

Quality and safety management in the concept of the healthcare system in the Czech Republic

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ABSTRACT

Purpose: The completion of a survey across selected hospitals in the Czech Republic and to check the status of the implementation of healthcare quality and safety management in hospitals in the Czech Republic.

Materials and methods: The study was conducted by the Czech Association of Nurses, the largest Czech professional nurses' organization, which is oriented towards creation of effective tools for ensuring safe and high-quality provision of nursing care. The investigation was held from September 2011 to February 2012 and the chosen healthcare facilities were selected from a group of institutions that were preparing for implementation of a quality management system or which have already implemented such a system. The criterion for selection of respondents was involvement in the *Tracking falls among hospitalized patients* project. A total of 38 hospital facilities in the Czech Republic were addressed and received questionnaires. The questionnaire contained a total of 31 questions, which were focused mainly on the area A total of 34 completed questionnaires were returned. Statistical analysis was done on the basis of the evaluation of the questionnaires.

Results: The survey shows that 77.78% of the surveyed healthcare facilities have implemented a long-term strategy for the implementation or maintenance of a management system and healthcare quality assurance. The remainder of the addressed facilities is either preparing such a strategy or has yet to plan such a strategy.

Conclusions: Hospital healthcare facilities are often evaluated with an eye towards economic performance (profitability) and avoidance of long-term loss. Yet the healthcare provided is not fully linked to the payment system of healthcare payers. We conclude that the decision-making process of the patient does not depend on the quality of the healthcare facility, even though this information can be found on the web portals of individual healthcare facilities. We conclude that patient does not make its decision according to the quality of the healthcare facility. Even though, the information of quality of the healthcare facility is available on web portals of every facility.

Key words: system, quality, safety, healthcare facilities.

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INTRODUCTION

The concept of quality is primarily determined by cultural and social environments. The idea of quality of care in healthcare facilities is affected by collective values that dominate in society, and by individual values of those who define the term 'quality' (e.g., government representatives – politicians, healthcare legislation authors, representatives of healthcare institutions and healthcare professionals). Quality healthcare is therefore the result of 'an agreement' between the government, the patient and the healthcare professional. There are several definitions of healthcare quality. The World Health Organization (WHO) has issued a *Guidance on developing quality and safety strategies with a health system approach*, where 'quality' is defined as a service "which organizes resources in the most effective way to meet the health needs of those most in need, for prevention and care, safely, without waste and within higher level requirements" [1]. This definition implies a need for safety, securing fundamental human rights and the use of legislative standards. It simultaneously includes three basic perspectives on quality: quality from the patient's perspective (patient needs, patient wishes); professional quality (i.e., proper professional training); quality of management (i.e., prescribing and regulatory compliance).

Implementation of quality in healthcare facilities requires the use of specific methods. The World Health Organization determines four basic categories: increasing the role of patients/clients and consumers of healthcare; regulation and evaluation of healthcare personnel and healthcare services; local implementation of standards and norms; teams focused on solving 'quality' problems.

Implementation of 'quality' into the healthcare system of a given country, and thus in the healthcare facilities strengthen the healthcare and support for health as follows:

- High quality healthcare services provide effective and reliable healthcare and provide it using needs-based methodologies and with minimal waste of resources (financial resources, human resources, etc.).
- Effective communication through a purpose-driven healthcare information system ensures production, coordination, analysis and use of information as it related to the health system and patient health.
- Well-established healthcare services ensure equitable access to basic healthcare.
- A healthcare worker, who performs quality work, is friendly, effective and efficient. Depending on the available resources and

conditions, they seek to maximize healthcare results.

- A functional system of healthcare financing provides financial support for healthcare facilities.

The care provided by healthcare facilities should reflect current knowledge in many areas – scientific, clinical, technical, human, cognitive and organizational foundations of healthcare management.

We can assume that healthcare facilities such as hospitals are here to help and treat patients, and at the same time to provide a work environment for healthcare professionals. Never, in the history of medicine, has there been a greater potential to help patients than today. This potential results from the recent dramatic increase in the scope of effective therapies and life-prolonging treatments. Despite this, or perhaps because of this, healthcare systems remain far behind the potential the stems from new technology that often presents as dissatisfied patients, frustrated by the care they receive. Healthcare personnel also express their dissatisfaction: they report being overloaded by the system, which often demands too much from them and needlessly complicates their work. We also observe growing demands for reconstruction of the healthcare system.

Patient safety, which is becoming one of the most common topics of study relative to healthcare 'quality,' remains a priority. According to several expert foreign studies, written since the end of the eighties, approximately 10% of hospital admissions are linked in iatrogenic events. A study made by Institute of Medicine estimates that in the United States, 44 – 98 per thousand hospitalized patients, die each year as a result of medical errors. This rate exceeds that of deaths caused by accidents, AIDS and breast cancer [2].

Similar results were produced by studies carried out within the European Union. The British Ministry of Health estimates that in the UK, there are around 850 per thousand hospitalization iatrogenic events each year [3].

Similar results were obtained in a study carried out by researchers in Spain, France and Denmark. EU citizens evaluate healthcare safety very seriously and according to the *Eurobarometer study* (January 2006), 78% of EU citizens consider healthcare-related errors in their own country to be a serious problem [4].

The study *Crossing the Quality Chasm and New Health System for the 21st Century* stated that healthcare should be safe, effective, efficient, timely, focused on the patient, and equitable [5]. We will now describe the six objectives in more details [6]:

- *Safety*: the care provided to the patients in healthcare facilities should be as safe as that provided in their homes.
- *Effectiveness*: scientific knowledge about healthcare should be used, and it should serve as a standard for providing healthcare.
- *Efficiency*: care and services should be effective and waste should be eliminated from the system.
- *Timeliness*: patients should not experience prolonged or excessive waiting periods or delays when receiving healthcare.
- *Focus on the patient*: the healthcare system should focus on and respect the needs of the patient.
- *Equity*: unequal treatment of patients has no place in modern healthcare; areas where discrimination and prejudice can enter the system need to be identified and systematically. There are two basic types of formal recognition, which confirms that a healthcare facility is capable of providing quality healthcare and that it has a functional and effective system for performance evaluations and continuous quality improvement.

The aim of the *accreditation* process is primarily to standardize healthcare facilities and the healthcare services they provide. The accreditation should also encourage implementation of new elements of quality management. As a voluntary process, it begins with filing an application with the relevant accreditation body. Next there is a pre – accreditation, followed by an accreditation inspection of the institution. If the healthcare facility meets all requirements, it is granted a certificate that is valid for three to five years depending on the type of accreditation. Accreditation standards used in Czech Republic are followed:

- *Joint Commission on Accreditation of Health Care Organization/The Joint Commission International Accreditation (JCAHO/JCIA)*
The underlying philosophy is based on the principles of quality management. These standards have both mandatory and optional parts, which must be respected by the healthcare facility. The process of accreditation by JCAHO/JCIA can, of course, be adapted to legislative, religious and cultural conditions within a country. The actual accreditation is then conducted by an international accreditation commission, which grants the healthcare facility a certificate, valid for three years [7].
- *Accreditation by the Spojená akreditační komise (Joint Accreditation Commission – JAI)*
For the JAI, a procedure similar to the JCAHO/JCIA accreditation is used. The

healthcare facility must comply with the requirements of the accreditation standards, which are available on the SAK website. After the accreditation is finished, the healthcare facility is granted a certificate valid for three years [8].

- *Accreditation by the Český institut pro akreditaci (Czech Accreditation Institute – CAI)*. This institute provides its services to both state and private facilities, in accordance with the legislation. In accordance with the requirements of international standards, the CAI provides accreditation for testing and medical laboratories and calibration laboratories [9].
- *Accreditation by the Národní autorizační středisko pro klinické laboratoře (National Accreditation Center for Clinical Laboratories – NACCL)*. This organization grants accreditation to medical laboratories in the Czech Republic. NACCL cooperates mainly with health insurance companies and CAI. The main objective is to harmonize the requirements of the individual laboratory specialization [10].

The second formal recognition – *certification* – is a procedure by which the certification authority (institution) gives written assurance that a product, process or service is in conformity with specified requirements. These requirements are determined by a normative or other professional regulation. The process of certification is similar to the accreditation inspection. The facility which successfully completes the certification, receives a certificate which is usually valid for three years, depending on the certifying authority. During this time, a compliance audit is conducted every six months, in order to verify compliance with the conditions specified by the certification. The best known and most widely used certification is the ISO 9001:2008 – *Quality management systems* [11]. The standard requires that healthcare and other facilities state their areas of expertise, comply with their stated policies, document their compliance, maintain a system for steady improvement of policies. Certifications of this type apply to various healthcare fields and are especially useful for smaller healthcare facilities, medical laboratories and technical facilities.

MATERIALS AND METHODS

The aim of a quantitative investigation is the completion of a survey across selected hospitals in the Czech Republic, and to check the status of the implementation of healthcare quality and safety management in hospitals in the Czech Republic. The investigation was held from September 2011 to February 2012 and the chosen healthcare facilities

were selected from a group of healthcare facilities that were preparing for implementation of a quality management system or which have already implemented such a system. The criterion for selection of respondents was involvement in the *Tracking falls among hospitalized patients* project. A total of 38 hospital facilities in the Czech Republic were addressed and received questionnaires. In the questionnaire survey, several types of questions were used: [a] dichotomous – closed (yes – no), [b] closed selective questions, [c] semi-closed enumerative questions (multiple choice), [d] questions asking about dates and [e] scale questions. The questionnaire contained a total of 31 questions, which were focused mainly on the area of (the quality management system) implementation. A total of 34 completed questionnaires were returned. Thirty-two women and 2 men responded. The average age of the respondents was 49 years. Statistical analysis was done on the basis of the evaluation of the questionnaires.

RESULTS

The survey clearly shows that 77.78% of the surveyed healthcare facilities have implemented a long-term strategy for the implementation or maintenance of a management system and healthcare quality assurance. The remainder of the addressed facilities is either preparing such a strategy or has yet to plan such a strategy.

To the question regarding preparation of the individual healthcare facility for implementation of the quality management system, 72.73% of the organizations responded, that such a system is in preparation. Almost three quarters (72.22%) have prepared their quality management system according to the Joint Accreditation Commission; coming second, with 30.56%, were the quality management system prepared according to ISO 9001:2008 (or 9001:2000). The rest of the answers refer to international quality management systems JCAHO, TQM, EFQM. Most hospital healthcare facilities (30%) decided to implement the healthcare quality and safety management system in 2005; answers reflecting actions taken in "nineties" are not included in the evaluation due to data inaccuracies and the number of extreme values. The decision to implement a (the quality management system) was made by competent people in the following order – deputy director for quality (88.89%), manager of quality (79.17%), hospital director (73.53%), deputy director for nursing care/other (70%). In 40.43% of cases the decision was made by the deputy director for medical care. It was also found, that 83.33% of responding facilities (or their parts) possess their own certificate (they already have a certificate; they own a certificate of

implementation...) of implementation of the quality management system. From the surveyed facilities, the first certificates were received in 2007 (31.03%) or in 2008 (20.68%). A total of 94.12% of the addressed healthcare facilities have an authorized person responsible for quality management. In most cases it was a quality manager (69.44%). A quality manager position was found in (33.33%) of hospitals with (the quality management system) in operation for over five years; in most situations the position was subordinate to the director of the hospital (75%).

The survey also focused on finding the person coordinating the implementation of the quality management systems in a given healthcare facility. Most often, it was the deputy director for quality (81.82%), the quality manager, or other, unspecified worker (80%). Other responsible persons included the deputy for nursing care (71.88%) or the hospital director (56.67%).

The respondents saw the most common deficiency in the process of implementing of the quality management system in habitual "vertical" hierarchies and "rigid" structures (72.22%). Other deficiencies included lack of coordination among individual organizational units, errors in the economic sphere or fear of possible loss of decision-making potential, prestige, or other, unspecified issues. The addressed hospitals also identified positive aspects of implementation and maintenance of healthcare quality management. These included [a] management with clearly determined targets (90%), [b] regular comparisons and evaluations of indicators (74.29%), [c] a plan for continuous improvement and education (61.11%), [d] permanent access to information (60%), and [e] responsibility to public and society (55.56%). The weaknesses of the implementation of the quality management system include areas such as economic pressure (39.39%), lack of motivation (29.41%) and other unspecified issues (50%). Changes the addressed facilities would like to achieve include increased attention to the needs of the patients (73.53%), greater involvement of physicians (66.67%) and the lack of workers with their own ideas (44.12%). Other areas of change included: implementation of the team-method of cooperation in the institution and a desire to have a greater input on compliance with recommended practices and standards. The healthcare facilities have achieved, at least partially, the implementation of the team-method of cooperation in institutions (48.49%), hospital managers usually have a clear vision (48.39%) and managed to comply with the recommended practices and standards (50%). Since the implementation of the quality management system, hospitals expect increased satisfaction among patients (88.24%), increased employee

satisfaction (52.94%) and increased compliance with the recommended standards and practices (78.19%). Another positive impact stemming from the implementation of the quality management system was an expectation of an improved working environment, reduce fluctuation in number of health workers and an improved economic situation (i.e., cost savings). The research was also focused on monitoring quality indicators. The employees of hospitals pay particular attention to falls among hospitalized patients and nosocomial infections (100%). Other monitored quality indicators included patient satisfaction, numbers/rates of generally undesirable events, prevalence of decubitus examinations, employee satisfaction (another item), medication complications, incidental decubitus examination (i.e., every day), and others. From this list, in a nationwide comparison, patient falls are monitored in 97.22% of all facilities. Regarding the question of whether the facilities internally disclose the monitored indicators, the answer was 'yes' in 97.22% cases. Such information is usually published on the hospital's information system (80.56%) and in meetings of senior consultants and head nurses (80.56%).

Implementation of the current quality control was implemented in hospitals with the help of consultants (55.56%); the remaining percentage received help from firms that specialize in implementation of a quality management system, or completed the implementation without any external cooperation. Of the hospitals, which are ready to implement healthcare quality management, 64.29% plan to use a consultant, 53.85% plan to use an external consultant and 47.37% plan to complete the process without external assistance. A total of 100% of the respondents answered that they are personally involved in the implementation (of the quality management system) in their healthcare facility; specific involvement is presented in the following list:

- Participated in preparation of processes and standards (88.24 %).
- Participated in local audits, which surveyed compliance with standards (80.56 %).
- Coordinated prepared processes (Coordinated the process of implementation) (69.44 %).
- Carried out professional and educational events in the quality (in the field of quality management system) field (54.55 %).
- Communicated with consultants from external firms in the field of implementation of quality processes (54.55 %).
- Administrator of documentation (this includes comprehensive maintenance of hospital documentation; publishing and revising the hospital documentation) (43.75 %).

In all cases, the questionnaire participants were in regular contact with hospital employees (i.e. doctors, non-doctors, and administrative workers). According to the addressed employees, the most difficult problem during implementation of the quality management system was employee motivation (51.52 %), administrative load (50 %) and employee communication (45.45 %). There were also other problems such as cooperation with medical personnel and other unspecified issues. According to their personal experiences, the most difficult problem for employees, during implementation and maintenance of the quality management system, was also the administrative load (64.71 %) and employee motivation (57.58 %). Among others, there were also issues like complying with standard processes, interpersonal communication and realization of internal audits.

DISCUSSION

The survey shows that the majority (77.77%) of surveyed hospitals have implemented a long-term strategy for implementation or maintenance of a management and quality assurance system. Most of the facilities use the system of quality management in healthcare according to the Joint Accreditation Commission, as evidenced by the current number of accredited medical facilities by this system: 52 Czech healthcare facilities (as of December 31, 2011). In most cases, the implementation of a quality management system was initiated in 2005. The implementation of a quality management was mandated by a deputy director for quality, quality manager, hospital director, deputy director for nursing care, deputy director for medical care, or some representative of top management. Most of the healthcare facilities hold a certificate of implementation of a quality system in at least some parts of the facility. The first such document was obtained in 2007 – that is, within two years after a strategic decision on implementation of some quality management system. In the vast majority of cases, healthcare facilities appointed a person who was responsible for the implementation of quality management, and their job description also includes competencies to act as deputies for hospital quality. The position of a quality manager (deputy for hospital quality) was a position that had been existence, in the surveyed facilities, for more than five years. This worker is usually subordinate to the hospital director, which is proper (suitable, appropriate). This creates a neutral space where the deputy for quality can equally affect other representatives of the hospital management, as well as medical and other employees. Among the coordinators of a quality system, the workers are nominated in the following order: deputy director for quality, quality manager or another professional

worker, deputy director for the nursing care, hospital director, and deputy director for the medical care (Among the coordinators of quality system are in the following order: deputy director for quality, quality manager or another professional worker, deputy director for the nursing care, hospital director, and deputy director for the medical care. The biggest deficiencies in the implementation of the quality management system included the traditional “vertical” hierarchy and “stiff” organizational structures.

Lack of coordination by various organizational units, and weaknesses in the operational and economic areas of the hospital are also weak points. The healthcare facility representatives see the advantages (Fig.1) of implementation (or maintenance) of the quality management system, especially in the management of a facility with clearly determined targets, regular comparison and evaluation of indicators, plan of continuous improvement and education, permanent

access to information, responsible to public and society, and access to information about the performance and economy of individual clinics/departments.

The disadvantages (Fig. 2) include economic pressure, insufficient motivation, inadequate staffing and insufficient professional level of the personnel. The surveyed workplaces would like to make changes in areas of care for the needs of patients, greater involvement of physicians, increasing the number of employees with a clear vision of strategy for implementation of quality management system.

Hospitals expect that the implementation of a healthcare quality and safety system to improve both patient and employee satisfaction, and improve the compliance with recommended practices and standards.

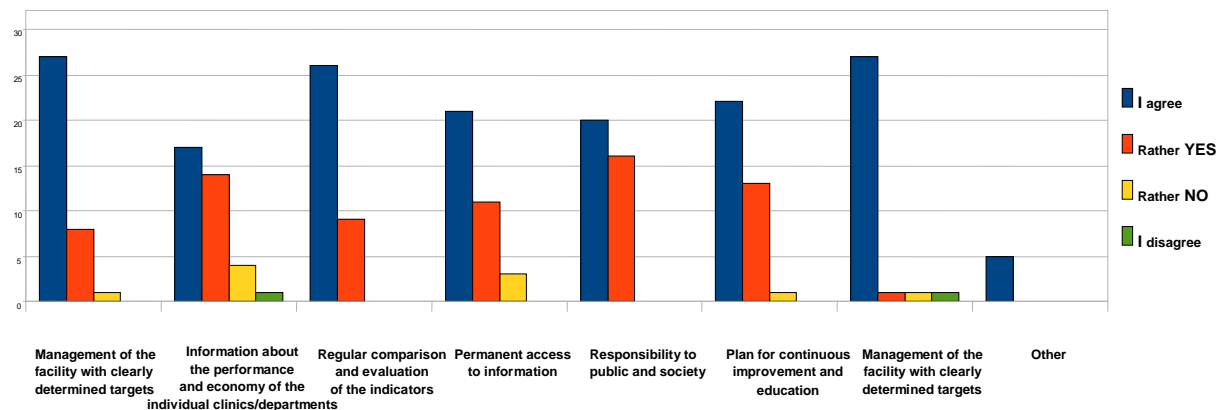


Figure 1. The most frequent advantages associated with implementation (or maintenance) of the quality management system.

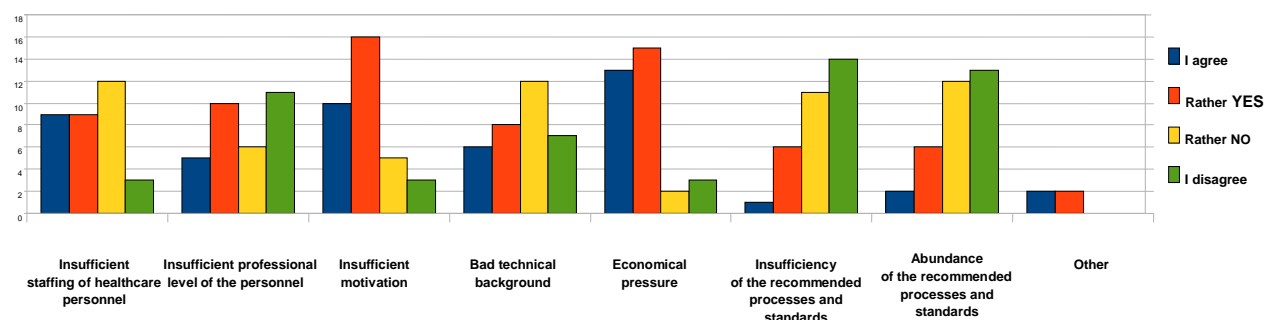


Figure 2. The most frequent disadvantages associated with implementation (or maintenance) of the quality management system.

Regardless of the implementation of any of the quality systems, the surveyed healthcare facilities monitor quality indicators; especially the nursing indicator of *patient's falls and nosocomial infections*; in the nationwide comparison, only patient falls were nationwide comparison, only patient falls were evaluated.

The monitored indicators are usually published in hospital information systems and also at meetings of senior consultants and head nurses. The quality system was implemented in most hospitals with the help of a consultant. In those cases where the healthcare facilities are preparing to take this step, they will realize it on their own, in some cases with the help of a consultant or an external company specialized in quality system implementation. All the surveyed experts participated in monitoring quality by coordinating the prepared process – they participate in internal audits, which monitor the compliance with the standards, they work on administration of documentation (this includes comprehensive maintenance of hospital documentation; publishing and revising the hospital documentation), participate on preparation of procedures and standards, organize professional and educational events in the area of quality, conduct control audits and communicate with consultants from external companies in the area of implementation of quality processes. These persons are usually in contact with hospital personnel from different areas.

According to the personal experience of the respondents, the most problematic issue for employees, during implementation and maintenance of quality, was employee motivation and administrative load.

The study has, of course, its several limitations – the one of them is the number of the participating healthcare facilities in the Czech Republic (34 from 197: 17% – 2011); the study could also e. g. check the experience of hospital employees with quality management systems. As well, it is important to notice that the Ministry of the Health of the Czech Republic intends to fully link the healthcare provided to the payment system of healthcare payers in 2015.

CONCLUSION

Hospital healthcare facilities are often evaluated with an eye towards economic performance (profitability) and avoidance of long-term loss. We conclude that patient does not make its decision according to the quality of the healthcare facility. Even though, the information of quality of the healthcare facility is available on web portals of every facility. Implementation of a quality management system is a long process, whose professional mastering creates the basic

attributes of healthcare facilities. The procedures associated with obtaining accreditation or certification require deep and essential interventions into the structure, operation, financing and management of healthcare organizations. For these reasons, preparation for accreditation or certification is pointless without support from higher hospital management. The preparation for accreditation would lead to a waste of the entrusted institutional resources. Managements of individual healthcare organizations should enforce the transformation processes in the area of quality. But it is necessary to consider, to what extent we are willing (able) to accept the increased requirements. The effort to achieve national and international quality standards in the future is an unquestionable process. Of course, the effort to achieve national and international quality standards depends on the attitude and the ability to adapt ourselves and the surrounding environment to the changes in public health.

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Conflicts of interest

I declare that i have no conflicts of interest.

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