Quality of Care and Services of a Public Hospital: Awareness and Assessment

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Received: May 05, 2014 **Accepted: December 12, 2014**

Published: April 01, 2015

Abstract: *In order to give everyone access to quality care, this study attempts to make quality awareness, highlighting the importance of the implementation of the quality management system in health care facilities. The objective of our work is to make a quality awareness, to analyze the current situation and to provide recommendations. The analysis of the existing situation consists of identifying, describing, and analyzing the key processes implemented, listing the dysfunctions, classifying them, deciding on the corresponding actions and putting in place indicators and dashboards, which will help track improvements. The overall situation of the hospital regarding the requirements of ISO 9001 indicated a respect of about 28% of the requirements of the standard. The state of the premises of the establishment does not indicate a clear organization at the hospital. The hospital environment is a prerequisite to the establishment of a system of quality management that enables you to deploy a clear and shared policy to improve the quality of care and services.*

Keywords: *Hospital centre, Quality of care, Health, Awareness, Quality management system.*

Introduction

A recent survey of hospitals shows that most health professionals do not have a clear idea about the meaning of "quality" [9].

Quality approach is based on the establishment of a quality management system that enables you to deploy the quality policy of a hospital or healthcare facility. This management system has several components including a process of listening to patients, improving quality program including explicit operational objectives, a training program for professionals in quality, a document management system. The provisions for monitoring of the process by the hospital management are essential elements of this system. The system of quality management must include the deployment of the approach in the various departments of the hospital.

Work [2], a pioneer work in this field, talks about quality of care to "maximize the well-being

of patients after taking into account the benefit/risk at each stage of the care process".

The quality management system must be to ensure the safety of care. Risk management is a major tool to increase the safety of care and services delivered to patients.

Equity is closely related to access to and the ability of a health system to treat fairly all persons concerned, regardless of age, gender, race and financial resources dimension [1].

The establishment of a quality approach is primarily the creation of a new state of mind in establishing shared by all staff. As such the quality improvement (reduction of non-quality and process improvement work) requires a reflection involving the management and the entire staff to define objective achievable and acceptable quality.

It is therefore necessary to establish an inventory of the organization to specify the organization of the hospital and explaining the project:

- General objectives of the institution
- General organization and responsibilities: who does what?

The objective of our work is to make quality awareness, analysis of the existing and provide perspectives highlighting the importance of the implementation of management quality system in a health facility (Hospital Hassan II Agadir).

Materials and methods

The analysis of the existing

The analysis of existing is to:

- Identify, describe and analyze the main processes involved.

The description of the process used to identify:

- phases (steps or sub-processes);
- the input data of each stage;
- the output of each phase;
- key points of each phase.

- Highlight:
  - strengths;
  - areas for improvement;
  - malfunctions.

⇒ It allows specifying the objectives of the quality process.
⇒ It leads to the development of the quality improvement plan [7].

Improvement plan

For each phase of diagnosis, we listed strengths, areas for improvement and malfunctions by: investigations; interviews; working groups; ...; assessment of different hospital departments.

The "assessment" concept meanwhile can be defined as a technique whose goal is to make a judgment of value based on predetermined criteria and standards.

World Health Organization (WHO) defined evaluation as "systematic and scientific process to

assess the extent to which an activity or series of activities helped achieve predetermined objectives. This process involves measuring the adequacy of the effectiveness and efficiency of health services, helps redistribute priorities and resources according to changing needs" [5].

While the assessment of the quality of care is defined by the WHO as:
"Scientific and systematic procedure to determine the extent an action or set of actions to reach a successful or agreed targets" [5].

This is an analysis of the quality of care act and its consequences in terms of results and patient satisfaction [5].

Barometric calculation to better present the results of the diagnosis by encrypting the execution rate of each chapter of the standard based on the ISO 9001 Checklist, this calculation is based on the following factors:

NA = not applicable;
Required 1 = not satisfied;
2 = poorly defined and applied;
3 = good defined and applied;
4 = sets, applied and documented;
5 = sets, diligent, documented and improved.

There are many differences, the number of requirements of each paragraph of the standard that must be assigned to the coefficients NA, 1, 2, 3, 4 and 5 and then multiply it by the factor in Table 1 below to obtain a ratio.

Table 1. Coefficients and factors used to calculate the barometric

Coefficients	Factors
NA	0
1	0.2
2	0.4
3	0.6
4	0.8
5	1

$$\text{The percentage of the embodiment} = \frac{\text{The sum of the rates}}{\text{The number ofrequirements}}$$

Results and discussions

Example calculation are shown in Table 2. Diagnostic results according to the "checklist" ISO 9001 section are shown in Table 3.

Percentage of completion: $\frac{2.5}{6}100 = 47\%$

Table 2. Calculate the percentage of completion (Chap 4: Medicine Service)

							the sum
Coefficients	**NA**	**1**	**2**	**3**	**4**	**5**	*
Factors	0	0.2	0.4	0.6	0.8	1	*
Number of gaps	1	0	2	2	1	0	6
Rate	0	0	0.8	1.2	0.8	0	2.8

Table 3. Completion percentage against the requirements of ISO 9001

		Achievement, %				
Dept.	**Services**	**Chap 4**	**Chap 5**	**Chap 6**	**Chap 7**	**Chap 8**
Dept. Medicine	Medicine	47	48	25	53	66
	Cardiology, Pneumonology Nephrology	40	55	25	51	66
	P 03	43	73	30	50	69
Dept. Traumato-neuro surgery	Emergency	47	49	25	30	20
	Resuscitation	44	56	20	16	13
	Neurosurgery	47	45	25	15	02
Dept. Mother – child	Pediatric Surgery	04	29	15	20	25
	Maternity	08	36	40	29	27
	Pediatrics	04	24	20	12	17
	Rea Newborn	04	42	15	32	29
	Gynecology	03	24	05	17	17
	Surgery Service	04	58	15	21	23
	Operating Theater	04	18	40	20	17
Dept. Medico-technique	Orthopedics	25	44	10	18	03
	Radiology	07	24	05	18	15
	Pathologists	20	58	05	32	06
	Fractional Scanning Unit	14	22	10	09	11
	Psyco-Keni-Orth	08	47	05	28	07
	Laboratory	50	44	30	44	32
Adm	Administration	73	49	50	55	40
	Average	24.8	42.25	20.75	28.5	25.25

The average percentage of completion for each chapter is less than half of the requirements of ISO 9001. Table 4 shows the percentage of completion and the gap between chapters of ISO 9001.

Table 4. Percentages of completion and the gap between chapters of ISO 9001

	Achievement	Difference
Chap 4: System of quality management	24.80%	75.20%
Chap 5: Management's responsibility	42.25%	57.75%
Chap 6: Resource management	20.75%	79.25%
Chap 7: Product realization	28.50%	71.50%
Chap 8: Measurement, analysis and improvement	25.25%	74.75%

The inventory of the property is summarized in Fig. 1: overall presentation of the situation of the hospital.

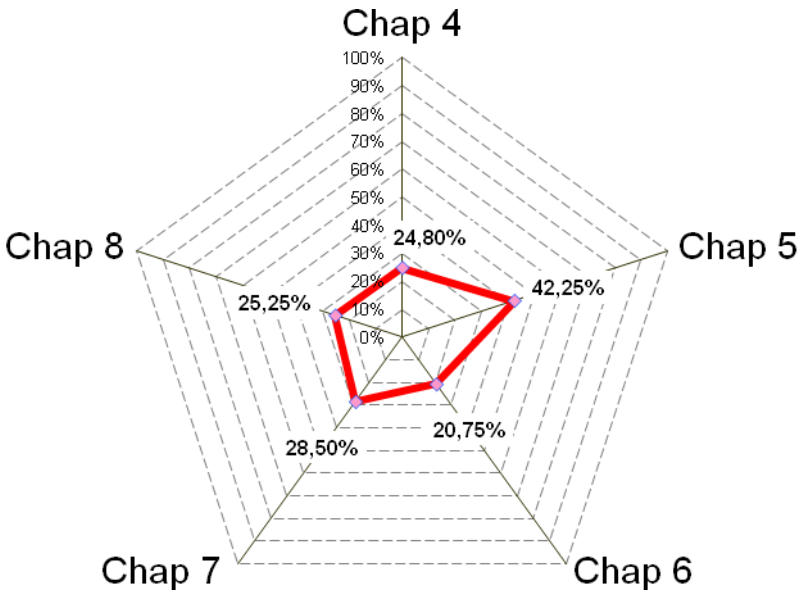

Fig. 1 Overall presentation of the situation of the hospital with the requirements of ISO 9001v2000

The overall presentation of the situation of the hospital reflects a respect for approximately 28.31% of the requirements of the standard.

The inventory of the property does not specify a clear organization for lack of a written policy explaining the general objectives of the hospital, the general organization and responsibilities.

From the results we concluded that the hospital environment is a prerequisite for the implementation of a quality management system.

Requirements management system quality

General requirements

Quality of care is the result of a synergy between the structures and processes of care that the translation is a change in the health status of the patient or for the benefit of the community. It is estimated by A. Donabedian an assessment of the quality of structures, procedures and results of a health care system [5].

In addition to the various dimensions of quality of care, appreciation are three areas of investigation may be based on measures relating to the structure of care, process of care or final results [3].

The hospital officials must:

- Identify processes;
- Determine the sequence and interaction of processes;
- Establish the criteria for measuring the effectiveness of the operation and control of processes;
- Ensure the availability of resources and useful information for the proper functioning of processes;
- Monitor and analyze these processes.

At the Hassan II hospital, we identified three macro processes:

- Process realization;
- Process support;
- Process management.

The Table 5 illustrates the different processes involved in the implementation of the Quality management system (QMS) in the Hassan II hospital processes and are categorized by reference.

Table 5. QMS processes at the Hassan II hospital

Category	Process	Reference
Process control "Policy and quality management"	✓ Quality policy and objective ✓ Listen and customer satisfaction ✓ Improved QMS	PSP01 PSP02 PSP03
Realization process "Patient support"	✓ Conduct consultations ✓ Ensure emergencies ✓ Ensure hospitalizations	PSR01 PSR02 PSR03
Process support "Transversal resources"	✓ Pharmacy ✓ Maintenance ✓ Infrastructure and environment	PSS01 PSS02 PSS03

Requirements for documentation

- The definition of the documentary system consists of:
  - set goals and limitations of the system;
  - designing its structure;
  - define the life cycles of different types of documents;
  - prepare the control procedure of the documentary system (what, who, where, when, how) [8].
- The system of quality management (processes and procedures) must be defined in a quality manual.
- Quality manual applies to all activities of the hospital. It describes the major steps taken by the various functions of the hospital to get and increase customer satisfaction, as well as commitments to provide service in accordance with customer requirements.
- Written by management to implement the system involvement is highly recommended.

Control of documents

- Process of elaboration of a quality document:

At the Hassan II hospital, document control should take the following steps:
Editor: Editor established fact check the document and ensures the review if necessary. It's usually the driver or other person designated by the pilot.

Verification: It is most often the quality manager, based on its technical expertise in and knowledge of ISO 9001v2000 standard.

Approval: It is the strategic driver for organizational and operational procedures, and operational driver for work instructions and forms of recording.

Use: The user responsible for the use of documents in condition and in compliance with the provisions contained therein. He has the duty to suggest changes and/or to trace malfunctions generated, it is necessary for its implementation. Rules for filing and archiving of documents should be established.

- Development of procedures required by the standard:

The system of quality management requires six basic procedures are: control of documents, control of records, internal audit, and treatment of non-conformities, corrective actions and preventive actions.

The following table (Table 6) illustrates the procedures required by the standard necessary to the implementation of the QMS (quality management system) in the Hassan II hospital; they are classified by reference and chapter number of the standard:

Table 6. Procedures required by the standard

Procedures	No of Chapter	References
Control of documents	4.2.3	PR.001.PSP03
Control of records	4.2.4	PR.002.PSP03
Internal audit	8.2.2	PR006/PSP03
Control of nonconforming	8.3	PR.003.PSP03
Corrective actions	8.5.2	PR004/PSP03
Preventive actions	8.5.3	PR005/PSP03

Control of records

A record is a document stating results achieved or providing evidence of completion of an action or event. It allows storing, validating and/or protecting the data on this action or event (record of non-compliance status of corrective actions/preventive actions, reporting, management review, ets.), regardless form (paper, computer support, etc.).

A quality record is intended to provide tangible evidence of activities performed or results achieved in terms of quality. Records shall be maintained to demonstrate that the system of quality management is operational.

Responsibility of direction

The hospital management must commit in writing quality policy and ensure that the objective qualities remain relevant and effective through management reviews.

Resource management

The management of the hospital must determine useful skills, control the availability of resources, to provide training and ensure staff motivation.

Product realization
This chapter is by far the largest of the standard. It accepts all processes to produce a product from conception to delivery. To comply with requirements, the product must pass through a number of quality's procedures at all stages of its life cycle.

Measures, analysis and improvement
The management of the hospital must provide and establish processes for measurement, analysis and improvement, then collect the appropriate data to prepare for the implementation of the system of quality management and improve efficiency.

For this purpose, audits on the operations staff of the hospital (internal audits) or those of its suppliers and subcontractors (external audits) should be held regularly to check the consistency of measures followed in the field of quality.

Points to improve and dysfunction by service

- The hospital does not have a chart itself in accordance with the standard, but there is the presence of one well-defined chain of command;
- No written or unmet required quality procedures, processes are not yet formalized, and the description of the interactions between different processes;
- Lack of Quality Manual for some services;
- Lack of written quality policy and objectives are not documented;
- No control of records, identification, storage, accessibility, protection, shelf life and disposal of obsolete and control external records recordings;
- Insufficient human resources and additional training would be very useful; and Insufficient infrastructures;
- Lack of monitoring indicators of customer satisfaction survey and monitoring of customer complaints;
- Lack of job description designating missions personnel;
- Lack of warehouse and archiving;
- Form Of Communication (display, internal newspaper, network, ...) and to develop inter-communication;
- Lack of monitoring indicators of customer satisfaction survey and monitoring of customer complaints;
- Record corrective action and preventive action away;
- Management Commitment: Optimistic outlook from management, but not yet formalized;
- Display awareness insufficient quality;
- The involvement of all staff is highly recommended to meet the requirements and expectations of customers;
- Lack of appropriate training for staff in terms of quality management.

Point out that there are other approaches to optimization of quality in hospitals. For example, in [6] authors draw attention to the new approach to building hierarchy for patient's attendance in intensive care unit with use of fuzzy information and dynamic modeling. In [4] authors present a dynamic model of intensive care unit workflow based on generalized nets, it's an adequate approach for optimum distribution of the resources and optimum conduct in the care for patients with severe disorders of the vital functions.

Conclusion

From the results we concluded that the hospital environment is a prerequisite for the implementation of a quality management system that allows you to deploy a clear policy and shared to improve the quality of care and services this management system has several components including a process of listening to patients, improving quality program including explicit operational objectives, a training program for professionals in the quality and document management system.

Noting that the provisions relating to the monitoring of the process by the hospital management are essential elements of this system, and the system must provide for the deployment of the approach in the various departments of the hospital.

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