

5 Million Lives Campaign

Getting Boards on Board: Engaging Governing Boards in Quality and Safety

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This article is the sixth and final in the series on the 5 Million Lives Campaign, the Institute for Healthcare Improvement's national initiative that aims to protect patients from five million incidents of medical harm in United States hospitals between December 2006 and December 2008.

The Institute for Healthcare Improvement (IHI)'s 5 Million Lives Campaign has set a target of reducing five million incidents of harm in hospitals from December 2006 to December 2008. To that end, the campaign has recommended 12 interventions. The only nonclinical intervention is to fully engage the governance leadership in quality and safety, more commonly known as “Getting Boards on Board.”

Our goal is for boards of trustees in all hospitals to undertake the recommended six key governance leadership activities to improve quality and reduce harm in their hospitals. At a minimum, at every meeting, boards should spend more than 25% of their meeting time on quality and safety issues and should conduct, as full boards, a conversation with at least one patient, or family member of a patient, who sustained serious harm at their organizations within the previous year.

As hospitals seek to drive rapid quality improvement, boards have an opportunity, indeed a significant responsibility, to make better quality of care the organization's top priority. Outmoded views of hospital governance suggest that hospital boards are responsible primarily for the organization's financial health and reputation. Board duties in these areas are unquestionably important, but the board's duties do not end with financial stewardship. Boards oversee mission, strategy, executive leadership, quality, and safety on behalf of the owner—whether the hospital is a nonprofit, government, or investor-owned facility. For nonprofit and government facilities, this owner is the

Article-at-a-Glance

Background: As hospitals seek to drive rapid quality improvement, boards have an opportunity—and a significant responsibility—to make better quality of care the organization's top priority.

Intervention: “Six things all boards should do to improve quality and reduce harm” are recommended: (1) setting aims—set a specific aim to reduce harm this year; make an explicit, public commitment to measurable quality improvement; (2) getting data and hearing stories—select and review progress toward safer care as the first agenda item at every board meeting, grounded in transparency—and putting a “human face” on harm data; (3) establishing and monitoring system-level measures—identify a small group of organizationwide “roll-up” measures of patient safety that are continually updated and are made transparent to the entire organization and its customers; (4) changing the environment, policies, and culture—commit to establish and maintain an environment that is respectful, fair, and just for all who experience the pain and loss as a result of avoidable harm and adverse outcomes: the patients, their families, and the staff at the sharp end of error; (5) learning, starting with the board—develop the board's capability and learn about how “best-in-the-world” boards work with executive and medical staff leaders to reduce harm; (6) establishing executive accountability—oversee the effective execution of a plan to achieve aims to reduce harm, including executive team accountability for clear quality improvement targets.

community, its citizens, and the patients receiving care and their families.

In the modern view, boards bear direct responsibility for the hospital's mission to provide quality care. This responsibility cannot be delegated to the medical staff or executive-level administrative and clinical leadership because it is at the very core of the board's fiduciary responsibility. An activated board, in partnership with executive leadership, can provide the will and set system-level expectations and accountability for high performance and the elimination of harm. Properly conducted, this leadership work can dramatically and continuously improve the quality of care in service to the mission, those receiving care, and those delivering it.

Foundations in Research and Management Literature

In the last 10 years, management research and opinion literature has been replete with articles underscoring the responsibility and impact of hospital boards on quality and safety.⁴⁻¹³ In 1999, the Institute of Medicine (IOM) made this responsibility explicit in its landmark study, *To Err Is Human*,¹⁴ and reinforced it again in 2001's *Crossing the Quality Chasm*¹⁵ and in subsequent reports. During the last five years, many assessment tools, publications, and presentations have emerged through IHI and leadership organizations working in the area of governance, including the Center for Healthcare Governance and the Healthcare Research and Educational Trust,¹⁶ the Centers for Medicare & Medicaid Services (CMS), the Estes Park Institute, Great Boards,¹⁷ The Joint Commission, the National Association of Public Hospitals and Health Systems, the National Center for Healthcare Leadership, the National Quality Forum,¹⁸ and the Governance Institute.¹⁹ Recent research from two distinct teams (Lockee and Vaughn and their colleagues^{20,21}) on the role of governance in high-performing organizations shows a direct correlation between high performance in hospitals and specific attributes of their boards.

An Accelerating, and Urgent, Call for Action

An invitational meeting hosted by CMS²² in 2006 found the current degree of engagement of governing boards and executive leadership to be suboptimal, and CMS

issued recommendations on how boards and leaders should act. In 2006, Standard and Poor's²³ and Moody's Investors Service²⁴ released opinions on the importance they will attach to the leadership of clinical quality outcomes and safety in making hospital bond rating decisions. In 2007, the Office of Inspector General of the U.S. Department of Health and Human Services and the American Health Lawyers Association jointly issued a report²⁵ that includes an emphasis on the key questions hospital boards should be asking. The Joint Commission has issued new standards for Governance and Executive Leadership for accreditation scoring in 2009.²⁶ The National Quality Forum, in the first chapter of a recently adopted report,²⁷ places a significant emphasis on governing boards and executive leaders. The National Business Group on Health, a coalition of the largest national employers, announced an initiative focused on an engaged board and the education of the executives of their organizations who sit on hospital boards about quality and safety issues.²⁸

These actions, and many more, are drawing further attention, urgency, responsibility, and accountability for quality and for the stewardship of improvement by health care boards of trustees and senior leaders.

Governance of Quality and Safety: The Current State of Variability

With all of the focus on the board's role in driving quality, an IHI faculty assessment undertaken in 2006,²⁹ with the help of governance experts, of the more than 5,000 hospitals in the United States suggests that the current state of hospital governance activity is, at best, highly variable. The reported analysis finds that boards fall into four general categories with respect to their level of engagement in improving quality and safety, their effectiveness in doing so, and their understanding of quality principles:

1. Actively engaged and capable; already leading a high-performance organization and wondering how their board work can be even better
2. Actively engaged; often showing that commitment through a high-profile event but needing a much stronger foundation for continual work on improvement
3. Not fully engaged but having strong, latent capabilities and talent on the board; looking to light a fire with the full board but not sure how to proceed

4. Neither engaged nor capable; feeling that quality is just fine and viewing quality of care as not the board's proper business but rather that of the medical and executive leadership

IHI hopes that through the "Boards on Board" intervention, along with our partnerships with the nation's hospitals and governance experts, most of the hospitals in the United States can become both actively engaged and capable.

The Governance Intervention: Six Things All Boards Should Do to Improve Quality and Reduce Harm

IHI's Framework for Leadership of Improvement³⁰ suggests five core leadership activities relevant to improvement:

1. *Establish the mission, vision, and strategy* as a "relentless drumbeat" for communicating the direction of the organization to all stakeholders.
2. *Build the foundation for an effective leadership system* by choosing, developing, and aligning a leadership team capable of transformational tasks, and then ensure that, throughout this team, improvement capability is exceptional.
3. *Build will* in the form of visible, constant, unrelenting, and well-explained commitment, starting with the organization's leaders, to make measurable systemic improvement as quickly as possible.
4. *Ensure access to ideas* about the clinical best practices and support processes, and insights about how to introduce them, so that the organization has readily available designs and concepts that are superior to the status quo.
5. *Attend relentlessly to execution*, integrating improvement activities and review in the daily work of the organization, and ensuring that better results are effective, sustained, and spread throughout the organization.

The 5 Million Lives Campaign utilized this framework in recommending the minimum activities it asks governance leadership to undertake. If each organization in the United States could make a commitment to Six Things All Boards Should Do to Improve Quality and Reduce Harm, we predict enormous improvement in introducing the best practices at the heart of the 5 Million Lives Campaign and a dramatic national transformation in the quality and safety of hospital care.

1. SETTING AIMS

Set a specific aim to reduce harm this year. Make an explicit, public commitment to measurable quality improvement (for example, reduction in unnecessary mortality and harm), establishing a clear aim for the facility or system.

Organizations should develop a specific statement of aims for improvement, with quality effectively integrated into strategy. For example, the leaders at Ascension Health, the largest not-for-profit health system in the United States, formulated three strategic aims. They promise to provide "Health Care That Is Safe," "Health Care That Works," and "Health Care That Leaves No One Behind."^{31,32}

Ascension's senior leaders and board spelled out each aim in detail, including quantitative goals. For example, for the aim, "Health Care That Is Safe," the specific goal statement is, "No preventable injuries or deaths by July 2008." Ascension's board and leaders review progress toward this aim regularly, and they created a transparent system to transfer learning among hospitals all across their system. The aim itself is systemwide; it applies to all their hospitals.

Another strategic aim of this type, with an associated goal (among others), from a different organization, is as follows: "We will offer all the care and only that care that we know will help you. We will do nothing that will harm you." "One specific goal is to achieve zero central line infections for the entire institution across all services by August 31, 2008."

2. GETTING DATA AND HEARING STORIES

Select and review progress toward safer care as the first agenda item at every board meeting, grounded in transparency, and putting a "human face" on harm data.

Many boards are now working in partnership with patients and families³³ and are starting their meetings with case reviews of patients who experienced harm at their hospitals in the prior month. These cases provoke new and different conversations and provide added will to move to safer systems. At a recent board clinical quality committee meeting of the Seton Family of Hospitals in Austin, Texas, operational leaders reviewed a patient safety problem and their plans to prevent a recurrence. One of the lay board members pushed harder for a reliable plan. She noted that the proposed plans were not likely to produce reliability at

a level consistent with the best in the field and that employing reliability science would be a better solution than working harder. The meeting was an important step toward creating a culture of reliability, and it began with informed questioning by a board member. Delnor-Community Hospital in Geneva, Illinois, begins each board meeting with a patient story. Dana-Farber Cancer Institute in Boston welcomes four patients, parents, or family members to each of their board quality committee meetings.

IHI recommends two specific steps in initial assessment for every board and organization in the campaign. Although both are challenging, we know of no steps more powerful than these two to accelerate commitment from the senior-leader level:

1. An Initial Chart Audit for Harm. The board should commission a review of 20 randomly chosen patient charts from the previous month to document all types and levels of injury. We suggest that this review, and the subsequent report to the board, be conducted by a team of clinicians with the help of the IHI Global Trigger Tool (although other supports can be helpful, as well).³⁴ In the longer run, organizations may choose monthly chart review of this size and type to become one of their key, system-level safety monitoring systems.

2. An In-Depth Case Study: The chief executive officer (CEO), with the assistance of the chief medical officer (CMO) and chief nursing officer (CNO), should conduct a detailed, personal investigation of a significant patient injury in the hospital, including interviewing the involved patient, family, and staff. The CEO should personally present that case to the board in a session of no less than one hour in length. If possible and desirable, the affected patient and family should attend the board meeting to add their accounts and views in person.

3. ESTABLISHING AND MONITORING SYSTEM-LEVEL MEASURES

Identify a small group of organizationwide “roll-up” measures of patient safety (for example, facilitywide harm, risk-adjusted mortality) that are continually updated and are made transparent to the entire organization and all its customers.

It is not enough for the executive leadership group and the medical staff to frame an aim. The board must know about the aim, understand it, care about it, and oversee its

achievement. This is critical, because board engagement is essential to building the will needed to drive change at the scale and pace intended in the 5 Million Lives Campaign. When they receive reports on quality of care, many boards find themselves lost in the hundreds of minute but important measures at the patient level. It is not unusual for a board report on quality to contain several hundred measures and benchmarks—and yet not to contain metrics that can help the board see quality or improvement at the system level. Developing and using effective board dashboards is essential.³⁵ Boards of hospitals in IHI’s IMPACT Network now view a small set of system-level measures, called “Whole System Measures,”³⁶ including benchmarks against the best hospitals in the United States—sometimes the best in the world—as a way to monitor organization-wide progress. One such system-level metric—of particular relevance to the campaign—is the rate of medical harm per 1,000 patient days, which can also be expressed as a rate per 100. Another is the Hospital Standardized Mortality Ratio (HSMR),³⁷ which allows a board to compare its organization’s risk-adjusted mortality rate to others and to track the rate within the institution over time.

4. CHANGING THE ENVIRONMENT, POLICIES, AND CULTURE

Commit to establish and maintain an environment that is respectful, fair, and just for all who experience the pain and loss as a result of avoidable harm and adverse outcomes: the patients, their families, and the staff at the sharp end of error.

To become safer, hospitals need to build cultures of quality and safety that are bound in respect and communication and committed to full disclosure, apology, support, resolution, and learning for patients and families when there is harm. As organizations around the United States struggle with this critical element of a culture of safety and patient and family partnership, other organizations are providing leadership and courage to draw from. Dana-Farber Cancer Institute has operated for years under their board-approved Principles of a Fair and Just Culture^{38,39} for all staff. The Harvard hospitals have issued their seminal work, *When Things Go Wrong*,⁴⁰ and the University of Michigan is writing a powerful story of learning, respectful practice, and results from a multiyear journey of communication, transparency, disclosure, support, and rapid case resolution.⁴¹

5. LEARNING...STARTING WITH THE BOARD

Develop your capability as a board. Learn about how "best-in-the-world" boards work with executive and medical staff leaders to reduce harm. Set an expectation for similar levels of education and training for all staff.

Modules for consideration in board education should answer these questions:

- What is the board of trustees' responsibility and accountability for quality and safety?
- What is the current state of quality improvement and safety in health care overall, in your community, and in your hospital? How does your prevailing practice stand up to best practice? Is your organization getting better compared to others and compared to yourself over time?
- How can board members effectively leverage their roles and experiences to affect the pace of quality improvement in their organization?
- What are the key questions boards should be asking management and clinical leadership?
- What are the best strategies to hold the gains and drive continuous improvement?

In our experience, most boards and leaders overestimate the frontline staff's ability to improve. In such cases, even with sufficient will and great ideas that have worked elsewhere, execution stalls. Boards can work to ensure that all physicians, nurses, and staff know how to make performance changes, and leaders can help to diffuse the new performance levels reliably across the entire system and to hold the gains over time.

Trends in new approaches to trustee education are emerging. The Tennessee Hospital Association has begun a program of voluntary board certification across the spectrum of board responsibilities, including quality and safety. In New Jersey, a bill was passed by both Houses that mandates all new board of trustee members in the state have one full day of education about their responsibilities as board members, including their duties, finances, and quality indicators. In June 2006, the Massachusetts Hospital Association (MHA) board of directors approved a recommendation to proceed with the development of a Blue Cross Blue Shield of Massachusetts (BCBSMA)-funded curriculum for hospitals trustees, focusing on their role in health care quality. The development of this curriculum was guided by MHA's ad hoc trustees steering committee and Dr. John Combes, President of the Center

for Healthcare Governance. In addition to a curriculum tailored to each board, additional deliverables include a Quality Resource Guide to supplement the curriculum and a tool kit that offers board members a series of action steps that support their fiduciary responsibility for their hospitals' quality performance. The program was piloted in nine hospitals in 2007 and will move across the state. Hospitals whose trustees have completed the program will receive increased financial incentives through the BCBS-MA pay-for-performance program. In 2008 the Center for Healthcare Governance will offer the program across the United States.

6. ESTABLISHING EXECUTIVE ACCOUNTABILITY

Oversee the effective execution of a plan to achieve your aims to reduce harm, including executive team accountability for clear quality improvement targets.

Boards should spend more than 25% of their time in activities related to quality and safety, overseeing the effective execution of a plan to achieve their aims to reduce harm, just as they oversee finance. The board can set the agenda for improvement by linking it to performance reviews and compensation for all top leaders. The feedback to these leaders during their reviews can create energy around a patient-focused safety agenda, or it can focus more exclusively on financial performance. The board's choice about these messages tends to have a lasting impact on the day-to-day priorities and focus for the leader team's daily work. Researchers have compiled a comprehensive review of how boards are providing incentives to CEOs and senior executives to ensure successful execution.⁴²

Organizational Challenges Emerging in Implementation

As of this date, 1,667 organizations have committed to the Boards on Board intervention, and a number of them serve as best-practice mentors. In the gap between where organizations are and where they want to be, an enabling creative tension has emerged. With this interest also come struggles that typically fall in the following buckets:

- *The challenge of transparency of data where it hasn't existed in the past.* How do you begin, explain, and focus at appropriate levels? How do you avoid creating new areas for risk management? This has been a major question in public organizations where all board meetings are open.

■ *What is the appropriate level of information on dashboards?* Across the United States, trustees are reporting that they are overloaded with information. At the same time, they have no real understanding of the degree of serious injury that happens in their organization on a monthly basis.

■ *Where does the medical staff fit into the picture of engaging boards and executive leadership?* How do we begin to see the medical staff as new partners and engage them effectively in ways they value?

■ *How do you engage patients and families in new ways?* It is clear that leadership wants to do this but is hesitant because of lack of experience and perceived risk. How do you start? What's an optimal partnership? What's the potential value?

■ *What is the role of the system board and what is the role of the individual hospital boards or advisory boards?* How to we maximize the potential of both?

■ *What is the role of the full board and what is the role of the quality committee?* Do you really expect the full board to spend 25% or more of their time on quality, safety, and risk issues?

IHI is constantly updating resources in response to these and other challenges.⁴² One area that has not been a challenge is aligning this intervention with other work ongoing in the country; it is directionally aligned with all of the major governance activities underway.

Getting Started on the Governance Intervention

How does a hospital move forward? We encourage organizations to distribute the IHI's *How-to Guide*³ to the board and executive administrative and clinical staff immediately. Discussion of the 5 Million Lives Campaign should be on the agendas of the next scheduled meetings of the board of trustees and the board quality committee, as well as those of the executive leadership and the medical executive committee. The meeting should be opened with a short narrative of an actual patient event, illustrating a type or pattern of harm that occurred within the last month in that institution. This is most effective when connected to the organization's harm reduction strategy, including lessons learned from the event and specific actions being asked of the board. At this same meeting, leadership should present the Six Things All Boards

Should Do to Improve Quality and Reduce Harm and develop an action plan to move forward on each item within the next month. These six elements provide the opportunity for a simple self-assessment: Where are you now, what are the areas both for celebration and for improvement, and what are you going to do now to close the gap? **1**

The author gratefully acknowledges the contributions of the cited leadership organizations and experts in governance, specifically the team members, who, along with him, proposed the elements of the 5 Million Lives Boards on Board Intervention—Stephen Jencks, M.D., M.P.H.; Joseph McCannon; Diane Miller, M.B.A.; James Orlikoff, M.A.; and James Reinertsen, M.D.

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References

1. McCannon C.J., Hackbarth A.D., Griffin F.A.: Miles to go: An introduction to the 5 Million Lives Campaign. *Jt Comm J Qual Patient Saf* 33:477–484, Aug. 2007.
2. Institute for Healthcare Improvement: *Get Boards on Board*. <http://www.ihi.org/IHI/Programs/Campaign/BoardsonBoard.htm> (last accessed Feb. 11, 2008).
3. Institute for Healthcare Improvement: *Getting Started Kit: Governance Leadership "Boards on Board" How-to Guide*. <http://www.ihi.org/IHI/Programs/Campaign/BoardsonBoard.htm> (last accessed Feb. 20, 2008).
4. Alexander J.A., Lee S.Y.: Does governance matter? Board configuration and performance in not-for-profit hospitals. *Milbank Q* 84:733–758, Dec. 2006.
5. Chait R., Ryan W., Taylor B.: *Governance as Leadership: Reframing the Work of Nonprofit Boards*. Hoboken, N.J.: BoardSource and John Wiley and Sons, 2005.
6. Conway J.B.: Taking it to the top. *Hosp Health Netw* 74(3):100, 2007.
7. Joshi M.S., Hines S.C.: Getting the board on board: Engaging hospital boards in quality and patient safety. *Jt Comm J Qual Patient Saf* 32:179–187, Apr. 2006.
8. McDonagh K.: Hospital governing boards: A study of their effectiveness in relation to organizational performance. *J Healthc Manag* 51:377–389, Nov.–Dec. 2006.
9. Orlikoff J.E.: Building better boards in the new era of accountability. *Front Health Serv Manage* 21:3–12, Spring 2005.
10. Reinertsen J.: Boards, administrators, medical staffs and quality: Sorting out the roles. *Trustee* 56:1–11, Sep. 2003.
11. Schyve P.M.: What you can do: The trustee, patient safety, and JCAHO. *Trustee* 56:19–21, Sep. 2003.
12. Weiner B., Shortell S., Alexander J.A.: Promoting clinical involvement in hospital quality improvement efforts: The effects of top management, board, and physician leadership. *Health Serv Res* 32:491–510, Oct. 1997.

13. Clough J., Nash D.B.: Health care governance for quality and safety: The new agenda. *Am J Med Qual* 22:203–213, May–Jun. 2007.
14. Institute of Medicine: *To Err Is Human: Building a Safer Health System*. Washington, DC: National Academy Press, 1999.
15. Institute of Medicine: *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academies Press, 2001.
16. HRET Center for Healthcare Governance: *Building an Exceptional Board: Effective Practices for Health Care Governance*. Chicago: HRET and Center for Healthcare Governance, 2007.
17. Zablocki E.: IHI calls on boards to lead on quality and safety: An interview with Jim Conway. *Great Boards* 7:1–5, Summer 2007.
18. National Quality Forum: *Hospital Governing Boards and Quality of Care: A Call to Responsibility*. <http://www.ihl.org/NR/rdonlyres/C75264FA-1703-4DD0-99C2-0355D81DF982/0/NQFCalltoResponsibilityHospitalBoards2004.pdf> (last accessed Feb. 11, 2008).
19. Institute for Healthcare Improvement: *Getting Started Kit: Governance Leadership. How-to Guide*. <http://www.ihl.org/IHI/Programs/Campaign/BoardsonBoard.htm> (last accessed Feb. 11, 2008).
20. Lockee C., et al.: *Quality*. San Diego, CA: The Governance Institute, 2006.
21. Vaughn T., et al.: Engagement of leadership in quality improvement initiatives: Executive quality improvement survey results. *Journal of Patient Safety* 2:2–9, Mar. 2006.
22. Centers for Medicare & Medicaid Services: *Hospital Leadership Summit: Moving from Good to Great*. CMS Headquarters, Baltimore, Sep. 28, 2006.
23. Sweeney L. (ed.): *Quality and Transparency Could Transform U.S. Not-for-Profit Health Care*. New York City: Standard and Poor's, 2006.
24. Moody's Investor Service: Improving clinical quality and patient safety of greater importance to not-for-profit hospitals. *Moody's Special Comment*, pp. 1–5, May 2006.
25. Callender A.N., et al.: *Corporate Responsibility and Health Care Quality: A Resource for Health Care Boards of Directors*. Jun. 27, 2007. <http://oig.hhs.gov/fraud/docs/complianceguidance/CorporateResponsibilityFinal%209-4-07.pdf> (last accessed Feb. 11, 2008).
26. The Joint Commission: *Standards Revisions: Pre-Publication*. <http://www.jointcommission.org/Standards/Pre-PublicationStandards> (last accessed Feb. 11, 2008).
27. National Quality Forum: *Safe Practices for Better Healthcare—2006 Update: A Consensus Report*. Washington, DC: National Quality Forum, 2006.
28. National Business Group on Health: *A Toolkit for Action: Ensuring Patient Safety Across Health Care*. http://www.businessgrouphealth.org/benefitsttopics/et_patientsafety.cfm (last accessed Feb. 11, 2008).
29. Institute For Healthcare Improvement (IHI): Faculty Assessment: IHI Governance Workshop Report (internal document). Alta, WY, Aug. 26, 2006.
30. Provost L., Miller D., Reinertsen J.: *A Framework for Leadership of Improvement*. Feb. 2006. <http://www.ihl.org/IHI/Topics/LeadingSystemImprovement/Leadership/EmergingContent/AFrameworkforLeadershipofImprovement.htm> (last accessed Feb. 11, 2008).
31. Pryor D.B., et al.: The clinical transformation of Ascension Health: Eliminating all preventable injuries and deaths. *Jt Comm J Qual Patient Saf* 32:299–308, Jun. 2006.
32. Hendrich A., et al.: The Ascension Health journey to zero: Lessons learned and leadership. *Jt Comm J Qual Patient Saf* 33:739–749, Dec. 2007.
33. Conway J.: Patients and families: Powerful new partners for health care and for caregivers. *Healthc Exec* 23:60–62, Jan.–Feb. 2008.
34. Griffin F.A., Resar R.K.: *IHI Global Trigger Tool for Measuring Adverse Events*. Institute for Healthcare Improvement (IHI) Innovation Series white paper. Cambridge, MA: IHI, 2007 (available at <http://www.IHI.org>).
35. Pugh M., Reinertsen J.: Reducing harm to patients: Using patient safety dashboards at the board level. *Healthc Exec* 22:62, 64–65, Nov.–Dec. 2007.
36. Martin L.A., et al.: *Whole System Measures*. Institute for Healthcare Improvement (IHI) Innovation Series white paper. Cambridge, MA: IHI, 2007 (available at www.IHI.org).
37. Institute for Healthcare Improvement (IHI): *Move Your Dot™: Measuring, Evaluating, and Reducing Hospital Mortality Rates (Part 1)*. IHI Innovation Series white paper. Boston: IHI, 2003 (available on www.IHI.org).
38. Dana-Farber Cancer Institute: *Principles of a Fair and Just Culture*. http://www.macoalition.org/Initiatives/docs/Dana-Farber_PrinciplesJustCulture.pdf (last accessed Feb. 11, 2008).
39. Connor M., et al.: Creating a fair and just culture: One institution's path toward organizational change. *Jt Comm J Qual Patient Saf* 33:617–624, Oct. 2007.
40. Massachusetts Coalition for the Prevention of Medical Errors: *When Things Go Wrong: Responding to Adverse Events. A Consensus Statement of the Harvard Hospitals*. Mar. 2006. <http://www.taskforce.org/JustinHope/respondingToAdverseEvents.pdf> (last accessed Feb. 11, 2008).
41. Boothman R.: Medical Justice: Making the System Work Better for Patients and Doctors. Testimony before the United States Senate Committee on Health, Education, Labor and Pensions, Jun. 22, 2006. http://help.senate.gov/Hearings/2006_06_22/boothman.pdf (last accessed Feb. 20, 2008).
42. Rice J.: *Executive Pay and Quality: New Incentive Links*. Integrated Healthcare Strategies, 2008. <http://www.ihstrategies.com/pdf/NewIncentiveLinks.pdf> (last accessed Feb. 11, 2008).