



APPENDIX 1: REVIEW OF  
THE LITERATURE ON THE  
ROLE OF THE BOARD IN  
THE IMPROVEMENT OF  
QUALITY AND SAFETY IN  
HEALTHCARE  
ORGANIZATIONS

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## TABLE OF CONTENTS

<b>I- Introduction</b> .....	<b>1</b>
<b>II- Methodology</b> .....	<b>2</b>
<b>III- The board’s role in quality and safety</b> .....	<b>3</b>
1. Vision.....	3
2. Resourcing and skills development .....	5
<i>A. Resourcing</i> .....	5
<i>B. Skills development</i> .....	5
3. Relationship management.....	6
4. Control and monitoring .....	8
Conclusion .....	10
Bibliography .....	11
Appendix 1: Summary of empirical papers reviewed .....	16



## I- INTRODUCTION

Patient safety and the quality of care have been major healthcare issues in past years and studies show that safety and quality problems are common in a number of healthcare systems. In the United States, for example, the Institute of Medicine report *To Err Is Human* (IOM, 1999) identified healthcare errors as a major public health issue that leads to the death of between 44,000 and 98,000 Americans per year (Baker & Norton, 2004; Bader, 2006). In 2001, another Institute of Medicine report, *Crossing the Quality Chasm* (IOM, 2001), again documented widespread problems in the quality and safety of care. The findings of these and other studies have led to a number of U.S. initiatives to improve quality and safety, including the JCAHO's national safety patient goals and the IHI 100,000 Lives Campaign (Bader, 2006). In the U.K., Australia, New Zealand and Denmark, findings suggest that 10% of hospitalization may result in some kind of adverse outcome (DOH, 2003). In Canada, meanwhile, one study estimated that 7.5% of patients admitted to acute care hospitals in 2000 experienced one or more adverse events, 36.9% of which were highly preventable (Baker et al, 2004). Another study of a Canadian teaching hospital found that 12.7% of hospitalizations were associated with an adverse event; of these, 38% were preventable and 61% occurred after the patient's admission to the facility (Forster, 2004). Other researchers estimate that adverse events are responsible for the death of 5,000 to 10,000 Canadians per year (Wong, 2004). Faced with these striking statistics, many healthcare organizations have used quality improvement processes to assess and improve the quality and safety of care. Many of these processes emphasize the importance of an organization's commitment to quality and safety and the value of implementing programs in these areas. In this context, the role of boards of directors has emerged as an important one. Improvements in the availability and quality of information at the hospital level and within other healthcare delivery organizations have led to a push for the more active involvement of boards and management teams in the review of quality and safety measures. Interest in the role of governance in improving quality and safety has also grown among governments increasingly preoccupied by the growing amount of public resources dedicated to the healthcare system, a phenomenon that has prompted them to require greater accountability on the part of healthcare providers and healthcare organizations (Braitwaite, 2008; Jiang, 2008; Clough & Nash, 2007; IHI, 2007, TGI, 2002). In this review we use "governance" to refer to a multidimensional concept: the "actions taken to steer society toward identified goals" (Shortt, 2006, Rhodes, Hatchuel, 2000) or as the nature of the relationship between an organization and its owners (Denis, 2007; Pomey et al., 2007; Denis et al., 2006). In an organizational context, "governance" refers to "the policies, processes, and structures used by organizations to direct and control its activities, achieve its objectives, and protect the interests of its diverse stakeholder groups in a manner consistent with appropriate ethical standards" (The Institute of Internal Auditors, 2006, p.4.)

While there is a growing interest in the potential role of boards of directors ("the board") in quality and safety improvements, most literature on quality and safety management rarely mentions the board at all (Youngberg et al., 2004, Donabedian, 2003; Kavalier et al., 2003; Lighter et al., 2004; McLaughlin et al., 2006). The historical allocation of responsibilities between the administration and the medical staff of healthcare organizations may be one reason for this devaluation of the board's role. Traditionally, the administration has been responsible for financial and operational issues, while medical staff were charged with the quality of care. The growing complexity of clinical care has only entrenched this divide. Most board members (and many CEOs) are not clinicians and feel that because they lack expertise in clinical care, they also lack the legitimacy to interact with clinicians about quality and safety issues (IHI, 2007), however personally concerned they may be (Mc Ginn, 2007; Sandrick 2007; Combes, 2008). Moreover, there are few studies of the effectiveness of board structures and board processes related to quality and safety. A literature review on patient safety and healthcare error in the Canadian health system finds only brief mention of the commitment and support of the board as a potential strategy for healthcare improvement and does not elaborate on its specific role (Baker & Norton 2001b). Yet, other management research (Alexander 2006, Berwick 2006, Joshi 2006, McDonagh 2006, Shortell 2006, Weiner 1996, 2007) has suggested that defining the responsibilities of hospital boards might improve quality and safety. In addition, recent research on the role of governance in high-performing organizations

(Zablocki 2007; Bader, 2006; Vaughn, 2006; Kroch, 2006) shows a correlation between hospital performance and certain attributes of the board. The Institute for Healthcare Improvement's widely publicized "Board On Board" initiative (IHI, 2007; Hader, 2007; Bisognano, 2005) and popularized works on governance (e.g., Carver and Orlikoff<sup>1</sup>) have also found that boards have a critical role in quality and safety improvement.

Growing interests of government and accreditation agencies is helping to stimulate greater examination of the role of governance in improving quality and safety. It is our hypothesis that, like efforts to improve information on healthcare performance, continuing, sustainable improvements of care will result from convergent actions across various levels of governance within healthcare systems. Boards of directors of healthcare institutions have a vital role to play in this dynamic. Accordingly, we have performed the present literature review that focuses on various aspects of board governance in relation to quality and safety of care.

## II- METHODOLOGY

Our search strategy focused on electronic journal databases in the domains of healthcare organization and management and health services research. We searched articles for the period between 1990 and 2007 using three main databases: Medline Ovid (1996-2007), Embase Ovid (1988-2007) and AbiInform (1900-2007). We first used the following keywords: quality improvement and governance; governance and safety; safety of care and governance; board and quality of care; board and patient safety; board influence and quality of care; board influence and patient safety; governing body and quality improvement; governing body and quality of care; governing body and patient safety; total quality management and board; and continuous quality improvement and board. This strategy allowed us to identify a preliminary set of 35 papers. We then analyzed a sub-sample of the papers in order to refine our keywords. Next, we searched anew using the following keywords: board and quality improvement in healthcare; board and quality improvement and healthcare organization; governing body and quality of care; governing body and patient safety; board role and quality of care; board role and patient safety; board of directors and quality of care; board of directors; and patient safety, for electronic search. From the reference list of published material generated by both searches, we identified additional material. In order to broaden our access to articles from different professional disciplines, we also added two databases: Business Source Premier (EBSCO) and ISI Web of Science. This procedure brought up papers in journals that were not indexed in the databases that we first explored (e.g., Journal of Management Studies, Organization Studies, Health Care Management Review, International Journal for Quality in Health Care, Quality in Health Care, Quality Letter for Healthcare Leaders, Journal of Healthcare Quality, Medical Care Review, and Trustee). We supplemented our database search by applying our revised keywords to online search engines such as Yahoo, Google, and Google Scholar. We also searched the following websites for research reports and grey literature: Institute for Healthcare Improvement (IHI), The Governance Institute, Institute of Medicine (IOM), Institute for Governance of Private and Public Organizations (IGOPP), National Quality Forum (NQF), International Forum on Quality (IFQ), Service Delivery and Organization Research and development program (SDO – NHS), National Health Service (Wales, Scotland), NHS National Patient Safety Agency, Agency for Healthcare Research and Quality (AHRQ), Haute Autorité de Santé (HAS), Commonwealth fund, King's Fund, International Society for Quality in Health Care (ISQua), Australian Commission for Safety and Quality in Health Care, Australian Safety and Quality Council, Victorian Quality Council, Joint Commission on Accreditation of Healthcare Organizations,

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<sup>1</sup> Carver J. « Boards that make a difference: A new design for leadership in non-profit and public organizations» 2nd ed., San Francisco: Jossey-Bass, 1997. Dennis D. Pointer, James E. Orlikoff. «Getting to Great: Principles of Health Care Organization Governance», Jossey Bass, 2002. Pointer, D.D., Orlikoff, J.E. «Board Work: Governing Health Care Organizations». Jossey Bass, 1999.

Quality and safety, Quality in health care, WHO collaboration on patient safety, Health Quality Council of Alberta (HQCA), U.S. National Patient Safety Foundation, Baldrige National Quality Program, The National Quality Institute (NQI). We included all documents published between 1990 and 2008 that related to our search terms.

Finally, we extended our review to integrate key studies on the managerial and organizational determinants of quality and safety of care (for example, Hoff et al, 2004, Weiner and al. 2006, Waring, 2005; Shortell et al., 1995, Øvretveit, 2002; Kathri and Baveja A., 2006; Baker et al, 2007) in the expectation that these papers would provide additional insight on the link between governance and the quality and safety agenda. For a summary table of empirical papers reviewed, please see Appendix 1.

In total, our search produced 126 papers that ranged from literature reviews to empirical papers, reports, guidelines, viewpoints, working papers, and book chapters. All addressed the role of the board in quality and safety and the relation between board policies and actions and quality and safety improvements. Discussion on the role and influence of boards as a key lever for improving quality and safety has become much more common in the last few years; papers from earlier years are often less specific about the mechanisms and need for board involvement. These shifts in views will be commented on in our assessments of this literature.

### III- THE BOARD'S ROLE IN QUALITY AND SAFETY

Overall, the literature is much more prescriptive than it is empirical. Furthermore, with the exception of a limited set of papers, the conceptual underpinnings of the publications we reviewed are weak. Nonetheless, we consider that the available literature is sufficiently developed to identify key issues related to board involvement and to orient the development of case studies on board practices in regard to quality and safety. The literature provides a relatively fine-grained description of potential board roles and tasks under each of the governance functions that could help improve quality and safety. Having said this, studies that provide empirical evidence on the relationships between board functions and demonstrated improvement in quality and safety are either scarce or based on anecdotal evidence. Still, some studies are more grounded in existing theoretical frameworks and studies on governance and may provide plausible insights on the potential relationships between board functions and quality and safety improvements.

The literature we analyzed here suggests that there is a consensus on the need for greater board involvement in quality and safety improvements (Jiang, 2008; Callender et al., 2007; Meyers, 2004). For the purposes of our discussion, we have used our previous work on governance to define governance as a limited set of functions (Denis, Champagne, Pomey et al., 2005; Lee, 2008): vision; resourcing, information and skills development; relationship management; and control and monitoring.

#### 1. VISION

Vision encompasses not only the act of defining substantive goals for an organization but also the fundamental values that support organizational action (White, 2001). Because of the centrality of vision to good governance, the board must pay close attention to the formulation of vision statements and policies that make vision effective within the organization (Carver, 1997). This procedure counterbalances the executive team's tendency to become absorbed by immediate imperatives and possibly neglect the organization's long-term needs. Through vision statements, mission statements and broad implementation strategies, the board aims to better align strategic and operational goals in regard to quality and safety (Weiner et al 1996, Reinertsen, 2007; Reinertsen 2003, Braithwaite, 2008). Ultimately, the board's mission is to ensure that the best possible care is delivered and that patients are not harmed (IHI, 2007). The board has a key role in establishing policies and guidelines that help to drive the quality transformation process (Lister 2006). The board also plays a role in defining priorities for the executive team and medical staff leaders (Spath 1998). Elaboration of policies and guidelines

concerning quality and safety has been often delegated to the medical profession. However, board members (and members of a quality committee) have a key role in the process of ensuring alignment of those activities with the goals and mission of the organization (Reinertsen 2003). Furthermore, the board has to integrate financial, strategic and quality planning (Bader, 2007).

The board also has a role in nurturing the organization's commitment to a continuous improvement agenda (Spath 1998) and has to translate their values into effective oversight (Keroack, 2007). In order to be effective, the board must commit itself to the process and translate that commitment into identifying strategic priorities and monitoring plans that actively engage all staff (Stanton, 2006). The board has to ensure that the clinical and organizational initiatives in place to enhance quality and safety are ongoing process and involve long-term effort to improve services and healthcare outcomes (Braithwaite, 2008) and move the quality agenda forward (Becker 2006).

The board's leadership role in quality and safety is demonstrated through initiatives for the development of a safety and quality culture (NHS, 2004) that support team work (Reinertsen, 2007) and help set safety goals while providing the resources to achieve them (Reinertsen, 2001). Overall, the board should serve as the driving force behind all quality and safety efforts in the organization (Sandrick 2007). Leaders help determine the culture of safety by encouraging exchange of ideas, reporting errors, and problem-solving. Continuous education is a recommended approach to encourage staff to engage in the process of improving services and quality of care (Braithwaite, 2008). However, creating a culture of safety is difficult because healthcare organizations are complex and there are several barriers related to safety perception according to the notion of blame for errors, fear of lawsuits, focus on individual performance and malpractice litigation about open reporting of errors (Leape 2002; Watcher, 2002). Progress in improving quality and safety depends on how successfully those barriers are addressed (Leape, 2005). Boards can use different tools to help create and implement a culture of safety that empowers staff, managers and physicians to improve patient-related care (HQCA, 2007). Examples of these tools are quality/safety rounds by board members, performance indicator reports, dashboards, and the routine addition of patient safety and quality topics to board meeting agendas. However, there are four important areas they have to consider: implementation of health system information; wide diffusion of proven and safe practices, spread of training on teamwork and safety and quality; and full disclosure to patients following injury (Leape, 2005).

The board can communicate its commitment to quality improvement (QI) through membership on various staff committees. The board must also make sure that medical staff is involved in QI and patient safety initiatives (Weiner et al, 1993, 1997). The board's leadership relies on close connections with key stakeholders within the organization: managers, physician leaders in quality improvement processes and other professionals (Weiner et al, 1997).

Board members must invest in processes that promote the legitimacy of a safety and quality culture (Baker & Norton, 2001a; Baker & Norton, 2001b; Weiner et al., 1997, Lister, 2006; Myceck 2001). They must also initiate a cultural shift that will help different groups of professionals work together (Nicholls, 2001). A key element of a quality and safety culture is the shift from a culture of punishment and blame towards a culture that promotes the identification and reporting of near misses and adverse events (Sheps, 2005, NHS, 2004). Promoting a culture of patient safety can be seen as an essential ingredient to understanding and integrating quality and safety into all care delivery processes (Reeder, 2001). This culture must be founded on a clear, common understanding of quality and safety, and must support and empower all categories of personnel:

*“To improve patient-related care using strategies such as regular safety culture surveys of staff, regular quality/safety rounds, regular (transparent) performance indicator reports, administrative walkabouts, routine addition of patient safety and quality topics to all meeting agendas, and any other patient safety initiatives that would be appropriate” (HQCA, 2007 p.)*

## 2. RESOURCING AND SKILLS DEVELOPMENT

Resources and skills development provide the means by which organizations and their members can achieve the goals (the mission and vision) set by governance bodies. Resourcing emphasizes the need to align the supply of resources with the requirements of broad policy goals, while skills development refers to the generation of appropriate knowledge and expertise for good governance. The resourcing and skills development functions of the board affect the boards' internal development, the provision of knowledge needed in the development of the organization, and strategies for the acquisition of resources.

### A. Resourcing

According to the agency model of governance, the provision of sufficient human, financial, and knowledge resources to attain organizational goals is a fundamental responsibility of the principals (owners) of the organization. The board should have a strategy to maximize its contribution to resources acquisition (Denis et al., 2006). To assure the proper and sufficient resources needed for the attainment of quality and safety policy goals, boards must ensure that the budgetary process takes these goals into consideration (Reinertsen 2003, McGinn 2007). Resources may be allocated for various improvement activities: human resources development, reliable equipment, information management capabilities, or quality/safety infrastructure of the organization (Weiner et al, 1997; Spath 1998). The recruitment and retention of good clinical staff is a critical success factor for institutional quality, and it could become the single most important factor going forward (McGinn 2007). The board can also participate in the development of criteria that determine medical staff recruitment and promote quality and safety improvement activities.

### B. Skills development

**Board composition and recruitment:** Board members with quality/safety expertise are a key determinant of the board's involvement setting quality and safety orientation and policies (TGI, 2002). Boards are in general mainly composed of non-healthcare professionals. It could reasonably be supposed that this configuration restrains their involvement in quality and safety and encourages delegation of these matters to the CEO and medical staff (Reinertsen, 2007). Boards may use subcommittees to ensure the proper monitoring of quality and safety issues (Mycek, 2001; Sandrick, 2007; Carey, 2003), but the committees must be aligned with the roles and responsibilities of the board (Quigley et al., 2005). The primary responsibilities of quality committees can include performance improvement, the monitoring of clinical outcomes, and patient safety and patient satisfaction surveys. The members of the committee have to be carefully chosen. Committee composition might be based on the participation of medical staff, nursing officers, chief of staff and director of performance improvement and patient safety (Governance Institute, 2002, Bader 2007) and of members with quality/safety expertise from other professions (Reinertsen, 2007; Carey, 2003), with background from industry, education or another healthcare organization. However, they should not be intimidated by clinical issues and should be able to understand the issues in the healthcare context (Bader, 2007). Physician members of board quality committees can help educate other members about clinical information and support a proactive role for the committee (Bader, 2007).

Board committee responsibilities are to support and control quality and safety activities such as meeting attendance, data review, report writing, and communication with the board and other senior management (Carey, 2003). Findings of a recent study in the U.S. shows that boards with a quality committee can significantly enhance the board's oversight function because they are more likely to write policies, set goals and agenda, use tools, and follow up on corrective action related to adverse events in a process for improving quality and safety (Jiang 2008). Quality and safety issues should be regularly scheduled on board meeting agendas (Sandrick 2007; Meyers, 2004) and debated in almost all meetings (Governance Institute, 2002; NQF, 2004). It is suggested that board members spend over 25% of meetings discussing quality and safety issues. They should take ownership of quality problems and take time to talk to patients or their family members (IHI, 2007; Conway, 2006-2007-2008; Reinertsen, 2007). Also, it is the role and the responsibility of the board quality committee to make sure that quality and safety are part

of every board meetings and are the first items on agenda. It also has to ensure that data and “big dots” are reviewed and presented in way that allows all board members to understand and be able to solicit feedback and questions, and to make recommendations for policy changes when it is necessary to achieve quality and safety goals (Conway, 2008b).

**Board education:** Several strategies have been suggested to “get the board on board” (IHI, 2007). The education of board members is one means of increasing board members’ familiarity with quality and safety improvement processes within healthcare organizations and developing their familiarity with the problems faced by healthcare systems (Sandrick 2007). The literature mentions how appropriate educational programs can help board members engage and fulfill their role in quality and safety matters (Sandrick 2007, Lister 2006, Weiner 1993, 1997, Spath 1998). Education has been seen as a key initiative to developing capacity among board members. Education can help the board recognize its responsibility for quality and safety, understand the meaning of the quality and safety of care, acquire relevant skills and abilities, and mobilize it to play its role and meet its legal obligations. When boards have the necessary knowledge, skills and abilities to evaluate and align the strategic direction of their institution around quality and safety goals and monitor performance accordingly, they can play a more effective role in quality and safety oversight and leadership (Sandrick, 2007). To nurture board roles, board members’ attendance of educational sessions and conferences focusing on quality and safety issues should be encouraged (Lister 2006). Education can also serve to promote a culture of quality and to sensitize board members to the importance of responding to patient expectations in this regard (Spath 1998).

Education of the board may cover a variety of quality/safety aspect such as key quality measurement, performance improvement and patient safety processes, accreditation process and standards, clinical benchmarking, and customer service excellence training (bader, 2007).

Overall, it appears that educational initiatives targeting board members aim at fostering the board’s willingness to take a more active role in quality and safety issues. Such initiatives can show members how to take a more active role in monitoring and overseeing the improvement of care. They can also augment board capacity by disseminating basic knowledge on processes used to improve and monitor quality and safety of care. Except for material related to the IHI initiative “board on board” (IHI, 2007), we did not identify material that supported a greater involvement of boards in quality and safety issues to support through education. However, we found detailed guidelines on improving board practices that did not make specific reference to issues of quality and safety (Government of Saskatchewan, 2008).

### 3. Relationship management

The function of relationship management concerns both the relationship between the board and its stakeholders and the relationship between the board and the CEO (Denis et al, 2006). In addition to internal communication needs, boards have a role to play in enhancing the organization’s reputation and communicating with the outside environment (Weiner 1993).

**A. The relationship with the CEO and the executive team.** The board’s ability to manage its relationship with the CEO, top management, medical staff and the external environment in an effective manner can contribute to quality improvement (Weiner et al, 1993, 1997). In the organization, ultimately, boards and the CEO are accountable for quality and safety despite difficulties in practices (Braithwaite, 2008). Quality and safety may improve when the CEO and the board share a vision and when the board evaluates CEO performance based on elements that include quality/safety standards (Weiner et al, 1993). The quality of the relationship between the board and the CEO may limit CEO turnover and encourage CEOs to pursue long-term strategic quality objectives (Weiner, 1993).

The relationship between the board and the executive team is characterized by the inherent tension between two governance responsibilities. On one hand, the board must develop an effective accountability relationship with the CEO and the executive team. This relationship can push the parties toward more hierarchical and less collaborative relations (Donaldson, 1997 in AMR). On the other hand, the development

of co-operative relationships between the board and the CEO and the executive team is necessary to ensure the exchange of information, encourage mutual learning and enrich strategic thinking at the apex of the organization. An appropriate balance between these two governance responsibilities can be difficult to establish. Boards and CEOs might, for example, develop relationships based on trust and support, which are essential for smooth governance operations but which complicate the development of a strong accountability relationship insofar as quality and safety are concerned (McGinn 2007; Weiner et al, 1997). However, boards do have to put in place processes that provide feedback to the CEO in order for him or her to effectively manage activities and ensure that priorities set by the board are implemented (Greeley, 2008). The adoption of a stewardship model of governance has been proposed as a response to this dilemma (WHO, 2005; Denis et al., 2007).

In another way, systematic reporting of the CEO to the board regarding quality and safety initiatives can help the board focus its attention on problematic areas and encourage management to seek potential solutions (Brozovich 2006). To do this, it can be helpful to identify a limited number of quality and safety indicators that will help align strategic goals and operational activities in three different domains: finances, patient satisfaction and clinical indicators (Carey, 2003).

**B. The relationship with medical staff.** The relationship between medical staff and the board is another key element in the improvement of quality and safety (VHS, 2004). Insofar as medical staff is concerned, the board has a legally sanctioned responsibility to oversee staff activities. Clinicians can be held accountable in performing their duties by the board and senior management (Braithwaite, 2008). To be effective, however, board members must develop a strong relationship with staff by sharing information and reviewing clinical processes and their impact on quality and safety, regularly communicating positive results and experiences. The greater involvement of staff physicians in governance matters has been shown to have a significant positive relationship with measures of clinical involvement that may be conclusive to quality improvement (Weiner, 1997). Ideally, medical staff is actively involved in setting the agenda for the board's discussion surrounding quality (Lockee, Kroom, Zablocki, Bader, 2000; IHI, 2007). However, the responsibility for oversight of quality and safety cannot be delegated to the medical staff (Reinertsen, 2007)

Board can include quality-related goals in the executive team's incentive compensation plan (Bader 2007). Financial incentives, providers and institutions might be offered recognition (awards or rewards) or other incentives for adjusting institutional behaviour to enhance patient safety and quality (Shortt, 2006). It has been suggested that non-financial incentives can motivate personal, and encourage positive, behaviour changes (Pomey et al., 2008), and boards clearly have a role in celebrating the success of performance improvement projects within their organization (Spath, 1998). A direct relationship between financial incentives and better patient safety (Shortt, 2006) has not, however, been shown.

Boards must encourage team work and establish an effective communication system within and outside the organization (Nicholls, 2000).

Finally, the board must ensure that the organization has implemented a system to minimize clinical risk and to identify risks proactively. Medical staff has to regularly review and report critical incidents and potential critical incidents (Braithwaite, 2008). The board must also be sure that all staff, professionals and service users have played a full and active part in this process (NHS, 2004). For that, the board, in collaboration with the CEO and senior management, has to make sure that relevant systems (availability of data and evidence for best practice, information system, and other) are in place and provide leadership by participating in the performance management of the personnel (Braithwaite, 2008). The board leadership is expressed through direction-setting, such as establishing the mission, the vision and strategies for the organization concerning quality and safety (Conway, 2006). The leadership role in quality and safety improvement has to be played by leaders, managers, teams and groups of the organization (Øvretveit, 2004).

In the organization, each group has distinct responsibilities, but they need to understand their respective responsibilities and the need to work together for better performance of the organization (Greeley, 2008).

In the level of medical care services, a closely related concept to governance is “Clinical Governance;” it concerns accountability, effective end results, acceptable resource use, and appropriate ways of working and behaving (Braithwaite, 2008).

Safety is not only the result of medical mistakes: the systems that support staff in the delivery of safe, quality healthcare is also involved. This approach helped to develop the new NHS strategy – *Building a Safer NHS for Patients – and the Design for Patient Safety* initiative to rectify system failures that have, in the past, led to errors and accidents (DOH, 2003).

Overall, medical staff play a critical role in quality and patient safety when they are involved in the process and when they participate in committees. However, a strong and reliable infrastructure is required to develop, promote, and support quality and patient safety activities within the organization.

**C. The relationship with external stakeholders.** Governance bodies must support the accreditation process within the organization and compare their performance with the performance of other organizations. Through the accreditation process, the board attempts to respond to customer expectations and requirements (Weiner et al., 1993). Boards should ensure availability of adequate resources for this process that make the participation worthwhile (Braithwaite, 2008). The accreditation process can also help the organization promote board involvement in quality and safety. Weiner and al. (1993) and advance the idea that norms can force boards to conform and change their involvement. Recently, JCAHO and Accreditation Canada have placed greater emphasis on governance and quality and safety (Denis et al., 2006; Poniatowski, 2004).

Many initiatives have been developed: in the U.S, the Institute for Healthcare Improvement (IHI) initiated the *100,000 Lives Campaign*, a national effort to reduce preventable deaths in U.S. hospitals, and the Leapfrog Group is a voluntary program for quality and safety. In the U.K.’s National Health System, the National Patient Safety Agency is working to improve patient safety, and the *patient safety campaign* was initiated with the aim to save lives and reduce harm. In Canada there is the Baldrige National Quality Program (Joshi, 2006). In 2002, all members of the World Health Organization adopted a resolution to pay more attention to the problem of patient safety and to establish and strengthen science-based systems necessary for improving patients’ safety and the quality of healthcare (WHO, 2004).

Boards can improve quality and safety by exploring external partnerships with other organizations, by promoting greater collaboration among hospitals and other healthcare organizations, and by sharing information with other organizations (Weiner 1993; Gautam, 2005). Boards’ external orientation – and by extension, the external orientation of the organization – may contribute to learning in the domain of quality and safety.

#### 4. Control and monitoring

The control and monitoring function refers to the board’s ability to determine the degree to which the organization has achieved its policy goals and is able to adjust its operations in line with expectations from external stakeholders, including patients (Denis et al., 2005). In an environment where healthcare organizations face increasing demands of accountability, this function is fundamental. A board’s capacity to govern depends heavily on board members receiving regular reports of quality assessment and improvement activities (Spath 1998; NHS, 2004). However, the quality and safety information should be presented in terms that are comprehensive to the board and that they can evaluate (Meyers, 2004). In case of incident or crisis, board have the responsibility to ensure that there is a regular review and reporting process of critical incidents to the board and executive group (Braithwaite, 2008)

Boards are accountable for assuring the quality of care delivered by and within the institutions they govern (Weiner 1996, 1997). They must make sure that the organization's quality planning, quality control and quality improvement systems are in place, and it must evaluate the performance of these structures (Weiner 1996, 1997). Boards must also implement systems and processes that monitor clinical activities and support staff in delivering safe, high-quality care (NHS, 2004; Bader 2007). Boards must also establish their own systems for measuring and monitoring quality and safety, learning from and working with senior leaders in the field (Lister 2006, Bader, 2007). Once monitoring methods are in place, the boards must assess the results and determine how their performance ranks according to internal measurements of quality and patient safety and according to the benchmarks of other hospital systems (Sandrick, 2001; Brozovich, 2006).

Boards that choose to become involved in quality and safety require practical guidance in leading the organization's quality agenda (IHI, 2007). If board members are to adopt a more active and concrete role in quality and safety issues, they need information that will allow them to assess the organization's position and monitor its progress over time. A fundamental responsibility of boards is to frame their information needs and allocate responsibilities and resources to ensure the proper supply of information. Information is an invaluable resource for the assessment of safety risks and quality standards and for the definition and implementation of corrective measures. Information helps support board action and decision-making only when provided in a timely fashion (Wiener et al 1993; Audit Commission, 2008). Detailed information that reveals the organization's position related to quality and safety serves to trigger and reinforce boards' propensity to become involved. Along these lines, studies have shown a positive relation between the availability and adequacy of information, board members' efforts to educate themselves, and quality and safety improvement (Wiener et 1993, Sandrick 2007, Spath 2008, Lister 2006, Audit commission, 2008). Information technology that made information available and strategies for sharing information can help improve safety of care (Sandrick, 2005), but the culture that encourages the sharing rather than the hiding of errors and near misses is most important (Altman, 2004).

Boards can also rely on measurement and benchmarking to improve care and to realize potential gains in efficiency. Because international health data such as OECD Health Data currently lack comparable measures for the technical quality of care, there have been limited opportunities for international benchmarking. Reinertsen and IHI (2003) are emphasizing that it is more important for boards to track their own organizations' using "big dot" measures over time than to use external comparisons to support improvement efforts. In an attempt to develop valid and focused indicators, the OECD Health Care Quality Indicators Project (HCQI) brought together 21 countries, the World Health Organization (WHO), the European Commission (EC), the World Bank, and leading research organizations such as the International Society for Quality in Health Care (ISQua) and the European Society for Quality in Healthcare (ESQH). An expert group representing these countries and organizations has identified five priority areas for the development of initial indicators: cardiac care, diabetes mellitus, mental health, patient safety, and prevention/health promotion–primary care (OCDE, 2004). These indicators are being developed on a national level, but such work may contribute to organizational indicators that support the future role of boards in the improvement of the quality and safety of care. In the U.S., patient-safety indicators have been developed by the Agency for Healthcare Research and Quality in their improvement efforts, and the Joint Commission on Accreditation of Healthcare Organizations has adopted patient-safety goals as part of the accreditation process (Altman, 2004). In Canada, the National Quality Institute has developed quality criteria for the public sector (NQI, 1997), and the Baldrige National Quality Program has developed the Health Care Criteria for Performance Excellence (BNQP, 2008). The Canadian Quality Criteria for the public sector is a framework for effective public service organizations and agencies at all levels. In this document, senior management is identified as responsible and accountable for the organization's performance, with no specific indication of the board's roles or responsibilities (NQI, 1997). The Baldrige National Quality Program develops criteria concerning different categories and items with specific reference to the board (Baldrige National Quality Program, 2008).

Dashboards have emerged as a vital tool for hospital leaders who are interested in promoting quality improvement within their institutions (Kroch 2006). A dashboard is a visual presentation of critical data in a summary form that helps users track performance improvements at different levels of the organization. The dashboard can cover a variety of safety and quality indicators and provides a quick visual scan of how the hospital rates relative to national benchmarks. The dashboard also helps users compare the institution to other institutions, and identify past and current achievements in quality and safety improvement objectives. It can also help identify areas with specific problems and/or challenges so that decision-makers can adjust their strategies and implementation plans (Reinertsen, 2007; Kroch, 2006). The dashboards have to be conceived in a way to allow all board members, not only the board quality committee, to understand how to interpret and use them to drive continuous improvement and exercise accountability for results (Bader, 2007). The control and monitoring function includes not only the monitoring of quality and safety activities, but also evaluating the overall performance of the organization related to quality and safety issues. In this process, boards should take patient satisfaction into account and periodically review key target indicators (Lockee, Kroom, Zablocki 2007; Bader, 2006; Becker 2006, IHI, 2007, Braithwaite, 2008). Boards should establish, review and monitor measures of system performance and establish a system-level improvement strategy (Reinertsen, 2003). They should also participate in reviewing the effectiveness of established priorities and quality improvement goals (Spath, 1998). This process can help board members to redefine areas of the organization that need more attention, and re-evaluate their own roles (Meyers, 2004).

Quality performance indicators can be developed with CEOs, medical directors and even department-level managers, and a performance evaluation process for quality and security should be established (Sandrick, 2007). Control and monitoring can be based on a range of tools: statistics, narrative reports (Weiner 1993, 1996, 1997), report cards or other scorecards (Sandrick 2007; Conway, 2007).

Overall, the board of directors has to play four main roles in improving quality and safety in a healthcare organization: formulating the vision, providing resources and skills development, managing relationships, and assuring control and monitoring. However, to perform these roles, the board has to assure leadership, develop a culture of quality and safety, communicate with different stakeholders, adapt their structure/composition, and be educated on quality and safety.

## CONCLUSION

Weiner and Alexander (1993) categorize board roles as transitional roles; that is, roles that actors (in this case, board members) do not play on a full-time basis. As a result, board members do not pay allegiance to a single formal professional role and do not identify with a single organization. In this context, realistic means must be developed to increase the scope and impact of the board role in quality and safety improvement. In addition, the expansion of the role of the board must also respect the need for a functional delimitation of roles between the board, senior executive's roles and clinical professionals' roles. As we underlined in this review, boards have a key role to play in quality and safety improvement. Board members can contribute to quality and safety by promoting a vision of their organization that places quality and safety as core values. Board composition plays a critical role; it can ensure that the board has the necessary expertise and know-how to promote quality and safety and represent a diversity of perspectives on these issues. To be able to do so, the board will find its expertise inside the board or through the involvement of invited key stakeholders. The process of agenda-setting is also critical to ensure that quality and safety issues are not put aside for others' immediate concerns. Because it is important to monitor improvement targets over time, boards should incorporate quality and safety items into the agenda at each meeting. While a board has only an indirect influence on processes that influence the delivery of care, the quality of the relationship that the board develops with the senior executive team, physician leaders, and leaders in other professions is important. This is in line with the role that trust and collaboration play in managing quality and safety issues. The relationship of the board with key external stakeholders is also important to incorporate in the management of quality and safety expectations from various groups or constituencies. Finally, the role of the board in monitoring

performance and improvement with solid and parsimonious indicators is a key element in a governance approach to safety and quality. Overall, it appears from this literature review that boards can have a significant role in quality and safety. To actualize this role, boards need proper information, commitment to use this information, and leadership in the promotion of quality and safety values. Board education can be used to reinforce capacities to govern with a strong quality and safety agenda.

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## APPENDIX 1: SUMMARY OF EMPIRICAL PAPERS REVIEWED

Author	Publication type	Methods			Objectives	Outcome measures
		Study type	Sample size (n)	Data level (type of tool)		
Vaughn T. et al (2006)	Journal article	Survey of hospital leaders (CEO and senior quality executives)	413 hospitals in 8 states in US	Question-naire	Identify characteristics of hospital leadership engagement in QI that are most likely to strengthen QI activities within hospitals	<ul style="list-style-type: none"> <li>▾ Engagement of hospital board, senior management, and physicians</li> <li>▾ Influence of government and accreditation on QI</li> <li>▾ Single change lead to the most significant patient care QI</li> <li>▾ Relation of hospital leadership to quality outcomes</li> </ul>
Wong & Beglaryan (2004)	Report	Literature review on preventable adverse events	Not specified	Review paper (peer-reviewed and gray literatures)		<ul style="list-style-type: none"> <li>▾ Leadership for patient safety initiatives</li> <li>▾ Creating a culture of safety</li> <li>▾ Providing training and continuous education</li> <li>▾ Improving training and continuous education</li> <li>▾ Improving reporting systems</li> <li>▾ Establishing a national patient safety strategy</li> </ul>

Author	Publication type	Methods			Objectives	Outcome measures
		Study type	Sample size (n)	Data level (type of tool)		
Weiner BJ & al. (1996)	Journal article	Logistical regression analyses	1,870 hospitals of USA	National mailed survey,  Medicare cost report,  Regulatory stringency data	Explore factors promoting leadership from the top for hospital quality improvement (CQI/TQM)	<ul style="list-style-type: none"> <li>▼ CQI/TQI adoption</li> <li>▼ Board leadership for quality</li> </ul>
Weiner BJ & al. (1997)	Journal article	Two stage modeling approach	2,193 hospitals	National survey	Examine the effect of top management, board, and physician leadership for quality on the extent of clinical involvement in hospital CQI/TQM efforts.	<ul style="list-style-type: none"> <li>▼ Hospital quality effort (hospital involvement, clinical involvement in CQI/TQM)</li> <li>▼ Leadership for quality (physician involvement in governance, board quality monitoring, board activity in QI, CEO involvement in CQI/TQM)</li> </ul>
Weiner BJ. & al (2006)	Journal article	Empirical research	1,784 U.S. hospitals	National mailed survey  With CEO	Examine the association between scope of QI implementation in hospitals and hospital performance on patient safety indicators.	<ul style="list-style-type: none"> <li>▼ Involvement of hospital units in QI efforts</li> <li>▼ Participation of hospital staff in QI</li> <li>▼ Participation of senior management in QI</li> <li>▼ Participation of active staff physicians in QI</li> </ul>

Author	Publication type	Methods			Objectives	Outcome measures
		Study type	Sample size (n)	Data level (type of tool)		
Blumenthal & Kilo (1998)	Journal article	Report	Not specified	Interviews with national experts and senior organizational leaders	Discussing a series of interviews with health care leaders about the accomplishments of the CQI movement, the shortcomings of the early CQI movement, the barriers to implementation of CQI in the health care system.	<ul style="list-style-type: none"> <li>▼ Relation between quality measurement and improvement</li> <li>▼ Shortcomings of early quality improvement efforts</li> <li>▼ Barriers to continuous quality improvement</li> <li>▼ Mistakes in early application of CQI principles</li> <li>▼ Politics and power structures</li> </ul>
McCarthy & Blumenthal (2006)	Journal article	Case study	six cases	Telephone interviews and written communications with leaders, a review of relevant publications	Capture a snapshot of the key accomplishments of leading organizations and to synthesize the self-perceived learning of their internal change leaders.	<ul style="list-style-type: none"> <li>▼ Acquiring a Safety Culture</li> <li>▼ Informed Culture</li> <li>▼ Reporting Culture</li> <li>▼ Trust Culture</li> <li>▼ Flexible Culture</li> <li>▼ Learning Culture</li> </ul>

