for follow up and monitoring of the documentation process to improve the status of documentation.

When comparing NOH findings with Al Ron (2009), Abu Sada'a (2012) and Abu Dagaa (2014) studies; the main gap in documentation in Shifa medical Compound, EGH, and others governmental hospitals at GG, are the same but with variations of the rates among variables, even though NOH shows better documentation regarding many variables.

4.6.2 Outpatient's file (Glaucoma unit files)

This part shows findings of documentation status regarding glaucoma file, and to which extent glaucoma care pathway is generally congruent with international recommended guidelines for glaucoma care. (Annex 15) summarized variables findings, which were as the following:

Galucoma is simply defined as a common sight threatening disease that affects the optic nerve (RCOphth 2015-b). Glaucoma unit is one of the most important diagnostic units at NOH's out clinic department. It is the only unit which has a special formulated patient's medical file, with special sheet for glaucoma management. Glaucoma was responsible for 5.8% of avoidable irreversible blindness in Occupied Palestinian Territories (Chiang, *et. al.* 2010).

Regarding documentation of glaucoma clinical care pathway national Collaborating Centre for Acute Care (NICE) recommended the following standards to be documented regarding all types of glaucoma (Ocular hypertension, suspected Chronic open angle glaucoma, Chronic open angle glaucoma, and Primary angle closure glaucoma); they stated that the following tests should be carried out at assessment and diagnosis:

Assessment for glaucoma essentially involves three types of test; measurement of IOP, automated testing of the visual field, and assessment of the optic nerve head. Further assessment should include measurement of central corneal thickness and a more detailed assessment of the optic nerve head, and also includes interpretation of the clinical findings to determine if glaucoma is present. Optic disc imaging should also be carried out and the images should be available at all future visits to facilitate the detection of optic disc change. Imaging may take the form of standard photography or other modalities such as optical coherence tomography. The assessment should also include gonioscopy to diagnose or exclude angle-closure. Moreover a patient-held management plan should include diagnosis, copies of disc imaging and visual fields, central corneal thickness (NICE, 2009).

At NOH Glaucoma clinic developed a special file form regarding glaucoma needed investigations and measurements, which highly aligned with (NICE, 2009) allowing researcher to check status of documentation of glaucoma items and comparing them with

these guidelines and standards. By checking data in 158 glaucoma files, the findings were as the following per each item:

1- Date: Date was available and complete in 94.3% and not available in 5.7% of glaucoma medical files.

2- Personal data: Patient's name and ID is available and complete in 100% of checked files (name and ID included in each file cover and not included in glaucoma sheet; this may lead for missing patients' data if any sheet is lost from the file. The researcher suggests include name, ID, age, and gender items inside glaucoma unit sheet.

3- Medical history: Regarding patient medical history it was available and complete in 88.6%, not available in 11.4%.

4- Investigations and measurements: Visual acuity was available and complete in 100% of cases, intraocular pressure available and complete in 98.7%, not available 1.3%, while cup disc ratio was available in 92.4%, available and complete but 97.94% , not available in 7.6% of cases. Visual field test was available and complete in 26.6%, but not available in 62.0% of files, and recommended but still not recorded in 11.4%. Such a gap in visual field testing documentation is not accepted in glaucoma management pathway; reflecting a weak diagnosis and monitoring process of glaucoma progression in checked files. This gap could be attributed to unavailability of visual field analyzer at NOH, but ophthalmologists have to refer patients to other health facilities and emphasis on its importance regarding diagnosis, monitoring, and management of case.

OCT was available and complete in 13.3%, but not available (77.8%), recommended under investigations *8.9%. Even though OCT was available at NOH, but extended waiting lists in diagnostic clinic among diabetic retinopathy and glaucomatous patients leads to ignoring it and depending mainly on direct ophthalmoscope test. Regarding CCT test it was available and complete in 80.4%, but not available in 19.6%.

Treatment was checked regarding availability and completeness of current treatment and new visit treatment changes notes in addition to daily dose. Treatment was available and complete in 92.4%, not available in 5.7%, and not recommended for cases under investigations in 1.9% of the checked files. And finally regarding signature availability, it

was available and clearly signed in 26.6%; and it was available but not clearly signed in 55.7%, while 17.7% was not available at all.

The study showed gaps in documentation of important measures needed for glaucoma patients management pathway. People with glaucoma often do not experience symptoms until the disease is advanced and there has already been considerable damage to the person's vision and if not diagnosed, monitored and treated correctly, glaucoma can result in severe not recoverable loss of vision or blindness, therefore, successful management of glaucoma requires lifelong monitoring and treatment to prevent or minimize further vision loss (RCOphth, 2015-b). Therefore following best practices guidelines suggested by (NICE, 2009, and monitoring compliance of them through checking medical files documentation, will be of great effects on improving glaucoma patient's clinical pathway and providing them with best service quality.

4.7 Performance indicators

This part explores various performance indicators at NOH, which were extracted from hospital annual reports, hospital statistical data base, surgical, clinical and administrative records. Some indicators will be compared with PATH findings and recommend rates, while the indicators regarding ocular care will be compared with different national findings.

4.7.1 Phaco to ECCE rate "Cataract surgeries"

Phaco is the standard method of cataract extraction in developed countries, and in regional centers in most developing countries (Bowling, 2016). Literature showed advantages of phaco over ECCE, especially in recent De Silva, Riaz & Evans (2014) review study, where trials, showed superiority for Phaco visual acuity results compared to ECCE, and a lower complication rate.

At NOH, for total year (2015) operation lists were reviewed, where statistics summarized in table (4.17) showed that ECCE rate was higher (57.63%) than Phaco rate (43.36%).

Table (4.17): ECCE to Phaco rate at NOH

Month / Year	Total cataract surgeries	ECCE	Rate	Phaco	Rate
January	69	36	52.17%	33	47.82%
February	102	60	58.82%	42	41.17%
March	114	63	55.26%	51	44.73%
April	111	65	58.55%	46	41.44%
May	119	62	52.10%	57	47.89%
June	128	74	57.81%	54	42.18%
July	74	47	63.51%	27	36.48%
August	125	77	61.60%	48	38.40%
September	80	65	81.25%	15	18.75%
October	141	93	65.45%	48	34.04%
November	145	69	47.58%	76	52.41%
December	128	59	46.09%	69	53.90%
Total	**1336**	**770**	**57.63%**	**566**	**42.36%**

Qualitative part of this study clarified this rates where hospital general director commented…"*Phaco technique classified as a highly skill operation, need special high surgical skills which are not available in all surgeons team. Moreover we have one operating Phaco equipment, which exposed to failure many times, and we frequently*

***forced to stop Phaco operations*" , while NOH's outpatient clinic director commented… " Such rates are accepted at NOH, where we operating by one Phaco equipment ".**

Table (4.17) showed lower Phaco rates reported at the second year half; these are attributed to Phaco equipment failure at the hospital. De Silva, Riaz & Evans (2014) study justified ECCE usage in a patient population, where high-volume surgery is apriority due to its lower cost which is the case at NOH case, and may express higher usage of ECCE technique.

4.7.2 Visual outcome and intraoperative ocular complication rate (cataract) tracers

WHO set a target for quality of cataract surgery outcome, where at least 85% of eyes achieve 6/18 or better presenting visual acuity postoperatively (Baltussen, *et al.* 2004). Visual acuity was measured using a Snellen tumbling 'E' chart at 3 metre distance, and was measured in full daylight with available correction. Eligible cataract operations were those performed using Phaco or ECCE. The primary intention was cataract surgery, not combined cataract operations where the cataract component may not have been the primary reason for surgery.

A- Visual outcome

The result of researcher survey at NOH for cataract visual outcome in out clinic during patient's follow-up appointment for 2 months (July- August 2015) was as the following:
As shown in table (4.18), out of the total 125 cataract surgeries, 62 were operated by ECCE technique and 63 were operated by Phaco technique. Good outcome (VA ≥ 6/18) reported for 99 operations with 79.2% percentage, borderline outcome (VA< 6/18 and ≥ 6/60) 20 operations with 16% percentage, while poor outcome (VA< 6/60) 6 eyes with 4.8% percentage.

Borderline and poor outcome cases files were extracted to explore co morbidity status, where 12% of cases were diabetic, 24% were hypertensive, 24% were both hypertensive and diabetic, 4% were amblyopic, and 36% were medically free.

Table (4.18): Visual outcome of cataract surgeries

Visual Outcome according to WHO classification		
Good outcome (VA ≥ 6/18)	Borderline outcome (VA< 6/18 and ≥ 6/60)	Poor outcome (VA< 6/60)
99	20	6
79.2%	16 %	4.8%

In comparison to Rapid Assessment of Avoidable Blindness in the Occupied Palestinian Territories project, the survey find that among people who had undergone cataract surgery in the past, only 54.5% of eyes obtained a good outcome; 23.2% had a borderline outcome, and 22.3% had a poor outcome, with available correction, in those eyes with a poor outcome. The single largest cause was attributable to ocular co-morbidity as ARMD, glaucoma, diabetic retinopathy (Chiang, *et al.* 2010).

In another two recent studies that concern to outcome of cataract surgeries postoperative best-measured visual acuity was 6/6 and 6/12 or better in 94.6% eyes without ocular co-pathology, and 79.9% in eyes with co-pathology. For eyes without co-pathology, postoperative uncorrected distance visual acuity was 6/6 and 6/12 better in 80.9% eyes (Day, *et. al.* 2015), while good outcome presenting VA 6/18 or better was seen in 350 (67%) eyes were the fitted model consisted of ocular co-morbidity (Sonron, *et al.* 2015). It is obviously that the rate of good outcome of cataract surgeries at NOH indicates good quality service and comparable to international standards.

B- Complication rate

In this study the researcher checks complication rate post cataract surgeries through reviewing hospital operative notes "incidence reports" for total one year (2015).
PCR rate with or without vitreous loss was (2.96%). A total 40 cases were reported out of 1347 total cataract surgeries. Such rate at NOH is accepted if compared with others more advanced international settings where PCR or vitreous loss or both occurred in (1.95%) cases (Day, *et. al.* 2015), while in Moorfields Eye Hospital cataract rate (PCR) in phaco operations in last two years quality reports was 0.80% in 2012-2013 report while 0.94% in 2013-2014 report where targeted ratio was <1.3% (Morfield hospital, 2013-2014).

4.7.3 Visual outcome post laser therapy for Diabetic maculopathy (DM) and Proliferative diabetic retinopathy (PDR)

At this study the researcher checked outcome of laser therapy for DM and PDR patients through reviewing laser department clinical records to extract targeted data regarding DM and PDR patients for a period of three months. Total cases were 100 case and distribution of cases was 51% with DM, while 49% with PDR. Table (4.19) below shows visual outcome of laser therapy for both DM and PDR.

Table (4.19): Visual outcome of laser therapy

DM outcome			PDR outcome		
Visual outcome	%	Overall outcome	Visual outcome	%	Overall outcome
+1 line	19.6	52.8% improved vision	+1 line	28.5	65.24% improved vision
+2 to +3lines	21.5		+2 to +3lines	24.5	
+4 to +5 lines	11.7		+4 to +5 lines	12.24	
No changes	19.6	19.6%	No changes	18.3	18.3%
-1 line	13.7	27.4% decreased vision	-1 line	4	16.2% decreased vision
-2 to -3lines	9.8		-2 to -3lines	12.2	
-4 lines	3.9		-4 lines	0	

Study results showed that 52.8% of DM cases have experienced improvement in visual acuity post laser therapy, 19.6% no changes, and 27.4% have experienced decreased of visual acuity, while in PDR 65.24% of cases have experienced improvement in visual acuity, 18.3% no changes, and 16.2% hve experienced decreased of visual acuity.

In both DM and PDR total 19% of cases were not stable clinically and take others different fundus clinical pictures, where patients managed by other treatment options.

Results at NOH of laser therapy are comparable to standards in both DM and PDR; reflecting high quality care provided for diabetic retinopathy patients. Both outcomes exceed 50% improvement of visual acuity and preventing sight loss, where laser photocoagulation for DM supposed to reduce the risk of visual loss by 50% (Bowling, 2016) and the risk of severe visual loss in PDR patients with high risk characteristics is reduced by 50% at 2 and 5 years by pan retinal photocoagulation laser therapy and by up

to 70% in moderate risk patients (The Diabetic Retinopathy Study Research Group, 1987).

4.7.4 Rate of hospital-acquired infections (post intraocular surgical intervention) – (endophthalmitis)

At this study prevelence of acute endophthalmitis rate at NOH was monitored for total one year (2015). Researcher track every recorded cases of endophthalmitis in daily hospital admission records for both male and female departments; this is followed by extraction of patient medical file to ensure that the case was operated at NOH and admitted for acute postoperative endophthalmitis. Admission sheet, progress notes, and discharge sheet, vital signs, and medication records were reviewed to ensure final diagnosis of endophthalmitis.

Total invasive surgical interventions at NOH were 3270, total recorded cases of postoperative acute endohthalmitis were 10 cases with (0.3058%) total endophthalmitis rate. As shown in figure (4.6) the rate of endophthalmitis for total 1336 cataract surgeries at this period was (0.5988) where 8 cases were reported, while for total 1377 intravitreal Avastin Injection two cases were reported with (0.1452%) endohthalmitis rate. No cases recorded post any other type of invasive surgeries.

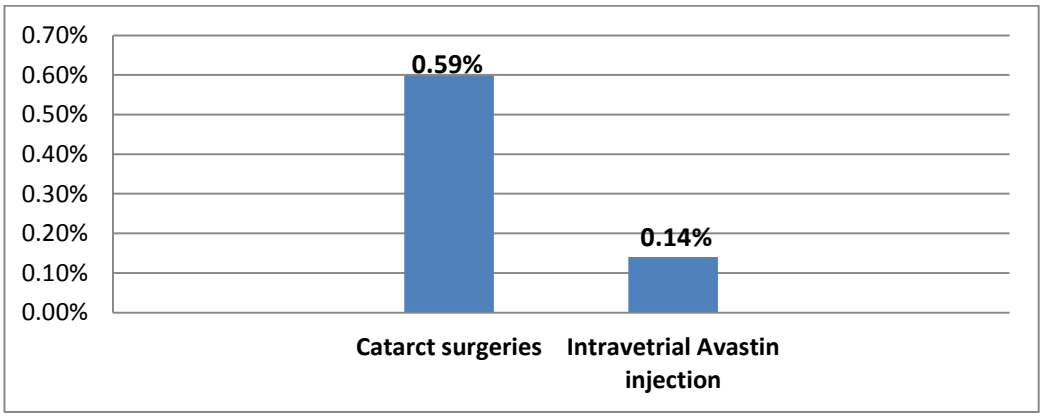


Figure (4.6): Endopthalmities rate

Such rate of acute endopthalmities post cataract surgeries is considered high, but study's qualitative part showed the full picture of such high rate.

Through managers discussion group hospital medical director clarified the situation ***"NOH reported two breaks of endopthalmities, where causes tracked through infection***

control team and surprising result was of ineffective sterilizer materials which supplied through MOH storages. Another break occurs as a result of lack of surgical supplies, where patient purchasing different materials from different medical companies, which do not meet the requirements which causes inflammatory reactions postoperatively for patients" **(Hospital medical director).**

Argument about documentation accuracy at patient medical files occurred during managers discussion group, where general manager, medical director and out clinic manager agreed on that most of cases considered post operatively sterile inflammatory reaction where it could be mistaken for acute postoperative endophthalmitis even though ophthalmologists final diagnosis for the cases was acute postoperative endophthalmitis. Both NOH general manager and NOH out clinic manager commented ***"We can roll out 2-3 cases of real acute postoperatively endophthalmities regarding cataract surgeries with (0.2245%) which is accepted rate".***

In case of considering final diagnosis accuracy at medical files; high rate of endophthalmitis incidence post cataract surgeries at NOH is not comparable with national standards, while in case of considering managers suggested rate it is comparable rate. Rate is very good and comparable regarding endophthalmitis incidence post Intravitreal Avastin Injection.

Different international findings were as the following: Standard incidence rate was <0.08% at last quality report of Moorfields Eye Hospital at UK, and real rate per 1,000 cataract cases was 0.04%, while incidence of endophthalmitis Per 1,000 intravitreal Injections was (0.18) (Moorfields Eye Hospital, 2013-2014). At USA a 10-year study of a large U.S. national insurance database found that the overall rate of endophthalmitis post intravitreal injection from 2003 to 2012 was 0.037% (1/2702) (Bonaffini & VanderBeek, 2015), while Six-year incidence of endophthalmitis after cataract surgery in the incidence of endophthalmitis in Sweden was of 0.029% (Friling, et. al. 2013). ESCRS endophthalmitis study group (2007) reported incidence of less than 1 in 1000 of postoperative endophthalmitis following cataract surgery endophthalmitis (ESCRS Endophthalmitis Study Group, 2007). Finally in comparison to the largest referral centers in Israel Sheba and Rabin Medical Centers, ten cases occurred between the years 2007 and 2014 out of 29,431 cataract operations with a rate of 0.034 % (Katz, *et al.* 2015).

To conclude both breaks were out of NOH control, even though the source of infection usually cannot be identified with certainty (Bowling, 2016) but many responsive investigations and activities done through infection prevention and control committee, where surgical pathway was tracked for suspected causes. Moreover lack of regular auditing of medical documentation accuracy still the major gap between the study findings and real existed facts.

4.7.5 Day surgery rate

Day surgery is a multidimensional indicator reflecting efficiency, clinical effectiveness, and patient orientation, the higher day surgery rate is preferred, as long as safety is not compromised (WHO, 2009). As shown in table (4.20) the non daily care activity e.g. (cataract, retina, squint, and corneal surgeries) taking great bulk of work at NOH, while less day activities at operation room as some oculoplastic surgeries were reported. This rate does not in line with the world health trend towards a day care surgery which will be an integral component of health care in the future.

Table (4.20): Day surgery rate

Month	Total planned surgeries	Day surgeries	Day surgery rate
January	377	30	7.95
February	360	25	6.94
March	406	50	12.31
April	451	35	7.76
May	374	34	9.09
June	501	39	7.78
July	306	6	1.96
August	431	55	12.76
September	321	33	10.28
October	391	31	7.92
November	442	44	9.95
December	414	44	10.62
Total	4774	426	8.92%

Day surgery rate at NOH for one year (2015) was 8.92% which is considered low rate. Even though same day separation for patients occurs within 2-3 hours post surgeries, but they are not officially discharged till ophthalmologists' morning rounds. As noticed in table (4.20) above June-2015 showed decreased number of both day and non day surgeries due to endopthalmities breakout at the hospital, where many operation lists was cancelled. In comparison day surgery rate at EGH were 39.4% reflecting more efficient care. To increase day surgery rate NOH has to seek toward redesign existing structures, extend the roles of health professionals and other staff, explore ways of achieving better integration with primary care services to ensure optimal pre- and postoperative care (Abu Sada'a, 2012).

4.7.6 Readmission rate 30 day

Readmission is one of hospital quality indicator reflecting multidimensional aspects of quality of health care provided; clinical effectiveness, efficiency and safety (WHO, 2007-d). At this study the readmission rate of patients who have been discharged from NOH within 30 day from 1st January to 30th September 2015 was calculated through reviewing hospital statistics of repeated admissions followed by extraction of patient medical file to review the cause of readmission.

Table (4.21) total admissions for both surgical and medical for this period were 4565 with **(0.96%) readmission rate**, while total surgical admissions were 3546 with (0.73%) readmission rate, and finally total medical admissions were 1019 with (1.76%) rate.

Lower rate is preferred; however, very low rates may reflect that patients are readmitted to other hospitals (WHO, 2007-d). The readmission rate at NOH was (0.96%) which is regarded as very low rate and reflects very effective and efficient care. Moreover there was no other place for readmission expect NOH and EGH, so such low rate is comparable to national standards and exceeding them, where in comparison to Moorfields Eye hospitals at UK as 28-day emergency readmissions in 2013/14 of all admissions was of (3.8%).

Table (4.21) readmission rate at NOH

Admission	Total admissions	Readmissions	Readmission rate
Surgical	3546	26	.73%
Medical	1019	18	1.76%
Total	4565	44	.96%

4.7.7 Length of stay

LOS is a direct measure of efficiency, and literature clarified that nowadays the trend in the world is toward day care surgery, rapid return to home & cost effective treatment. For total one year (2015) the average LOS at NOH was 2.25 days. Figure (4.7) below show monthly average LOS at NOH.

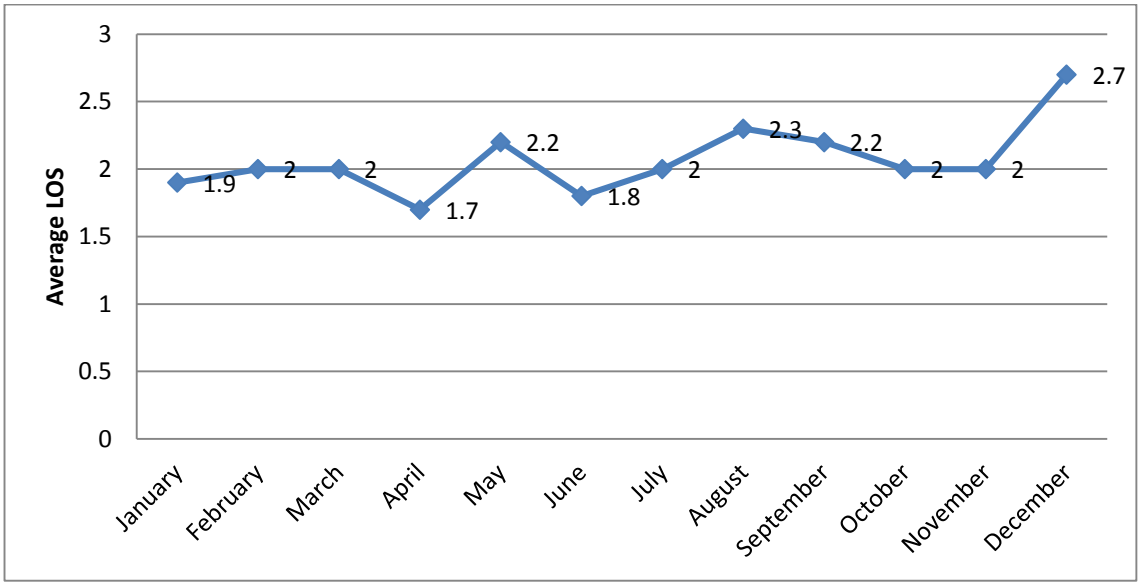


Figure (4.7) Monthly average LOS at NOH

LOS ranges from 2.3 at male to 2.1 at female department; this rate is considered a good rate. (Annex 16) showed monthly LOS at both surgical and medical departments. Such a low LOS rate reflecting an efficient service at NOH, and could be attribute to the nature of ocular care where patients discharged postoperatively within average two to three hours. Same day separation and short length of stay provide a good structural base to increase day surgeries at NOH to increase care efficiency.

From efficiency the point of view, shorter is better, but very low median days may pose patients at risk. If NOH guarantee patient safety, the average LOS at NOH could be

considered comparable to international standards, as the average LOS in hospitals for all causes among OECD countries was less than five days the lowest in Mexico, Turkey and Israel, and it was also low in Norway and Denmark, as well as in the United States, all at less than 5 days (OECD, 2011). In comparison to Abu Sad'a (2012) average LOS at EGH was 4.5 days, where surgical departments ranges from 4.88 at male surgical to 5.03 at female surgical which is considered high and this difference could be attributed to different hospital context and type of provided services where NOH is specialized hospital, while EGH is general hospital.

4.7.8 Attendance to appointments

Patients failing to attend hospital appointments contribute to inefficient use of resources. The researcher tracks attendance to appointment at outpatient department and at surgical department for total year (2015). Table (4.22) below showed that total attendance rate at out clinic and surgical departments at NOH was (64.43%).

Table (4.22) Percentage of attendance in NOH outpatient's clinics by specialty

Clinic	Appointments	Attendance	Percentage of attendance
Cataract unit	11315	7374	65.17
Glaucoma unit	3733	2289	61.31
Retina unit	3145	2400	76.31
Cornea unit	1853	1548	83.35
Oculoplastic unit	3005	1650	54.90
Pediatric unit	3007	1504	50.01
Laser unit	10036	7088	70.62
Diagnostic unit	5219	3544	67.90
Optometry unit	5080	2208	43.46
School health	2797	1057	37.79
Medical reports	1785	1374	76.97
General	7230	3567	48.33
Total out clinic	58205	35603	61.16%
Surgical department	5522	5459	98.85%
Total appointments	63727	41062	64.43%

Attendance rate at outpatient department varies between clinics from (37.79%) to (83.35%) with (61.16%) average rate. Total number of appointments 58205 and total number of attendant appointments 35603. In comparison to surgical department, average attendance rate of appointments was (98.85%) with total 5522 planned surgeries appointment and total 5459 attended appointments.

NOH attendance rate to outpatient clinics appointment is not comparable to international rates or even local rates. Reports from hospital statistics in UK in 2012-13 showed that there were 94.1 million outpatient appointments, of which 75.5 million (80.2 %) were attended (Health and Social Care Information Centre, 2013). When comparing the rate to EUH rate in Abu Sada'a (2012) study, the rate of attendance at outpatient department at EGH varies between clinics from 55% to 100% with average of 72%.

It is obvious that there is a lot of missed appointments in out clinic department; which indicates inefficient service. NOH need to review appointment system and communicate more with patients to identify the causes of non attendance to avoid resources wastage. Phone calls or reminders text messages could be used before appointments time to enhance patients attendance. short message service reminders in health care settings substantially increase the likelihood of attending clinic appointments, and it is efficient option for health services to use to improve service delivery, as well as resulting in health benefits for the patients who receive the reminders (Guy, *et. al.* 2012).

"We daily accept unscheduled clinical visits and provide patients with needed care to replace missed appointments" **(Hospital General director).**

"Appointment system has full extended lists for each unit, so we replaced missed appointments with postoperative patients without appointments. Postoperative visits are urgent and waiting time for new appointments is longer that supposed for follow up time" **(Outpatient clinic director).**

NOH has to review appointment system, reevaluate appointments list based up on attendance rate, prioritizing patient entrance, and modify postoperative patients care pathway.

4.7.9 Cancellation rate of elective operations

Cancellation of elective scheduled operations leads to inefficient use of operating room time; bringing additional burden of re-scheduling appointments; moreover they are distressing and inconvenient for patients. The researcher tracks cancellation rate of elective operations at NOH for one year (2015). Cancelled lists according to cause of cancellation were extracted from hospital statistics electronic data base.

Cancellation rate at NOH was (16.12%). (Annex 17) showed that total elective operation at NOH for one year was (4774), and total cancelled operations was (770), while figure (4.8) below shows that cancellation rate varies between months from (25.18%) to (8.35%) and the process was unstable, even though the overall rate is considered relatively a good rate and reflecting efficient.

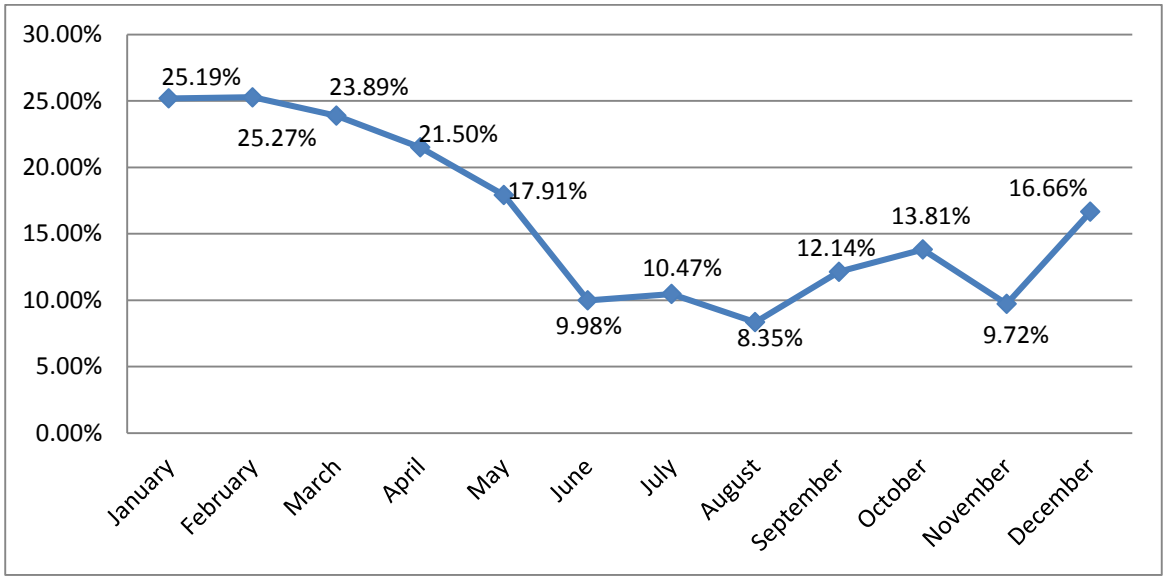


Figure (4.8) Cancellation rate at NOH

In qualitative part researcher questioned about this unstable process where NOH's general director commented…"***High cancellation rate has been one of our major concerns at NOH's quality committee for 2 years, it sometimes exceeds 25%, and this drop to reach (16.12%) means that we are on track and QI efforts was effective", while*** **hospital medical Director commented** ***"Sometimes cancellation rate it out of our control specially in urgent settings as breaks and essential equipment failure at operating rooms" .***

The major causes of cancellation rate at NOH were categorized as the following:

Total (38.36%) was attributed to high blood pressure, followed by others causes (equipment failure, political lock out lack of human resources specially anesthetists) with total (27.54%) percentage, (12.29%) due to high blood sugar level, (8.42%) to non attendance to surgical appointments, and (7.91%) to different medical causes (chest infections, low blood hemoglobin level, eye infections, continuous intake of aspirin, and finally (5.48%) due to lack of time.

In comparison to different studies cancellation rate at NOH was relatively accepted and cancellation causes were almost similar. Cancellation rate at EGH was 18.3%, and most causes of cancellation were due to lack of operating time, followed by emergent cases that usually supersedes the elective surgery, and medical unfitness of the patients which was not clear on admission or lack of some investigations and in some cases, and finally unavailability of equipment (Abu Sada'a, 2012). Reasons for (3.6%) of cancellation of elective operations at a major teaching referral hospital in Jordan over a period of 12 months ; patient-related reasons, administrative and medical reasons accounted for 31.4%, 30.4% and 38.2% of all cancelled operations respectively (Mesmar, *et al.* 2011). At Department of surgery at Omdurman Teaching Hospital reported cancellation rate of (10.6%) and the major three causes for cancellation were failure of the patients to attend, uncontrolled hypertension and overloaded schedule, 19.7%, 12.1% and 11.0% respectively, while most of the reasons (76.9%) were potentially avoidable (Elrahman, *et al.* 2014).

NOH needs to identify the different types of cancellations, understand the reasons and tackle them appropriately. Most of cancellation causes are preventable and can be reduced to minimum by enhancing communication with patients at the time of surgical registration and admission. This can be done through providing them with suitable instruction for specially for Hypertensive and Diabetic patients to ensure taking proper medication before surgical appointment and referring them to contact with suitable medical specialists. As for lake of time reason, NOH needs to evaluate operating theater performance and reschedule surgical lists according to suitable time and building capacity as time specialized for elective surgical work is limited by the end of official working hours.

4.7.10 Training expenditure

Through manager discussion group, qualitative findings showed that there was no specialized expenditure at NOH regarding staff training "*No financial support from MOH regarding training, and we seek to bring fund for internal training activities from NGO's* " (Hospital general director). Lack of training and development opportunities could negatively affect staff performance and skills. Study results could be expressed in the light of Shamia (2016) the study findings showed that 50.4% of respondents reported that the siege affected strategic planning for human resource development at MOH. Centralization at MOH prevents hospitals from innovation through allocation of internal resources. Moreover current resources are allocated to satisfy emergency needs at MOH.

4.7.11 Excessive working hours

In this study the researcher explores the status of excessive working hours among physicians, nurses and administrative staff who work on excessive hours system. Excessive working hours is measured through dividing numerator (weeks worked more than 48 hours) on the denominator of all work weeks (WHO, 2007-d).

Results for total year (2015), were as the following:

- **Physicians staff:** Average extra time hours were 15.27 hours per month.
- **Nursing staff:** Average extra time hours were 11hours per month.
- **Administrative staff**: Average extra time hours were 17.8 hours per month.

(Annex18) summarized monthly excessive working hour among different professionals at NOH.

As stated by (WHO, 2007-d) low rate of excessive hours worked are better. This low number of excessive working hours at NOH among different professionals represents a good quality indicator and aligned with recommended rate of WHO and DIRECTIVE (1993), where workers enjoy an average of weekly working period of not more than 48 hours, including the overtime for each seven-day period (WHO, 2007-d).

Qualitative part expressed this low rate through NOH's Medical director comment… ***"Low rate attributed to lack of financial return of excessive hours, and we tend to avoid put extra stress in current situation of employee salary shortages ".***

In comparison to EGH, average extra time hours were about 17.7 hours per a month, where low rate was attributed to the same reason; lack of financial return (Abu Sada'a, 2012). This came as a result of facing same work conditions at MOH hospitals.

4.7.12 Absenteeism rate

Absenteeism is referred as failure of employees to report for work when they are scheduled to work; it measures staff orientation and safety. Long-term absenteeism: more than 30 days to 1 year (WHO, 2004-a). Employees who are away from work on recognized holidays, vacations, approved leaves of absence, or leaves of absence allowed for under the collective agreement provisions would not be included. It is measured through dividing (number of days of medically or non-medically justified absence for less seven days or less in a raw (short-term absenteeism) or 30 days or more (long-term absenteeism, excluding holidays, among nurses and nurse assistants), on (total equivalent full time nurses and nurses assistants * number contractual days per year for a full-time staff 230).

Absenteeism rate among different professionals at NOH's was as the following: Absenteeism rates among nurses, physicians, pharmacists, and anesthetists staff was 0%, which is considered a low rate reflecting very good quality care and ensuring that appropriate numbers of health care providers are available for patients' care.

Regarding optometrists and administrative staff, absenteeism rates were 11.19%, 4.5% respectively, which are considered high rates. Optometrists provide care for patients at out clinic, surgical, and emergency departments and such absenteeism rate may cause discontinuity of provided service, affected quality of care, and put extra burden on other team members. Moreover absenteeism rate was reported among administrative staff who directly contact with patients almost everywhere at hospital. NOH's administrative complains from availability of adequate administrative staff make low rates of absenteeism of high burden on other staff members. Absenteeism rate among administrative and optometrists staff at NOH summarized at (Annex 19).

In Europe, the absenteeism rate (including temporary and permanent work incapacity) ranges from 3.5% in Denmark to 8% in Portugal (WHO, 2007-d). In comparison to Abu Sada'a (2012) study at EUG absenteeism rate among nurse stuff was 0.6% which is non-significant rate, reflecting high commitment of nurse staff at EUG. In Europe, the absenteeism rate (including temporary and permanent work incapacity) ranges from 3.5%

in Denmark to 8% in Portugal (WHO, 2007-d). In comparison to EUG absenteeism rate among nurse stuff was 0.6% which is non-significant rate, reflecting high commitment of nurse staff at EUG (Abu Sada'a, 2012).

4.7.13 Turnover rate

In this study researcher review employee affairs office at NOH to explore turnover rate for total one year (2015). The number of turnover employee was "1" with (0.787%) turnover rate. This low rate may be attributed to lack of employment opportunities at GGs and not conditioned by perfect levels of work conditions or satisfaction with work. The study findings showed weak satisfaction status with work conditions and managerial practices, and high percentage of employee experience high level of emotional exhaustion, while suggestions part of staff's questionnaire showed that many care providers intend to leave work at the hospital if better employment opportunities available. Stabilizing the workforce and improving continuity of care is an important key for providing quality care. Improvement of work conditions, empowering employee through, providing them with development opportunities, training and enhance better communication may prevent loss of experienced staff and maintain low turnover rate at NOH.

Investing in transformational leadership development for supervisors could reduce emotional exhaustion and turnover among public sector mental health where providers' emotional exhaustion was positively related to turnover intention, while transformational leadership moderated the relationship between emotional exhaustion and turnover intention indicating that having a transformational leader may buffer the effect of providers' emotional exhaustion on turnover intention (Green, Miller & Aarons, 2013).

Chapter 5

Conclusion and recommendations

This is the first study aiming to assess quality service provided at Al Naser Ophthalmic Hospital. The study reveals many important findings, making valuable baseline for future quality improvement activities and providing NOH with comprehensive framework for performance assessment.

5.1 Conclusion

Study findings at NOH showed many strengths and areas for potential improvement regarding the study conceptual framework, main quality dimensions and sub-dimensional indicators. The status of service quality at NOH is acceptable, but it still needs efforts to enhance the situation through developing a culture of measurements and using of performance indicators, monitoring, and continuous quality improvement.

Health care at NOH was clinically effective and safe, where strengths areas were reported regarding different indicators such as effective outcome of cataract surgeries, laser therapy, and documentation status of cataract surgical file, which reflected good cataract surgical pathway. Safe care reflected through accepted low complication rate and low 30 day readmission rate. Indicators flagged with inadequate effectiveness where high ECCE compared to Phaco rate and low day surgery rate. Relatively high rate of intraoperative acquired infections indicate poor safety circumstances which need more safety oriented activities. Moreover documentation status need potential intervention regarding medical treatment and outpatient file.

Efficiency dimension showed inefficient service in respect to low attendance rate to appointments, while surgical cancellation rate was accepted, and high efficient care reported regarding low length of stay.

Responsive governance dimension showed inadequate findings at the qualitative part regarding quality structure, expenditure, measurements and performance monitoring, while good responsive quality activities and service development was reported at NOH.

Staff orientation dimension showed many weakness areas which need quality improvement activities such as; lack of training and training expenditure, inadequate work conditions regarding (enabling healthcare/work circumstances, managerial practices, and training. Moreover large number of staff were exposed to different work related injuries, and overall related supervisory safety practices were not fair enough to keep staff safe during care delivery. In addition burnout scale showed high burnout status among NOH's staff. Less strength areas were reported regarding low rate of excessive working hours, and low turnover rate was reported among NOH's staff members.

Healthcare at NOH was markedly patient centered care, where patient perspectives regarded quality of care showed adequate access to care and adequate meeting of expectations; reflecting that patients have a good positive perception about quality of care provided at NOH.

5.2 Recommendations

The Following recommendation oriented to NOH management, followed by recommendation to MOH.

Regarding NOH management the following is recommended:

- Developing a strategic performance measurements system through well defined framework that contains the most important performance indicators and an effective internal monitoring system, which are able to monitor the quality of the provided services, and satisfaction status of staff and patients.
- Strengthening the role of management and leadership through dissemination of quality culture, ensuring the resources, and increase investment in the training.
- Provide service through agreed, known written and disseminated policies, protocols, procedures, and best clinical practice guidelines for healthcare standardization.
- Ensure registration, unification, development and modification of patients' medical file at diagnostic units, and enhance proper documentation specially at post care and follow up stages.
- Enhance the on job training and empowering supervision concept among different professionals groups at NOH to raise employees' knowledge and skills.

- Enhance better communication with staff, and increase its involvement in decision making.

- Developing separated patients' surgical pathway, which has special requirements different from outpatient pathway.

MOH is the main regulator of Palestinian health care system, so it has to be responsive to hospital needs through:

- Empowering health information system at hospitals to enhance regular monitoring of hospitals performance, and creating a benchmarking performance networks among MOH facilities.

- Training at MOH should be based on effective strategic plan, and the actual needs. Moreover providing quality committees members at MOH hospitals with suitable training regarding QI concepts, principles, tools, and activities.

- Increasing NOH building capacity to appropriate the expanding service needs of patients, and to respond staff needs.

- Providing NOH's with essential needs of equipment, medical supplies, and human resources regarding different professionals.

- Better distribution of ocular services among GGs to avoid spots workloads areas and emphasis of providing primary eye care in other places.

- Cooperation with other ocular services providers like NGOs and private sector.

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Chapter 7

Annexes

7.1 Annex (1): Map of Palestine

Source: (PCBS, 2016)

7.2 (Annex 2): Staff self-administer questionnaire (Arabic and English versions)

بسم الله الرحمن الرحيم

عزيزي مزود الخدمة الطبية / الموظف الإداري

أشكرك على مشاركتك في هذا البحث حيث تم اختيارك لأنه قد توفرت فيك جميع معايير اختيار العينة. حيث يتم عمل هذا البحث كمتطلب تخرج للحصول على درجة الماجستير في الإدارة الصحية من كلية الصحة العامة - جامعة القدس.

وتهدف هذه الدراسة للتعرف على مدى جودة الخدمات المقدمة في مستشفى العيون بغزة ومدى مطابقتها لمعايير. كما أن نتائج هذه الدراسة سوف تكون مفيدة لعمل مشاريع لتحسين جودة الخدمات المقدمة حيث أنها تقدم إطار لتقييم الجودة بمؤشرات أداء متفق عليها عالميا تشير إلى أماكن القوة وأماكن الضعف داخل المستشفى مما يعطي فرصة لمعرفة نقاط التدخل والبدء بنشاطات تحسن الجودة.

مشاركتك في هذا البحث اختياريه ولديك الحق في الانسحاب وقتما تشاء. كما أن المعلومات الخاصة بك وبنتائج البحث سوف تكون في سرية تامة ، الإجابة على هذا الاستبيان لن تستغرق أكثر من 20 دقيقة من وقتك.

شكرا لتعاونكم

الباحثة/ أماني أكرم حبيب

رقم جوال 0599813713

Optoamani_1984@hotmail.com

رقم التسلسل:.....

أولا: البيانات الشخصية والديموغرافية	
1. العمر	2. **الجنس** ☐ ذكر ☐ أنثى
3. الحالة الاجتماعية	☐ أعزب ☐ متزوج ☐ غير ذلك (أرمل ، مطلق)
4. المسمى الوظيفي	☐ طبيب ☐ صيدلي ☐ ممرض ☐ أخصائي بصر ☐ أخصائي تخدير ☐ فني تخدير ☐ موظف إداري
5. المحافظة	☐ شمال غزة ☐ غزة ☐ الوسطى ☐ خانيونس ☐ رفح
6. المؤهل العلمي	☐ دبلوم ☐ بكالوريوس ☐ ماجستير ☐ دكتوراه
7. خبرتك العملية داخل المستشفى	☐ اقل من 5 سنوات ☐ 5-10 سنوات ☐ أكثر من 10 سنوات

ثانيا: العبارات التالية لاستكشاف ظروف العمل (الظروف المحيطة التي تمكن من تقديم الخدمة / العمل – الممارسات الإدارية - التدريب)					
الظروف المحيطة التي تمكن من تقديم الخدمة / العمل	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1. جميع الأجهزة والاحتياجات الأساسية اللازمة لتقديم الخدمة/ العمل متوفرة					
2. يتم تقديم الخدمة / العمل من خلال برتوكولات معروفة ومطبوعة					
3. يتم مراقبة مدى الالتزام ببروتوكولات العمل من قبل المسئولين					
4. أتلقى الدعم اللازم في العمل من المشرفين عندما احتاج					
5. عدد ساعات العمل مناسبة مع حجم الخدمات المقدمة					
6. هنالك فرص للتعليم المستمر والتطوير في المستشفى					
7. مكان العمل نظيف وجيد التهوية ومناسب لتقديم الخدمة الطبية/ العمل					
8. تتوفر المرافق صحية ودورات المياه للعاملين في المستشفى					
9. تتوفر مياه الشرب والخدمات الفندقية الخاصة بالعاملين داخل المستشفى					
10. يتوفر مكان مخصص للموظفين لفترات الاستراحة					
11. أنا راضي عن ظروف العمل المحيطة					
الأسئلة التالية مخصصة لمقدمي الخدمة الطبية فقط من (12-17) لاستكشاف المزيد من ظروف العمل الخاصة بالخدمة الطبية					
الظروف المحيطة التي تمكن من تقديم الخدمة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
12. استطيع التواصل والتنسيق للفحوصات والاختبارات اللازمة للمرضى داخل المستشفى بسهولة					
13. استطيع التواصل والتنسيق للفحوصات اللازمة للمرضى خارج المستشفى بسهولة					
14. مكان العمل يوفر خصوصية أثناء فحص أو تقديم الخدمة للمريض					
15. مساحة انتظار المرضى كافية لأعداد المرضى المراجعين					
16. يتم تنظيم وتنسيق دخول المرضى للأقسام والعيادات بسلاسة					
17. اشعر انه باستطاعتي تقديم أفضل خدمة طبية ممكنة للمرضى					
الممارسات الإدارية	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1. تم تعريفي بطبيعة العمل والمهام الموكلة إلى عند بدء العمل					
2. تقوم الإدارة بإتاحة الفرصة المناسبة للإبداع والتطوير					
3. تقوم الإدارة بتحفيزي للعمل حتى في أصعب الظروف					
4. تقوم الإدارة بإشراكي عند التخطيط لتطوير العمل الذي أقوم به					
5. تفوضني الإدارة لاتخاذ القرار في بعض المواقف في العمل					
6. تقدر الإدارة العمل الذي أقوم به					
7. تزودني الإدارة بتغذية راجعة عن أدائي المهني وكيفية التغلب على جوانب الضعف في الأداء					
8. تعاملني الإدارة بكرامة واحترام					
9. تعطيني الإدارة الفرصة لتغيير مناوبات جدول العمل عند وجود مبرر					
10. تقوم الإدارة بسؤالي عن حاجاتي في العمل بصورة دورية					

11. تقوم الإدارة بمساءلتي قانونيا عند حدوث أي خطأ في العمل					
12.تحرص الإدارة على العمل بروح الفريق ما بين أقسام المستشفى					
13.استطيع التواصل مع الإدارة بسهولة عند الحاجة					
14.أنا راضي عن ممارسات الإدارة تجاه الموظفين					
الدورات التدريب	**موافق بشدة**	**موافق**	**محايد**	**غير موافق**	**غير موافق بشدة**
1. أتلقى دورات تدريبية بصورة دورية داخل المستشفى					
2. أتلقى تدريب بصورة دورية خارج المستشفى تابع لوزارة الصحة					
3. أشارك في التخطيط لاحتياجات القسم من التدريب					
4. يساهم التدريب في تطوير أدائي المهني					
5. تتابع الإدارة الفئات التي تم تدريبها وتحفزهم للمزيد من الإنتاجية					
6. هنالك برامج تدريبية شاملة تغطي جميع شرائح الموظفين					
7. برامج التدريب مبنية حسب احتياجات المستشفى والموظفين					
8. الرجاء ذكر ما هي احتياجاتك التدريبية حسب الأهمية : -1 ..... -2 ..... -3					
ثالثا : الإصابات الناتجة عن العمل	**موافق بشدة**	**موافق**	**محايد**	**غير موافق**	**غير موافق بشدة**
1. لقد تم إعلامي بالأمراض الوظيفية التي من الممكن أن أتعرض لها خلال عملي					
2. لقد تلقيت التدريبات اللازمة لتجنب الإصابات الناجمة عن العمل					
3. لقد تلقيت التطعيمات المطلوبة لمزودي الخدمة الطبية					
4. يراجع مسئول سلامة المرضى مدى التزام الموظفين بتلقي التطعيمات					
5. يراجع مسئول سلامة المرضى مدى التزام الموظفين ببروتوكولات العمل الخاصة لضمان السلامة من الإصابة					
6. يتم توثيق إصابات العمل لدي مسئول السلامة في المستشفى					
7. يتم تحويل الموظف المصاب للمزيد من الفحوصات بعد الإصابة					
8. هل سبق وتعرضت لإصابات خلال العمل (وخز ابر– عدوى – ضربة- إجهاد): ☐ نعم ☐ لا 9. إن سبق وتعرضت لإصابة ناجمة عن العمل ما هي نوع الإصابة : ☐ وخز بالإبر ☐ عدوى ☐ ضربة ☐ إجهاد ☐ أخري					

رابعا : الحالة الاحتراق الوظيفي مقياس ماسلاش (الإجهاد الانفعالي – تبلد المشاعر – الانجاز الشخصي)

1- الإجهاد الانفعالي	**لا مطلقا**	**مرات قليلة بالسنة**	**مرة بالشهر**	**مرات قليلة بالشهر**	**مرة في كل أسبوع**	**مرات قليلة في الأسبوع**	**كل يوم**
1- أشعر بأن عملي يسلب مشاعر العاطفة مني تجاه الآخرين							
2- أشعر أن التعامل طوال اليوم مع المرضي يحتاج لمجهود كبير							
3- أشعر أن عملي ينهكني ويسبب لي الاحتراق النفسي							

4- أشعر بالإحباط من العمل الذي أمارسه								
5- أشعر بأنني أبذل جهداً شاقاً في مهنتي								
6- إن العمل بشكل مباشر مع الناس يؤدي بي إلى ضغوط شديدة								
7- أشعر بالإرهاق حينما أصحو في الصباح لمواجهة يوم عمل آخر.								
8- أشعر باستنفاذ كامل طاقتي في نهاية اليوم الذي أقضيه في عملي								
9- أشعر بالاختناق وقرب النهاية								
تبلد المشاعر	**لا مطلقاً**	**مرات قليلة بالسنة**	**مرة بالشهر**	**مرات قليلة بالشهر**	**مرة في كل أسبوع**	**مرات قليلة في الأسبوع**	**كل يوم**	
1- أشعر أنني أتعامل مع بعض المرضى والزملاء وكأنهم جمادات لا بشر								
2- أشعر أن المرضى يلومونني على بعض مشاكلهم								
3- اشعر أني استنفذت كل صبري بنهاية يومي في العمل								
4- لم أعد اهتم بما يحدث لمن أتعامل معهم من الآخرين.								
5- أصبحت أكثر قسوة مع الناس نتيجة عملي								
الإنجاز الشخصي	**لا مطلقاً**	**مرات قليلة بالسنة**	**مرة بالشهر**	**مرات قليلة بالشهر**	**مرة كل أسبوع**	**مرات قليلة في الأسبوع**	**كل يوم**	
1- أنجزت أشياء كثيرة ذات قيمة وأهمية في ممارستي لهذه المهنة								
2- أشعر بالنشاط والحيوية								
3- من السهل معرفة مشاعر المرضى								
4- أتعامل بفعالية عالية مع مشاكل المرضى								
5- أتعامل بكل هدوء مع المشاكل الانفعالية والعاطفية أثناء ممارستي لهذه المهنة								
6- أشعر أن لي تأثيرًا إيجابيًا في حياة كثير من الناس من خلال عملي								
7- أستطيع بكل سهولة خلق جو مريح مع الزملاء والمرضى.								
8- أشعر بالحيوية والنشاط بالقرب من المرضى								

ملاحظات واقتراحات للمساهمة في تحسين جودة العمل :

.....

.....

.....

.....

Serial No……

Part I: Personal and Demographical data

1- Age ……..year

2- Gender: □ male □female

3- Marital status : □ Single □ Married □ Divorced □ Widows

4- Governorate: □ North Gaza □Gaza □ Mid- Zone □ Khanyounis □ Rafah

5- Profession category:

- ☐ Physicians
- ☐ Pharmacists
- ☐ Nurse
- ☐ Optometry specialists
- ☐ Antitheists
- ☐ Administrative employee

6- Years of experience

- ☐ Less than 5 years
- ☐ 5-10 years
- ☐ More than 10 years

Part II-Working conditions regarding (Enabling care delivery circumstances – Managerial Practices – Training)

1- Working conditions	**(Enabling care delivery circumstances / work – Managerial Practices – Training)**				
Enabling care delivery / work circumstances	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. All essential equipment & needs are available for care delivery/ work					
2. 2.Care delivery/ work done through known and written protocols					
3. Direct supervisors monitors work protocols compliance					
4. I receive on job support from my supervisors when I need					
5. Number of working hours is suitable for provided services					
6. There are opportunities for continuing education and development at the hospital					
7. Work place is clean, well ventilated and suitable for providing health service.					
8. Drinking water and hotel services specialized foe employee is available					
9. Path rooms and toilets are available for employee					
10. There is a specialized place for employee for rest and break times					
11. I am satisfied about care delivery/ work conditions					

The following questions are required to be filled by healthcare providers (12-17) explores specific health care circumstances					
12. I easily refer patients for further testing and investigation within the hospital					
13. I easily refer patient for further testing and investigation outside the hospital					
14. Physical working conditions adequate to keep patient's privacy					
15. Patient's waiting areas are adequate for patient's numbers					
16. Patient entrance to departments and clinics is fluent					
17. I am able to provide patients with best quality care at the hospital					
Managerial practices	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. The administration make job orientation when I received my work					
2. The administration give me the opportunity for creativity and development					
3. Administration make me motivated to work even in hard times					
4. Administration involve me in planning for work development					
5. The administration delegate me for decision making in some work situations					
6. My work appreciated from administration					
7. I receive a feedback of my job performance and how to overcome performance gaps areas					
8. Administration treat me with dignity and respect					
9. Administration accept rational change of my shift on schedule after being decided					
10. Administrative ask regularly about my needs at work					
11. The administration legally accounts me for mistakes					
12. The administration enhance team working between different hospital department					
13. I can access to administration easily when I need					
14. I am satisfied about managerial practices					
Training	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. I receive regular training at the hospital					
2. I receive regular training outside the hospital through MOH					
3. Training contributes in job performance improvement					
4. Administration track trained employee to ensure gaining benefits from skilled trainees					
5. Trained employee share gained knowledge and skills to non-trained					
6. Training opportunities is equity distributed among different professionals					
7. Administration ask regularly about my training needs at the hospital					
▪ If you never receive any training inside NOH or outside NOH through MOH or if you need training in specific field please fill the following item :					

My needs of training as the following: :

……

……

……

Part III (Work related injuries)

2- Work related injuries	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. I have been informed about occupational disease that I may exposed to through may work					
2. I received training to avoid work related injuries					
3. I received all immunization required for health worker					
4. Safety officer review compliance of health worker required immunization					
5. Safety officer review health worker compliance of work protocols to keep staff safety					
6. Work related injuries documented through safety officer at NOH					
7. Injured employee referred for further investigation after injury (Lab testing- Physical consultation)					

8. I expose to work related injury (Needle stick injury, infections, trauma):
   - ☐ Yes
   - ☐ NO
9. If you exposed to work related injury please fill the following items:
   - ☐ Needle stick injury
   - ☐ Infections
   - ☐ Trauma
   - ☐ Stress
   - ☐ Others

Part IV - Burnout status , Maslach Burnout Inventory (MBI)

Burnout	Never	A few Times/ year	Once a month	A few times/ month	Once a week	A few Times/ week	Every day
1. I feel emotionally drained by my work							
2. Working with people all day long requires a great deal of effort.							
3. I feel like my work is breaking me down.							
4. I feel frustrated by my work							
5. I feel I work too hard at my job.							
6. It stresses me too much to work in direct contact with people.							
7. I feel tired when I get up in the morning and have to face another day at work.							
8. I feel I used up at the end of the work day							
9. I feel like I'm at the end of my rope							

Depersonalization	Never	A few Times/ year	Once a month	A few times/ month	Once a week	A few Times/ week	Every day
1. I feel I look after certain patients/clients impersonally, as if they are objects.							
2. I have the impression that my patients/clients make me responsible for some of their problems							
3. I am at the end of my patience at the end of my work day.							
4. I really don't care about what happens to some of my patients/clients.							
5. I have become more insensitive to people since I've been working.							
Accomplishment	Never	A few Times/ year	Once a month	A few times/ month	Once a week	A few Times/ week	Every day
1. I accomplish many worthwhile things in this job.							
2. I feel very energetic							
3. I am easily able to understand what my patients/clients feel.							
4. I look after my patients'/clients' problems very effectively.							
5. In my work, I handle emotional problems very calmly.							
6. Through my work, I feel that I have a positive influence on people.							
7. I am easily able to create a relaxed atmosphere with my patients/clients.							
8. I feel refreshed when I have been close to my patients/clients at work.							

7.3 (Annex 3) Patients questionnaire (Arabic version)

أخي الكريم/ أختي الكريمة:

السلام عليكم ورحمة الله وبركاته

هذه دراسة بحثية بعنوان "تقييم جودة الخدمة المقدمة في مستشفى النصر للعيون "

أشكرك على مشاركتك في هذا البحث حيث تم اختيارك لأنه قد توفرت فيك جميع معايير اختيار العينة. حيث يتم عمل هذا البحث كمتطلب تخرج للحصول على درجة الماجستير في الإدارة الصحية من كلية الصحة العامة - جامعة القدس.

وتهدف هذه الدراسة لتقييم مدى جودة الخدمات المقدمة في مستشفى العيون بغزة ومطابقتها لمعايير الجودة المتفق عليها عالميا مما يعطي فرصة لمعرفة نقاط التدخل والبدء بنشاطات تحسن الجودة داخل المستشفى مما سيعود بفائدة على المواطنين المراجعين في المستشفى .

لذا يرجى التكرم بالإجابة على جميع الأسئلة الواردة في الاستبانة وذلك بغرض الخروج بنتائج وتوصيات تسهم في تحسين جودة الخدمة وسوف تستخدم المعلومات الواردة لأغراض البحث العلمي فقط.

ملاحظات هامة:

مشاركتك في تعبئة هذه الاستبانة تعتبر ذات أهمية كبيرة، والمعلومات سوف تكون بسرية تامة لكافة البيانات الشخصية الواردة في الاستبانة.

- تعبئة هذه الاستبانة اختيارية وغير ملزمة، لذلك في حال الشعور بعدم الارتياح ممكنان تنسحب.
- تستغرق تعبئة الاستبانة 15 دقيقة تقريباً.

شاكرين لكم حسن تعاونكم

الباحثة/ أماني أكرم حبيب

رقم جوال 0599813713

Optoamani_1984@hotmail.com

رقم التسلسل : .....

أولا: البيانات الشخصية والديموغرافية	
1- العمر.....	**2- الجنس** ☐ ذكر ☐ أنثى
3- الحالة الاجتماعية	☐ أعزب ☐ متزوج ☐ غير ذلك (أرمل ، مطلق)
4- مكان الإقامة	☐ شمال غزة ☐ غزة ☐ الوسطى ☐ خانيونس ☐ رفح
5- المستوى التعليمي	☐ امي ☐ ابتدائي ☐ إعدادي ☐ ثانوي ☐ جامعي
6- نوع الدخول	☐ طبي علاجي ☐ جراحي
7- القسم	
8- الدخول	☐ اول ☐ متكرر (عدد مرات الدخول .....)

ثانيا : الوصول للخدمة الصحية (الوصول الفعلي – الوصول للمعلومات – الوصول المالي – الوصول للدواء)			
1. هل تمكنت من التنقل بسهولة داخل مباني المستشفى لتلقى الخدمة الطبية	☐ نعم ☐ لا	الوصول الفعلي	
2. هل تتوفر لوحات إرشادية ساعدتك في التنقل داخل المستشفى	☐ نعم ☐ لا		
3. هل وصلت بسهولة للخدمة الطبية التي تريد	☐ نعم ☐ لا		
4. هل تلقيت الخدمة في الموعد المحدد	☐ نعم ☐ لا		
5. هل تم تزويدك بالمعلومات الخاصة بمواعيد الحجز والمراجعات	☐ نعم ☐ لا	الوصول للمعلومات	
6. هل تم تزويدك بمعلومات شفهية كافية حول طبيعة الإجراء (الطبي / الجراحي) الذي تلقيته	☐ نعم ☐ لا		
7. هل تم تزويدك بمعلومات أو إرشادات مكتوبة خاصة بالإجراء (الطبي / الجراحي)	☐ نعم ☐ لا		
8. هل تم إعلامك مسبقا بمدة المكوث المتوقعة داخل المستشفى	☐ نعم ☐ لا		
9. هل وجدت الدواء الموصوف داخل صيدلية المستشفى؟	☐ نعم ☐ لا ☐ بعضها ☐ اغلبها	الوصول الدوائي	
10. هل كان بمقدورك شراء الأدوية غير المتوفرة في المستشفى؟	☐ نعم ☐ لا		
11. هل تم وصف الجرعة الدوائية من قبل الطبيب بوضوح؟	☐ نعم ☐ لا		
12. هل أعلمك الطبيب عن مدة استعمال الدواء ؟	☐ نعم ☐ لا		
13. هل سألك الطبيب ما إذا كنت تتناول أدوية أخرى؟	☐ نعم ☐ لا		
14. هل يغطى التأمين الصحي الخدمات التي تلقيتها داخل المستشفى	☐ نعم كلها ☐ لا نهائيا ☐ بعضها ☐ اغلبها	الوصول المالي	
15. هل دفعت أي أموال مقابل أي خدمة تلقيتها	☐ نعم ☐ لا		
16. هل كان بمقدورك تحمل التكلفة المالية لتلقي الخدمة	☐ نعم ☐ لا		
17. **الخدمة التي دفعت مقابل مادي لتتلقاها هي**: ☐ رسوم دخول ☐ دواء ☐ جراحية ☐ تصوير ☐ غير ذلك (تقارير – تحويلات)			

ثالثا :توقعات المرضى من (عملية تقديم الرعاية الصحية- الاستشارة والمعالجة – نتيجة المعالجة)

عملية تقديم الرعاية الصحية	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1. الوقت الذي انتظرته لتلقي الخدمة عند وصولك كان مناسبا					
2. قام مقدم الخدمة الصحية بتقديم نفسه لك					
3. اظهر القائم على الخدمة احتراما لك وعاملك بكرامة					
4. شعرت أن القائم على الخدمة على دراية وفهم كافي بحالتك الصحية					
5. قام القائم على الخدمة بمشاركتك بالقرار فيما يخص حالتك الصحية					
6. تم المحافظة على خصوصيتك خلال فترة علاجك					
7. شعرت بالراحة خلال فترة مكوثي داخل المستشفى					
8. تتوفر وسائل الراحة في الأماكن المخصصة للانتظار					
الاستشارة والمعالجة	**موافق**	**موافق**	**محايد**	**غير**	**غير موافق**

	بشدة			موافق	بشدة
9. ناقش الطبيب معك المنافع والأثار الجانبية للعلاج (المخاطر –المضاعفات)					
10. تم منحك الفرصة للمناقشة والسؤال حول وضعك الصحي					
11. تم التنويه عن المخاطر التي يجب تجنبها بعد الخروج					
12. تم إعلامك عن آلية التواصل في حال حدوث طارئ قبل موعد المراجعة بعد الخروج					
نتيجة المعالجة (دوائي- جراحي)	**موافق بشدة**	**موافق**	**محايد**	**غير موافق**	**غير موافق بشدة**
13. توقعت أن يخفف العلاج(طبي/ جراحي) من مشكلتك الصحية وأعراضها					
14. ساهم العلاج(طبي/ جراحي) فعليا في تخفيف من مشكلتك الصحية وأعراضها					

15. هل كانت الخدمة عامة موافقة لتوقعاتك:

16.

☐ لم تتوافق نهائيا ☐ توافقت قليلا ☐ توافقت بدرجة معقولة ☐ توافقت كثيرا ☐ توافقت كليا

17. ما هو مستوى رضاك عن خدمات المستشفى عامة :

☐ راضي جدا ☐ راضي ☐ محايد ☐ غير راضي ☐ غير راضي بشدة

18. من صفر – 10 كم تعطي درجة للمستشفى علما أن (صفر) أسوأ مستشفى وان (10) يعني أفضل مستشفى : ☐

19. ملاحظات ومقترحات لتحسين الخدمة المقدمة :

.....

.....

.....

.....

7.4 (Annex 4): Small group discussion questions

	Quality structure and measurements
1.	Is there a quality improvement policies and strategies initiated at the hospital?
2.	Do you specialized apart of NOH expenditure for quality improvement ?
3.	Do you have any formulated performance measurements ? indicators ?(if yes) review documents ?
	Responsive QI activities
4.	How do you respond to staff needs? What are the resulted responsive quality activities ?
5.	How you interested to provide a patient centered care ?how ?
6.	Describe in terms of strengths, weaknesses, opportunities and threatens that surrounding quality improvements activities at NOH ?
7.	Do you have further comments ?

7.5 Annex (5): Inpatient surgical file checklist

	Item	Available	Complete		Not available	Signature (1,2,3)
			Yes	No		
1-	**Patient registration form**					
2-	**Admission sheet- Opthalmological and Optometry examination**					
1.2	Patient personal data					
2.2	History of medical diseases					
3.2	Complaint					
4.2	Ocular examination (present condition)					
5.2	Diagnosis					
6.2	Preoperative medication					
7.2	Preoperative V.A					
8.2	Biometry calculation					
9.2	Refraction					
3-	**Nursing note**					
1.3	Preoperative check list					
2.3	Vital sign chart					
4-	**Consent form**					
5-	**Operative and progress note**					
6-	**Anesthesia report**					
7-	**Medication sheet (cardex)**					
8-	**Discharge sheet**					
1.8	Hospitaization Data					
2.8	Patient personal Data					
3.8	Clinical summery					
4.8	Investigation					
5.8	Operation Note done					
6.8	Final Diagnosis					
7.8	Treatment recorded					
8.8	Appointment for follow up DS					
9.8	ICD 10					

Serial N:…… File number

Notes:……*

Name or signature are clear (1), name or signature are available but not clear (2),no signature or name is mentioned (3).

7.6 Annex (6): Inpatient medical file checklist

	Item	Available	Complete		Not available	Signature (1,2,3)
			Yes	No		
1-	**Admission sheet**					
1.1	Patient personal data					
1.2	History of medical diseases					
1.3	Complaint					
1.4	Ocular examination (present condition)					
1.5	Diagnosis					
1.6	Medication on admission					
1.7	Visual acuity					
2-	Nursing note (Vital sign chart)					
3-	**Progress note**					
4-	**Medication sheet (cardex)**					
5-	**Discharge sheet**					
5.1	Hospitaization Data					
5.2	Patient personal Data					
5.3	Clinical summery					
5.4	Investigation					
5.5	Operation done					
5.6	Final Diagnosis					
5.7	Treatment recorded					
5.8	Appointment for follow up DS					
5.9	ICD 10					

Serial N:…… File number

Notes:……

*Name or signature are clear (1), name or signature are available but not clear (2),no signature or name is mentioned (3).brutally

7.7 (Annex 7): Outpatient file checklist items extracted from glaucoma clinic sheet

Serial ……File Number ……

#	Item	Available	Complete		Not Available	Signature (1,2,)3
			yes	no		
1-	Date					
2-	Patient name					
3-	Patient ID					
4-	History					
5-	Diagnosis					
Investigations						
6-	BCVA					
7-	AC					
8-	Gonioscopy					
9-	IOP					
10-	CDR					
11-	VF					
12-	OCT					
13-	CCT					
14-	Treatment					

Notes:……

……..

7.8 Annex (8): Expertise list

1. Dr. Yehia Abed
2. Dr. Bassam abu Hamad
3. Dr. Sanaa Abu Dagaa
4. Dr. Abed Al Raouf Al Manamaa
5. Dr. Mohammed Al Kashif
6. Dr. Mahmoud Ghounem
7. Dr. Hussam Dawoud
8. Dr. Abed Al Salam Sabah
9. Dr. Hatem Al Aydi
10. Dr. Radwan Baroud

7.9 (Annex 9): Public Health at Al-Quds University and Helsinki Committee approval

المجلس الفلسطيني للبحث الصحي

Palestinian Health Research Council

تعزيز النظام الصحي الفلسطيني من خلال مأسسة استخدام المعلومات البحثية في صنع القرار

Developing the Palestinian health system through institutionalizing the use of information in decision making

Helsinki Committee

For Ethical Approval

Date: 03\08\2015 **Number:** PHRC/HC/47 /15

Name: الاسم: أماني أكرم حبيب

We would like to inform you that the committee had discussed the proposal of your study about:

نفيدكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:-

Assessment of Service Quality Provided at Al- Naser Ophthalmic Hospital

The committee has decided to approve the above mentioned research. Approval number PHRC/HC/47 /15 in its meeting on 03/08/2015

و قد قررت الموافقة على البحث المذكور عاليه بالرقم والتاريخ المذكوران عاليه

Signature

Member Member

Chairman

Genral Conditions:-

١٠. Valid for 2 years from the date of approval.

١١. It is necessary to notify the committee of any change in the approved study protocol.

١٢. The committee appreciates receiving a copy of your final research when completed.

Specific Conditions:-

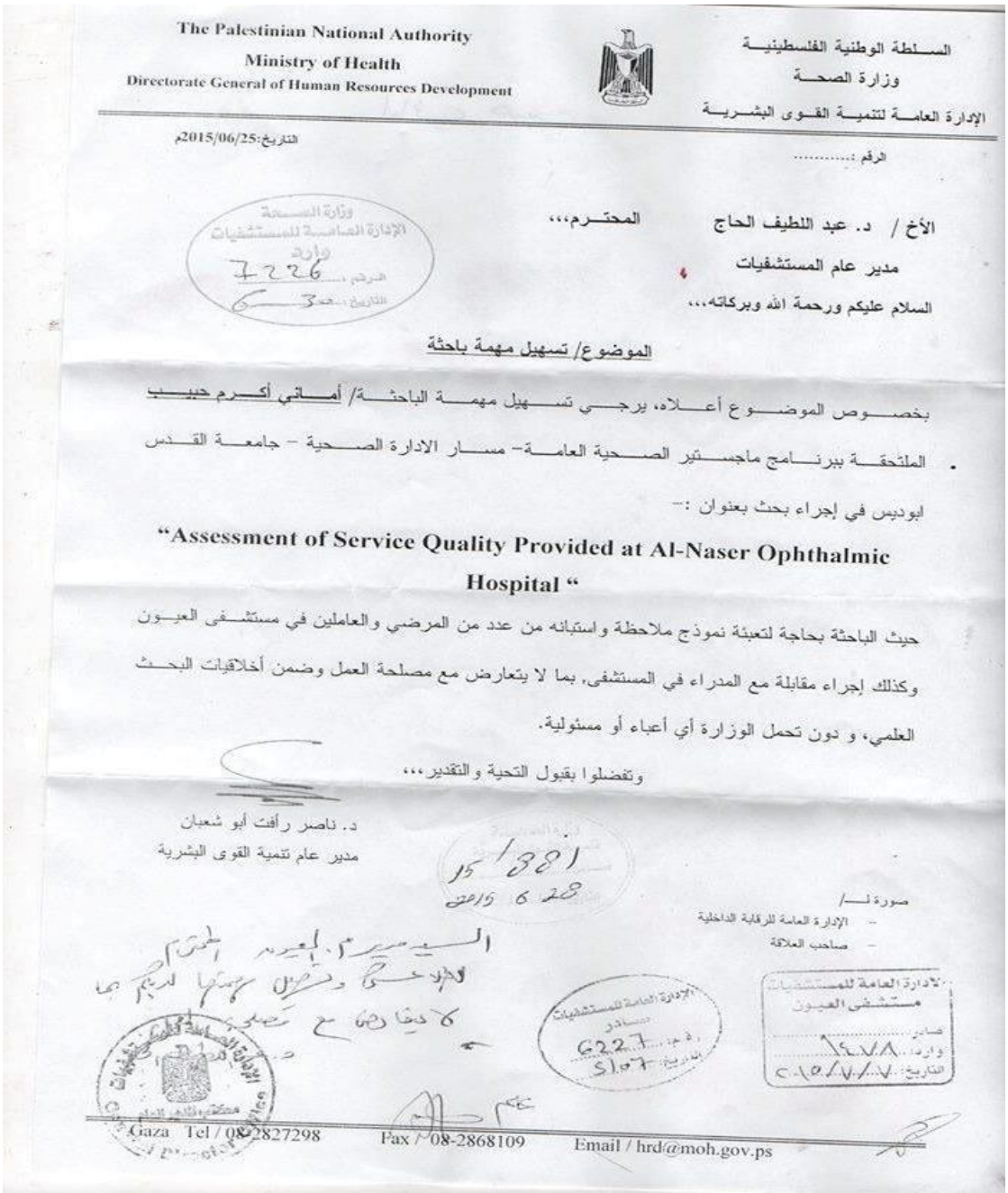
The subject was approved following the World Medical Association Declaration of Helsinki-Ethical principles for medical research involving human subjects, adopted by the 18th World Medical Association General Assembly, Helsinki, Finland, June 1964 and amended by the 59th WMA General Assembly, Seoul, Korea, October 2008.

E-Mail:pal.phrc@gmail.com

Gaza - Palestine غزة - فلسطين

شارع النصر - مفترق العيون

7.10 Annex (10): Administrative approval from MOH (Human Resources Development General Directorate)



The Palestinian National Authority
Ministry of Health
Directorate General of Human Resources Development

السلطة الوطنية الفلسطينية
وزارة الصحة
الإدارة العامة لتنمية القوى البشرية

التاريخ:2015/06/25م

الرقم :.....

وزارة الصحة
الإدارة العامة للمستشفيات
وارد
الرقم: 7226
التاريخ: 30/6

الأخ / د. عبد اللطيف الحاج المحترم،،،
مدير عام المستشفيات
السلام عليكم ورحمة الله وبركاته،،،

الموضوع/ تسهيل مهمة باحثة

بخصوص الموضوع أعلاه، يرجى تسهيل مهمة الباحثة/ أماني أكرم حبيب الملتحقة ببرنامج ماجستير الصحية العامة- مسار الادارة الصحية - جامعة القدس ابوديس في إجراء بحث بعنوان :-

"Assessment of Service Quality Provided at Al-Naser Ophthalmic Hospital "

حيث الباحثة بحاجة لتعبئة نموذج ملاحظة واستبانه من عدد من المرضي والعاملين في مستشفى العيون وكذلك إجراء مقابلة مع المدراء في المستشفى، بما لا يتعارض مع مصلحة العمل وضمن أخلاقيات البحث العلمي، و دون تحمل الوزارة أي أعباء أو مسئولية.

وتفضلوا بقبول التحية والتقدير،،،

د. ناصر رأفت أبو شعبان
مدير عام تنمية القوى البشرية

15/381
وارد 6/30

صورة لـ/
- الإدارة العامة للرقابة الداخلية
- صاحب العلاقة

الإدارة العامة للمستشفيات
صادر
الرقم: 6227
التاريخ: 30/6

الإدارة العامة للمستشفيات
مستشفى العيون
صادر
وارد: ١٤٧٨
التاريخ: ٢٠١٥/٧/٧

Gaza Tel / 082827298 Fax / 08-2868109 Email / hrd@moh.gov.ps

7.11 Annex (11): Description of key managers managerial positions and educational level

Manager	Managerial position	Educational degree and certifications
Dr Abed Al Salam Sabah	Hospital General Director	Ophthalmic consultant Jordanian board council of Ophthalmology Palestinian council of Ophthalmology International council of Ophthalmology
Dr Mahmoud Gouneem	Hospital Medical Director	Ophthalmic consultant PHD in Ophthalmology Fellow of retinal surgery
Dr Husam Dawoud	Outpatient clinic Director	Ophthalmic consultant Jordanian council of Ophthalmology Palestinian council of Ophthalmology International council of Ophthalmology Fellow of Cornea and refractive surgery
Hani Al Za'aneen	Nurse unit manager	MP in Policies and health management
Zouhier Kalaja	Hospital administrative Director	Bacalor in social and family development

7.12 Annex (12): Post Hoc Tests multiple comparisons between career groups and different dependent variables

Multiple Comparisons							
Scheffe							
Dependent Variable	(I) 5.Career	(J) 5.Career	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Work conditions	Physician	Others	.39277	.20436	.302	-.1885-	.9740
		Nurse	-.21026-	.17858	.709	-.7182-	.2977
		Administrative	-.37943-	.18000	.224	-.8914-	.1325
	Others	Physician	-.39277-	.20436	.302	-.9740-	.1885
		Nurse	-.60303-*	.19871	.031	-1.1682-	-.0379-
		Administrative	-.77220-*	.19999	.003	-1.3410-	-.2034-
	Nurse	Physician	.21026	.17858	.709	-.2977-	.7182
		Others	.60303*	.19871	.031	.0379	1.1682
		Administrative	-.16917-	.17356	.813	-.6628-	.3245
	Administrative	Physician	.37943	.18000	.224	-.1325-	.8914
		Others	.77220*	.19999	.003	.2034	1.3410
		Nurse	.16917	.17356	.813	-.3245-	.6628
Managerial Practices	physician	Others	.08578	.21285	.983	-.5196-	.6912
		Nurse	-.28407-	.18600	.509	-.8131-	.2450
		Administrative	-.42175-	.18748	.175	-.9550-	.1115
	Others	physician	-.08578-	.21285	.983	-.6912-	.5196
		Nurse	-.36984-	.20696	.368	-.9585-	.2188
		Administrative	-.50753-	.20830	.122	-1.1000-	.0849
	Nurse	physician	.28407	.18600	.509	-.2450-	.8131
		Others	.36984	.20696	.368	-.2188-	.9585
		Administrative	-.13768-	.18077	.901	-.6518-	.3765
	Administrative	physician	.42175	.18748	.175	-.1115-	.9550
		Others	.50753	.20830	.122	-.0849-	1.1000
		Nurse	.13768	.18077	.901	-.3765-	.6518
Training	physician	Others	.03053	.23168	.999	-.6284-	.6895
		Nurse	-.12821-	.20246	.940	-.7040-	.4476
		Administrative	-.31622-	.20407	.497	-.8966-	.2642
	Others	physician	-.03053-	.23168	.999	-.6895-	.6284
		Nurse	-.15873-	.22527	.919	-.7994-	.4820
		Administrative	-.34674-	.22672	.508	-.9916-	.2981
	Nurse	physician	.12821	.20246	.940	-.4476-	.7040
		Others	.15873	.22527	.919	-.4820-	.7994
		Administrative	-.18801-	.19677	.822	-.7477-	.3716
	Administrative	physician	.31622	.20407	.497	-.2642-	.8966
		Others	.34674	.22672	.508	-.2981-	.9916
		Nurse	.18801	.19677	.822	-.3716-	.7477
work related injuries	physician	Others	.46581	.23653	.281	-.2069-	1.1386
		Nurse	-.55641-	.20670	.071	-1.1443-	.0315
		Administrative	.11879	.20834	.955	-.4738-	.7114
	Others	physician	-.46581-	.23653	.281	-1.1386-	.2069
		Nurse	-1.02222-*	.22999	.000	-1.6764-	-.3681-
		Administrative	-.34702-	.23147	.525	-1.0054-	.3113
	Nurse	physician	.55641	.20670	.071	-.0315-	1.1443
		Others	1.02222*	.22999	.000	.3681	1.6764
		Administrative	.67521*	.20089	.013	.1038	1.2466
	Administrative	physician	-.11879-	.20834	.955	-.7114-	.4738
		Others	.34702	.23147	.525	-.3113-	1.0054
		Nurse	-.67521-*	.20089	.013	-1.2466-	-.1038-

7.13 Annex (13): Status of Documentation at NOH (cataract surgical files)

Variable	Available not complete		Available & complete		Total Available		Not Available	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
1- Registration Form	14	15	108	88.5	122	100	-	-
2- Admission sheet items								
2.1 Admission Personal Data	3	2.5	119	97.5	122	100	-	-
2.2 History of medical disease	2	1.7	114	98.27	116	95.1	6	4.9
2.3 Complaint	-	-	19	15.6	19	15.7	103	84.4
2.4 Ocular Condition	-	-	122	100	122	100	-	-
2.5 Diagnosis	-	-	122	100	122	100	-	-
2.6 Preoperative Medication	-	-	112	100	122	100	-	-
2.7 Preoperative Visual Acuity	-	-	112	100	122	100	-	-
2.8 Biometry	-	-	112	100	122	100	-	-
2.9 Refraction	-	-	21	17.2	21	17.21	101	82.8
3- Nurse Preoperative Check List	20	16.4	102	83.6	122	100	-	-
4- Nurse Vital Signs	84	68.9	38	31.1	122	100	-	-
5- Consent Form	55	45.1	67	54.9	122	100	-	-
6- Operative Progress Notes	8	6.6	114	93.4	122	100	-	-
7- Anesthesia Report	77	64.70	42	35.29	119	97.54	3	2.5
8- Cardex Medication	82	82.82	17	17.17	99	81.14	23	18.9
9- Discharge Sheet items								
9.1 Hospital Data	104	85.2	18	14.8	122	100	-	-
9.2 Personal Data	109	89.3	13	10.7	122	100	-	-
9.3 Clinical Summery	22	18	100	82	122	100	-	-
9.4 Investigations	7	9.45	67	90.54	74	60.65	48	39.3
9.5 Operation Done	1	0.83	119	99.16	120	98.36	2	1.6
9.6 Final Diagnosis	2	1.88	104	98.11	106	86.88	16	13.1
9.7 Treatment	2	1.6	120	98.4	122	100	-	-
9.8 Appointment For Follow Up	3	3.15	77	96.25	80	65.57	42	34.4
9.10 ICD10	4	12.90	27	87.09	31	25.40	91	74.6

Signature status

Signature	A and Clear		Not Clear		Available		NOT Applicable	
	N	%	N	%	N	%	N	%
Registration Form	112	91.8	10	8.2	122	100	-	-
Admission sheet	111	94.06	7	5.9	118	96.72	4	3.3
Optometrists biometry	41	36.93	70	63.06	111	90.98	11	9.0
Vital Signs	7	5.8	113	94.1	120	98.36	2	1.6
Nurse Operative Check List	32	28.57	80	71.42	112	91.80	10	8.2
Progress Notes	73	62.93	43	37.06	116	95.08	6	4.9
Consent form	61	80.26	15	19.73	76	62.29	46	37.7
Anesthesia report	70	65.42	37	34.57	107	87.70	15	12.3
Cardex Sheet	65	68.42	30	31.57	95	77.86	27	22.1
Discharge sheet	100	82.0	22	18	122	100	-	-

7.14 Annex (14) Status of Documentation at NOH (Medical Files)

Variable	Available not complete		Available & complete		Total Available		Not Available	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
1- Admission sheet items								
1.1Admission Personal Data	18	25.7	52	74.3	70	100	-	-
1.2 History of medical disease	-	-	39	55.7	39	55.7	31	44.3
1.3 Complaint	-	-	34	48.6	34	48.6	36	51.4
1.4 Ocular Condition	-	-	70	100	70	100	-	-
1.5 Diagnosis	-	-	70	100	70	100	-	-
1.6 Preoperative Medication	2	3.03	64	96.96	66	94.3	4	5.7
1.7 Preoperative Visual Acuity	-	-	70	100	70	100	-	-
2- Nursing notes Vital Signs	40	61.53	25	38.46	65	92.8	5	7.1
3- Progress Notes	4	5.88	64	94.11	68	97.7	2	2.9
4- Cardex Sheet	20	30.30	46	69.69	66	94.3	4	5.7
5- Discharge Sheet items								
5.1 Hospital Data	67	95.7	3	4.3	70	100	-	-
5.2 Personal Data	48	68.6	22	31.4	70	100	-	-
5.3 Clinical Summery	6	8.98	61	91.04	67	97.7	3	4.3
5.4 Investigations	4	7.54	49	92.45	53	75.7	17	24.3
5.5 Operation Done	-	-	46	65.7	46	65.71	24	34.3
5.6 Final Diagnosis	-	-	45	64.3	45	64.3	25	35.7
5.7 Treatment	-	-	69	98.6	69	98.6	1	1.4
5.8 Appointment For Follow Up	-	-	48	68.6	48	68.6	22	31.4
5.10 ICD10	-	-	11	15.7	11	15.7	59	84.3

Signature status

Signature	A and Clear		Not Clear		Total available		NOT Applicable	
	N	%	N	%	N	%	N	%
Admission sheet	63	92.64	5	7.35	68	97.14	2	2.9
Vital Signs	7	11.11	56	88.88	63	90	7	10
Progress Notes	56	86.15	9	13.84	65	92.85	5	7.1
Cardex Sheet	61	92.42	5	7.57	66	94.28	3	4.3
Discharge sheet	60	89.55	7	10.44	67	95.71	3	4.3

7.15 Annex (15): Outpatient Glaucoma clinic documentation status

Variable	Available not complete		Available & complete		Total Available		Not Available	
	Freq	%	Freq	%	Freq	%	Freq	%
1- Date	9	5.7	149	94.3	158	100	-	-
2- Patient name	-	-	158	100	158	100	-	-
3- Patient ID	-	-	158	100	158	100	-	-
4- History			140	88.6	140	88.6	18	11.4
5- Visual Acuity	-	-	158	100	158	100	-	-
6- Diagnosis	-	-	50	31.6	50	31.6	108	68.4
7- Anterior Chamber	1	0.71	139	99.28	140	88.6	18	11.4
8- Gonioscopy	-	-	80	50.6	80	50.6	78	49.4
9- Intraocular Pressure			156	98.7	156	98.7	2	1.3
10- Cup Disk Ratio	3	2.05	143	97.94	146	92.4	12	7.6
11- Visual Field	-	-	42	26.6	42	26.6	98	62.0
	*18	*11.4	Recommended					
12- Ocular Coherence Topography	-	-	21	13.3	21	13.3	123	77.8
	*14	*8.9	Recommended					
13- Central Corneal Thickness	-	-	127	80.4	127	80.4	31	19.6
14- Treatment	-	-	146	92.4	146	92.4	9	5.7
	*3	*1.9	Treatment not recommended case under investigations					

*Test recommended case (under investigations)

*R treatment not recommended (case under investigations)

Signature	Frequency	Percent
Available and clear	42	26.6%
Available but not clear	88	55.7%
Not available	28	17.7%

7.16 Annex (16): Average length of stay at NOH departments of 2015

Month	Average LOS (Male Dept)	Average LOS (Female Dept)	Total LOS
January	1.7	1.9	1.8
February	2	2.1	2
March	1.9	2.	2
April	1.8	1.6	1.7
May	2.5	2	2.2
June	1.8	1.9	1.8
July	2.1	1.9	2
August	2	2.5	2.3
September	1.9	2.3	2.2
October	2.1	1.9	2
November	4	2	2
December	3.9	2	2.7
Total LOS	2.3	2.1	2.25

7.17 Annex (17): Cancellation rate of elective operations

Month	Total surgeries	Cancelled surgeries	Cancellation rate
January	377	95	25.19%
February	360	91	25.27%
March	406	97	23.89%
April	451	97	21.50%
May	374	67	17.91%
June	501	50	9.98%
July	306	32	10.47%
August	431	36	8.35%
September	321	39	12.14%
October	391	54	13.81%
November	442	43	9.72%
December	414	69	16.66%
Total	4774	770	16.12%

7.18 Annex (18): Excessive working hours

Variable	January	February	March	April	May	June	July	August	September	October	November	December	Total
Nurses													
Normal working hours/ week	35	35	35	35	35	35	35	35	35	35	35	35	**11 h/m**
Number of employee worked extra time/ month	14	17	16	15	15	16	15	13	15	13	13	12	
Extra time per month	167	179	159	135	137	261	204	185	163	110	112	118	
Excessive working hours rate	11.9	10.5	9.9	9	9.1	16.3	13.6	14.2	10.9	8.5	8.6	9.8	
Physicians													
Normal working hours/ week	35	35	35	35	35	35	35	35	35	35	35	35	**15.27 h/m**
Number of employee worked extra time/ month	4	5	4	4	4	15	4	3	4	3	4	4	
Extra time per month	8	92	75	84	83	204	67	42	38	42	80	58	
Excessive working hours rate	2	18.4	18.75	21	20.75	13.6	16.75	14	9.5	14	20	14.5	
Administrative													
Normal working hours/ week	35	35	35	35	35	35	35	35	35	35	35	35	**17.8 h/m**
Number employee worked extra time/ month	3	16	1	1	1	4	4	1	1	1	1	1	
Extra time per month	33	203	20	20	20	79	43	20	20	20	20	20	
Excessive working hours rate	11	12.68	20	20	20	19.75	10.75	20	20	20	20	20	

7.19 Annex (19): Absenteeism rate among administrative and optometrists staff

Administrative	
Variable	**Value**
Total absence days	368
Days without replacement	368
Total number of working staff	38
Rate of absenteeism	4.5%
Optometrists	
Variable	**Value**
Total absence days	310
Days without replacement	310
Total number of working staff	13
Rate of absenteeism	11.19%

تقييم جودة الخدمة المقدمة في مستشفي النصر للعيون

إعداد: أماني حبيب

إشراف: د. سناء أبو دقة

ملخص الدراسة:

تقييم الأداء يعتبر نقطة البداية لتحسين الجودة حيث انه يثير التساؤلات، ويعزز عمليات جمع البيانات و فهم النتائج لتحديد الأماكن التي تتطلب جهودا لتحسين الجودة، ويمكن تبنيه ضمن إستراتيجية متكاملة واستخدامه كأداة إدارية من قبل المدراء لتقييم الأداء في المستشفيات. هذه هي الدراسة الأولى التي تهدف لتقييم جودة الخدمات المقدمة في مستشفى العيون من خلال تتبع مؤشرات الأداء الأساسية بهدف تحسين الجودة, حيث تم تقييمها من منظور الطواقم العاملة، المرضى، والمدراء بناءا على مؤشرات الأداء الموصي بها من قبل منظمة الصحة العالمية ، ومن ثم تم تحديد نقاط القوة والضعف و تزويد المستشفى بإطار شامل لتقييم الأداء.

اعتمدت الدراسة طريقة التصميم المقطعي التحليلي الوصفي والكمي، حيث تم تطوير أداة تقييم جودة الخدمة في المستشفيات (PATH) كأداة أساسية للدراسة وتم استخدام أربع أدوات ثانوية لجمع العينات. الأداة الأولى (استبيان ذاتي) للطواقم العاملة وتراوحت دقة ثباته حسب عامل اختبار كرنبخ من (0.848-0,924)، الأداة الثانية استبيان – غير ذاتي (مقابلة) للمرضى وتراوحت دقة ثباته من (0,611-0,705) ، الأداة الثالثة مجموعة أسئلة لحلقة نقاش استهدفت المدراء الأساسين، أما الأداة الرابعة كانت قوائم ملاحظة تحتوى لمراجعة ملفات المرضى الطبية.

العينة الأولى شملت (120) موظف بنسبة استجابة 85.83% ، والعينة الثانية شملت (250) مريض من مرضي الخروج بنسبة استجابة 92%, والعينة الثالثة شملت (5) مدراء أساسيين في المستشفى، أما العينة الرابعة فقط تمثلت بمراجعة عينة من ملفات المرضى في أقسام الدخول (جراحي وعلاجي) والعيادة الخارجية (350ملف) لمعرفة مدى اكتمال تعبئة الملفات الطبية، كما وتم مراجعة سجلات وتقارير المستشفى الطبية والإحصائيات السنوية. ولقد تم استخدام برنامج التحليل الإحصائي (SPSS) لتحليل البيانات.

وقد كشفت الدراسة عن عدة أماكن قوة وضعف في أبعاد الدراسة، حيث أظهرت الدراسة نتائج ايجابية فيما يخص مؤشرات الأداء المستخدمة لتقييم بعد الكفاءة السريرية والسلامة، فكانت نتائج مؤشرات عمليات ساد العين والعلاج بالليزر ايجابية. وفيما يخص دخول المرضى المتكرر فقد كانت النسبة منخفضة (0,96%). وظهرت بعض المؤشرات السلبية حيث كان معدل العدوى المكتسبة (التهاب باطن المقلة) بعد عمليات ساد العين مرتفع نسبيا، ومعدل عمليات ساد العين بواسطة الموجات فوق الصوتية اقل من معدل استخراج العدسة مع الحفاظ على الحافظة، كما بينت الدراسة معدلات متدنية لجراحات اليوم الواحد (8,92%).

و أظهرت الدراسة نتائج جيدة فيما يخص توثيق الملفات الجراحية و اكتمال البيانات المطلوبة بصورة أفضل من نتائج ملفات العلاج الطبي، بينما ظهر وجود نقص في اكتمال بعض البيانات المهمة في ملف العيادة الخارجية (زرق العين).

بُعد الفعالية السريرية اظهر مؤشرات مقبولة حيث كان معدل إلغاء العمليات الجراحية (16,12%) ، بينما معدل مكوث المرضى في الأقسام كان منخفض بمعدل (2,25 يوم) و فيما يخص التزام المرضى بمواعيد الحجوزات فقد كانت النتائج متوسطة بنسبة (63,31%)

كما اظهر بعد الطواقم العاملة جودة الخدمة من منظور الطواقم، حيث تبين أن الموظفين يعانون من ظروف عمل غير كافية لتقديم خدمة ذات جودة عالية، وعدم توفر ميزانية مخصصة للتدريب . وتبين أن 73% تعرضوا لإصابات ناجمة عن العمل وان ممارسات سلامة الطواقم ذات الصلة غير كافية ، بينما قرابة النصف يعانون من نسبة عالية من الاحتراق الوظيفي على مقياس ماسلاش في كل من بعد الإنهاك العاطفي وتبلد المشاعر. وقد أظهرت الدراسة نتائج ايجابية فيما يخص ساعات العمل الإضافية ونسبة تغيب ودوران منخفضة لدى معظم الفئات العاملة.

أما بعد الإدارة المستجيبة اظهر أن مبدأ تحسين الجودة مدرج في هيكلية المستشفى, و لكن هناك غياب واضح لوجود نظام مراقبة الجودة من خلال مؤشرات الأداء، أما فيما يخص الاستجابة للمرضى فقد ظهرت استجابة جيدة لاحتياجاتهم وتطوير مستمر للخدمة ، بينما كشفت عن استجابة اقل لاحتياجات الطواقم العاملة.

وأخيرا كشف بعد مركزية الخدمة تجاه المرضى عن نتائج ايجابية لجودة الخدمة من منظور المرضى من حيث مدى وصولهم للخدمة الطبية وموافقتها لتوقعاتهم.

وخلصت الدراسة إلي أن وضع جودة الخدمة المقدمة في مستشفى العيون مقبول، لكنه لا يزال يحتاج إلى جهود لتعزيز وتنمية ثقافة القياس واستخدام مؤشرات الأداء لتحسين الجودة بالإضافة لضرورة تعزيز استجابة الإدارة للطواقم العاملة.