

**Abstract**

**Purpose:** Today, Quality Management Systems (QMS) are a promising candidate for the improvement of healthcare. The purpose of the study was to investigate the opinions/attitudes of gynecology healthcare professionals towards quality and quality management in Healthcare Facilities (HFs) in Greece. **Design/methodology/approach:** An anonymous self-administered questionnaire was distributed to healthcare professionals, asking for opinions on quality objectives associated with the everyday workflow in HFs (e.g. management of patients, resources etc.) and on Quality Management Systems (QMS). The study was conducted in Hippokration Hospital of Thessaloniki including 187 participants. Statistical assessment and analysis of the questionnaires was carried out. **Findings:** Although 87.5% recognized the importance of potential QMS implementation and accreditation, over 50% believed that it would lead rather to increased workload and bureaucracy than to any considerable quality improvement. More than 60% were completely unaware of the implementation of quality objectives such as Quality Handbook, quality policy, audit meetings and accreditation status in their HFs. This unawareness was also reported in terms of patient, data, human and general resources management. Finally, awareness over medical malpractice and positive attitude over official reporting were detected. **Originality/value:** Most respondents acknowledged the significance of quality, QMS implementation and accreditation in Greek hospitals. However, there was a critical gap in knowledge about quality management objectives/processes which could be possibly resolved by expert teams and well-organized educational programs aiming to educate personnel regarding personnel's harmonization with the various quality objectives in Greek HFs.

**Keywords:** Certification, Accreditation, Total Quality Management, Quality Standards (QS), Quality Systems, Quality Healthcare

### ***Introduction***

The term “Quality” is difficult to define since it can be explained with various definitions associated with the sector or field in which it applies every time. Generally, quality can be interpreted as the superiority or excellence that characterizes a provided service or product that meets its predefined requirements and expectations and can adequately satisfy implied needs (Crosby, 1999, Harteloh, 2003). As expected, quality applies in the field of Healthcare provision as well although it made its transition from the industrial world to the medical one quite slowly. The Institute of Medicine (IOM) was the first to describe quality in healthcare as “the degree to which health services for patients increase the likelihood of desired health outcomes and are consistent with current professional knowledge” (Lohr and Schroeder, 1990, Institute of Medicine Committee on Quality of Health Care in, 2001). This definition linked quality with Quality Standards (QS) which are documents, consisting of requirements and specifications, that can be used consistently to ensure that provided services are fit for their purpose (Mitchell and Lang, 2004).

QS for hospitals were initially introduced by the American College of Surgeons (ACS). ACS was founded in 1913 to address potential variations in the quality of medical education and the competence of physicians. 4 years later, ACS after properly adopting Codman’s “End Result System”, developed its Hospital Standardization Program and published their work entitled “Minimum Standard of Hospitals” in 1917. Thirty years later, the International Organization for Standardization (ISO) was founded in Switzerland aiming to the design of universally accepted QS that would be gradually adopted by hospitals all over the world leading to standardization and improvement of healthcare (Greenfield and Braithwaite, 2008). This led to two new terms: “accreditation” and “certification” which, despite being often used interchangeably, are not synonymous. Accreditation is a formal recognized evaluation process from a neutral auditing body that officially assesses and recognizes that hospitals have designed and implemented a Quality Management System (QMS) which meets applicable pre-determined standards suitable for its services and purpose while certification is a third-party authorized confirmation of compliance of hospitals with set standards (Shaw et al., 2014, Stichler, 2010, Brubakk et al.,

2015) (7-9). In 1951, the first accreditation and certification programs were initiated in USA with the formulation of the Joint Commission on Accreditation of Healthcare Organizations. In detail, the Joint Commission was founded as a not-for-profit organization by the American College of Surgeons, the American College of Physicians, the American Hospital Association, the American Medical Association, and the Canadian Medical Association, to design and offer voluntary accreditation programs to hospitals in USA and Canada by applying at first the minimum quality standards introduced in Hospitalization Standardization Program and gradually applying more demanding and rigorous standards (Donabedian, 2005). In the 1990s, accreditation was widely adopted and spread globally. In 1996, the Academic Hospital of Utrecht became the first HF in Europe that successfully implemented a QMS in its radiology department (van den Heuvel, 2007). At the beginning of this millennium, World Health Organization carried out a study that finally identified 36 national healthcare accreditation programs worldwide (Shaw, 2003).

Since then, quality in healthcare has come a long way and now it is considered as a key driver in a healthcare reform. Hospitals are expected to provide high quality medical services to patients while at the same time society requests efficient management of public funding. This is the reason why the government authorities, in an attempt ~~for~~ **to provide** better healthcare services with transparency, accountability and credibility, have turned to QS and accreditation programs for relative implementation in national hospitals during the last 20 years (Shaw, 2006, Brubakk et al., 2015) making accreditation a vital part of healthcare in more than 70 countries (Shaw, 2003). In some European countries, there are laws that oblige hospitals to design and apply QMS (e.g. Finland, Netherlands) (Wagner et al., 2006, van den Heuvel et al., 2005), while in others internal or external assessment of healthcare services, based on ISO QS, has been only partially legislated (e.g. Germany, France) (Sluijs et al., 2001, Heaton, 2000, Daucourt and Michel, 2003, Pomey et al., 2004). Moreover, it should be noted that there is a number of countries that are adopting (with or without modifications) accreditation systems developed in other countries. For example, in 2001 Ireland the authorities decided to apply the accreditation system that was designed by the Canadian Council on Health Services Accreditation until the design and implementation its own accreditation system by the Health Information and quality

authority (HIQA) while in Hong Kong they adopted the Australian Council of Healthcare Standards accreditation system (Donahue and vanOstenberg, 2000).

It should be stressed that this study has focused on the accreditation of entire hospitals and not of their subunits individually (e.g. medical laboratories). Particularly, in Greece, there is in force a National Law 4025/2011 (article 34), requiring from the private diagnostic laboratories, providing services also to healthcare agencies or other medical laboratories, to be accredited according to ISO 15189:2012 for all their testing portfolio, while there are no laws or other legal requirements that oblige hospitals to comply with specific QS, and thus such standards are adopted only by a minority of hospitals on a voluntary basis (Heaton, 2000, Sluijs et al., 2001, Theodorou and Giannelos, 2015). So, this study attempted to determine gynecology healthcare professionals' opinions/attitudes towards quality and QMS in Greek public and private hospitals where QMS implementation and accreditation are still not mandatory.

### **Methods**

Our team conducted a quantitative survey during 2016 in which gynecology healthcare professionals including midwives, midwife interns, physicians and others, were recruited to express their opinions about quality in Greek Hospitals through a well-structured questionnaire.

The initial version of the questionnaire was developed during a preparative period of 3 months (January-March 2016) during which our team, with the form of through informal communications during normal working hours, discussed the nature of a hypothetical questionnaire associated mainly with quality in different areas covering the full range of activities in Hospitals, which could be administered to working personnel asking for their opinions. During that period, the team members exchanged valuable information from their working experience in Hospitals and in agreement with the requirements of internationally accepted healthcare-associated QS (ISO 9001:2015, BS EN 15224:2012, Joint Commission International Accreditation Standards for Hospitals 2014), the first draft questionnaire was generated. Before its administration, the draft questionnaire was pre-tested through a control group of healthcare professionals at an accredited private hospital whose personnel were completely aware of requirements and

procedures associated with the hospital's quality management and accreditation status. This initial group of respondents, that was not included in this study, was asked to evaluate the comprehension level of the questionnaire and suggest possible modifications leading at the end to some slight alternations for better clarity. The final version of this anonymous self-administered questionnaire was distributed to working personnel during staff meetings in Hippokration General Hospital of Thessaloniki, academic activities in Thessaloniki Medical School and nursing seminars where healthcare professionals from public and private hospitals in Greece participated. Before completing the questionnaire, each participant was asked to read and sign an informed consent form.

The introductory part of the questionnaire explored demographic characteristics of the respondents (age, educational level and profession). The main part consisted of three question-groups investigating the respondents' view about quality in the full continuum of everyday workflow in Greek Hospitals. The first group consisted of general questions about quality and quality management systems, the second one was focusing on quality in terms of everyday practice and information/data management and the last one was related to quality in terms of patient, general and human resources management. Most of the questions were based on a Likert scale where the respondents were asked to specify their level of agreement or disagreement on a symmetric agree-disagree scale for a series of statements addressed by the questions. The Likert format was a typical six-level Likert item where: 1\* corresponded to "Strongly disagree", 2\* to "Moderately disagree", 3\* to "Somewhat Disagree", 4\* to "Somewhat Agree", 5\* to "Moderately agree" and 6\* to "Strongly agree". The remaining questions were closed-ended with 2 (Yes/No) or 3 (Yes/No/Do not know) possible responses.

## ***Results***

### **Demographics**

The questionnaire was administered to a total of 202 healthcare professionals and 187 of them agreed to participate (92.57% response rate). This group of 187 respondents consisted of 90 midwives, 87 midwife interns, 2 physicians and 8 other healthcare professionals (see Table 1

that illustrates demographic characteristics of healthcare professionals participating in the study). It should be noted that: not all the 187 participants responded to all the questions and this explains why some figures in the Tables do not sum up to the total number of participants in some questions (marked with \*).

Regarding age, more than half the respondents were in their early thirties (59.3%), one quarter of them were between 30 and 50 years old (24.1%) and only 16.7% were older than 50 years old. Because of the relatively low average age, more than 65% of the participants were single without children (data not shown). Regarding education level, almost all of them (92%) had attended or were attending a Nursing Technical Institute.

### **Quality in hospitals (in general)**

It was shown that almost 9 out of 10 healthcare professionals considered that quality was important for their services and that despite **that they characterized their work as of high quality their qualitative work, they considered that** there was room for further improvement (see Table 2 that illustrates the healthcare professionals' view about Quality and QMS in Greek Hospitals). However, more than half the participants (56.5%) expressed their disagreement to the statement that the administration in their workplace had established a vision and set goals associated with the quality level of hospital services. In addition, the participants expressed their opinions about QMS in their workplace. Although it appeared that only slightly more than half the participants were familiar with QMS and accreditation process, the majority (87.5%) acknowledged the importance of potential QMS implementation and accreditation at their workplace. Despite a highly-reported significance, 57.0% considered QMS implementation and accreditation to be more a matter of status/prestige than a factor of actual healthcare improvement and 55.5% believed that they would lead rather to increased workload and bureaucracy than to any improvement in hospitals. Surprisingly, it was shown that approximately 6 out of 10 healthcare professionals were completely unaware of any QMS, Quality Handbook, official quality policy, established quality indices, and audit meetings for quality assessment in their workplace or if their hospital had obtained any accreditation or not.

### **Quality in everyday practice and management of information/data in hospitals**

Concerning the existence of protocols in their workplace, it seems that for every 10 respondents there were 4 confirming their existence, 2 denying it and 4 unaware if such protocols were applied or not (see Table 3 that illustrates the health-care professionals' view about Quality in everyday practice and management of information/data in Greek hospitals). Additionally, most participants reported their ignorance about organization charts of procedures, operating procedures related to document control and personnel notification about recent documents either internal or external (e.g. WHO Guidelines) in their workplace.

In terms of internal/external audits, 46.8% were unsure whether an auditing schedule was applied or not. Although 81.6% regarded audits as necessary, more than half the participants agreed that the audit findings were not taken under serious consideration by the administration or/and the working personnel. In cases of non-compliance/malpractice, 86.2% considered that it is necessary to design and apply proper measures for the effective management of such cases while 57.9% were not sure if such measures were implemented in their hospitals or not. In the same context, the majority (59.9%) outlined their ability to accurately identify potential malpractice/non-compliance and that they would officially report such cases caused either by their colleagues or even themselves despite that most of them did not know if their hospital had established a reporting process or how to fill-in malpractice reports (53.9% and 69.5% respectively).

In terms of quality in data/information management, over 50% confirmed that administration in their workplace keeps records of phone, postal and electronic communication even though 42.2% was unsure about the quality control of electronic data in their facilities. Furthermore, most participants regarded confidentiality as highly important in their work (90.5%) despite that 60.5% admitted not having signed any relative confidentiality agreement.

### **Quality in patient, general and human resources management in hospitals**

When asked about patient complaints, only 45.9% confirmed that there was a documented process for complaint submission and far less (38.8%) that such complaints were managed

effectively (see Table 4 that illustrates the health-care professionals' view about Quality in patient, general resources and human resources management in Greek hospitals). Regarding medical ethics principles, even though almost all the participants (94.7%) acknowledged the importance of these principles, the majority admitted that they were unsure whether these principles were documented in their hospitals or not (55.6%). To that direction, 44.1% denied having been properly informed or having signed any legal agreement of medical ethics principles.

In terms of human resources management, almost 2 out of 3 participants stated that the administration in their hospitals allowed them to attend medical courses or seminars but only 36.9% stated that the same applied for courses about QMS. Additionally, 50-60% were unaware whether job descriptions, organization chart of assignments/duties or list of personnel clearances were available in their hospitals or not. Regarding technical competence assessment of hospital personnel, almost 80% regarded this process as highly significant although approximately 50% were unaware if a relative process was applied in their workplace or not. More than 70% claimed that administration in hospitals tended not to reward their personnel for providing qualitative services or to evaluate their satisfaction levels through surveys. Finally, personnel's hygiene and safety seemed to be taken under consideration by the administration in half HFs in Greece.

In the final group of questions associated with quality in general resources management, for every 10 healthcare professionals, about 4 of them stated that there are lists of confirmed orders and of available stock supplies in their workplace. However, over 70% expressed their unawareness about the way the approved suppliers were selected and if there was a periodical re-evaluation process or not. Finally, most respondents considered that the resources in their workplace were not adequate for the provision of high quality healthcare and that administration was not likely to spend resources for the further quality improvement of healthcare services (52.7% and 69.5% respectively).



## **Discussion**

The purpose of our study was to investigate the attitudes of healthcare professionals towards quality and QMS in the full continuum of everyday workflow in Greek hospitals with a questionnaire focusing on various quality objectives. To our knowledge, relative topics have not been evaluated by the existing literature so far proving the originality of this study in which personnel associated with the Specialty of Gynecology participated.

Generally, more than 80% regarded quality as a crucial parameter for their work, which was considered ~~as quantitative~~ **to be of high quality** and at the same time capable for further improvement. In terms of quality management, most healthcare professionals had a positive perception of accreditation and QMS as shown in other studies (Nandraj et al., 2001, Pomey et al., 2004). Despite their undeniable significance in HFs, only 1 out of every 2 participants is familiar with QMS and accreditation. Most respondents agreed that accreditation and QMS implementation have more to offer in terms of marketing and social status for the hospital rather than to actual quality improvement. Furthermore, it was widely believed that the benefits from QMS implementation and accreditation are not worth the highly increased workload, bureaucracy and personnel time, something underlined in other studies as well (Pomey et al., 2004, Brasure et al., 2000, Boldy and Grenade, 2002, Fairbrother and Gleeson, 2000, Gough and Reynolds, 2000).

It was shown that 6 out of 10 healthcare professionals in Greek hospitals were characterized by crucial ignorance over fundamental objectives related to quality and QMS including the existence or absence of QMS, Quality Handbook, official quality policy, established quality indices, audit meetings, organization chart of procedures, document control and finally accreditation, something concluded in other foreign studies where healthcare professionals were unaware and skeptical about such quality objectives in their workplace (Pomey et al., 2004, Alkhenizan and Shaw, 2012, Reznich and Mavis, 2000).

In terms of auditing, although over 80% considered audits crucial for the detection of malpractice/non-compliances and that proper measures shall be applied, more than 50% stated

that the resulting findings were not taken under serious consideration. When asked about malpractice reporting, the majority claimed were in favor of official malpractice reporting no matter who was responsible. This reporting awareness of personnel involved with gynecological-obstetrical care could be possibly explained by the fact that Gynecology is among the specialties with increased involvement in medical errors and permanent disabilities (Panagiotou, 2016), being the most injurious specialty concerning the mean compensation amount and the second most injurious regarding frequency of compensation awarded per specialty in Greece (Riga et al., 2014).

Regarding the human resources management, more than half the participants were unaware of QMS requirements about hospital personnel including job descriptions, organization chart of assignments/duties, list of clearances and technical competence assessment, a process of high significance according to almost 80%. Additionally, there was an important gap of knowledge among the healthcare professionals about general resources management. Finally, a crucial lack of interest was reported towards the personnel's working satisfaction and the quality of their work on behalf of the hospital administration together with a reluctance to invest in further quality improvement of provided healthcare.

This study had one important limitation associated with the "nature" of the participants. More specifically, 177 out of 187 participants were either professional midwives or midwife-interns which basically makes it difficult to extract conclusions about the opinions/attitudes of other healthcare professionals in hospitals including doctors and others. Also, the relatively **small low** average age of the participants may be considered as a limitation since it implies limited working experience and interaction with QMS and QS in hospitals. Finally, the self-reported nature of the questionnaire, despite being well-designed and well-structured, could possibly act as another limitation because some participants might have possibly misinterpreted certain questions without asking for assistance or clarifications from our team when answering the questionnaire.

### **Conclusions**

In today's environment where a constantly increasing international focus on improving safety and quality in healthcare has appeared, QMS in hospitals has been introduced as an ideal candidate for standard of excellence (Shekelle, 2002). However, this push for QMS implementation and accreditation does not seem to be the case in Greek hospitals where although most gynecology healthcare professionals admitted that QMS are highly likely to improve the procedures and services, most of them shared the view that the resulting drawbacks (extensive bureaucracy, workload and personnel effort etc.) completely outbalance against the perceived benefits. Furthermore, there was consistent evidence indicating a critical gap in knowledge when it comes to QMS implementation in hospitals.

Management and Administration Boards of Greek hospitals could contribute vitally with the creation of healthcare teams, consisting of experts in Total Quality Hospital Management and Hospital Quality Control/Assurance, that would be assigned with the establishment of a hospital plan to harmonize educate the personnel with regarding various quality objectives such as QMS, quality handbook, quality policy, accreditation etc. (Brubakk et al., 2015). To this direction, a well-organized educational program for the personnel including seminars and lectures, aiming for at a deeper understanding of the benefits offered by a well-implemented QMS, would effectively contribute to the establishment of a "quality in healthcare" and a "continuous quality improvement" culture in Greece which is the crucial milestone before any hospital accreditation or QMS implementation.

To our knowledge, this study was the first one to evaluate and assess the opinions and attitudes of healthcare professionals towards Quality Management Systems in Greek Healthcare Facilities focusing exclusively on the Specialty of Gynecology. Future relative studies could target a larger number of respondents focusing on a more balanced composition of the responding subgroups including if possible equal numbers of all the working hospital personnel such as midwives, doctors, laboratory personnel, administrative and secretary personnel and heads of hospitals, while at the same time trying to achieve a wider variety in the respondents' age and working experience, to extrapolate more universal results. Finally, personnel from

other medical specialties different than Gynecology could be included to detect differences in quality attitudes among Greek healthcare professionals of different background.

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