THESIS

THE IMPACT OF HEALTH SECTOR ACCREDITATION: A LITERATURE REVIEW

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Abstract

Background: The necessity for an empirically grounded, comprehensive evidence base for accreditation has long been recognized. Without this, the varying positive and negative views about accreditation will remain anecdotal, influenced by ideology or preferences, and driven by such biases.

Purpose: The purpose of this thesis is to identify and analyze research into accreditation processes impact and to find out if there is difference between accredited and nonaccredited health units.

Data sources: A review of the accreditation literature was conducted from May to July 2018. The search identified articles researching accreditation of health sector. An analysis of abstracts of the articles was conducted to identify substantial studies relevant to health services accreditation. The full text of these studies was retrieved and reviewed. Inclusion criteria included studies addressing the impact of hospital accreditation using systematic reviews, randomized controlled trials, observational studies with a control group, or interrupted time series.

Results: The analysis reveals a complex picture. The results, examining the impact of accreditation, were classified into 2 categories following a chronological order: Proponents – Positive Impact and Opponents – Neutral or Negative Impact. The search identified a number of national health care accreditation organizations engaged in research activities. Accreditation continues to grow internationally but due to scant evidence, no conclusions could be reached to support its effectiveness. Concerns are raised about the cost of accreditation programs by health care professionals especially in developing countries.

Conclusion: The health care accreditation industry appears to be purposefully moving towards constructing the evidence to ground our understanding of accreditation, by analyzing both traditional and newly developed measures and measurement systems.

Keywords: accreditation, health care, literature review, quality and safety

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Introduction

Accreditation is constructed around norms or standards related to the inputs, processes and outputs with which organizations must comply in order to receive accreditation and the level of attainment for each target in accreditation manuals is measured by the organization's performance (Smits et al., 2008). The accreditation of healthcare organizations is an integral part of the healthcare quality system in more than 70 countries (including national accreditation systems) spreading beyond North America to Europe and many developing countries and currently, approximately 61 accrediting organizations are estimated to exist globally (Saut et al., 2017).

While it is fair to say that involvement in accreditation is variable, in many parts of the world it now is an accepted and important element in quality improvement activities. Nevertheless, research into the effectiveness of these programs is still at an embryonic stage and evidence base for accreditation is thought to be incomplete.

Jaafaripooyan et al. (2011) pointed out that critical outcomes (Gauld, 2005) and information asymmetry between providers and consumers in healthcare (Montagu, 2003) have added to the sensitivity and importance of these programs in this area of the public sector. Flodgren et al. (2011) raised questions about the effects of such processes and their value for money.

In the accreditation literature, there have been many calls for research into accreditation. In their extensive review of health sector accreditation research, Greenfield and Braithwaite (2008) have largely focused on the aspect of accreditation's performance. The results, examining the impact or effectiveness of accreditation, were classified into 10 categories. Only in two categories were consistent findings recorded: promote change and professional development.

Accordingly, this thesis seeks to provide a valuable insight in the impact of accreditation by classifying the results into 2 categories by a chronological order. The thesis is structured in the following fashion. The first section provides a background on the related literature concerning an overview of healthcare accreditation. The second section is devoted to present evidence, regarding the impact of accreditation programs on healthcare organizations. The conclusions are presented in the last part, followed by discussion of the results.

Materials and Methods

The search, using a multi-method strategy, was conducted between June and July 2018. It was a systematic qualitative review of the literature of the impact or effectiveness of accreditation programs in health sector. A search for published articles that assessed the effects of accreditation and/or certification of hospitals was conducted. During the search, where available, citations, abstracts and complete references were downloaded. Inclusion criteria included studies addressing the effect of hospital accreditation and certification using systematic reviews, randomized controlled trials, observational studies with a control group, or interrupted time series. Several keywords in different combinations including 'accreditation', 'health services, 'quality', 'quality indicators', 'quality of health care' and 'impact' were utilized. An analysis of abstracts of the citations was conducted to identify substantial studies relevant to the accreditation of health services. The bibliographies of all selected articles and relevant review articles were scrutinized to identify additional studies. I included empirical work that systematically examined accreditation or the accreditation process. The studies selected centered on how accreditation works, what it does, the results achieved and accreditation surveyors and their processes. Keywords produced a large number and wide range of references; the majority of which were not relevant to the task. Within the results obtained, a further narrowing was undertaken. An analysis of abstracts of these references was conducted. The full text of these studies was retrieved and reviewed for their research design and internal validity. The impact of accreditation programs has been researched with a variety of degrees and the documents were categorized under 2 topics, following a chronological order: Proponents – Positive Impact of Accreditation Process in Health Sector and Opponents – Neutral or Negative Impact of Accreditation Process in Health Sector.

SECTION ONE
BACKGROUND

1.1 Definition

Accreditation of a health care organization is an external evaluation of the level of compliance against a set of organizational standards; the external evaluation is carried out by a team of surveyors who are practicing senior health care professionals and who report their findings to the accrediting organization (Bohigas et al., 1998). Shaw (2006) defined accreditation as "a public recognition by a national healthcare accreditation body of the achievement of accreditation standards by a healthcare organization, demonstrated through an independent external peer assessment of that organization's level of performance in relation to the standards". Accreditation is constructed around norms or standards related to the inputs, processes and outputs with which organizations must comply in order to receive accreditation and the level of attainment for each target in accreditation manuals is measured by the organization's performance (Smits et al., 2008). It encompasses elements of self-assessment, field survey, reporting and subsequent follow-up (Hayes et al., 1995). Arce (1998) pointed out that accreditation is an important strategy for quality assessment and improvement in health care. Originally, the primary goal of healthcare organization accreditation was to improve the performance of health systems through the standardization of practices and quality improvement (Robert et al., 1987). It then also became a locus for social change (Pomey et al., 2004). Accreditation involves the certification of a program, service, organization, institution or agency by an authorized external body using process to assess performance in relation to established standards in order to support continuous improvement (Desveaux et al., 2017) and is expected to minimize variations in medical practice, eliminate medically inappropriate care, and control costs (Shin, 1995; Viswanathan & Salmon, 2000). By subjecting health care organizations to a formal process that makes them meet predetermined standards, accreditation is also presumed to address the possibility that

quality is underprovided (Akerlof, 1970). Accreditation can be conducted by statutory or voluntary bodies that offer organizational development through external assessment of health services by means of published standards (Ng et al., 2013). External assessment determines whether a health care organization complies with international standards and can provide quality assurance (WHO, 2003). Accreditation is usually performed by a multidisciplinary team of health professionals and the assessments often include self-appraisal, on-site surveys, peer review interviews, review of documentation, checking of equipment, and the appraisal of key clinical and organizational data (Braithwaite, 2010). Accreditation is a procedure that is being used with increasing frequency around the world. The accreditation of healthcare organizations is an integral part of the healthcare quality system in more than 70 countries (including national accreditation systems) spreading beyond North America to Europe and many developing countries and currently, approximately 61 accrediting organizations are estimated to exist globally (Saut et al., 2017).

1.2 A Brief History

In the early 19th century, American medicine was disorganized and of poor quality, with the control of medical education in the hands of proprietary and for-profit institutions (Luce et al. 1994). Several organizations and individuals undertook to correct this. Founded in part for this reason in 1847 as a confederation of state and local societies, the American Medical Association (AMA), encouraged Abraham Flexner in research that by 1910 led to his Report to the Carnegie Foundation, which documented the deplorable state of the nation's medical schools and major hospitals (Luce et al. 1994). Accreditation of hospitals historically owes its genesis to Dr Ernest Codman. In the same year Ernest Codman of Boston's Massachusetts General Hospital first noted the need to improve hospital conditions and to track patients to verify that their care had been effective and proposed a mechanism to track patients being treated for tuberculosis at a sanitarium in England in 1910 (Roberts et at., 1987; Luce et al. 1994). This led to creation of the American College of Surgeons (ACS) in 1913.

Although few followed Codman's lead, his efforts contributed to the American College of Surgeons, establishing its Hospital Standardization Program in 1917(Roberts et al., 1987). In 1918, the ACS began conducting onsite hospital inspections to determine facility-level compliance with the ACS internally developed documents – “Minimum Standards for Hospitals” (Chatterjee, 2017) The first five standards focused almost entirely on care within hospitals, they called for the following: Organizing hospital medical staffs; Limiting staff membership to well-educated, competent, and licensed physicians and surgeons; Framing rules and regulations to ensure regular staff meetings and clinical review; Keeping medical records that included the history, physical examination, and laboratory results; and Establishing supervised diagnostic and treatment facilities such as clinical laboratories and radiology departments (Luce et al. 1994).

With the adoption of the minimum standards, representatives of the American College of Surgeons began surveying health care organizations to determine their acceptability for accreditation. Additional standards addressing physical plant issues, equipment, and administrative structure led to a broadening of the survey teams (Roberts et at., 1987). By 1952 the American College of Physicians, the American

Hospital Association, the AMA, and the Canadian Medical Association had joined the American College of Surgeons (Roberts et at., 1987). Such activities presaged the formation of the Joint Commission on Accreditation of Hospitals (JCAH) 33 years later (Schmaltz et al., 2011). Although the Joint Commission initially followed the minimum standards, in 1966 it abandoned this approach in favor of so-called optimal achievable standards (Roberts et at., 1987). This change occurred primarily for three reasons: Most American hospitals were already meeting the minimum standards, Medicare set more rigorous guidelines, creating an obligation to respond; and The techniques used to assess and d improve quality had grown more and more sophisticated.

The organization subsequently changed its name to the JCAHO in 1987–1988 and established the Joint Commission International (JCI) in 1994 to reflect an expanded scope of activities (Chatterjee, 2017).The resulting hospital standardization program of the American College of Surgeons was the forerunner in the United States of both the national Joint Commission on Accreditation of Healthcare Organizations and the federal and state regulatory framework now in place for all types of health care organizations (Roberts et at., 1987). The program was then extended to Canada and Australia in the 1960s and 1970s, to Europe in 1980, and finally to the entire world in 1990 (Teymourzadeh et al., 2015).

1.3 The Life Cycle of Accreditation.

The accreditation life cycle defines the complex stages and dynamics of accreditation as a quality intervention. Joint Commission International (JCI) has published an accreditation preparation strategy that suggests most hospitals will pass through various phases during the process of accreditation (Joint Commission International, 2010).

- The initiation phase

This involves laying the foundation for achieving compliance with the JCI quality standards. There are two subphases: adoption and revitalization (figure 1). The adoption subphase is characterized by the implementation of new standards. JCI recommends developing an internal structure, composed of teams and leaders, to facilitate coordination of all the activities needed to prepare for accreditation (Joint Commission International, 2010). A steering committee of team leaders coordinates the preparation. As JCI requires a number of mandatory policies and procedures, a document review is initiated. The revitalization subphase is characterized by further improvement in compliance stimulated by a gap analysis. JCI recommends that a Baseline Assessment/Gap analysis is carried out in order to compare current processes and compliance with the expectations of the standards (Joint Commission International, 2010). This identifies the actions necessary to eliminate the gaps between an organization's current performance and that necessary to achieve accreditation. Additionally the collection and analysis of baseline quality data are initiated and compared with the requirements of the quality monitoring standards (Joint Commission International, 2010). The process includes: (1) analyzing compliance with the JCI standards; (2) developing an action plan to address deficiencies; (3) implementation of new processes and data collection targeting compliance to standards; (4) conducting an organization-wide training program and (5) allocation of required resources.

- The presurvey phase

The presurvey phase occurs within 3–6 months of the accreditation survey. It follows a mock survey, recommended by JCI, where the findings lead to a review of existing gaps and the staff work on closing these within the short time frame (Joint Commission International, 2010). A marked improvement (ramp up) in compliance is

expected to occur during the presurvey phase because the staff is aware of the proximity of the survey and because the organization invests resources in preparation. Furthermore, JCI accreditation requires submission of a 4-month record of compliance measures prior to the accreditation survey, thus providing a further stimulus to improvement. It is hypothesized, therefore, that the peak level of compliance performance will occur during this phase.

- The postaccreditation slump

The quality performance of most hospitals tends to fall back towards preaccreditation levels immediately on receiving accredited status. The staff no longer feels the pressure to perform optimally and may focus on activities that were neglected or shelved during the presurvey phase. This phase may be prolonged if there is a lack of leadership, no incentive to improve, competing demands, organizational changes or lack of continuous monitoring of performance. The loss of the quality manager, who is responsible for maintaining quality by measures such as periodic self-audit and continuous education, is potentially serious. If the goal was survey compliance rather than quality improvement, standards may not be embedded in practice and performance will not be sustained.

- The stagnation/maturation phase

This phase follows the postaccreditation slump and occurs a few months after the accreditation survey. Since the hospital is in compliance with the JCI standards, as validated by the survey, there are no new initiatives to drive further improvements, which are predicted to lead to stagnation in compliance performance. If there is no ongoing performance management system, a decline may set in which may last until the next initiation phase in preparation for reaccreditation. Generally, the accreditation process includes a periodic (snapshot), as opposed to continuous assessment, which leads to a more reactive rather than forward-looking focus and can be a factor in persistent quality deficiencies (Lewis, 2007).

1.4 Market Incentives and Health Professionals Motivations

Incentives for accreditation could include legal requirements, for marketing and publicity, becoming consistent with government policy, and for voluntary organizational development (Fortes et al., 2011). Several factors have driven the healthcare sector to implement programs for improving the quality of healthcare services. These factors include healthcare costs, number of adverse events, complexity of new technologies, aging population, and rapid dissemination of transmissible diseases across the globe (Saut et al., 2017). Ng et al. (2013) indentified in their study that the incentives for participation in accreditation may vary among public and private hospitals:

- Public Hospitals: accreditation may help to provide evaluation data for performance assessment, which could inform policy planning decisions and improve facilities and they may also address the public's calls for health care professionals to guarantee quality of care by using more effective strategies to monitor and evaluate performances. In the
- Private Hospitals: the acquisition of accreditation may enhance public image and market advantages. Moreover, market-driven force could be exploited as the major incentive for private hospitals to participate in accreditation programmes.

Sustainable accreditation organizations (AOs) have adapted their programmes, products and services to prevailing incentives and the markets that they generate. Broadly, these fall into four categories (Shaw et al., 2013):

- Ethical: the original drivers of accreditation, quality improvement and organizational development remain the leading reasons cited for accreditation and specifically the voluntary participation approach. These may be linked to professional development, the recognition of clinical training and public esteem.
- Commercial: access to public funding, health insurance benefits and advantage in a competitive market.
- Regulatory: nearly all the long-established AOs now offer a degree of regulation by proxy, for example as third party assessor of compliance with regulation on behalf of national, state or provincial government, or by reducing the burden of inspection by statutory authorities.

- International: medical tourism generates a market for accreditation (and for ISO certification) of health-care providers across borders; new national and regional accreditation programmes may buy technical assistance from established organizations, often funded by international and bilateral donors.

Motivated staff is needed to improve quality and safety in healthcare organizations. Stimulating and engaging staff to participate in accreditation processes is a considerable challenge. Greenfield et al. (2010) pointed out that whether health professionals' support or criticism of accreditation holds sway, their motivation to be involved is a critical issue by exploring the experiences of health executives, managers and frontline clinicians who participated in organizational accreditation processes. Greenfield et al. (2010) identified three categories of staff perceptions of engagement with accreditation (Figure 1.), each with sub-themes: accreditation response (reactions to accreditation and the value of surveys); survey issues (participation in the survey, learning through interactions and constraints) and documentation issues (self-assessment report, survey report and recommendations).

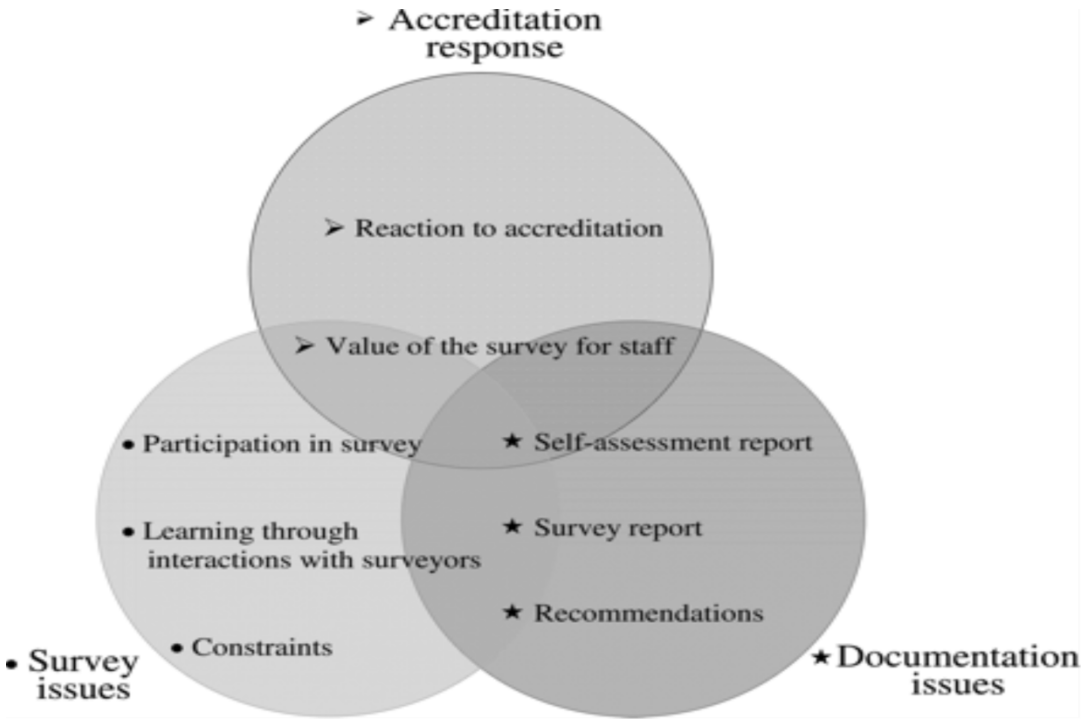

Figure 1. A model of staff perceptions of engagement with accreditation.

[Source: Greenfield et al. (2010)]

The category labeled '*accreditation response'* encapsulates concerns that relate to the accreditation programme overall and has two sub-themes: reaction to accreditation and the value of the survey for staff. The category of '*survey issues'* encompassed three sub-themes: participation in the survey; learning through interactions with surveyors and constraints. The survey visit encompasses the organizational presentation to the survey team, informal discussions, formal interviews and summation conference. The third category centers on *documentation issues*. Within this category there are three themes: self-assessment report; survey report and recommendations. Of these, the self-assessment report is the documentation produced by the organization, while the latter two are produced by the survey team. Recommendations' stood out as a clear sub-theme within the issue of documentation and, while related, is a separate issue to that of the survey report.

Greenfield et al. (2010) indicated that the motivations that impel staff to participate in their organizational accreditation activities and benefits that accrued to them are positively self-reinforcing. A model representing a positive self-reinforcing collaborative quality and safety culture is derived from the findings and presented in Figure 2.

Figure 2. An empirically derived model of a positive self-reinforcing collaborative quality and safety culture. [Source: Greenfield et al. (2010)]

Greenfield et al. (2010) concluded that participation in the accreditation process promoted a quality and safety culture that crossed organizational boundaries. Health

professionals can be motivated to engage positively in their organizations' accreditation activities when given the opportunity in a collaborative, supportive context. In doing so, their contribution can become a self-reinforcing loop whereby collectively they can support, validate and contribute to each others' learning and their organizations' accreditation outcomes(Greenfield et al., 2010)

1.5 Taxonomy of Accreditation

Hospital accreditation is commonly conducted against guidelines in detailed manuals (Woodhead, 2012). Smits et al. (2008) reviewed the manuals from three major international accreditors, relying on a Parsonian description of action and its application to the concept of performance, as it applies to the specific case of healthcare organizations (Sicotte et al., 1998). The model (Figure 3) synthesizes the common core elements addressed in the healthcare organization performance literature. It is based on the idea of achieving equilibrium among four dimensions of performance:

- Adaptation (A): the organization's capacity to survive and grow in the changing environment
- Goals (G): the results pursued in terms of efficiency, effectiveness, the attainment of outcomes and stakeholder satisfaction
- Integration (I) or Production: the care and services produced by the healthcare organization in terms of volume of care and mechanisms
- Latency (L): or values and culture, the sense-making in the organization and its social environment. Values and culture refer to organizational climate, resolution of staff conflicts, rewarding system and staff motivation.

These four dimensions are related to each other through six inter-linked systems or alignments (Sicotte et al., 1998). This framework orders the diverse standards of accreditation and provides the analytical groundwork for comparison of accreditations and analysis of the conceptualization of performance underlying the recognized accreditations.

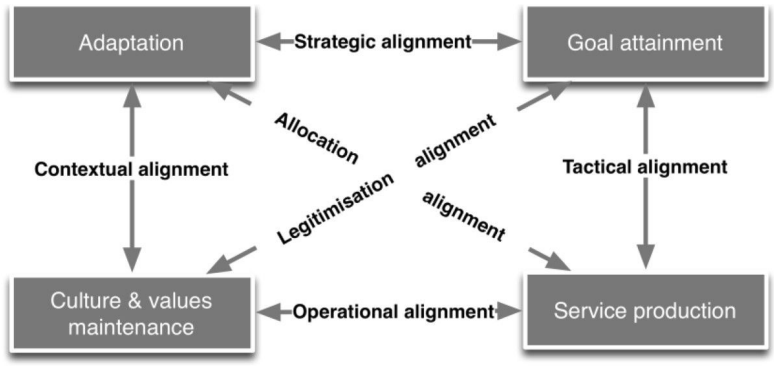

Figure 3. The four functions of the EGIPPS framework of Sicotte et al. (2008). [Source: Sicotte et al. (2008)]

All of the selected accreditations emphasize the production of services, especially quality and coordination of services and adaptation to the environment, reflecting a normative view of the performance of healthcare organizations. Some omit values or goal attainment. The dimensions of performance, when not mentioned directly, are included in relation to other dimensions through the alignments. For example, the attainment of goals is assessed by several means: a standard of accreditation can be specific to the dimension of goals - 'human resources achieving positive outcomes' (CCHSA, 2001), or it can be linked to the alignment of goals with the other dimensions - 'management of human resources supports the delivery of quality, safe care, and services/ human resources planning supports the organization's current and future ability to provide quality, safe care and services' (ACHS. The EQuIP Guide, 2002).

The Parsonian-based perspective of performance presents four dimensions that healthcare organizations have to fulfill in order to achieve high performance levels. Therefore, theoretically an accreditation built around all four dimensions produces the highest level of performance.

Smits et al. (2008) proposed Taxonomy of the standards of accreditation manuals to compare them with respect to their conceptualization of performance, choosing to classify the various manuals using two axes reflecting the importance they give to both the individual dimensions and to the alignments between dimensions. The results given earlier showed that quality is the only dimension present in every accreditation manual. Moreover, accreditations vary in how much emphasis they place on production, especially its quality and on the alignments between dimensions. Therefore, they decided to organize the taxonomy around these two axes: normative quality-oriented axis and balanced alignment-oriented axis. In Figure 4, one axis represents a quality-oriented accreditation, ranging from normative to non-normative accreditation, and the other represents an alignment-oriented axis ranging from more (+) to less (-) balanced accreditation.

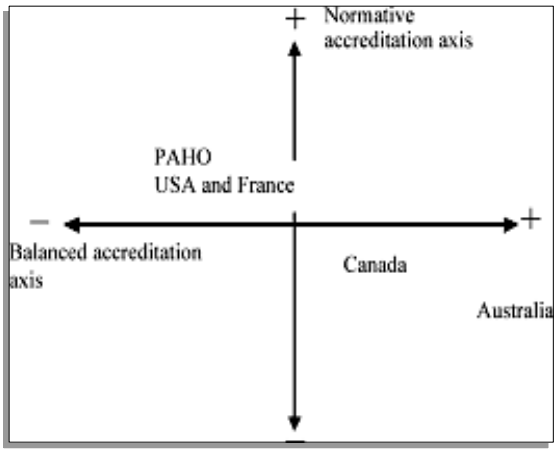

Figure 4. Visual representation of taxonomy of accreditation based on the conceptualization of performance. [Source: Smits et al. (2008)]

A *normative accreditation* is one that places a relatively high emphasis on the dimension of production, especially on the subdimension of quality, compared with the emphasis placed on the other three dimensions. A *balanced accreditation* is one that places great emphasis on alignments. Accreditation manuals composed of many alignments will achieve higher organizational performance. Ideally, accreditation should be balanced and take quality into account. Smits et al. (2008) concluded that the accreditation process took a normative stance since all manuals focus on accrediting from a top down perspective with ideas about what particular or normal procedures and outcomes indicate high-quality practice (Woodhead, 2012). This comparative analysis of the diversity of performance conceptualizations parallels research into how the conception of management varies across countries (Pindur, 1995).

1.6 Performance in Accreditation Programs

Braithwaite et al. (2008) argue that only a multi-method, multidisciplinary, multi-level research design is capable of providing reliable evidence on the performance and impact of accreditation. Scrivens' approaches of 'experience/perception and objective indicator' could provide a valuable lens to look critically into and make sense of the current trends in studying accreditation programs (Scrivens, 1996).The first approach requires that the perceptions and experiences of various groups, involved in or related to accreditation (e.g. HCOs' professionals and stakeholders) are elicited toward the different aspects and functions of the program. Public sector abounds with those studies adopting this approach; in the healthcare (Hurst, 1996 and Pongpirul et al., 2006) and the education sector (Baker et al., 2006). In these studies, the perceptions of healthcare professionals and accreditation surveyors have been solicited upon the performance of their running accreditation system in terms of accreditation standards, surveyors and implementation processes.

The objective indicator approach, instead, calls for identifying and developing tangible and intangible measures of success (i.e. hospital performance indicators, patient satisfaction, etc.) in connection with accreditation in HCOs. In line with this approach, any change (e.g. in the quality of services) in accredited HCOs is quantitatively investigated and the positive effects are attributed to the effective function and performance of the accreditation programs. This approach subsequently sees the changes as a confirmatory sign of the programs' impact on the organizations. The respective studies include those, for instance, that sift through the relationship between accreditation and clinical indicators (Collopy, 2000; Williams et al. 2002-2004)], patient (Heuer, 2004) or provider satisfaction (Al Tehewy et al., 2009) and the changes triggered by these programs in subject organizations (Pomey et al., 2004; Duckett, 1983).

Both approaches have arguably their own strengths and weaknesses. The perception approach has been criticized for being superficial and judgmental (Scrivens, 1997). Deficiency of the objective approach lies mostly in the difficulty of measuring performance in healthcare, such as long-lasting, multi-factor and probable outcomes (Eddy, 1998 and Abernethy 2006).Ovretveit and Gustafson, 2002 point to the methodological challenges in measuring healthcare outcomes and conceiving causality between accreditation and its possible outcomes. De Walcque et al., (2008)

refer to possible disagreement of the programs' stakeholders on intended outcomes as a real cause of this challenge. As such, Shaw,(2000) has expressed concerns about the difficulty of defining 'endpoints' of an accreditation program and their change based on the expectations of users and observers.

Given these challenges, Jaafaripooyan et al. (2011) provided related 'performance measures' for judging the functionality of accreditation:

- Trained, experienced and healthcare- (hospital) oriented surveyors: The use of specifically tailored training programs for surveyors. Regular examination of surveyors' selection and training processes.
- Appraisal of surveyors' performance: A mechanism for regular appraisal of surveyors' performance.
- Surveyor replacement and turnover rate: This could reduce the risk of surveys turning into an informal and routinized process and introduce fresh eyes to the process (low turnover times might eliminate experience element).
- Presence of HCOs' members (as observers) during surveyors' evaluation: This could both validate the assessment process and justify the results to the members and create more clarification on HCOs' activities to surveyors.
- Ongoing monitoring of HCOs during the intervening time between two accreditation surveys: In light of long intervening times (e.g. three years), monitoring HCOs (via announced and unannounced visits) during this time could keep HCOs loyal to the requirements of (mandatory) accreditation programs and safe for patients.
- Cross-check of the survey report with HCOs before final submission for ranking: This might increase the validity and acceptability of the results to HCOs.
- Access of the HCOs to survey report after evaluation: Apart from confidential aspects, availability of the reports for HCOs after evaluation might show how they can attend to and improve the details of their operations.
- Report turnaround time: Time between the onsite visit and delivery of final survey report and recommendations to the hospitals (e.g. it was claimed by the professionals that the shorter this time the sooner the hospitals could identify and make an effort to rectify the problems).
- Consultatively driven standard development process: A significant input from all stakeholders (e.g. providers of care, consumers and purchasers,

government, insurers and healthcare administrators) specifically into accreditation programs' standard development process.

- Different patterns of evaluation or standards for/in accordance with various hospitals: Identical or different types of standards are applied for evaluating different hospitals. Given the different mission of these hospitals, similar standards might not generate a fair evaluation of their all activities.
- Feasibility of standards: Whether HCOs are able to fulfill the accreditation standards in practice.
- Clarity of standards: The intention, meaning and interpretation of the standards are understandable for all participating groups (i.e. HCOs, surveyors).
- Communication of accreditation standards to HCOs by accreditation programs: HCOs have access to the standards against which their performance is to be assessed.
- Consideration of documenting requirements in accreditation standards: The programs insist on the documentation of the services (i.e. encouraging evidence-based assessment).
- The scope of the standards: The coverage of all type of activities and services of HCOs by accreditation standards, including hotel-type services and administrative and financial activities.
- Inclusion of 'outcome-related' metrics in accreditation standards: Given the argument that assuming a linear relationship between processes and outcomes in healthcare is thought to be challenging, attention to outcome-related indicators seems necessary, in addition to processes and structures.
- Consideration of structure and process standards by accreditation programs in developing countries: Unlike developed countries with well-organized structures and processes, developing countries should still focus more on their structures and processes, along with outcome indicators.
- Inclusion of 'core clinical activities' of HCOs in accreditation standards: The majority and core of the services rendered in HCOs are clinical, which are argued to be more influential in care delivery processes.
- Regular review and update of accreditation standards: A regular review and update system set up specifically for the standards. The frequency of reviewing and updating process in a specific period.

- Participation (attraction) of HCOs' staff (especially clinical people) in accreditation processes: This could increase the credibility of the accreditation programs' requirements and facilitate their operationalization in HCOs. This might be undertaken in the self-evaluation stage of HCOs (i.e. preparation for the accreditation).
- A sound and reliable scoring system: An evidence-based rather than judgmental system for allocation of the scores to the related activities (more reliance on evidence for scoring).
- The use of a self-evaluation system by accreditation programs to ensure their continued relevance to current practice of HCOs: Accreditation of HCOs based on newly emerged methods and development of standards for new services afoot in HCOs.

Surveyors and standards are two main elements of any accreditation scheme (Scrivens, 1995). Surveyors are envisioned as the 'eyes, ears and hands' of any accrediting organization, without which the accreditation process is argued to be unsustainable (Perneger et al., 2004). Therefore, as such, a detailed training program for new surveyors along with setting surveyor selection criteria are claimed to enhance the reliability of accreditation (Greenfield, 2009). As Pickering, 1995 indicates, the training is essential in guiding the surveyors to detect the gaming in the hospitals.

Standards are similarly a key element for accreditation, against which HCOs' performance is assessed. The choice of standards, their focus and the level at which they are set are crucial in determining the tone, acceptability and nature of the accreditation programs (Scrivens, 1997). Therefore, it is important that the standards are concomitantly reviewed and kept aligned with advances in healthcare and relevant to the services or organizations under their evaluation. There are various dimensions that should also be taken into consideration while evaluating accreditation standards. For instance, 'the rate of clarity and feasibility of standards for HCOs' implies that standards should be 'understandable' at first sight by those who perform accreditation (i.e. surveyors) and are accredited (i.e. HCOs).The Accreditation Canada institution believes in optimal, but achievable (within the current state of the art) and surveyable standards within the confines of resource constraints (Greenfield, 2009). Application of a 'consensual process' for developing the accreditation standards was also

recommended by the experts. Incorporation of 'stakeholders' voice' in different stages of accreditation is highly stressed (Schyve, 2009) and is receiving growing attention among accreditation agencies (O'Connor, 2007)

'Outcomes performance measures' are increasingly important in healthcare. Lack of evidence supporting the assumption that appropriately organized inputs could certainly lead to desired outcomes in healthcare has accelerated the movement towards using outcome indicators in evaluating hospitals (Hurst,1997 and Griffith et al., 2002). De Walcque et al. (2008) refer to 'outcome measures' as the determinant of the ultimate impact of an accreditation program. However, given the intangible nature of these indicators, process and structure measures might be preferred (Griffith, 2002). Despite the importance of outcomes, achieving quality outcomes through poor structures and processes might also appear unlikely, as could be the case in developing countries (Shaw, 2003).

'Inclusion of clinical indicators' in the accreditation standards could increase the clinician's involvement, which is vital for successful introduction and implementation of accreditation programs (Powell, 2009), in different stages of the accreditation process (Collopy, 2000). This is noticed and operationalized by various programs. For instance, in the USA, since 1997, JCAHO has linked clinical outcomes indicators to accreditation process through ORYX-initiative integrating outcomes and other performance measurement data into the accreditation process (JCAHO, 2005). ACHS has developed the performance and outcome service to increase the clinical components and indicators in its new accreditation program (Luderus, 1996 and Scrivens, 1996). The existence of a regular review and update system for the entire accreditation process, specifically the standards, was widely reflected by the respondents. In JCAHO, standards are reviewed every year for hospitals and every 2 years for other HCOs, and Accreditation Canada reviews its standards every 2 years. The self-evaluation system for accreditation programs ensures the relevance of their standards to the newly emerging activities of HCOs. It further helps assimilate the advancements in the structure and development of accreditation programs. Emphasis on 'documenting' by HCOs in accreditation standards could be a key pointer to 'evidence-based' evaluation of HCOs. 'Documentation requirements' for HCOs by these programs are a key element indicative of 'reliability' of accreditation processes (Greenfield, 2009).

1.7 Dimensions and Factors of Surveyor Management

The surveyor is a health professional who is trained and skilled in surveying techniques and who gathers the relevant information to enable the hospital's compliance with a set of standards to be assessed (Bohigas et al., 1998). The surveyors in hospital accreditation program are considered as the core of accreditation programs. So, the reliability and validity of the accreditation program heavily depend on their performance (Teymourzadeh et al., 2015). The management of surveyors is a critical activity for an accrediting organization. A great deal of the credibility and validity of the programme depends on this important function (Bohigas et al., 1998). Therefore, an accreditation program surveyor must be sufficiently proficient in the areas under assessment to be capable of utilizing standards in an accurate, flexible, and balanced manner. In general, reliability, consistency, and quality of assessments in an accreditation program are closely associated with the nature and quality of the issues, such as surveyor selection, training, support, and stimulation, which is the so-called surveyor management accreditation program and it is highly important to take advantage of specified indicators for this purpose (Plebani, 2001).

A specific mechanism for the hospital accreditation of surveyor management was not considered, and surveyors were mostly selected and embedded into survey teams without implementation of surveyor management processes. Designing of the surveyor information system, lack of financial communication between the surveyor and hospitals, surveyor occupational fatigue, surveyor occupational risk, and provision of appropriate support services were among the issues introduced in the theme of developmental suggestions for the management of hospital accreditation programs (Teymourzadeh et al., 2015). These findings have also been mentioned in the Australian association of Health care standards, such that each surveyor has a specific profile in the database. The surveyor’s profile is reviewed prior to their placement in the assessment team to ensure that they match the details of their file. The details include the role of the surveyor in assessment and the changes that have occurred over the past 2 years. In addition, the database profile contains details of the surveyor’s competence, experience, and expertise (Low, 2012).Therefore, a qualitative study in Iran in 2014, aimed to indentify dimensions and factors affecting surveyor management hospital accreditation and main themes emerged (Teymourzadeh et al., 2015): Selection and recruitment, Organization of the surveyor

team, Planning to perform surveys, Surveyor motivation and retention, Surveyor training, Surveyor assessment.

- **Selection and recruitment**

Qualified surveyors assigned to a hospital accreditation program are those who are equipped with simultaneous clinical, administrative, and accreditation knowledge (Teymourzadeh et al., 2015). The main criteria for recruiting surveyors are experience in the health sector within the defined professions of doctor, nurse and administrator or chief executive (Bohigas et al., 1998). All accreditors require a minimum of experience in high managerial positions. Experience is measured in years of work and varies between 2 and 5 years (Bohigas et al., 1998). Surveyors should have a commitment to quality and innovation, with an acceptable level of techniques, competencies, and organizational knowledge (Miller, 2009). Thus, it is known that taking advantage of clinical and hospital practice experiences are the main requirement for the entrance of surveyors into this area. Hospital accreditation program surveyors must have certain personality-behavioral characteristics in the areas of personal-social and professional ethics. Some of the main personality-behavioral characteristics considered by the respondents included communication skills, flexibility, confidence, accountability, honesty, open-mindedness, and impartiality (Teymourzadeh et al., 2015). Shaw (2006) showed that a surveyor should be selected on the basis of identification and definition of the components of employment, and taking advantage of a set of competencies and qualifications. Another study showed that surveyors should have both clinical and managerial experience (Shaw, 2000). The accreditors that employ volunteers prefer their surveyors to be currently holding a specific hospital position (Bohigas et al., 1998). All accreditors require profession-specific educational certification (Bohigas et al., 1998).The Joint Commission requires that the nurses and administrators hold a masters degree. The Canadian Council requires their surveyors to be employed in an accredited institution. The Australian Council requires knowledge of the Australian health care system, good interpersonal skills and commitment to ACHS accreditation. The New Zealand Council requires knowledge and experience in Continuous Quality Improvement.

- **Organization of the surveyor team**

The average number of surveyors in a team is three; this number, as well as the number of survey days, varies according to the expected surveying work; this work

varies mainly with the size of the hospital, the number and types of services provided and the organizational structure (Bohigas et al., 1998). Inter-rater reliability within a group and its promotion strategies are issues of importance in the theme of organizing a surveyor team. For example, some stated that the standardization of the number of team members, selection of the right people, surveyor style, independence and impartiality, equalization of ideas through training, workload and fatigue, and avoidance of personal judgments are factors that can affect inter-rater reliability within a group (Teymourzadeh et al., 2015). The core members of the team typically are a doctor, a nurse and an administrator with several variations on this professional grouping (Bohigas et al., 1998). In the Joint Commission when the hospital is small and only requires two surveyors, they will be a doctor and a nurse. In the Canadian Council and other accreditors, a specialist is added to the team if the hospital has a special service that requires a particular expertise to be applied to the surveying process. In HAP the team consists of a general practitioner and a clinical manager. In New Zealand for small units two surveyors are used (a nurse and an administrator) with a non-travelling medical adviser on the team. For large acute hospital surveys up to eight surveyors are used (Bohigas et al., 1998). Frisino (2002) studied issues such as surveyor training, continuous assessment of surveyors, and their impartiality to increase the credibility of accreditor organizations and also pointed to the fact that surveyors must be experienced and act in accordance with the established standards.

- **Planning to perform surveys**

In the theme of planning to conduct a survey, determination of a time limit to perform surveys was among the issues affecting the surveyors' performance and thus survey validity (four surveys per month are suitable). Of course, the size and complexity of services and hospital size were factors that were influential in determining the number of surveys that should be conducted within a month (Teymourzadeh et al., 2015). Considering the opportunity created by accreditation program, it is better for trained surveyors to train hospitals, as well as people, in order to enhance service quality (Teymourzadeh et al., 2015). Low indicated that surveyors should play the role of counselor and trainer for hospitals, to enable the latter to provide high-quality care and to comply with acceptable standards (Low, 2012).

- **Surveyor motivation and retention**

Factors such as good salaries, respect for surveyor dignity, and the opportunity to learn and participate in follow-up educational training sessions were the main motivators for surveyors. (Teymourzadeh et al., 2015). Greenfield et al. (2011) showed that the motivation of surveyors with regard to participating in the accreditation program was to contribute to improving quality and safety and to create an opportunity to increase capacities. It should be noted that in a hospital accreditation program in Iran, surveyors are selected from personnel working in universities and also in the ministry of health and medical education. Each of these has specified tasks and salaries in their relevant organization, and unfortunately they are not paid well (Teymourzadeh et al., 2015).

- **Surveyor training**

All surveyors undertake training at the beginning of their surveyor careers (Bohigas et al., 1998). Most accreditors require 2—4 days of initial training, an exception being the Joint Commission which requires that surveyors attend 15 days of orientation and training. Thereafter surveyors receive ongoing updates and education between 1 and 5 days per year (Bohigas et al., 1998). Teymourzadeh et al. (2015) indicated that training should be continual, purposeful, in accordance with job description and training courses should be based on a needs assessment, consisting of primary training and retraining. The time devoted to primary training should be lengthy, while the retraining should be limited. Suitable training would be field-based and carried out in a practical manner, in the form of apprenticeships and the holding of virtual assessment sessions, and finally results in equalization of surveyors Teymourzadeh et al., 2015). In the content of education should cover scientific and technical issues related to standards, communication skills, interviewing, observing, reporting, and teamwork (Teymourzadeh et al., 2015). The training of a surveyor includes the provision of information regarding validity assessment organizations, the role of surveyor, standard interpretation, and assessments' conformity with standards and techniques (Miller, 2009; Bohigas, 1998). Moreover, these studies indicated the range of methods, such as workshops, teleconferences, self-study tasks, and holding mock surveyor training assessments (Miller, 2009; Bohigas, 1998).

- **Surveyor assessment**

The theme of surveyor assessment of a hospital accreditation program comprises two core sub-themes, namely assessment area and types and methods (Teymourzadeh et al., 2015). Assessments must be conducted continuously to identify deviations and also to identify the surveyors that require further .training and should also be capable of assessing their behavior with cross-check assessment and with assessment by a senior surveyor (Teymourzadeh et al., 2015).

SECTION TWO

IMPACT OF ACCREDITATION PROCESS

2.1 Proponents – Positive Impact of Accreditation Process

The Australian Council on Healthcare Standards (ACHS) Evaluation and Quality Improvement Program (EQuIP) called on healthcare organizations to increase their focus on patients by using leadership to coordinate, and continuous improvement to guide, care delivery (Sheahan, 1999). At a large acute care private facility in Melbourne, a program has been developed to create a 'care partnership', characterized by shared decision making, collaboration and conciliation. This program enhanced patient care through the coordination of three strategies, a patient communication strategy, an evaluation strategy and a quality improvement strategy (Sheahan, 1999). The program has resulted in patient guided reforms such as redesign of a patient information booklet, a hospital-wide discharge planning improvement initiative and a hospital-wide strategy to improve pain management (Sheahan, 1999).

Hurst (1997) evaluated the characteristics of health care accreditation schemes, mainly the Trent small hospital accreditation scheme (TSHAS) in the United Kingdom and examined the skills and qualities of surveyors and the challenges they faced when undertaking accreditation surveys. Community hospital managers were committed to TSHAS. Staffs were also keen to see the program continue to evolve. Majority of managers were happy with the accreditation program. They felt that the accreditation program affirm quality of services, spread good practices and involve staffs at all levels (Hurst 1997).

In 1989 the Australian Council on Healthcare Standards (ACHS) embarked on a programme to develop acute health care clinical indicators in conjunction with the Australian medical colleges. Through a carefully structured stepwise process this collaboration established a 'World first' in 1993 with the introduction of the first set of indicators into the ACHS Accreditation programme (Collopy et al. 2000). This reporting process allows HCOs to receive feedback on the aggregate results together with comparative peer group information for each indicator they address. The clinical

response to the indicators has been overwhelming and there is now documented evidence of numerous actions taken by HCOs to improve both the processes and the outcomes of patient care (Collopy et al., 2000).

Nandraj et al. (2001) conducted a survey in Mumbai, India, in 1997-98 to elicit the views of the principal stakeholders on the introduction of accreditation and what form it should take. There was a high level of support for the classical features: voluntary participation, a standards-based approach to assessing hospital performance, periodic external assessment by health professionals, and the introduction of quality assurance measures to assist hospitals in meeting these standards. Nandraj et al. (2001) concluded that hospital owners, professional bodies and government officials all saw potential - though different - advantages in accreditation. For owners and professionals it could give them a competitive edge in a crowded market, while government officials reckoned it could increase their influence over an unregulated private market. However, areas of disagreement emerged; for example, hospital owners were opposed to government or third party payment bodies having a dominant role in running an accreditation system. Nandraj et al. (2001) indicated that the biggest obstacle to introducing accreditation in poorly resourced settings, such as India, is in how to finance it. Nandraj et al. (2001) suggested that the provisional support of the principal stakeholders for such a development, demonstrated in this study, will require a commitment from government and policymakers if the potential benefits of accreditation to the health of the population are to be realized.

Simons et al. (2002) studied data from three trauma centers, measured outcomes within a single regional trauma system after designation of trauma centers and compared outcomes in the one accredited center to the nonaccredited centers. Simons et al. (2002) concluded that the development of a trauma program and the commitment to meeting national guidelines through the accreditation process does appear to be associated with improved outcome after injury. Two centers (hospitals A and C) had a high trauma caseload; one (hospital B) had a small and diminishing caseload. Only one center (hospital A) developed a trauma program consistent with Canadian accreditation criteria (Simons et al. 2002). Designation and verification (accreditation) of trauma centers often occur synchronously or in a compressed time frame such that the relative importance of each is not evident, although the combined effect has been generally accepted to improve outcomes (Simons et al. 2002).

Peterson (2003) identified which faculty variables—a more participative management style, faculty participation in accreditation, faculty support of the Commission on Accreditation in Physical Therapy Education (CAPTE) accreditation process, and faculty commitment to implementing the plans delineated in the accreditation documentation—were associated with accreditation outcome. The population for this study was all program directors and faculty (of CAPTE-accredited physical therapy programs in the United States. The findings of Peterson's (2003) study indicated that the manager is the most important entity in achieving a successful accreditation outcome. Managers who were perceived as participative, had more years of experience, had written more self-studies, and whose faculty supported the accreditation process were likely to have more positive accreditation outcomes.

Under contract from the Centers for Medicare & Medicaid Services (CMS), Medicare Quality Improvement Organizations (QIOs) promote improvement in health care system performance. With the QIO contract cycle that began in the fall of 1999, CMS adopted a broad national improvement agenda emphasizing 24 quality measures from 6 clinical topic areas (Silver et al. 2004). The QIO developed a human factors and organizational safety management-based intervention strategy for the inpatient clinical topic areas, borrowing approaches and principles previously applied in hospital-based medication systems safety improvement efforts (Silver et al. 2004). Comparison of statewide inpatient quality indicator performance rates in 1998 and 2000 showed absolute improvement on 15 of the 16 measures used. Providers achieved levels of improvement in the patient clinic topic areas. Improvement in these areas translates into reduced mortality, reduced secondary complications, more effective use of healthcare resources, reduced hospitalization and disease prevention. Throughout development and implementation, Silver et al. (2004) thought of the human factors as a method that indentifies conditions under which improvement throughout work process redesign might be realized.

Quasi-regulatory organization (the Joint Commission on Accreditation of Healthcare Organizations) has been the primary driver of hospitals' patient-safety initiatives. Devers et al. (2004) conducted a qualitative research to describe hospital systems' and hospitals' patient-safety initiatives in United States of America. The most frequently mentioned initiatives are designed to meet the JCAHO requirements. Respondents explicitly noted that they were working to meet JCAHO standards, or the major initiatives they listed mapped clearly back to JCAHO's policies and

requirements. They grouped into three related JCAHO areas: (1) developing better processes for reporting, analyzing, and preventing sentinel events (this included responding to sentinel event alerts, particularly those concerning patient falls and use of patient restraints); (2) meeting patient-safety standards, including increasing hospital leadership's knowledge of, and accountability for, patient safety and creating a nonpunitive culture; and (3) meeting all or specific JCAHO patient-safety goals, particularly improving communication and the accuracy of patient identification (Alkhenizan et al., 2012). The most frequently mentioned patient-safety activity was improving medication safety, which is related to six of the eleven patient-safety goals for 2003 (Alkhenizan et al., 2012).

Pomey et al. (2004) examined the dynamics of change that operated following preparations for accreditation. The study was conducted from May 1995 to October 2001 in a university hospital center in France after the introduction in 1996 of mandatory accreditation. This was the first study to document the impact of accreditation preparations on healthcare organizations in France. Pomey et al. (2004) study indicated that the impact of self-assessment on the hospital's performance (Sicotte et al., 1998) translated primarily into the development of values shared by the professionals of the hospital and the creation an organizational environment which is more conducive to fostering better treatment of patients. Self-assessment makes it possible to refocus on the person treated and his or her family, through, for example, a more systematic evaluation of client satisfaction and the implementation of a more appropriate complaints management system. Professionals from clinical and medico-technical departments participated most. Preparations for accreditation provided an opportunity to reflect non-hierarchically on the treatment of patients and on the hospital's operational modalities (self-assessment provides people lower down the hierarchy or working in less prestigious structures within the hospital) by creating a locus for exchanges and collegial decision making. These preparations also led to giving greater consideration to results of exit surveys and to committing procedures to paper, and were a key opportunity for introducing a continuous quality program. A second point of Pomey et al. (2004) study concerned the impact of preparations for accreditation on relations with nearby hospitals. In this first phase of accreditation, the preparations served to foster the sharing of information and greater service integration.

In July 2002, the Joint Commission on Accreditation of Healthcare Organizations implemented standardized performance measures that were designed to track the performance of accredited hospitals and encourage improvement in the quality of health care. Williams et al. (2005) examined hospitals' performance on 18 standardized indicators of the quality of care for acute myocardial infarction, heart failure, and pneumonia. Their data demonstrated a steady improvement in the performance of U.S. hospitals over a period of eight quarters in measures reflecting the quality of care for acute myocardial infarction, heart failure, and pneumonia. Improvement was observed in 15 of 18 measures. Moreover, Williams et al. (2005) analysis revealed that, for 16 of the 17 process measures, hospitals that began the study as low-level performers tended to improve at faster rates than those that started the study with higher levels of performance. With each passing quarter, low-level performers improved more quickly. In contrast, high-level performers generally maintained their high level of performance or improved at slower rates. Williams et al. (2005) concluded that whereas low-level performers have the most room for improvement; one might have expected different results, since such hospitals may be less likely to focus on quality or make an effort to improve performance than their counterparts with a higher level of performance.

Juul et al. (2005) examined the availability and the quality of clinical guidelines on perioperative diabetes care in hospital units before and after accreditation during the conduction of randomized controlled trial in 514 units (38 surgical and 13 anesthetic) in 9 hospitals. Among the 27 units without guidelines before the trial, significantly more accredited units compared to non- accredited units had a guideline after the trial. The improvement in the Systematic Development Care scores was significantly higher in accredited than in non-accredited units.

Gabriele et al. (2006) analyzed the practical feasibility and efficacy of the quality indicators elaborated by the National Health Service study group in a radiotherapy unit. A number of documents assessed the need for quality assurance in radiotherapy, which must be constantly monitored and possibly improved. In this regard, a system that confirmed the quality of a department has been suggested and quality indicators have been used to improve the quality of the service. Gabriele et al. (2006) concluded that the self evaluation promoted by the National Health Service Project allowed the monitoring of the activities of the service in order to asses critical

factors and had the potential to be the starting point to improve the quality of the service and to compare national and international quality assurance results.

VanSuch et al. (2006) determined whether documentation of compliance with any or all of the six required discharge instructions of the United States standards of Joint Commission on Accreditation of Healthcare Organizations heart failure core measure is correlated with readmissions to hospital or mortality. This study presented stronger evidence for the use of discharge instructions as an evidence-based measure than has been produced previously. Documentation of discharge information and patient education appeared, in fact, to be associated with reductions in both mortality and readmissions. The inclusion of this measure in the set of core measures on heart failure among other evidence-based measures appeared justified (VanSuch et al. 2006).

Williams et al. (2006) investigated the reliability of self-reported standardized performance indicators introduced by the Joint Commission on Accreditation of Healthcare Organizations in July 2002. Symmetry of disagreement among original abstractors and re-abstractors identified eight indicators whose differences in calculated rates were statistically significant (Greenfield et al. 2008).

Burling et al (2007) surveyed radiologists' experience of VC training, compared with barium enema, and assessed attitudes towards accreditation. A questionnaire was sent to 78 consultant radiologists from 72 centers (65 National Health Service hospitals; seven independent primary screening centers) offering a VC service. Burling et al (2007) determined that forty-seven (87%) of radiologists favored accreditation for virtual Colonoscopy; thirty-eight (70%) favored accreditation beyond internal audit for virtual Colonoscopy. Overall, 42 (78%) considered specific accreditation for reporting screening examinations appropriate and 45 (83%) respondents preferred a national radiological organization to regulate such a scheme. Burling et al (2007) survey has shown wide variability in VC experience amongst UK consultant radiologists across both NHS and independent screening centre settings. Access to suitable training workshops is limited and recommendations by expert consensus have not been widely adopted. Nevertheless, Burling et al (2007) concluded that radiologists generally favor the introduction of a quality assurance scheme for VC, with individual testing regulated by a national radiological organization, as the most popular method.

Quimbo et al. (2008) measured the quality of pediatric care provided by private and public doctors working at the district hospital level in Philippines, by using baseline data from the Quality Improvement Demonstration Study (QIDS). They found that national level accreditation by a national insurance program influences quality of care. An accredited doctors' average score was on the margin 6% points higher than average score of a doctor without accreditation. Quimbo et al. (2008) found evidence that accreditation can be an effective mechanism for quality assurance among both public and private providers in a developing country setting, however suggested that accreditation alone may not be sufficient to promote high quality of care.

Sekimoto et al. (2008) conducted surveys in consecutive years (2004 and 2005), targeting all teaching hospitals in Japan, to characterize the current situation of hospital Infection Control programs and activities and assess the impact of accreditation and other factors on hospital Infection Control performance. Sekimoto et al. (2008) found improvements in Infection Control infrastructure in newly accredited hospitals and in overall Infection Control performance scores in all groups. Changes in Infection Control performance scores were greater in the newly accredited group than in the other groups for many of the Infection Control topic. Another interesting finding was that hospitals newly accredited in 2005 attained Infection Control performance scores comparable to those hospitals that had been accredited in 2004. Because hospitals undergoing accreditation must prepare for assessment far in advance, the impact of accreditation on Infection Control performance may have been felt in the first year.

Al Tehewy et al. (2009) determined the effect of accreditation of non-governmental organizations' health units on patient satisfaction and provider satisfaction and the output of accreditation on compliance to some accreditation standards. Al Tehewy et al. (2009) concluded that accredited NGO health centers showed higher patient satisfaction compared with non-accredited health units. This pattern was seen in all areas of the health service: cleanliness, waiting area, waiting time and staff performance Accredited units had higher prevalence of clean toilets, appropriate furniture, analyzed patient satisfaction surveys and announced patient right. Overall provider satisfaction was higher in accredited health units, and accredited health units continue to comply with the accreditation standards within the first year after getting accreditation.

Chandra et al. (2009) evaluated the association between Society of Chest Pain Centers (SCPC) accreditation and adherence to the American College of Cardiology/American Heart Association (ACC/AHA) evidence-based guidelines for non–ST-segment elevation myocardial infarction (NSTEMI) and described the clinical outcomes and the association with accreditation. The analysis explored differences between SCPC-accredited and nonaccredited hospitals in evidence-based therapy given within the first 24 hours (including aspirin, β-blocker, glycoprotein IIb/IIIa inhibitors, heparin, and ECG within 10 minutes).Chandra et al. 2009 reported that accredited members of the SCPC have higher adherence to the ACC/AHA guidelines for administration of aspirin and β-blockers within 24 hours.

Pomey et al. (2010) evaluated how the accreditation process helps introduce organizational changes that enhance the quality and safety of care. This study was the first of its kind in Canada to document the impact of the accreditation process on healthcare organizations in terms of organizational changes. Pomey et al. (2010) concluded that the accreditation process is an effective leitmotiv for the introduction of change but is nonetheless subject to a learning cycle and a learning curve. This is translated by the following conclusions of their study: the ways that institutions use the accreditation process depends on the context in which accreditation takes place; accreditation should not only be used to find problems but also to validate and recognize success; the number of years that an healthcare organization has participated in accreditation can affect the extent of the changes that take place. Pomey et al. (2010) showed that different phases of the accreditation process caused different kinds of changes to occur. At the external level, the accreditation process served to involve patients and families in quality management. The process was an opportunity to enhance current relationships, bring new partners together and create common ground and standards.

Alkhenizan et al. (2011) did a systematic review of the literature to evaluate the impact of accreditation programs on the quality of healthcare services. General accreditation programs appear to improve the structure and process of care, with a good body of evidence showing that accreditation programs improve clinical outcomes and should be encouraged and supported to improve the quality of healthcare services. Alkhenizan et al. (2011) concluded with the comment that “One of the most important barriers to the implementation of accreditation programs is the

skepticism of healthcare professionals in general and physicians in particular about the positive impact of accreditation programs on the quality of healthcare services".

Nguyen et al. (2011) analyzed perioperative outcomes of bariatric surgery performed at accredited vs. nonaccredited bariatric surgery centers; by hypothesizing that accreditation is associated with improved outcomes, specifically with respect to perioperative mortality. Nguyen et al. (2011) found that accreditation status was associated with lower in-hospital mortality. Mortality after bariatric surgery within accredited and nonaccredited centers was low at both; however, accredited centers had a significantly lower observed in-hospital mortality compared with nonaccredited centers. Even though the difference in mortality was relatively small, the relative risk was substantially large and is clinically relevant because the event of interest was death (Nguyen et al.,2011) Post-hoc analyses according to the type of operation and preoperative severity of illness suggested that accreditation status was associated with improved in-hospital mortality in patients who underwent complex bariatric operations such as open or laparoscopic Roux-en-Y gastric bypass and higher risk patients with moderate or major severity of illness (Nguyen et al., 2011) Another important finding from the study in question was the lower cost associated with accredited centers (22% reduction). The cost savings may be attributed to the shorter length of hospital stay and improved efficiency of care through the presence of clinical pathways and improved recognition and management of complications at accredited centers. Nguyen et al. (2011) concluded that this is an important finding, particularly in our current health care economic climate; with initiatives such as "Pay for Performance" being implemented by certain health care plans and Medicare.

Awa et al. (2011) aimed to determine if the accreditation process has a positive impact on patient safety and quality of care. A 4 year retrospective and prospective study design was used and a total of 119 performance indicators were collected through various processes and were lately transformed into 81 patient safety and quality indicators. The numbers and rates of hospital mortality, Healthcare-Associated Infections (HAI), medication errors, cardiopulmonary resuscitation codes, surgeries and invasive procedures, blood transfusion reaction and adverse events were the main outcome measures. The following areas had the corresponding number of indicators that were found to be sensitive to Canadian accreditation and that significantly improved post-accreditation. Awa et al. (2011) concluded that accreditation has a positive impact on patient safety and quality of care indicators.

Alkhenizan & Shaw (2011) searched the literature in 2009 and included 26 studies that assessed either the general impact of accreditation on hospitals or impact on a single aspect of performance of healthcare services, and on subspecialty accreditation programs. Alkhenizan & Shaw (2011) found a positive effect of accreditation on improving the process of care and clinical outcomes. The majority of the studies showed general accreditation for acute myocardial infarction (AMI), trauma, ambulatory surgical care, infection control and pain management; and subspecialty accreditation programs to significantly improve the process of care provided by healthcare services by improving the structure and organization of healthcare facilities (Alkhenizan & Shaw 2011). Several studies showed that general accreditation programs significantly improve clinical outcomes and the quality of care of these clinical conditions and showed a significant positive impact of subspecialty accreditation programs in improving clinical outcomes in different subspecialties, including sleep medicine, chest pain management and trauma management (Alkhenizan & Shaw, 2011). Alkhenizan & Shaw (2011) suggested that accreditation programs should be supported as a tool to improve the quality of healthcare services and general accreditation programs of health organizations and accreditation of subspecialties should be encouraged and supported to improve the quality of healthcare services.

Schmaltz et al. (2011) examined the association between Joint Commission accreditation status and both absolute measures of, and trends in, hospital performance on publicly reported quality measures for common diseases, by obtaining performance data for 2004 and 2008 from U.S. acute care and critical access hospitals, using publicly available CMS Hospital Compare data augmented with Joint Commission performance data. Hospitals accredited by The Joint Commission tended to have better baseline performance in 2004 than non-accredited hospitals. Accredited hospitals had larger gains over time, and were significantly more likely to have high performance in 2008 on 13 out of 16 standardized clinical performance measures and all summary scores (Schmaltz et al., 2011). While Joint Commission-accredited hospitals already outperformed non-accredited hospitals on publicly reported quality measures in the early days of public reporting, these differences became significantly more pronounced over 5 years of observation (Schmaltz et al., 2011). Schmaltz et al. (2011) suggested that future research should

examine whether accreditation actually promotes improved performance or is a marker for other hospital characteristics associated with such performance.

Wagner et al. (2012) examined the association between accreditation and select measures of quality in U.S. nursing homes, both cross-sectionally and over time and identified that nursing homes with TJC accreditation report better perceptions of patient safety culture as well as fewer deficiency citations. Comparing quality in the year before accreditation with the 1st year after accreditation, all five Quality Measures and both Five-Star categories demonstrated improvement. In comparing quality after 8 years of accreditation, three of the Quality Measures examined continued to improve. There were no cases where accreditation was associated with decreased quality. Wagner et al. (2012) results indicated that TJC accredited nursing homes improved their quality immediately after accreditation. Safety culture interventions in hospitals have been found to be associated with improved safety practices and outcomes. Studies in nursing homes generally report a poorly developed safety culture. Wagner et al. (2012) also assessed the impact of Joint Commission accreditation on patient safety culture perceptions among senior managers in nursing homes in the United States. Joint Commission accreditation appeared to be associated with a more favorable RSC in nursing homes. Assessing a nursing home's RSC is an organization's first step toward improving the culture of safety (Wagner et al., 2012).

Al-Awa et al. (2012) performed an unbiased assessment of the impact of accreditation on patient safety culture and provided valuable information pertaining to the impact of accreditation in the unique multicultural, multilingual competitive environment at King Abdul-Aziz University Hospital in Saudi Arabia. Al-Awa et al. (2012) discovered that the true value of accreditation may lie in its ability to generate discussion and stimulate change in general, and the organizational support was certainly evident. The statistical analyses of the post-accreditation survey on the impact of accreditation on patient safety culture presented in Al-Awa et al. (2012) study were significantly aligned with the international benchmarks. Al-Awa et al. (2012) concluded that despite all the barriers created by the multicultural, multi-language environment in which we provide patient care, the Canadian accreditation process conducted at KAUH has generated a positive impact on the majority of the patient safety indicators. Al-Awa et al. (2012) strongly recommend that for further improvement in patient outcomes, investigators should evaluate more indicators and

conduct further unbiased assessments of the impact of accreditation on patient safety culture as perceived by the nursing staff.

Saleh et al. (2013) explored the views of 101 private short-stay hospitals registered with the Syndicate of Private Hospitals in Lebanon on the worthiness of accreditation vis-à-vis its associated expenses in addition to examining the type and source of financial investments incurred during the accreditation process. Saleh et al. (2013) revealed that a majority (63%) of hospitals viewed accreditation as a worthy investment, despite most facing elevated expenses associated with the accreditation process. Hospitals admit that accreditation had benefits mostly in enhanced quality and patient satisfaction. However, there were a decent proportion of hospitals (25.7%) that did not see an added value that merits the level of increased expenses (training of staff, consultants' costs and infrastructure maintenance). This imbalance has to be discussed on a national level so that hospitals view accreditation as a beneficial tool for improvement, rather than a pure financial burden (Saleh et al. 2013). Saleh et al. (2013) suggested that the findings from this investigation with regard to perceived value of accreditation should be factored in the decision of its adoption at a national level, especially in developing countries.

In the United States, the accreditation of outpatient surgical facilities, especially those not part of an acute care hospital, has slowly become important and, in many cases, mandatory, for several reasons (McGuire, 2013). The outreach of the American accreditation agencies into international accreditation provides the potential of increasing patient safety for those who choose to travel abroad. McGuire (2013) indicated that the increase in accreditation does provide for increased patient safety and quality care for foreign patients as well as patients in those countries, because it stimulates an increase in the quality of training for staff members, and higher standards for sanitation, medication, anesthesia, physical plants, and so forth. It also encourages the facilities that are not accredited to improve so that they may qualify for accreditation (McGuire, 2013).

Lee et al. (2014) examined which effect the healthcare accreditation has on hospital employees` satisfaction level and hospital management performance by comparatively analyzing between accreditation hospital and non-accreditation hospital. As for difference in hospital employees` satisfaction level according to accreditation system, the incentive payment and pride of own task at the accreditation hospital and the hospital management effect were indicated to have positive(+)

influence with statistically significant difference upon the item such as accuracy of task performance owing to the business standardization. Lee et al. (2014) indicated that hospital employees` satisfaction is high at the accreditation hospital and that the higher satisfaction level leads to having influence upon the effect of hospital management.

El-Jardali et al. (2014) aimed to gain a better understanding of the impact of accreditation on quality of care as perceived by PHC staff members and directors and how accreditation affected staff and patient satisfaction. The Lebanese Ministry of Public Health (MOPH) launched the Primary Healthcare (PHC) accreditation program to improve quality across the continuum of care. The MOPH, with the support of Accreditation Canada, conducted the accreditation survey in 25 PHC centers in 2012. All staff members were surveyed using a self-administered questionnaire whereas semi-structured interviews were conducted with directors. All directors affirmed that accreditation has led to quality improvement in several areas, particularly in documentation (55% of directors) including recording minutes of meetings, thoroughly completing medical records and documenting rules and regulations (El-Jardali et al., 2014). Another mentioned benefit of accreditation was translating theories of quality into action (implementing standards, policies and procedures and rules and regulations provided a method for centers to translate their mission, vision and values). El-Jardali et al. (2014) also confirmed that centers were able to translate the notions of quality into tangible outcomes, by introducing new quality standards and reinforcing existing ones, such as infection control, occupational safety, waste and fire management, and incident and accident reporting, which can be measured and compared with other centers nationally and internationally. Other mentioned benefits of accreditation included: strengthened relationships between the centers and the communities they serve (23%), improved work conditions (18%), enhanced management and leadership (14%), and strengthened relationships between the centers and patients (14%) and local authorities (9%). Moreover, the increase in staff involvement in accreditation helped enhance their professional development and awareness in quality issues and encouraged them to voice their opinions, which in turn might have helped improve quality results. El-Jardali et al. (2014) finally indicated improvements in quality were reflected by the increase in customer satisfaction and number of patients visiting PHC centers from various regions and social strata.

Liu et al. (2015) examined and analyzed the relationship between the cost-effectiveness and outcome of radio-therapy for esophageal cancer among hospitals with varying accreditation levels. Liu et al. (2015) selected 428 esophageal cancer patients from medical and non-medical centers using the National Health Insurance Research Data-base, which is maintained by the Taiwanese National Health Research Institutes, and compared their medical expenditure and the outcome of their radiotherapy treatment. Liu et al. (2015) observed that radiotherapy for esophageal cancer patients in medical centers had significantly lower medical expenditure and mortality rates than that of non-medical centers. These findings provided vital implications for professional organisations and policymakers in adjusting the distribution of health insurance resources and public health policies (Liu et al. 2015).

Berssaneti et al. (2016) evaluated whether accredited health organizations perform better management practices than non-accredited ones, comparing hospital accreditation with the EFQM (European Foundation for Quality Management) model of excellence in management. Berssaneti et al. (2016) confirmed that there is evidence that accredited organizations scored better in the evaluation based on the EFQM model in comparison to non-accredited organizations. This result was also confirmed in the comparison of results between the categories Facilitators and Results in the EFQM model. Berssaneti et al. (2016) suggested that accreditation helps the healthcare sector to implement the best management practices already used by other business sectors.

Cancer center accreditation and public reporting are two approaches available to help guide patients with cancer to high-quality hospitals. Merkow et al. (2016) evaluated differences in hospital structural quality characteristics and assessed the association between national publicly reported quality indicators and cancer center accreditation status. Hospitals were categorized into 3 mutually exclusive groups: National Cancer Institute–Designated Cancer Centers (NCICCs), Commission on Cancer (CoC) centers, and “nonaccredited” hospitals. Performance was assessed on the basis of structural, processes-of-care, patient-reported experiences, costs, and outcomes (Merkow et al., 2016). Merkow et al. (2016) evaluated whether hospital characteristics differed by cancer accreditation status and found out that that accredited centers offer more structural resources (more beds, resources, and cancer-related services), because accreditation has historically been based on these types of characteristics. For example, 96% of NCI-CCs had more than 300 beds compared

with 46% of CoC and 9% of nonaccredited hospitals. Then Merkow et al. (2016) compared performance on patient experience measures by cancer center accreditation status, because measuring the patient perspective is an important yet often overlooked aspect of hospital quality.

Greenfield et al. (2016) aimed to investigate the impact of the accreditation program on the Hong Kong pilot hospitals, individually and collectively. Secondary data analysis of accreditation data collected across 2009–2014 by the Australian Council on Healthcare Standards was undertaken. There were eight pilot hospitals, comprising five public and three private institutions. Each of the eight organizations achieved and maintained accreditation status across the two cycles – 2010/2012 and 2014. However, outcomes for the seven criteria improvement varied over time and were different across the public or private groupings. Criteria which related to administrative or bureaucratic functions, for example credentialing or external provider systems, improvement appears to have been achievable, widespread and sustained. Conversely, criteria associated with clinical care matters, for example consent or infection control, shifting practices has been slower, uneven and yet to be sustained (Greenfield et al., 2016). Greenfield et al. (2016) concluded that a positive longitudinal impact of the ACHS accreditation program on the Hong Kong pilot hospitals was identified.

Saut et al. (2017) evaluated the impact of accreditation programs on 141 Brazilian healthcare organizations between February and May 2016. The main outcome measures were patient safety activities, quality management activities, planning activities—policies and strategies, patient involvement, involvement of professionals in the quality programs, monitoring of patient safety goals, organizational impact and financial impacts (Saut et al., 2017). There was evidence of a significant and moderate correlation between the status of accreditation and patient safety activities, quality management activities, planning activities—policies and strategies, and involvement of professionals in the quality programs. Saut et al. (2017) noticed that the variables related to quality activities were influenced by the type of accreditation, and not by the type of organization (hospital or other), administrative control (private or other), and ISO 9001 status. Additionally, organizational impacts of accreditation were identified through the internal processes, learning and customers (Saut et al., 2017). Accreditation primarily influences internal processes, culture, training, institutional image and competitive differentiation. Regarding the financial

dimension, accreditation's impact on the result shows little relevance when compared to the other items evaluated; however, the need for investment in the planning stage was validated. Saut et al. (2017) showed that accreditation leads the organizations to implement best practices for quality management and patient safety. Moreover, the evident convergence between accreditation and other quality models suggests that accreditation enables the implementation of consolidated management practices in other sectors.

Ehlers et al. (2017) conducted a cross-sectional survey to evaluate attitudes towards accreditation and the Danish Quality Model (DDKM) among hospital employees (all hospital managers, quality improvement staff, and hospital surveyors and clinicians) in Denmark. Ehlers et al. (2017) showed that studying attitudes may be important for understanding the effectiveness of accreditation and indicated that management is of vital importance for successful implementation. Danish Health Ministry's decided to abolish hospital accreditation in 2015; this was apparently based on an impression that employees' attitudes towards DDKM and accreditation were uniformly negative. Ehlers et al. (2017) showed that eventually overall attitudes were supportive. Typically, hospital physicians were more skeptical than others, but nevertheless they largely affirmed accreditation's positive effect on organizational quality. Nurses, managers, quality improvement staff and surveyors held positive attitudes. There were different patterns of attitudes in the five Danish regions and between medical professions (a small group of physicians was extremely negative). Ehlers et al. (2017) commented that attitudes may also reflect political agendas, and political lobbying might act to impede the take-up of improvement programs, cause their demise or reduce their effectiveness.

2.2 Opponents – Neutral or Negative Impact of Accreditation Process

Hadley et al. (1988) analyzed data on 216 state psychiatric hospitals to determine whether accreditation by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) or certification by the Health Care Financing Administration (HCFA) were related to seven hospital characteristics generally accepted as reflecting quality of care. The characteristics examined were average cost per patient, per diem bed cost, total staff hours per patient, clinical staff hours per patient, percent of staff hours provided by medical staff, bed turnover, and percent of beds occupied (Hadley et al. 1988). Analysis revealed a weak relationship between accreditation or certification status and the indicators of quality of care. Accredited or certified hospitals were more likely to have higher values on specific indicators than hospitals without accreditation (Hadley et al. 1988).

Mazmanian et al. (1993) conducted a survey of 398 head-injury rehabilitation facilities and defined the costs and providers for cognitive therapy staff training in Commission on Accreditation of Rehabilitation Facilities (CARF) approved and other (non-CARF) facilities. As results of this study are interpreted, the tendency of some may be to focus on the information that suggests few differences between CARF and non-CARF programmes and summarily to discount the value of the accreditation system (Mazmanian et al. 1993). These data with the observations of practitioners, administrators' survivors and their families may provide fundamental information for further development of accreditation and credentialing systems expected to protect and enhance the welfare of those who survive traumatic brain injury (Mazmanian et al. 1993).

There is a large rural-urban disparity in the proportion of hospitals that are accredited by the Joint Commission on the Accreditation of Health Care Organizations (JCAHO). Brasure et al. (2000) conducted a survey to explore why rural hospitals are not participating in the accreditation process. Several factors can influence whether a hospital participates in the accreditation process. A few of those factors include the hospital's size, case mix and ownership. However, even after controlling for many of these factors, hospitals in the most rural locations are less likely to be accredited by the JCAHO than urban hospitals. Brasure et al. (2000) study results showed that the largest factor contributing to rural hospital deterrence to seeking accreditation is cost. These results have several implications for monitoring

quality in rural hospitals. First, they indicate that proportionately more rural residents than urban residents are likely obtaining care in nonaccredited hospitals. It cannot be stated that they are receiving a lower quality of care, only that there is no way of consistently evaluating that care. Brasure et al. (2000) concluded that quality monitoring of rural hospitals will fall further behind that of urban hospitals, without accreditation by the JCAHO and compliance with their movement into performance measurement. Brasure et al. (2000) also suggested that policy initiatives that make accreditation more financially feasible should be considered.

Gross et al. (2000) compared indicators from several indicator measurement systems to determine the consistency of results. Five measurement systems with well-defined indicators were selected. They were applied to 24 hospitals. Indicators for mortality from coronary artery bypass graft surgery and mortality in the perioperative period were chosen from these measurement systems. Gross et al. (2000) concluded that it is faulty to assume that clinical indicators derived from different measurement systems will give the same rank order. Widespread demand for external release of outcome data from hospitals must be balanced by an educational effort about the factors that influence and potentially confound reported rates (Gross et al. 2000).

The Australian Council on Healthcare Standards' new Evaluation and Quality Improvement Program (EQuIP) accreditation model reflects the worldwide trend towards incorporating continuous quality improvement and patient-focused care goals into hospital/health service accreditation. Fairbrother et al. (2000) conducted a post-EQuIP feedback survey among senior clinical and managerial staff at a Sydney teaching hospital and identified significant levels of negative feedback among respondents. Negative feedback may in part be explained by the fact that the ongoing nature of the EQuIP process was to some extent hidden by the baseline-generating nature of the organization's first EQuIP survey, and hence the perceived usefulness of the workbooks as continuous quality improvement tools was lost (Fairbrother et al., 2000). The survey findings presented a red flag to health sector accreditors. Fairbrother et al. (2000) suggested that key benefits of the EQuIP process (for example, its long-term usefulness as an organizational continuous quality improvement tool) have not been well ingested by hospital managers and clinicians. Clearly the number, wordiness and repetitiveness of standard criteria resulted in perceptions of a cumbersome and unnecessarily time-consuming process. Fairbrother et al. (2000) concluded that principal concerns about the value of the process (time

spent in relation to benefits at patient care level) were related to perceptions that the process was unnecessarily unwieldy and that it offered little value in terms of patient care delivery for the significant amount of human resources it consumed.

The Practice Accreditation and Improvement Survey (PAIS) is an endorsed instrument by the Australian General Practice Accreditation Limited (AGPAL) for seeking patient views as part of the accreditation of Australian general practice s (Greco et al, 2001). From September 1998 to August 2000, a total of 53,055 patients completed the PAIS within 449 general practices across Australia. Patient views were analyzed, relating to doctors' interpersonal skills, access, availability and patient information and showed that patients' scored practice issues lower than doctors' interpersonal skills. Greco et al (2001) concluded that future research should explore how practices act on the results of patient feedback, and which practice based strategies are more effective in raising standards of care from a patient's perspective

Beaulieu et al. (2002) determined the characteristics of accredited plans, their performance on quality indicators and the impact on enrolment. The results showed that accredited plans have higher HEDIS (Health Plan Employer Data and Information Set) scores but similar or lower performance on patient-reported measures of health plan quality and satisfaction. Furthermore, a substantial number of the plans in the bottom decile of quality performance were accredited suggesting that accreditation does not ensure high quality care. Beaulieu et al. (2002) concluded that National Committee on Quality Assurance **(**NCQA) Accreditation is positively associated with some measures of quality but does not assure a minimal level of performance and does not appear to be a guarantor of high quality or to "protect" against low quality. From a health care consumer's point of view (or a purchaser's point of view), it is fair to conclude that accreditation is not an appropriate substitute for examining health plans on individual measures of plan performance (Beaulieu et al. 2002). Over time, as more plans in particular market become accredited, accreditation status is no longer a differentiating characteristic and may not be worth the organizational cost of undergoing an accreditation review. If this is true and if the requirements for accreditation do not change over time (in particular, become more demanding) then accreditation may emerge as a floor on health plan quality and lack the dynamic incentives for stimulating quality improvement (Beaulieu et al. 2002).

Barker et al. (2002) identified the prevalence of medication errors (doses administered differently than ordered) in a stratified random sample of 36 institutions.

Medication errors were found to be common in a stratified random sample of organizations. A significant number (7%) of potentially harmful errors were identified. Accreditation of a facility was not associated with a lower error rate (Greenfield et al. 2008).

Griffith et al. (2002) compared seven non-federal general hospital performance measures derived from Medicare against Joint Commission scores. They found that Joint Commission measures are generally not correlated with outcome measures and the few significant correlations that appear are often counterintuitive. Griffith et al. (2002) concluded that a potentially serious disjuncture exists between the outcomes measures and Joint Commission evaluations. Data showed no relationship of substance, and a confusing pattern of minor and sometimes conflicting associations (Griffith et al. 2002).

Bukonda et al. (2003) described the development of the Zambia Hospital Accreditation Program from 1997 to 2000. Zambia had successfully developed hospital standards that were relevant and potentially achievable by its hospitals. Half of Zambia's 79 hospitals have received educational surveys, and 12 have also received the full accreditation survey. Bukonda et al. (2003) determined that significant improvement in compliance with standards occurred in overall scores, and in seven out of 13 functional areas. However, the program has stalled due to lack of sufficient funds, lack of legal standing for the Zambia Health Accreditation Council, difficulties in retaining qualified surveyors, and indecision on how to handle accreditation results. In addition, Bukonda et al. (2003) resulted that serious resource constraints in hospitals and the need for ongoing facilitation have hindered their full participation in the program. It was estimated that the program costs about US$10 000 per hospital to complete the cycle. Bukonda et al. (2003) concluded that a developing country, which has to sustain an accreditation program requires dedicated funds, government and donor commitment, continual adaptation, ongoing technical assistance to hospitals, and a functioning accreditation body. In Zambia, the accrediting Council was stymied by a heavy workload, lack of legitimacy and budget authority, and the government's indecision on incentives and feedback. Long delays arose between accreditation surveys and feedback of written results.

Chen et al. (2003) examined the association between Joint Commission on Accreditation of Healthcare Organizations (JCAHO) accreditation of hospitals, those hospitals' quality of care, and survival among Medicare patients hospitalized for acute

myocardial infarction. Hospitals not surveyed by JCAHO had, on average, lower quality (less likely to use aspirin, beta-blockers, and reperfusion therapy) and higher thirty-day mortality rates than did surveyed hospitals (Chen et al. (2003).However, there was considerable variation within accreditation categories in quality of care and mortality among surveyed hospitals, which indicates that JCAHO accreditation levels have limited usefulness in distinguishing individual performance among accredited hospitals (Chen et al. 2003). These findings support current efforts to incorporate quality of care in accreditation decisions Chen et al. (2003) suggested that an exclusively standards-based accreditation is a limited tool for comparing hospital quality of care, because of the considerable heterogeneity of performance within accreditation levels across hospitals; this highlights the need to measure and report quality indicators directly. The integration of standardized quality measures into the next generation of JCAHO accreditation may address this deficiency

Salmon et al. (2003) examined the impact of an accreditation program on: (a) the standards identified for measurement and improvement by the accrediting organization and (b) quality indicators developed by an independent research team. The purpose of this study was to assess prospectively, using a randomized control trial, the effects of an accreditation program on public hospitals' processes and outcomes in a developing country setting. Those hospitals participating in an accreditation program significantly improved their average compliance with Council for Health Services Accreditation of Southern Africa (COHSASA) accreditation standards, while no appreciable increase was observed in the control hospitals. The improvement of the intervention hospitals relative to the controls was statistically significant and seems likely to have been due to the accreditation program. However, with the exception of nurse perceptions of clinical quality, the independent research team observed little or no effect of the intervention on the eight quality indicators.

Daucourt et al. (2003) showed wide heterogeneity in the summaries on accreditation and in accreditation agency decision-making for different size and status hospitals and provided initial insight into common quality defects and priorities for hospitals (Greenfield et al. 2008).

Borenstein et al. (2004) reviewed 399 self-reported quality improvement activities submitted by organizations seeking accreditation by the National Committee for Quality Assurance. Based on objective and audited information, the estimated effects of self-reported quality improvement activities were often small and

inconsistent. Borenstein et al. (2004) study showed that quality improvement activities undertaken to receive an accreditation status were only associated with the performance scores of standard quality measures to a limited extent. The apparent lack of a major effect of quality improvement activities on cross-sectional performance scores suggests that reliance on self-reported evaluations of adherence to standards (i.e., implementing quality improvement activities) is not a sufficient gauge of quality of care. This would imply that programs evaluating quality in health care, including accreditation and certification, should, whenever possible, contain data from direct measurements of clinical processes and outcomes (Borenstein et al. 2004).

Stoelwinder (2004) a qualitative study in six hospitals in Australia to explore what doctors working in hospitals wanted from hospital accreditation. Stoelwinder (2004) concluded that doctors were unaware or skeptical of accreditation and held concerns about how safety and quality of care should be measured. In general, doctors perceived themselves to be accountable within a professional framework (self/patient/colleagues) not to the organizations in which they worked.

Heuer (2004) examined the relationship between two principal measures of institutional healthcare quality: accreditation scores and independently measured patient-satisfaction ratings. This study involved a retrospective review and comparison of summative and selected categorical hospital accreditation scores from the Joint Commission on Accreditation of Healthcare Organizations and independently measured patient satisfaction ratings. The results revealed no relationship between these quality indicators on a summative level and no meaningful pattern categorical relationships. Heuer (2004) suggested a disassociation between these two quality indicators, thus supporting the use of a balanced scorecard approach to hospital quality management.

Grasso et al. (2005) during their accreditation survey, pointed out that experienced surveyors failed to detect an error-prone medication usage system (shown by an independent audit). This raised questions about the validity of survey scores as a measure of safety.

Miller et al. (2005) examined the association between the most widely used national benchmark for assessing health care institutional quality, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) accreditation scores and the Agency for Healthcare Research and Quality's Inpatient Quality Indicators and Patient Safety Indicators (IQIs/PSIs). At best, they concluded that there

appeared to be no relationship between the JCAHO survey results and these evidence-based measures of health care quality and safety. The most important message from Miller et al. (2005) study is the clear need to continuously and vigorously reevaluate all performance assessment strategies to promote the highest possible levels of health care quality and safety and to provide the public with reliable and consistent information.

Snyder et al. (2005) explored whether the quality of hospital care for Medicare beneficiaries improves more in hospitals that voluntarily participate with Medicare's Quality Improvement Organizations (QIOs) compared with nonparticipating hospitals. Snyder et al. (2005) concluded that there was no statistically significant difference in change from baseline to follow-up between participating and nonparticipating hospitals on 14 of 15 quality indicators. Hospitals that participated with the QIO program were not more likely to show improvement on quality indicators than hospitals that did not participate.

Pongpirul et al. (2006) explored problems and obstacles of thirty-nine hospitals in all 13 regions of Thailand implementing quality management systems according to the hospital accreditation (HA) standards. Health care professionals have been facing many problems with multidisciplinary process-related issues of the accreditation standard, whereas surveyors might have had some difficulties in conveying the core quality improvement concepts to them. Pongpirul et al. (2006) explained that the underlying philosophy of the accreditation program might not be entirely congruent with the contexts of less developed countries.

Menachemi et al. (2008) identified quality outcomes in accredited and nonaccredited ambulatory surgical centers (ASCs) in Florida. Quality outcomes in ASCs accredited by either the Accreditation Association for Ambulatory Health Care (AAAHC) or The Joint Commission were compared with those of nonaccredited ASCs in Florida, by analyzing patient-level ambulatory surgery and hospital discharge data from Florida in 2004. Menachemi et al. (2008) concluded that systematic differences in quality of care do not exist between ASCs that are accredited by AAAHC, those accredited by the Joint Commission, or those not accredited in Florida. With the exception of one procedure, patients at Joint Commission-accredited facilities were still significantly less likely to be hospitalized after colonoscopy. Specifically, compared with patients treated in nonaccredited ASCs regulated by the state agency, patients treated at those facilities were 10.9% less

likely to be hospitalized within 7 days and 9.4% less likely to be hospitalized within 30 days .No other differences in unexpected hospitalization rates were detected in the other procedures (colonoscopy, cataract removal, upper gastro endoscopy, arthroscopy, and prostate biopsy) examined (Menachemi et al., 2008).

Makai et al. (2009) described the development of quality management systems in Hungarian hospitals and aimed to answer the policy question, whether a separate patient safety policy should be created additional to quality policies, on national as well as hospital level. The relationship between the level of the development of quality management systems, the certification status and the current level of patient safety activities was investigated using linear regression. Quality was measured with the quality management system development score (QMSDS), and patient safety by the number of patient safety activities (Makai et al., 2009). Makai et al. (2009) results showed that there was no significant relationship between certification status and the number of patient safety activities. One explanation for the phenomenon may be that neither the Hungarian healthcare adaptation of the ISO, nor HHCS aims to directly improve patient safety (Makai et al., 2009).

Lutfiyya et al. (2009) determined whether quality measures used in the US Centers for Medicare and Medicaid Services Hospital Compare database differed for critical access hospitals based on Joint Commission on Accreditation of Healthcare Organizations accreditation status. Lutfiyya et al. (2009) indicated that in the setting of critical access hospitals, external accreditation appears to result in modestly better performance. It should be noted that the absolute differences for the measures achieving statistical significance between the accredited and non-accredited hospitals were relatively small (accredited critical access hospitals performed better on 4 of 16 Hospital Compare database quality indicators than non-accredited critical access hospitals) (Lutfiyya et al., 2009).

Matrix Knowledge group (2010) produced a general overview of results obtained and methodologies used to assess impact of accreditation. Most studies which contained an element of comparison suggested that accreditation/certification has an impact on the organization or on the professional practice. The impact on health outcomes or improvement in these outcomes was not demonstrated (Brubakk et al., 2015).

Birkmeyer et al. (2010) assessed complication rates of different bariatric procedures and variability in rates of serious complications across hospitals and

according to procedure volume and center of excellence (COE) status by evaluating short-term morbidity in 15.275 Michigan patients undergoing 1 of 3 common bariatric procedures between 2006 and 2009. Adjusted rates of serious complications were similar in COE and non-COE hospitals. Birkmeyer et al. (2010) concluded that rates of serious complications are inversely associated with hospital and surgeon procedure volume, but unrelated to COE accreditation by professional organizations.

Flodgren et al. (2011) evaluated the effectiveness of external inspection of compliance with standards in improving healthcare organization behavior, healthcare professional behavior and patient outcomes. No firm conclusions were drawn about the effectiveness of external inspection on compliance with standards due to paucity of high-quality controlled evaluations. Flodgren et al. (2011) also commented that in terms of considering quality of care delivered across a whole healthcare system (hospitals, primary healthcare organizations and other community-based healthcare organizations), external inspection as opposed to voluntary inspection, had the advantage of incorporating all organizations rather than only volunteer organizations. For those running a healthcare system this is a very attractive advantage and it is likely that external inspection will continue to be used. Situations where this occurs offer a useful opportunity to better define the effects of such processes, the optimal configuration of inspection processes and their value for money (Flodgren et al. 2011).

Sack et al. (2011) aimed to assess the relationship between patient satisfaction and accreditation status in 73 hospitals. Recommendation rate was used as primary endpoint, which was available from 35 945 patients. Regarding the primary outcome, 66.3% of all the patients recommended the hospital they had recently received care from to others. However, Sack et al. (2011) indicated that there was no evidence to support the idea that the recommendation rate was related to the accreditation status of the hospital. Sack et al. (2011) supported the notion that accreditation is not linked to measurable better quality of care as perceived by the patient. Hospital accreditation may represent a step towards total quality management, but may not be a key factor to quality of care measured by the patient's willingness to recommend. Sack et al. (2011) argued that accreditation itself may require evaluation and principles of evidence-based medicine and decision-making should be used before accreditations systems are implemented.

Shaw et al. (2014) investigated the relationship between ISO 9001 certification, healthcare accreditation and quality management in European hospitals. Seventy-three acute care hospitals with a total of 291 services managing acute myocardial infarction (AMI), hip fracture, stroke and obstetric deliveries, in Czech Republic, France, Germany, Poland, Portugal, Spain and Turkey. Shaw et al. (2014) study resulted that accreditation in isolation showed benefits in AMI and stroke more than in deliveries and hip fracture; the greatest significant association was with CR in stroke and certification in isolation showed little benefit in AMI but had more positive association with the other conditions. Despite the fact that accreditation and certification were positively associated with clinical leadership, systems for patient safety and clinical review, they were not associated with clinical practice. Shaw et al. (2014) concluded that both systems promoted structures and processes, which supported patient safety and clinical organization but had limited effect on the delivery of evidence-based patient care.

Mumford et al. (2015) tested a hypothesis that hospitals with higher accreditation scores, specifically in infection control, would be associated with lower Staphylococcus aureus bacteraemia (SAB) rates. The study took place in 77 public hospitals in New South Wales, Australia. Mumford et al. (2015) found less evidence to support whether accreditation scores accurately reflect implementation of the infection control accreditation standards. Despite the supportive evidence for using SAB rates to demonstrate the impact of infection control programs embedded within the accreditation program, Mumford et al. (2015) showed that SAB rates fell in Australian hospitals during their study period and there was a significant size effect, with the smallest hospitals showing the lowest mean SAB rates across the study period. The lack of a clear relationship between accreditation infection control scores and SAB rates across hospital types highlighted the challenges of identifying suitable indicator. Mumford et al. (2015) suggested a possible disconnect between the way accreditation surveys assess compliance with rules and regulations and the ability to measure the impact of accreditation using clinical outcome indicators, such as SAB rates. In the end Mumford et al. (2015) commented that this could explain the lack of consistent evidence as to whether accreditation is effective in improving patient safety and quality of care.

Bogh et al. (2015) examined whether performance measures improve more in accredited hospitals than in non-accredited hospital. A historical follow-up study was

performed using process of care data from all public Danish hospitals in order to examine the development over time in performance measures according to participation in accreditation programs. All patients admitted for acute stroke, heart failure or ulcer at Danish hospitals. A total of 27 273 patients were included. Bogh et al. (2015) stated that both accredited and non-accredited hospitals significantly improved their processes of care performance over time. Since hospital accreditation typically targets the whole hospital, the size of the improvements at disease level did not depend on whether hospitals participated in an accreditation program. Accreditation may possibly have impact on other diseases not included in this study. The four diseases selected, however, represent different types of diseases treated in hospitals, including acute diseases (stroke), chronic diseases (heart failure) and acute surgery (ulcer). Bogh et al. (2015) concluded that the overall opportunity-based composite score improved more at non-accredited hospitals compared with accredited hospitals.

Discussion and Conclusions

Health sector accreditation continues to grow internationally but due to scant evidence, no conclusions could be reached to support its impact and effectiveness (Brubakk et al., 2015). With respect to research, finally, this thesis, like that of Greenfield and Braithwaite (2008) suggests that literature of health care accreditation reveals a complex picture. Accordingly, this thesis seeks to provide a valuable insight in the impact of accreditation by classifying the results into 2 categories by a chronological order: Proponents – Positive Impact and Opponents – Neutral or Negative Impact. This thesis does not find evidence to support health sector accreditation's impact in time being linked to measurable changes in quality of care as measured by quality metrics and standards, due to varied financial and organizational healthcare constraints. Some studies related to accreditation and care delivery processes had either examined the impact of accreditation on individual diseases or had been designed as cross-sectional studies with little possibility of exploring potential causal associations. Lessons can be learned from no controlled studies such as cross-sectional studies and comparison between accredited and non-accredited hospitals yields important information about potential differences between these hospitals, but cannot provide information about the observed variations, and whether the results are transferable to other settings. Other studies had in general reported accreditation to be a marker for high process performance. This was supported by Alkhenizan et al. (2011) review, which concluded that accreditation programs improve processes of care provided by healthcare services. Moreover, there are claims that international accreditation provides the potential of increasing patient safety (e.g. quality of training for staff members, higher standards for sanitation, medication, anesthesia, physical plants) for those who choose to travel abroad, by reducing some of the many increased risks of medical tourism. However, not all research has shown improvements and other reviews have revealed a mixed picture with inconsistent findings and high performance variation between accredited hospitals. The inconsistency in results may be a consequence of the differences in study settings around the world and variation between accreditation programs.

Overall, this thesis provides a comprehensive overview of the effects of accreditation of hospitals on quality and patient safety outcomes and concludes that

due to scant evidence, no conclusions could be reached to support its effectiveness. The accreditation programs require substantial financial and labor investments, and distract healthcare teams from their primary clinical goals.

In the financial dimension, the result validates the literature review that discusses the significant time and resources involved in the process of obtaining accreditation. The lack of formal economic appraisal makes it difficult to evaluate accreditation in comparison to other methods to improve patient safety and quality of care. The lowest costs came from a single hospital study estimating costs for ongoing accreditation, whereas the highest costs came from one of the largest studies looking at costs for initial accreditation with a recently introduced accreditation body, and indicated that costs were relatively higher for smaller and rural centers (Mumford et al., 2013). Moreover, concerns have been raised about the cost of accreditation programs by health care professionals; especially in developing countries were consistent. The lack of a clear relationship between accreditation and the outcomes measured in the benefit studies makes it difficult to design and conduct such appraisals without a more robust and explicit understanding of the costs and benefits involved. Some of the studies also touch on the opportunity cost of accreditation in terms of the time not spent on clinical care, but the remedial costs of accreditation are not widely discussed or estimated. The greater challenge is that, even if the start-up costs are covered by government or international donors, the fixed operating costs have to be shared between a small numbers of institutions. They have to pay a high price for an unproven service. A formal economic evaluation is needed to create a baseline point of reference and for measuring and monitoring any reforms in accreditation processes by providing a more robust and explicit understanding of the costs and benefits involved. A clearer definition of the expected benefits would enable measurement and monetization to determine whether the benefits do outweigh the costs.

In the organizational dimension, several studies have shown that health care professionals were skeptical about accreditation because of concerns about its impact on the quality of health care services and also because of the significant additional cost involved. Alkhenizan et al. (2012) study showed that owners of hospitals indicated accreditation as a potential marketing tool, health care professionals viewed accreditation programs as bureaucratic and demanding and that nurses' perception towards accreditation was generally favorable. However, Alkhenizan et al. (2012)

found out that physicians were skeptical of accreditation and raised concerns on how the quality indicators were measured. It seems that initially, institutions invest greatly in order to learn how to conform to the first accreditation visit and reap the most benefits possible from accreditors' diagnosis and the ensuing changes. After some years, it appears that institutions no longer find accreditation challenging, even if they are given recommendations and are looking for other external procedure with which to challenge them. Accrediting bodies should look into putting the entire accreditation process to use and finding new ways to sustain motivation in healthcare organizations (e.g. pay more attention to educating organisations regarding the strategic goals, refine the standard criteria to eliminate repetition and jargon, and incorporate organizational and departmental achievements into the summation conference at the end of survey week, as a means of closure for staff). It is important that entities in this position review the accreditation process on an ongoing basis in order that it remains an impetus for healthcare organizations to continue to improve quality. Healthcare professionals (especially physicians) have to be educated on the potential benefits of accreditation. It is also important that accreditation bodies take physicians' disengagement from the accreditation process seriously and devise means to increase doctors' involvement.

At this point we do not know how to achieve sustainability as the evidence is largely anecdotal, but sufficient size (in terms of population and thus potential institutional customers or members), health system resources and structural frameworks seem to be preconditions for programmes to succeed (Shaw et al., 2010). In smaller countries, it is difficult to form peer review teams without any conflict of interest, especially for the assessment of academic and tertiary centers (Shaw et al., 2010). It is also necessary to be conducted a rigorous, independent evaluation of the cost-benefit analysis of accreditation of health services (Alkhenizan et al., 2012). A clearer definition of the expected benefits would enable measurement and monetization to determine whether the benefits do outweigh the costs (Mumford et al., 2013). Smits et al. (2014) determined that hospital accreditation is in a period of rapid international expansion and the achievement of the potential results depends on far more public available information and on the developers' willingness to reinvent the wheel in fundamental areas such as the development of standards, the training of surveyors and the use of incentives. Smits et al. (2014) proposed that a careful re-examination of the business model of successful schemes in the developed world and

a commitment to reporting and sharing information could help this important field move forward quickly.

The optimal impact and value of the accreditation methodology will be achieved when it is fully recognized as an ongoing capacity building tool; as a knowledge mobilization tool; as an investment rather than an expense; and as a quality improvement and patient safety evaluation tool. This assumes that the methodology is applied at the organizational level and includes all systems of clinical services and management (Nicklin et al., 2017). The strategies that hospitals should implement to improve patient safety and organizational outcomes related to accreditation components remains unclear.

Accreditation is not an injectable solution for health reform, nor a panacea for all ills; it is a structured way of developing standards and assessing performance against those standards, and demands responsive management and governance to produce the intended improvements to institutions and to the health system (Shaw et al., 2010). Accreditation should not only be used to find problems but also to validate and recognize success (Pomey et al., 2010). Without this mandate, the accreditation process will undermine the very goals it hopes to reach (Pomey et al., 2010).

This thesis has several limitations. An unavoidable limitation is that reviewed studies may appear out-dated as new ones are published. However, this thesis includes recently published studies. Although the research was conducted in a comprehensive manner, the time limitation is the reason why some key literature has been missed. Electronic research is generally problematic and the value of additional references and information may have also been missed.

References

Abernethy, M.A., Chua, W.F., Grafton, J et al. (2006) *Accounting and Control in Health Care: Behavioural, Organisational, Sociological and Critical Perspectives.* Handbook of Management Accounting Research. Oxford: Elsevier. p. 805–29.

ACHS. (2002) The EQuIP Guide: A Framework to Improve Quality and Safety of Health Care. 3rd edn. Australia: *The Australian Council on Healthcare Standards.*

Akerlof, G. (1970). The market for 'lemons:' quality uncertainty and the market mechanism. *Quarterly Journal of Economics*. 84(3). p.488–500.

Al-Awa, B., Al Mazrooa, A., Rayes, O., El Hati, T., Devreux, I., Al-Noury, K., et al. (2012) Benchmarking the post-accreditation patient safety culture at King Abdulaziz University Hospital. *Annals of Saudi Medicine*. 32(2).p.143–50.

Alkhenizan, A. & Shawb, C. (2011) Impact of Accreditation on the Quality of Healthcare Services: a Systematic Review of the Literature. *Annals of Saudi Medicine*. 31(4).p.407–416.

Alkhenizan, A. & Shaw, C. (2012) The attitude of health care professionals towards accreditation: a systematic review of the literature. *Journal of Family Community Medicine*. 19(2).p.74.

Al Tehewy. M., Bssiouni, S., Habil, I. & EL Okda, S. (2009) Evaluation of accreditation program in non-governmental organizations' health units in Egypt: Short-term outcomes. International *Journal of Quality Health Care*. 21(3).p183-9.

Arce, H.E. (1998) Hospital accreditation as a means of achieving international quality standards in health. *International Journal of Quality Health Care.*10.p.469-72.

Awa, B., de Wever, A., Almazrooa, A., et al. (2011) The impact of accreditation on patient safety and quality of care indicators at King Abdulaziz University Hospital in Saudi Arabia. Research *Journal of Medical Sciences*.5 p.43-51.

Baker, S. & Dunn, D. (2006) Accreditation: the hallmark of educational quality. *Radiologic Technology*. 78.p.123–30.

Barker, K., Flynn, E., Pepper, G. et al. (2002) Medication errors observed in 36 health care facilities. Archives of Internal Medicine. 162.p.1897 –1903.

Beaulieu, N. & Epstein, A.M. (2002) National Committee on Quality Assurance health-plan accreditation: predictors, correlates of performance, and market impact. *Med Care*. 40.p.325 –37.

Berssaneti, F.T., Saut, A.M., Barakat, M.F. et al. (2016) Is there any link between accreditation programs and the models of organizational excellence? *Journal of School of Nursing University São Paulo*. 50. p.650–7.

Birkmeyer, N.J., Dimick, J.B, Share, D., et al. (2010) Hospital complication rates with bariatric surgery in Michigan. *JAMA.* 304.p.435-442

Bogh, S.B., Falstie-Jensen, A.M., Bartels, P., Hollnagel, E., Johnsen, S.P. (2015) Accreditation and improvement in process quality of care: a nationwide study. *International Journal of Quality Health Care*. 27(5).p.336-43.

Bohigas, L., Brooks, T., Donahue, T., Donaldson, B., Heidemann, E., Shaw, C., et al. (1998) A comparative analysis of surveyors from six hospital accreditation programmes and a consideration of the related management issues. *International Journal of Quality Health Care.* 10(1)p.7–13.

Borenstein, J., Badamgarav, E., Henning, J. et al. (2004) The association between quality improvement activities performed by managed care organisations and quality of care. *American Journal of Medicine*. 117.p.297–304.

Braithwaite, J., Westbrook, J., Pawsey, M. et al. (2006) A prospective, multimethod, multi-disciplinary, multi-level, collaborative, social-organisational design for researching health sector accreditation. *BMC Health Services Research.* 6.p.113.

Braithwaite, J., Westbrook, M., Travaglia, J. (2008) Attitudes toward the large-scale implementation of an incident reporting system. *International Journal of Quality Health Care*. 20.p.184–91.

Braithwaite, J., Greenfield, D., Westbrook, J., et al.(2010) Health service accreditation as a predictor of clinical and organizational performance: a blinded, random, stratified study. *Quality & Safety in Health Care*. 19.p.14-21.

Brasure, M., Stensland, J., Wellever, A. (2000) Quality oversight: Why are rural hospitals less likely to be JCAHO accredited? The *Journal of Rural Health*. 16. p.324-36.

Brubakk, K., Vist, G.E., Bukholm, G., Barach, P., Tjomsland, O. (2015) Systematic Review of Hospital Accreditation: The Challenges of Measuring Complex Intervention Effects, *BMC Health Services Research*.15.P.280.

Bukonda, N., Tavrow, P. & Abdallah, H. (2003) Implementing a national hospital accreditation program: the Zambian experience, *International Journal of Quality in Health Care*. 14(1).p. 7-16.

Burling, D., Moore, A., Taylor, S., SLa Porte, S., Marshall, M. (2007) Virtual colonoscopy training and accreditation: A national survey of radiologist experience and attitudes in the UK. *Clinical Radiology*. 62p.651-9.

CCHSA. (2001) AIM: Achieving Improved Measurement: Accreditation Program. Ottawa: *Canadian Council on Health Services Accreditation.*

Chandra, A., Glickman, S.W., Ou, F.S., Peacock, W.F., McCord, J.K., Cairns, C.B., et al. (2009) An analysis of the association of society of chest pain centers accreditation to american college of cardiology/american heart association non-st-segment elevation myocardial infarction guideline adherence. *Annals of Emergency Medicine.*54.p.17–25.

Chatterjee, A. (2017) Accreditation of Armed Forces Hospitals: An Imperative now. *Medical Journal Armed Forces India.* 73(3).p.213–215.

Chen, J., Rathore, S.S., Radford, M.J., et al. (2003) JCAHO accreditation and quality of care for acute myocardial infarction. *Health Affairs.* 22 .p.243-54.

Collopy, B.T. (2000) Clinical indicators in accreditation: an effective stimulus to improve patient care. *International Journal of Quality Health Care*. 12. p.211–6.

Daucourt, V., Michel, P. (2003) Results of the first 100 accreditation procedures in France. *International Journal of Quality Health Care.* 15.p.463–71.

.Desveaux, L., Mitchell, J.I., Shaw, J., & Ivers, N.M. (2017) Understanding the impact of accreditation on quality in healthcare: Agrounded theory approach. *International Journal for Quality in Health Care*. 29 (7).p. 941-947.

Devers, K.J., Pham, H.H. & Liu, G. (2004) What is driving hospitals' patient safety efforts? *Health Affairs.* 23.p.103–15.

De Walcque, C., Seuntjens, B., Vermeyen, K. et al.(2008) Comparative Study of Hospital Accreditation Programs in Europe. Health Services Research (HSR). Brussels: *Belgian Health Care Knowledge Centre (KCE)*.

Dickison, P., Hostler, D., Platt, T.E. et al.(2006) Program accreditation effect on paramedic credentialing examination success rate. *Prehospital Emergency Care.*10.p.224–8.

Duckett, S. (1983) Changing hospitals: the role of hospital accreditation. *Social Science & Medicine*17.p.1573–9.

Eddy, D.M. (1998) Performance measurement: problems and solutions. *Health Affairs*.17.p.7–25.

Ehlers, L.H., Jensen, M.B., Simonsen, K.B., Rasmussen, G.S., & Braithwaite, J. (2017). Attitudes towards accreditation among hospital employees in Denmark: a cross-sec-tional survey. *International Journal for Quality in Health Care*.p.1–6.

El-Jardali,F., Hemadeh, R., JaafarM. et al. (2014) The impact of accreditation of primary healthcare centers: successes, challenges and policy implications as perceived by healthcare providers and directors in Lebanon. *BMC Health Services Research*, 14(86).

Fairbrother, G., Gleeson, M. (2000). EQuIP accreditation: feedback from a Sydney teaching hospital. *Aust Health Rev*. 23.p.153-62.

Flodgren, G., Pomey, M.P., Taber, S.A., Eccles, M.P. (2011) Effectiveness of external inspection of compliance with standards in improving healthcare organisation behaviour, healthcare professional behaviour or patient outcomes. *Cochrane Database Syst Rev*. 11.

Fortes, M.T., Mattos, R.A. & Baptista, T.W. (2011) Accreditation or accreditations? A comparative study about accreditation in France, United Kingdom and Cataluna. *Rev Assoc Med Bras*.57.p.239-46.

Frisino, J. (2002) COA's accredit system: Checks, balances, and firewalls. *Behav Health Accredit and Accountability Alert.* 17(6).p.1–4.

Gabriele, P., Malinverni, G., Bona, C. et al. (2006) Are quality indicators for radiotherapy useful in the evaluation of service efficacy in a new based radiotherapy institution? *Tumori* .92.p.496 –502.

Grasso, B.C., Rothschild, J.M., Jordan, C.W. et al. (2005) What is the measure of a safe hospital? Medication errors missed by risk management, clinical staff, and surveyors. *J Psychiatr Pract* .11.p.268 –73.

Greco, M., Sweeney, K., Brownlea, A. et al.(2001) The practice accreditation and improvement survey (PAIS). What patients think. *Aust Fam Physician*. 30.p.1096 – 100.

Greenfield, D. & Braithwaite, J. (2008) Health sector accreditation research: a systematic review. *International Journal for Quality in Health Care*. 20(3).p. 172-183.

Greenfield, D., Pawsey, M., Naylor, J. et al. (2009) Are accreditation surveys reliable? *International Journal of Health Care Quality Assurance.* 22.p.105–16.

Greenfield, D., Pawsey, M. & Braithwaite, J. (2011). What motivates professionals to engage in the accreditation of healthcare organizations? *International Journal for Quality Health Care.* 23(1).p.8–14.

Greenfield, D., Pawsey, M., Yen, D. & Dennis C. (2016) ISQUA16-2863 Assessing the longitudinal impact of safety and quality reforms: An analysis of the

achs pilot accreditation program in Hong Kong. *International Journal for Quality in Health Care*.28 (1).p.65-66.

Griffith, J., Knutzen, S. & Alexander, J. (2002) Structural versus outcomes measures in hospitals: A comparison of Joint Commission and Medicare outcomes scores in hospitals. *Qual Manag Health Care.* 10.p.29–38.

Gropper, R. (1996) Educational outcomes and specialized accreditation. *Nurse Educ*. 21.p.8–10.

Gross, P., Braun, B., Kritchevsky, S. et al. (2000) Comparison of clinical indicators for performance measurement of health care quality: a cautionary note. *Clin Perform Qual Health Care*.8.p.202–11.

Hayes, J. & Shaw, C. (1995) Implementing accreditation systems, *International Journal Quality Health Care*. 7.p165-71.

Heuer, A.J. (2004) Hospital accreditation and patient satisfaction: testing the relationship. *J Healthc Qual*. 26.p.46–51.

Hibbard, J., Stockard, J. & Tusler, M. (2003) Does publicizing hospital performance stimulate quality improvement efforts*? Health Affairs.* 22.p.84–94.

Hurst, K. (1997) The nature and value of small and community hospital accreditation. *International Journal of Health Care Quality Assur*ance.10.p.94–106.

JCAHO. (2005) Comprehensive Accreditation Manual for Hospitals (CAMH). Illinois: *Joint Commission Resources*.

Jovanovic, B. (2005) Hospital accreditation as method for assessing quality in healthcare. *Oncology* .13.p.156–7.

Juul, A.B, Gluud, C., Wetterslev, J. et al. (2005). The effects of a randomized multi-centre trial and international accreditation on availability and quality of clinical guidelines. *Int J Qual Health Care Inc Leadersh Health Serv.*18.p.321–8.

Lee, O. F., & Davis, T. R. (2005). International patients: a lucrative market for US hospitals. *Health Marketing Quarterly*, 22(1).p.41-56.

Lee, H.S. & Yang, Y.J. (2014) The effects of the healthcare accreditation on hospital employees' satisfaction level and hospital management performance. *J Digit Converg*. 12(1).p.431–443.

Lewis, S. (2007) Accreditation in Health Care and Education: The Promise, The Performance, and Lessons Learned. Raising the Bar on Performance and Sector Revitalization. *Access Consulting Ltd*.

Liu, S-H, Wu, J-N, Day, J-D et al. (2015) Mortality and cost of radiation therapy for oesophageal cancer according to hospital accreditation level: a nationwide population-based study. *European Journal Cancer Care*. 24. p.333–9.

Lovern, E. (2000) Accreditation gains attention. *Mod Healthc*.30.p.46.

Low, L. (2012) Medical clinician surveyors in the hospital accreditation process: their motivations for participating, the factors that influence them and how they deal with those influences.

Luce, J.M., Bindman, A.B. & Lee, P.R. (1994) A Brief History of Health Care Quality Assessment and Improvement in the United States. *Western Journal of Medicine.*160(3).p.263-68.

Luderus, E. (1996) The ACHS evaluation and quality improvement program (EQuIP): helping to give confidence to our future. *Aust Emerg Nurs J*.1.p.21–5.

Lutfiyya, M.N., Sikka, A., Mehta, S. & Lipsky M. S. (2009). Comparison of US accredited and non-accredited rural critical access hospitals. *International Journal for Quality in Health Care*. 21(2).p.112-118.

Makai, .P, Klazinga, N., Wagne,r C. et al. (2009) Quality management and patient safety: survey results from 102 Hungarian hospitals. *Health Policy (New York)*.90.p.175–80.

May, C. & Finch, T.(2009) Implementing, embedding, and integrating practices: an outline of normalization process theory. *Sociology.* 43.p.535–54.

Mazmanian, P.E., Kreutzer, J.S., Devany, C.W. et al.(1993) A survey of accredited and other rehabilitation facilities: education, training and cognitive rehabilitation in brain-injury programmes. *Brain Inj*.7.p.319–31.

Menachemi, N., Chukmaitov, A., Brown, L.S., Saunders, C., Brooks, R.G. (2008) Quality of care in accredited and nonaccredited ambulatory surgical centers. *Jt Comm J Qual Patient Saf*.34(9).p.546–51.

Merkow, R.P., Chung, J.W., Paruch, J.L. et al. (2014) Relationship between cancer center accreditation and performance on publicly reported quality measures. *Annals of Surgery*. 259.p.1091–7.

Miller, M.R., Pronovost, P., Donithan, M. et al. (2005) Relationship between performance measurement and accreditation: implications for quality of care and patient safety. *Am J Med Qual*. 20.p.239 –52.

Miller, S. (2009) Surveyor Participation in Safety and Quality Accreditation. Australian Commission on Safety and Quality in Health Care. Australia.

Montagu, D. (2003) Accreditation and other External Quality Assessment Systems for Healthcare: Review of Experience and Lessons Learned. London: *UK Department for International Development, Health Systems Resource Centre*.

Mumford, V., Reeve, R., Greenfield, D., Forde, K., Westbrook, J., Braithwaite. J. (2015) *International Journal for Quality in Health Care*, 27(6).p.479-485.

Nandraj, S., Khot, A., Menon, S. & Brugha, R. (2001) A stakeholder approach towards hospital accreditation in India. *Health Policy Plan*. 16(2).p.70-9.

Ng, K., Leung, G.K., Johnston, J.M. & Cowling, B.J. (2013) Factors affecting implementation of accreditation programmes and the impact of the accreditation process on quality improvement in hospitals: a SWOT analysis. *Hong Kong Med J.*19(5).p.434–46.

Nguyen, N.T., Nguyen, B., Nguyen, V.Q., Ziogas, A., Hohmann, S., Stamos, M.J. (2012) Outcomes of bariatric surgery performed at accredited vs nonaccredited centers. *J Am Coll Surg*. 215(4).p.467–74.

O'Connor, E., Fortune, T., Doran, J. et al. (2007) Involving consumers in accreditation: the Irish experience. *Int J Qual Health Care*. 19.p.296–300.

Perneger, T.V., Stonborough, M.J. (2004) Types of articles we want to publish. *Int J Qual Health Care*. 16.p.105–6.

Peterson, C.A. (2003) Management, faculty, and accreditation outcomes: a survey of physical therapy faculty and program directors. *J Phys Ther Edu*. 17.p.22–31.

Pickering, E. (1995) Evaluating the benefits and limitations of an accreditation system. *World Hosp Health Serv*. 31.p.31–5.

Pindur, W., Rogers, S.E. & Kim, P.S.(1995) The history of management: a global perspective. *J Manage Hist*.1.p.59–77.

Plebani, M. (2001) Role of inspectors in external review mechanisms: criteria for selection, training and appraisal. *Clin. Chim. Acta.* 309(2).p.147–54.

Pomey, M.P., Contandriopoulos, A.P., Francois, P. et al. (2004) Accreditation: a tool for organizational change in hospitals? *Int J Qual Health Care Inc Leadersh Health Serv*. 17.p.113–24.

Pomey, M.P., Lemieux-Charles, L., Champagne, F. et al. (2010) Does accreditation stimulate change? A study of the impact of the accreditation process on Canadian healthcare organizations. *Implementation Science*.5.p31.

Pongpirul, K., Sriratanaban, J., Asavaroengchai, S. et al. (2006) Comparison of health care professionals' and surveyors' opinions on problems and obstacles in implementing quality management system in Thailand: a national survey. *Int J Qual Health Care*.18.p.346–51.

Quimbo, S., Peabody, J., Shimkhada, R., Woo, K. & Solon, O. (2008) Should we have confidence if a physician is accredited? A study of the relative impacts of accreditation and insurance payments on quality of care in the Philippines. *Soc Sci Med*.63.p.505–10.

Robert, M.D., James, S., Jack, G., et al. (1987) A history of the joint commission on accreditation of hospitals. *J Am Med Assoc*. 258.p.21.

Sack, C., Scherag, A., Lutkes, P., et al. (2011) Is there an association between hospital accreditation and patient satisfaction with hospital care? a survey of 37,000 patients treated by 73 hospitals. *Int J Qual Health Care*. 23.p.278-283.

Saleh, S.S., Sleiman, J.B., Dagher, D. et al. (2013) Accreditation of hospitals in Lebanon: is it a worthy investment? *Int J Qual Heal Care*. 25.p.284–90.

Salmon, J.W., Heavens, J., Lombard, C., et al. (2003) Operations research results, The Impact of Accreditation on the Quality of Hospital Care: KwaZulu-Natal Province, Republic of South Africa. *Bethesda U.S. Agency for International Development (USAID) by the Quality Assurance Project*, *University Research*.p.1–56.

Saut, A.M., Berssaneti, F.T., Moreno, M.C. (2017) Evaluating the impact of accreditation on Brazilian healthcare organizations: A quantitative study. *International Journal for Quality in Health Care*.29 (5).p.713–721

Schmaltz, S., Williams, S., Chassin, M.R., Web, J. & Wachter, R. (2011) Hospital performance trends on national quality measures and the association with Joint Commission accreditation. *J Hosp Med*.6(8).p.454–461.

Schneider, I., & Sonmez, S. (1999). Exploring the touristic image of Jordan. *Tourism Management.* 20(4).p.539 - 542.

Schyve, P.M. (2000) The evolution of external quality evaluation: observations from the Joint Commission on Accreditation of Healthcare Organizations. *Int J Qual Health Care*.12.p.255–8.

Scrivens, E. (1995) Accreditation: Protecting the Professional or the Consumer? Buckingham: *Open University Press*.

Scrivens, E. (1996) A taxonomy of the dimensions of accreditation systems. Soc Policy Admin. 30.p.114-24.

Scrivens, E. (1997) Assessing the value of accreditation systems. *Eur J Public Health* .7.p.4–8.

Scrivens, E. (1997) Putting continuous quality improvement into accreditation: improving approaches to quality assessment. *Qual Health Care*. 6.p.212–8.

Scrivens, E. (1997) Impact of accreditation systems upon patient care. Scrivens, E., Klein, R. & Steiner, A. (1995) Accreditation: what can we learn from the Anglophone model? *Health Policy* .34.p.193–204.

Sekimoto, M., Imanaka, Y., Kobayashi, H., Okubo, T., Kizu, J. & Kobuse, H. (2008) Impact of hospital accreditation on infection control programs in teaching hospitals in Japan. *Am J Infect Control*.36.p.212–9.

Shaw, C.D. (2000) External quality mechanisms for health care: summary of the ExPeRT project on Visitatie, Accreditation, EFQM and ISO assessment in European Union countries. *Int J Qual Health Care*.12(3).p.169–75.

Shaw, C.D. (2003) Evaluating accreditation. *Int J Qual Health Care*.15.p.455–6

Shaw, C.D. (2006) Developing hospital accreditation in Europe. Geneva; WHO Regional Office for Europe.

Shaw, C., Kutryba, B., Braithwaite, J., Bedlicki, M., Warunek, A. (2010) Sustainable healthcare accreditation: messages from Europe in 2009. *Int J Qual Saf Health Care*.22.p.341-50.

Shaw, C.D., Braithwaite, J., Moldovan, M., et al. (2013) Profiling healthcare accreditation organisations: an international survey, *Int J Quality Care*. 25(3).p.222–231.

Shaw, C.D., Groene, O., Botje, D., et al. (2014) The effect of certification and accreditation on quality management in 4 clinical services in 73 European hospitals. *Int J Qual Health Care*.26 (1).p.100-107.

Sheahan, M. (1999) Customer focus: patient, organisation and EQuIP in collaboration. *J Qual Clin Pract*.19.p.139-44.

Shin, Y. S. (1995). Hospital accreditation – a universal perspective. *World Hospitals.*31(1).p. 22–28.

Sicotte, C., Champagne, F., Contandriopoulos, A.P. et al. (1998) Conceptual framework for the analysis of health care organizations' performance. *Health Serv Manage Res*.11.p.24–48.

Silver, M., Geis, M. & Bateman, K. (2004) Improving health care systems performance: a human factors approach. *Am J Med Qual*. 19.p.93–102.

Simons, R., Kasic, S., Kirkpatrick, A. et al.)2002) Relative importance of designation and accreditation of trauma centers during evolution of a regional trauma system. *J Trauma*.52.p.827–34.

Smits, P., Champagne, F., Contandriopoulos, D., Sicotte, C. and Prevail, J. (2008) Conceptualizing performance in accreditation. *International Journal for Quality in Health Care*. 20(1).p.47-52.

Smits, H., Supachutikul, A., Mate, K.S. (2014) Hospital accreditation: Lessons from low- and middle-income countries. *Global Health*.10.p.65.

Snyde,r C. & Anderson, G. (2005) Do quality improvement organizations improve the quality of hospital care for Medicare beneficiaries? *J Am Med Assoc*. 293.p.2900–7.

Stoelwinder, J. (2004) A study of doctors' views on how hospital accreditation can assist them provide quality and safe care to consumers. Melbourne, Australia: Monash University, Department of Epidemiology and Preventive Medicine.

VanSuch, M., Naessens, J., Stroebel, R. et al.(2006) Effect of discharge instructions on readmission of hospitalised patients with heart failure: do all of the Joint Commission on Accreditation of Healthcare Organizations heart failure core measures reflect better care? *Qual Saf Health Care*.15.p.414 –7.

Viswanathan, H., & Salmon, J. W. (2000). Accrediting organizations and quality improvement. *American Journal of Managed Care.* 6(10).p.1117–1130.

Wagner, L. M., McDonald, S. M., Castle, N. G. (2012a). Impact of voluntary accreditation on deficiency citations in U.S. nursing homes. *The Gerontologist.*

Wagner, L. M., McDonald, S. M., Castle, N. G. (2012b). Relationship between nursing home safety culture and Joint Commission accreditation. *The Joint Commission Journal on Quality and Patient Safety*.38(5).p.207-215.

Walshe, K. & Smith, J. (2006), *Healthcare Management*, Open University Press, Maidenhead.

WHO. (2003) Quality and accreditation in health care services: a global review. Geneva: WHO.

Williams, S.C., Schmaltz, S.P., Morton, D.J. et al. (2005) Quality of care in U.S. Hospitals as reflected by standardized measures, 2002–2004. *N Engl J Med*. 353.p.255–64.

Williams, S.C., Watt, A., Schmaltz, S.P. et al. (2006) Assessing the reliability of standardized performance indicators. *Int J Qual Health Care*.18.p.246–55.