What Is Driving Hospitals’ Patient-Safety Efforts?

A study of twelve communities suggests that a regulatory body, not market forces, is having the strongest impact on hospitals’ efforts to improve patient safety.

by Kelly J. Devers, Hoangmai H. Pham, and Gigi Liu

ABSTRACT: The Institute of Medicine’s report *To Err Is Human* described the alarming prevalence of medical errors and recommended a range of activities to improve patient safety. Three general mechanisms for stimulating hospitals to reduce medical errors are professionalism, regulation, and market forces. Although some believe that market forces are becoming more important, we found that a quasi-regulatory organization (the Joint Commission on Accreditation of Healthcare Organizations) has been the primary driver of hospitals’ patient-safety initiatives. Professional and market initiatives have also facilitated improvement, but hospitals report that these have had less impact to date.

The year 1999 was a watershed period for patient safety. With the publication of the Institute of Medicine’s (IOM’s) report *To Err Is Human*, medical error became a national problem that became increasingly difficult for providers to ignore. The report set some ambitious goals for all parties in the health care system, calling for a 50 percent reduction in medical errors over five years. To achieve this goal, the report argued that a multifaceted approach was needed, and its recommendations reflected this view.

Three general mechanisms can stimulate hospitals to improve patient safety and quality more broadly: professionalism, regulation, and markets. Professionalism is a system of self-governance, wherein members of a profession set and maintain standards primarily through shared values, norms, and educational activities. Regulation is when the government establishes a set of standards to which all parties must adhere. U.S. health care regulation has been strongly influenced by professionals, in that the government often allows regulatory requirements to be satisfied by adherence to standards established by professional associations, or public and private organizations governed primarily by professionals. For example, hospitals participating in Medicare are required to undergo regulatory review...
by the Centers for Medicare and Medicaid Services (CMS). Alternatively, through its “deeming authority,” the CMS allows hospitals to participate if they are accredited by a private body approved by the CMS (such as the Joint Commission on Accreditation of Healthcare Organizations, or JCAHO). Private organizations fulfilling this role are sometimes referred to as quasi-regulatory organizations. Finally, purchasers and consumers can use market mechanisms to stimulate hospitals to improve patient safety by rewarding or punishing them based on their patient-safety performance or progress.

The purpose of this paper is to describe hospital systems’ and freestanding hospitals’ patient-safety initiatives; their progress toward implementing them; and the relative roles that professionalism, regulation, and markets play in stimulating progress.\(^2\) The paper addresses three specific questions: (1) What are hospitals’ major patient-safety initiatives now, and how far along are hospitals in implementing them? (2) What facilitates and impedes hospitals’ progress in patient safety in local markets? (3) What impact have patient-safety efforts had on hospitals, the health care professionals working with them, and patients?

**Data And Methods**

Since 1996 the Community Tracking Study (CTS) has conducted four rounds of site visits in twelve U.S. metropolitan areas, initially selected at random.\(^3\) During Round Four, 1,000 semistructured interviews were conducted between September 2002 and May 2003. In this paper we focus on eighty-seven Round Four interviews with leaders of the three to four largest hospitals in each community, including the chief executive officer (CEO), person responsible for or most knowledgeable about the hospital’s patient-safety initiatives (such as a chief medical officer), and the director of patient care services. We also draw on 226 interviews with employers and brokers, health plans, and medical groups.

The research team used Atlas.ti, a qualitative data analysis software program, to organize and manage the interview data.\(^4\) For example, responses to various interview questions were coded, which facilitates collating and comparing data across markets and general respondent types and within specific organizations (such as the CEO and medical director from the same hospital system). This allows us to assess whether various subgroups have similar or different perspectives on hospitals’ patient-safety activities and the general strength of our findings. Unless noted otherwise, respondents of different types across markets reported similar views.

In addition to these interviews, we use data from two complementary surveys: a CTS patient safety survey fielded during this round of site visits, and the Leapfrog Group’s publicly reported survey data from hospitals in five of the twelve CTS markets included in its regional rollout efforts for the same time period as the CTS site visits.\(^5\) The CTS patient safety survey was completed by mail or fax by the person primarily responsible for patient safety at each hospital. A total of thirty-three surveys were completed (90 percent response rate).
Results

Role of JCAHO. Both interview and CTS patient survey data show that hospitals’ major patient-safety initiatives are primarily intended to meet JCAHO requirements (Exhibit 1). Typically, JCAHO policies identify organizational outcomes that...

<table>
<thead>
<tr>
<th>Date</th>
<th>Policy</th>
<th>General requirements</th>
</tr>
</thead>
</table>
| 1996            | Sentinel event policy           | Identify, report, and evaluate sentinel or adverse events\(^a\)  
Investigate causes of sentinel or adverse events using root-cause analysis  
Implement strategies to prevent the recurrence of sentinel events  
Monitor effectiveness of strategies  
Respond to JCAHO-issued sentinel event alerts, such as Alert no. 8 on Restraint Deaths and Alert no. 14 on Patient Falls |
| 2001            | Patient-safety standards        | Hospital leadership is responsible for  
Creating a culture of safety  
Implementing patient-safety programs  
Preventing medical error through prospective analysis (that is, failure mode and effects analysis) and redesign of vulnerable systems  
Hospitals must tell patients about the outcome of their care, including if the outcome was the result of an error |
Use at least two patient identifiers when taking blood or administering medications or blood products  
Conduct final verification process, such as “time out”  
Improve effectiveness of communication  
Develop process for taking verbal or telephone orders that require verification “read back”  
Standardize abbreviations, acronyms, and symbols  
Improve the safety of using high-alert medications  
Remove concentrated electrolytes from patient care units  
Standardize and limit number of drug concentrations available  
Eliminate wrong-site, -patient, and -procedure surgery  
Create and use preoperative verification procedure to confirm that appropriate documents are available  
Implement process to mark surgical site and involve patient in marking  
Improve the safety of using infusion pumps  
Ensure free-flow protection on all intravenous pumps  
Improve the effectiveness of clinical alarm systems  
Implement regular preventive maintenance and testing  
Assure that alarms are activated with appropriate settings and are sufficiently audible |
Comply with current CDC hand hygiene guidelines  
Manage as sentinel events all unanticipated deaths or major permanent loss of function |


NOTE: CDC is Centers for Disease Control and Prevention.

\(^a\)These are defined by JCAHO as “any unexpected events that resulted in death or serious physical or psychological injury or risk of such outcomes.”
hospitals must achieve (for example, improve effectiveness of communication) but do not always identify the specific structures and processes that hospitals should use to achieve them. Several alternatives are typically deemed acceptable, and hospitals can propose their own approaches for JCAHO review and acceptance.

Exhibit 2 shows how often general and specific types of patient-safety initiatives were mentioned by those interviewed in response to an open-ended question asking them to describe their hospitals’ major patient-safety initiatives. The most frequently mentioned initiatives are designed to meet the JCAHO requirements outlined above: Either 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 can be grouped into three related JCAHO areas: (1) developing better processes for reporting, analyzing, and preventing sentinel events (this includes responding to sentinel event alerts, particu-

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**EXHIBIT 2**

**Hospitals’ Major Patient-Safety Initiatives, 2002–2003**

<table>
<thead>
<tr>
<th>Organization requiring or recommending practice, major initiative area, specific areas of focus</th>
<th>Total number of hospital respondents mentioning (N = 87)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JCAHO</td>
<td></td>
</tr>
<tr>
<td>Sentinel events</td>
<td>188</td>
</tr>
<tr>
<td>Improve reporting, analysis, and monitoring of sentinel events</td>
<td>59</td>
</tr>
<tr>
<td>Reduce patient falls</td>
<td>25</td>
</tr>
<tr>
<td>Patient-safety standards</td>
<td>23</td>
</tr>
<tr>
<td>Leadership</td>
<td>44</td>
</tr>
<tr>
<td>Creating a nonpunitive culture</td>
<td>15</td>
</tr>
<tr>
<td>Truth telling (telling patients about errors)</td>
<td>23</td>
</tr>
<tr>
<td>Patient-safety goals (2003 and 2004)</td>
<td>6</td>
</tr>
<tr>
<td>Improve accuracy of patient identification</td>
<td>89</td>
</tr>
<tr>
<td>Improve effectiveness of communication</td>
<td>17</td>
</tr>
<tr>
<td>Eliminate wrong-site, -patient, -procedure surgery</td>
<td>20</td>
</tr>
<tr>
<td>Infection control</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>9</td>
</tr>
<tr>
<td>LeapFrog Group</td>
<td></td>
</tr>
<tr>
<td>Computerized physician order entry</td>
<td>67</td>
</tr>
<tr>
<td>Intensivists</td>
<td>47</td>
</tr>
<tr>
<td>Evidence-based hospital referral</td>
<td>11</td>
</tr>
<tr>
<td>Numerous organizations</td>
<td></td>
</tr>
<tr>
<td>Improve information technology</td>
<td>3</td>
</tr>
<tr>
<td>Electronic medical record</td>
<td>44</td>
</tr>
<tr>
<td>Reduce medication error</td>
<td>24</td>
</tr>
<tr>
<td>Automated dispensing</td>
<td>61</td>
</tr>
<tr>
<td>Bar-coding</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
</tr>
<tr>
<td>Credential physicians in certain procedures</td>
<td>14</td>
</tr>
<tr>
<td>Include questions on safety in patient satisfaction surveys</td>
<td>3</td>
</tr>
</tbody>
</table>

**SOURCE:** Community Tracking Study (CTS) Round Four, open-ended interview question about hospitals’ major patient-safety initiatives.

**NOTE:** JCAHO is Joint Commission on Accreditation of Healthcare Organizations.
larly 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. The most frequently mentioned patient-safety activity was improving medication safety, which is related to six of the eleven patient-safety goals for 2003.

The only frequently mentioned patient-safety activity that was not directly linked to JCAHO requirements was information technology (IT). Many hospitals are considering or making major investments in IT (such as electronic medical records) because IT is seen as critical for achieving the requirements and recommendations of JCAHO and other market and professional entities. Among these non-JCAHO activities mentioned, many others were related to JCAHO requirements.

Given JCAHO’s time frames for compliance, it is not surprising that hospitals reported in both interviews and surveys that they had fully, or almost fully, implemented many of these initiatives. Exhibit 3 shows that hospitals reported fully implementing JCAHO-related patient-safety initiatives in some or all possible hos-

### EXHIBIT 3
**Hospitals’ Progress In Implementing Patient-Safety Improvements, 2002–2003**

<table>
<thead>
<tr>
<th>Area/specific activity (N = 30 hospitals or systems)</th>
<th>Mean (scale 1–5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentinel event data collection</td>
<td></td>
</tr>
<tr>
<td>Establish definition of adverse events and near misses</td>
<td>4.7</td>
</tr>
<tr>
<td>Establish process for reporting adverse events and near misses</td>
<td>4.8</td>
</tr>
<tr>
<td>Provide feedback to clinicians on trends</td>
<td>3.7</td>
</tr>
<tr>
<td>Leadership and culture</td>
<td></td>
</tr>
<tr>
<td>Patient-safety activities regularly reported to board</td>
<td>4.7</td>
</tr>
<tr>
<td>Routinely conduct organizationwide assessment of risk</td>
<td>4.4</td>
</tr>
<tr>
<td>Nonpunitive policy</td>
<td>4.8</td>
</tr>
<tr>
<td>Medication error</td>
<td></td>
</tr>
<tr>
<td>Central pharmacy supplies high-risk intravenous medications</td>
<td>4.9</td>
</tr>
<tr>
<td>Special procedures and written protocols for high-risk medications</td>
<td>4.4</td>
</tr>
<tr>
<td>Single clinician with at least 50% of time dedicated to medication system oversight</td>
<td>4.0</td>
</tr>
<tr>
<td>Automated dispensing</td>
<td>4.0</td>
</tr>
<tr>
<td>Color-coded patient wristbands to alert for allergies</td>
<td>3.2</td>
</tr>
<tr>
<td>Bar-code system for patients, staff, and medications</td>
<td>2.1</td>
</tr>
<tr>
<td>Wrong-site surgery</td>
<td></td>
</tr>
<tr>
<td>“Sign your site” protocols to prevent wrong-site surgery</td>
<td>4.5</td>
</tr>
<tr>
<td>LeapFrog Group practices</td>
<td></td>
</tr>
<tr>
<td>Computerized physician order entry (CPOE)</td>
<td>2.7</td>
</tr>
<tr>
<td>Use of intensivists to care for patients in intensive care units</td>
<td>4.0</td>
</tr>
</tbody>
</table>


**NOTES:** Systems were asked to answer with respect to their main or flagship hospital. Scale: 0 = not applicable; 1 = no discussion; 2 = under discussion; 3 = partially implemented in some or all hospital areas; 4 = fully implemented in some hospital areas; and 5 = fully implemented hospitalwide or all possible hospital areas.
pital areas. Hospital respondents also said that they had fully or almost fully implemented initiatives related to JCAHO requirements. However, others mentioned the challenge of maintaining progress in these areas.

Although these requirements are a major focal point for hospitals, employers and health plan respondents either were unaware of the requirements and hospitals’ progress toward meeting them or did not describe them in any detail, perhaps assuming that hospitals were making adequate progress. Medical group leaders were knowledgeable about certain hospital patient-safety initiatives, particularly those directly affecting them. Overall, nonhospital respondents were skeptical that hospitals had made major progress toward improving patient safety. This skepticism could reflect a lack of awareness of the requirements or a belief that such requirements do not have a meaningful impact on patient safety.

Assessing other recommendations. Beyond JCAHO, hospital respondents mentioned fourteen other organizations. Among these were private purchasers (for example, the Leapfrog Group); national, regional, or local professional associations and related foundations (for example, the National Foundation for Patient Safety, which is supported by the American Medical Association); federal agencies (for example, the Agency for Healthcare Research and Quality, or AHRQ); public-private partnerships (for example, the National Quality Forum); and organizations dedicated to helping hospitals prioritize and implement patient-safety initiatives (for example, the Institute for Healthcare Improvement, or IHI). Hospitals were proactively assessing which of these organizations’ requirements and recommendations were most important to meet and whether any cost-effective initiatives could simultaneously meet several organizations’ requirements.

Interestingly, hospital respondents rarely mentioned state governments, which often oversee important patient safety–related issues (for example, hospital and professional licensing or adverse event reports) and had introduced or passed patient-safety legislation at the time of the CTS site visits (for example, the California legislature passed a law requiring hospitals to develop plans to greatly reduce medication related errors and to maintain mandatory nurse-staffing ratios). Similarly, national and state nursing associations were rarely mentioned, although nurses are very important to patient-safety improvement.

Among organizations outside of JCAHO, hospital respondents most frequently mentioned the Leapfrog Group. Hospital respondents gave four reasons why they were seriously considering the group’s three patient-safety practice recommendations (computerized physician order entry, or CPOE, intensivist use, and evidence-based hospital referral). First, Leapfrog has received much national and local attention, because of general interest in patient safety and the large number of people insured through its member companies. Second, Leapfrog’s approach has been the subject of some controversy. For example, the American Hospital Association (AHA) characterized its approach as inflexible and not well supported by evidence. Third, Leapfrog is rolling out its initiative in different regions of the
choice of a region for rollout signifies that a Leapfrog employer has agreed to try to use its leverage to provide hospitals with strong incentives to implement the three leaps and to get other local organizations (such as unions) to participate. Finally, the Leapfrog patient-safety practice most frequently mentioned (CPOE) is designed to reduce medication error, which is a goal of many other organizations, such as the IOM and the AHA. Although hospitals mentioned other initiatives to reduce medication error even more frequently, the Leapfrog Group has clearly helped focus much attention on CPOE as a mechanism for reducing medication errors.

Relative to their progress on JCAHO-related initiatives, hospital respondents reported making much less progress toward meeting the Leapfrog safety standards. Both CTS patient safety and Leapfrog surveys show that hospitals are only in the planning or early implementation stages on the three leaps. They have made the most progress on intensivist use, and less on CPOE and evidence-based hospital referral.9 Leapfrog survey data show that only 6 percent of site-visit hospitals in rollout markets have fully implemented CPOE and, while still low in absolute terms, almost three times as many hospitals (22 percent) have fully implemented use of intensivists. Hospitals reported meeting one or two of the six possible evidence-based referral volume thresholds on average. CTS patient-safety survey data show similar results.10 They also suggest that hospitals in the regional rollout have not made much more progress than hospitals in non-Leapfrog markets.

Some CTS hospital respondents indicated that they had decided not to develop initiatives to meet the three leaps. Others reported developing initiatives that met the spirit if not the letter of Leapfrog criteria (what hospitals considered to be more cost-effective alternatives). Still others indicated that they intended to meet the criteria but were in the early planning or implementation stages.

Given Leapfrog’s national campaign, employers and health plans were generally aware of the three patient-safety practices. Some employers and health plans in local markets included in regional rollout areas were also more knowledgeable about hospitals’ progress toward meeting Leapfrog’s standards. Medical groups were very aware of hospitals’ initiatives in these areas because all three Leapfrog safety practices directly affected physicians, potentially in negative ways (for example, reducing their autonomy, productivity, or income).

Facilitators not strong enough to overcome barriers. Although there were a number of facilitators of hospitals’ patient-safety improvements in local markets, there were also substantial barriers.11

Facilitators. Medicare was a major, but indirect, facilitator of patient-safety improvement.15 Because hospitals must be accredited by JCAHO or undergo regulatory review by the CMS to participate in Medicare, and because Medicare accounts for approximately 40 percent of hospitals’ revenues, hospitals have a strong incentive to meet JCAHO’s requirements.

Hospital respondents identified four other major facilitators. The first was the
publication of *To Err Is Human*. Although some hospital respondents noted that they had been working on quality and patient-safety improvement for many years, the report’s publication gave these efforts new urgency and greater priority. The second was the Leapfrog Group. Many hospital respondents reported that Leapfrog had had a positive impact on the climate for patient-safety improvement. Leapfrog’s efforts helped keep patient safety a high priority for policymakers and providers, provided three clear areas of focus, and symbolized the promise that purchasers might reward hospitals’ efforts to improve patient safety.

Another facilitator was ongoing research and peer education by public and private organizations. Respondents viewed research to evaluate what safety initiatives are most cost-effective and how to better implement them as being particularly helpful. For example, they cited patient-safety research sponsored by AHRQ and private foundations, and IHI activities that help facilitate implementation.

The fourth facilitator was characteristics of the hospitals themselves: hospital structure, institutional commitment to quality and patient-safety improvement, and financial and nonfinancial resources. Large hospital systems believed that they had some advantages over independent hospitals, such as the ability to pilot initiatives in different facilities and to share data and lessons learned. Respondents also noted that board, management, and clinical leadership were very important, in part because resources and cooperation were more likely to follow. Although financial resources were viewed as important, nonfinancial resources were often seen as equally important. In particular, managers and clinicians who were knowledgeable about possible solutions and how to implement them, given the hospital’s unique history and culture, were seen as particularly valuable.

**Barriers.** The first barrier identified by respondents was the absence of strong local market incentives for hospitals to improve patient safety. In the majority of CTS site-visit markets, employers and insurance brokers who work with them reported relatively little interest in hospital patient safety. Employers were most concerned about premium increases, and although reduction in medical error might reduce costs, few employers connected these two issues.13

Even in the five CTS markets included in Leapfrog’s regional rollout, employers were struggling to find effective ways to provide hospitals with strong incentives for improvement. Leapfrog employers primarily use nonfinancial incentives; most attempt to exercise leverage over hospitals indirectly through health plans and consumers. However, health plans were unable to provide hospitals with a strong incentive for improvement because of consumers’ demands for broad provider networks, the demise of risk contracting, and hospitals’ consolidation and capacity constraints.14 New tools for self-insured employers or plans, such as pay-for-performance and tiered provider networks, were not yet well developed.

Employers also had difficulty collecting useful comparative information and giving it to consumers. Hospitals’ participation in Leapfrog’s publicly reported patient-safety survey ranged from 30 to 82 percent in the five rollout markets, and
it is unclear to what extent consumers received and used the information.\textsuperscript{15}

Another major barrier was cost, although hospitals lacked good information about its magnitude. Ninety-two percent reported that they did not have a budget line item for patient safety, so they estimated the resources dedicated to this activity. Moreover, the estimates varied widely because of accounting challenges (for example, no guidelines about what to define as primarily a patient-safety activity or resource). On average, hospitals reported a $1.9 million budget for patient safety, ranging from $50,000 to $15 million. Estimates for staffing also varied greatly, with approximately four full-time equivalents (FTEs) on average dedicated to patient safety. Only 58 percent of hospitals reported that they expected their patient-safety budgets to increase in the next fiscal year.

Another barrier was IT infrastructure. Many organizations recommend safety practices that are IT-intensive, but respondents noted that IT is costly and often difficult to implement. New hardware and software have their own problems and must often interface with older hospital information systems, which present additional technical difficulties. Finally, implementation requires staff education, training, and cooperation. However, physicians, nurses, and other staff often resist their adoption because of concerns about autonomy, productivity, and income.

Hospitals’ own commitment, structure, and lack of financial and nonfinancial resources can pose substantial barriers. Although no one wants to provide unsafe care, respondents expressed different levels of commitment to patient safety. Some hospitals also felt that certain patient-safety initiatives were less feasible given their size and structure. For example, some hospitals are too small to attract scarce intensivists and have a large number of attending physicians practicing at multiple hospitals, which makes it difficult to educate and engage them in patient-safety efforts. Some patient-safety initiatives can also negatively affect hospitals’ bottom lines and market share. For example, Leapfrog’s evidence-based hospital referral criteria might require hospitals not meeting volume or outcome standards to close relatively profitable service lines or to refer patients to competitors.

A related barrier is physicians’ failure to buy into the magnitude of the problem and the proposed hospital-based solutions.\textsuperscript{16} Some physicians do not believe that the problem of medical error is as serious as the IOM report suggests.\textsuperscript{17} Such physicians occasionally cite published studies to make their case. Even if they agree that the problem is serious, some physicians have noted that the evidence base for proposed solutions is relatively weak.\textsuperscript{18} Finally, some hospital patient-safety efforts reduce physicians’ professional autonomy (for example, mandatory reporting of errors to patients and the hospital) and income, by reducing productivity or eliminating revenue streams. Several hospital CEOs noted that the IOM report and regulatory and market pressure helped them press physicians for greater cooperation on patient-safety initiatives.

A final barrier cited was malpractice liability concerns, and the medico-legal culture of blaming individuals rather systems, particularly because of its chilling
effect on error reporting. Despite some progress toward creating a nonpunitive culture and more disclosure of errors, hospital respondents still expressed concern that reporting errors might result in lawsuits and other negative consequences. Three CTS markets have serious malpractice insurance problems that threaten physicians’ and hospitals’ ability to provide certain services.

Impact on hospitals and patients. Respondents reported that the impact on hospitals of increased attention to patient safety has been mixed. On the one hand, the IOM report and the ensuing activity resulted in greater attention to the problem and, in some hospitals, efforts to develop creative approaches to addressing it. Many hospital respondents also perceived that their accountability for improving patient safety had increased. Finally, patient safety has required some investment of financial and nonfinancial resources. On the other hand, many hospitals reported that they were already doing many of these safety activities before the IOM report came out. These hospitals reported increasing the intensity of some of these activities but not developing and implementing new ways to improve. CTS survey results suggest that the majority of hospitals have invested relatively modest resources.

According to respondents, the impact on patients was unclear, because relevant data did not exist or were difficult to interpret. Data on medical errors have historically been greatly underreported. However, because of current efforts to improve error reporting, many hospitals reported a jump in the number of errors reported to the hospitals themselves. Given the major rise in errors on a small base number, it is difficult to determine whether safety is getting worse or improving, what initiatives are or are not working, and how these efforts are affecting patients. Interpretation of error data is particularly difficult if the hospital does not have any comparative information via a larger system or participation in voluntary efforts (such as the MedMarx system for medication errors). Data on medical injuries may be another important measure of patient-safety improvement, but respondents did not mention trying to collect and use such data. Some hospitals reported including several questions about patient safety on patient satisfaction surveys, but the results are just beginning to come in.

The most concrete impact on patients to date is efforts to inform them about the possibility of medical error and things they can do to help avoid it. In 2000 JCAHO launched a “Speak Up” campaign, which encouraged hospitals to voluntarily educate patients about errors and error prevention. Some hospitals in the CTS markets reported producing videos or pamphlets to be shown or distributed to patients upon admission. However, evaluation of these efforts is needed to better understand how patients respond to such information and whether, and how much, they reduce errors or injuries.

Policy Implications

Based on our study of twelve communities, it seems that quasi-regulatory forces (such as JCAHO) are having the greatest impact on hospitals’ patient-safety
efforts. Although professional and market initiatives have also facilitated improvement, hospitals in local markets reported that they have had less impact on hospitals’ behavior to date. Continued public and private effort is required to maintain the momentum for medical error reduction as health care costs continue to rise, and to develop the necessary infrastructure and know-how. These efforts must use professional, regulatory, and market mechanisms to stimulate change and accountability and to help hospitals and clinicians overcome organizational and technical barriers. Policymakers can strengthen these mechanisms in four ways.

- **Assess effectiveness of JCAHO initiatives.** Given JCAHO’s deeming authority in Medicare and its important role in shaping hospitals’ patient-safety efforts, federal policymakers might consider assessing the effectiveness of JCAHO’s initiatives. Although JCAHO accreditation is designed to establish the “floor” of hospital quality and safety, a 1999 report by the Health and Human Services (HHS) Office of Inspector General (OIG) concluded that JCAHO (accreditation) surveys are “unlikely to either surface substandard care or identify individuals whose judgment or skills to practice medicine are questionable...Survey results fail to make meaningful distinctions among hospitals.”21 Research also suggests that there is a disjuncture between JCAHO evaluations and outcomes.22 Finally, JCAHO is restructuring its accreditation process, which may improve or impede its ability to assess hospitals’ quality and safety.23

- **Pass legislation based on the IOM recommendations.** The IOM made recommendations in several federal policy areas seen as very important for facilitating progress in patient safety, including medical error reporting, IT, and research support. Although some progress is being made under existing statutory authority and other legislation (for example, Medicare prescription drug coverage), many of the IOM’s policy recommendations in these three areas have not been implemented or funded at the suggested levels.24

- **Strengthen public and private policymakers’ purchasing power.** Public and private policymakers could strengthen their purchasing power, both individually and collectively. The Medicare Payment Advisory Commission (MedPAC) has outlined ways in which Medicare could use its purchasing power more directly to improve quality and patient safety, despite major constraints.25 These include having the HHS secretary consider opportunities for minimizing avoidable errors in health care delivery through coverage and payment policies, quality measurement initiatives, and quality improvement programs.

Although the Leapfrog Group has had a positive impact on the patient-safety climate nationally, it established “stretch” goals that by definition are challenging for hospitals to meet. Given the nature of these goals, Leapfrog could try to develop stronger incentives for hospitals to fully implement their patient-safety practices. For example, several pay-for-performance initiatives are under way, and the concept of rewarding providers for improvement seems to be gaining momentum.26

The recent release of two important reports by the National Quality Forum
(NQF), a public-private partnership with participation from all segments of the health care industry, provides a new opportunity for greater coordination between public and private policymakers. The first report, released in May 2003 after our site visits were completed, identified a list of thirty evidence-based safety practices. Another report, released in September 2003, outlines national voluntary consensus standards for hospital performance measures—specifically, thirty-nine measures in eight condition-specific and cross-cutting areas, including patient safety. Collectively, these reports and others issued by the NQF are designed to provide a common framework that government, regulatory agencies, and public and private purchasers can use to stimulate hospital quality and safety improvement.

**Increase participation by professional organizations.** Professional associations and their related foundations may want to strengthen their training, education, and research efforts. Health care professionals’ values, norms, and knowledge are essential to reducing medical error. Some clinicians still do not believe that the problem of patient safety is as serious as the IOM report indicates or that there is a strong enough evidence base for proposed solutions. Even when providers believe that there is a serious problem and possible solutions, punitive cultures and a focus on “bad apples” instead of poor systems can impede progress.

As one respondent summarized it, “If reducing medical errors was easy, hospitals and health care professionals would have fixed the problem a long time ago.” Fortunately, greater attention is now being focused on finding solutions. Given the size and complexity of the health care industry, it is not surprising that progress is occurring relatively slowly and incrementally. The current level of public and private activity is encouraging, but sizable barriers to improvement remain.

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**NOTES**

2. Throughout the paper we use the term hospitals to refer to both hospital systems and freestanding hospitals, unless otherwise specified.
5. CTS markets included in the Leapfrog Group’s regional rollout areas include Boston, East Lansing, Northern New Jersey, Orange County, and Seattle.
7. See the Leapfrog Group’s Web site, www.leapfroggroup.org, for information on the organization and the three hospital patient-safety practices.
10. Ibid.
16. Lack of buy-in by nurses or other clinical staff (such as pharmacists) was also mentioned, although less frequently.
19. This finding is consistent with that reported by R. Lamb et al., “Hospital Disclosure Practices: Results of a National Survey,” Health Affairs (Mar/Apr 2003): 73–83.