

# TRENDWATCH

## Hospitals Demonstrate Commitment to Quality Improvement

Hospitals are on a never-ending journey of quality improvement—employing new technologies and techniques and research on what works, as well as continuously training new workers and meeting the needs of sicker patients. While hospitals are at different points on their quality path, all hospitals are committed to quality improvement. This commitment has helped hospitals make great strides in increasing adherence to treatment protocols and improving patient outcomes.

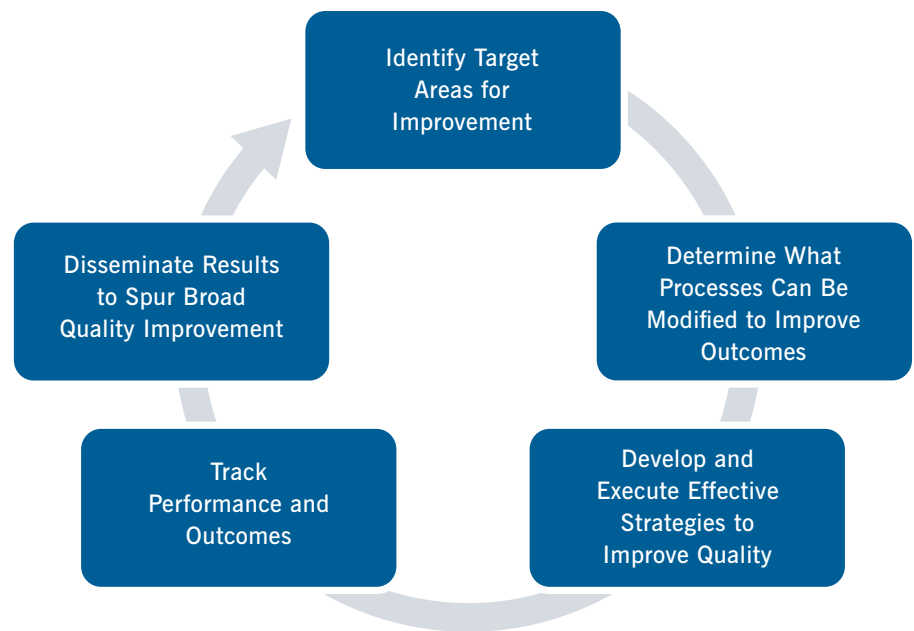
Hospitals employ different approaches and models of quality improvement, such as Lean, Six Sigma and the Plan-Do-Study-Act model for improvement, to name a few. Generally quality improvement efforts involve five steps:

1. Identify target areas for improvement;
2. Determine what processes can be modified to improve outcomes;
3. Develop and execute effective strategies to improve quality;
4. Track performance and outcomes; and
5. Disseminate results to spur broad quality improvement.

Hospitals are spearheading efforts—as well as collaborating with other hospitals,

Quality improvement can be viewed as a five-step process.

Chart 1: Five steps to Improving Quality



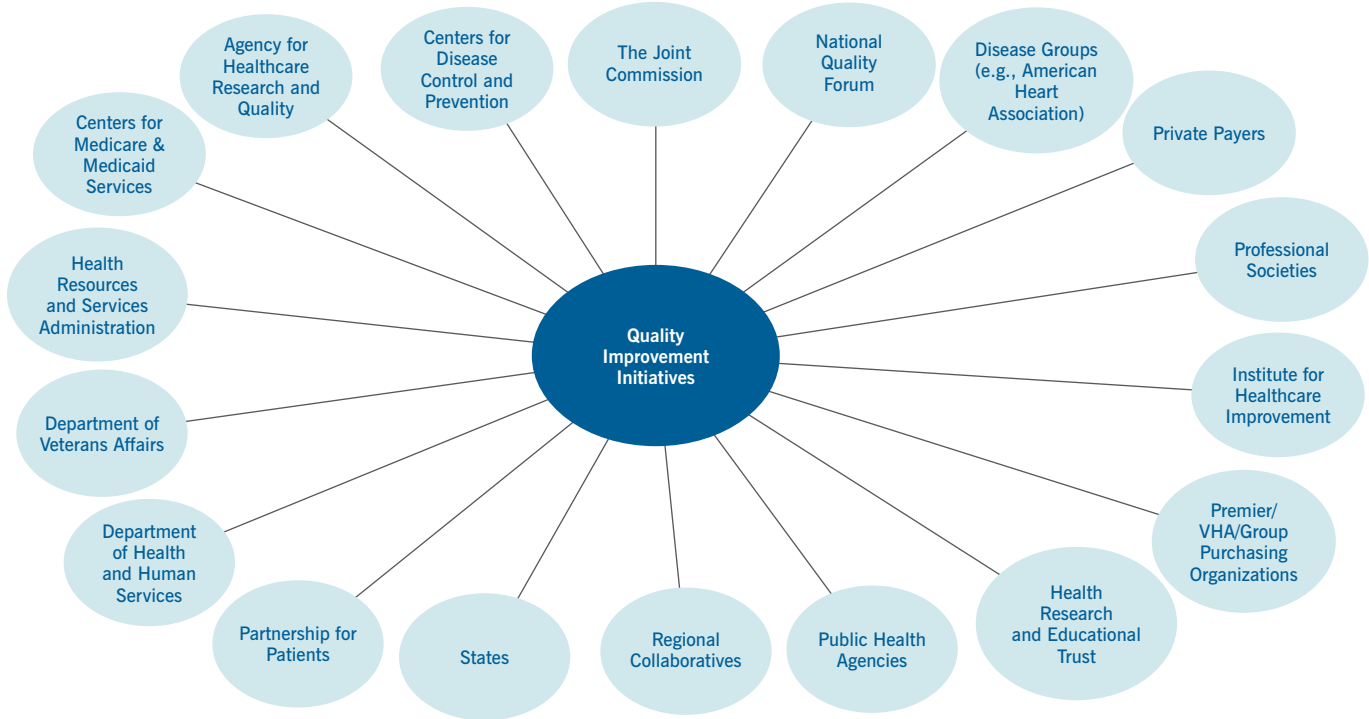
Source: Analysis by Avalere Health and American Hospital Association.

quality-focused organizations, states, payers and others—to improve patient safety and reduce adverse events. By forging effective strategies and sharing what they have learned, hospital leaders have spurred notable improvements in

care delivery and patient outcomes at the national, state and regional levels. These efforts have led to better quality and patient safety, as well as reduced health care costs, but more work is yet to be done.

Hospitals engage with government agencies and non-governmental bodies on quality improvement.

Chart 2: Sample of Hospital Quality Improvement Partners and Entities



Source: Analysis by Avalere Health and American Hospital Association.

### Hospital Approaches to Quality Improvement

Hospitals employ various approaches and models to improve quality. Many hospitals are using process-improvement programs with roots in manufacturing to prevent medical errors, reduce mortality rates, and improve patient care and quality. Examples of these models include:

**Lean**, based on the Toyota Production System, is a process-improvement methodology that aims to increase efficiency and productivity while reducing costs and waste. To implement Lean in health care settings, hospital staff

members collaborate to identify inefficiencies in care processes and boost productivity. The subsequent recovery in staff time leads to documented reductions in care errors, as well as improvements in physician, patient and employee satisfaction.<sup>1</sup>

**Six Sigma** is an approach to improving quality that was developed by engineers at Motorola for use in improving the quality of the company's products and services. It uses statistics to identify defects and a variety of techniques to try to identify the sources of those defects and the potential

changes that could be made to reduce or eliminate them. Successful implementation of Six Sigma improvement strategies requires engagement at all levels of the organization in pursuit of error free delivery of care.

**Plan-Do-Study-Act (PDSA)** is a four-step cycle to carry out a change, such as a process improvement or a modified work flow. Under the model providers develop a plan to test a change (Plan), execute the test (Do), observe and learn from the results (Study), and determine potential modifications (Act).<sup>2</sup>

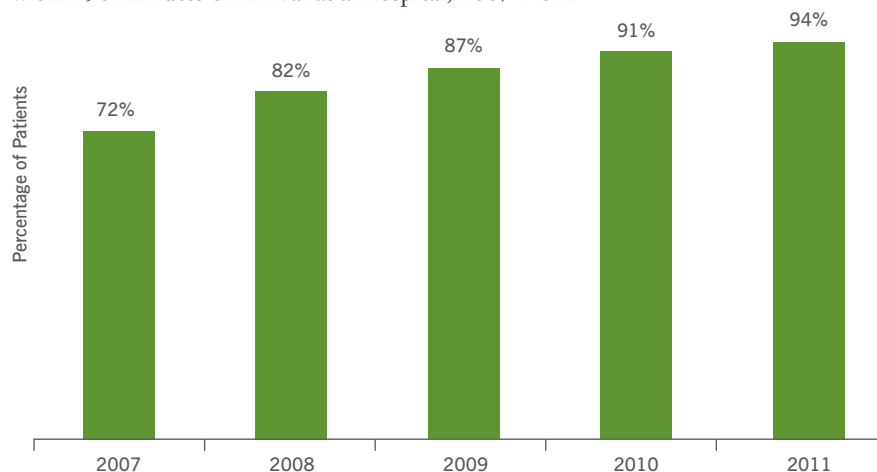
## Reporting Initiatives Sharpen Field's Focus on Quality Improvement

The formation of the Hospital Quality Alliance (HQA) and its development of standardized performance measures served to highlight opportunities for quality improvement and to create a greater impetus for action. In 2002, providers, federal agencies, consumer groups and oversight bodies collaborated to form the HQA, a national public-private partnership committed to collecting and disseminating meaningful data on hospital performance. HQA advanced the reporting of standardized performance measures for conditions such as acute myocardial infarction (AMI), congestive heart failure (CHF) and pneumonia as well as for surgical care, which were then publicly displayed on the Centers for Medicare & Medicaid Services' (CMS) *Hospital Compare* website.<sup>3</sup> HQA's efforts established a unified approach to measurement and reporting that equipped hospitals with performance benchmarks and a means of comparing their own performance to that of other hospitals. In addition, the *Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003* provided a financial incentive for hospitals to participate in public reporting of quality information.<sup>4</sup>

In December 2012, HQA will transition its hospital quality measure review process to the Measures Application Partnership (MAP), one of many data-based collaboratives targeting quality improvements. To ensure continued commitment to improvement, MAP, convened by the National Quality Forum (NQF), will advise the Department of Health and Human Services (HHS) on selecting performance measures for public

### National quality campaigns have improved hospital delivery of cardiac care.

Chart 3: Percentage of Patients Undergoing Percutaneous Coronary Interventions within 90 Minutes of Arrival at a Hospital, 2007–2011



Source: The Joint Commission. *Improving America's Hospitals: The Joint Commission's Annual Report on Quality and Safety 2012*.

reporting and performance-based payment programs. Looking ahead, MAP will play a pivotal role in encouraging quality improvement through the development of additional performance metrics.

The Joint Commission also was instrumental in standardizing quality metrics and shaping hospitals' quality improvement initiatives. In 1997, The Joint Commission launched ORYX, an initiative that integrated outcomes and other performance data into the hospital accreditation process to support hospitals in their quality improvement efforts.<sup>5</sup> Through ORYX, hospitals choose to report on select core measures, including AMI, CHF, pneumonia and stroke, among others. By encouraging hospitals to collect data on standardized performance measures, ORYX enables facilities to evaluate progress on core measures, as well

as to track and benchmark performance to identify areas for improvement. The Joint Commission continues to spur hospitals to examine their care processes and take action to improve outcomes. A survey of hospital leaders found that hospitals' major patient-safety initiatives were intended, in part, to meet Joint Commission standards.<sup>6</sup> Together, The Joint Commission and HQA expanded the focus on hospital quality, which in turn inspired quality improvement efforts that produced nationwide quality gains. As important as quality measurement is, however, reporting is just one piece of the puzzle. Studies indicate that simply publicizing hospital performance data does not improve quality.<sup>7</sup> Rather, improvement stems from the implementation of effective quality initiatives.

## Data Identifies Targets on which to Focus Collaborative Efforts to Modify Care Practices

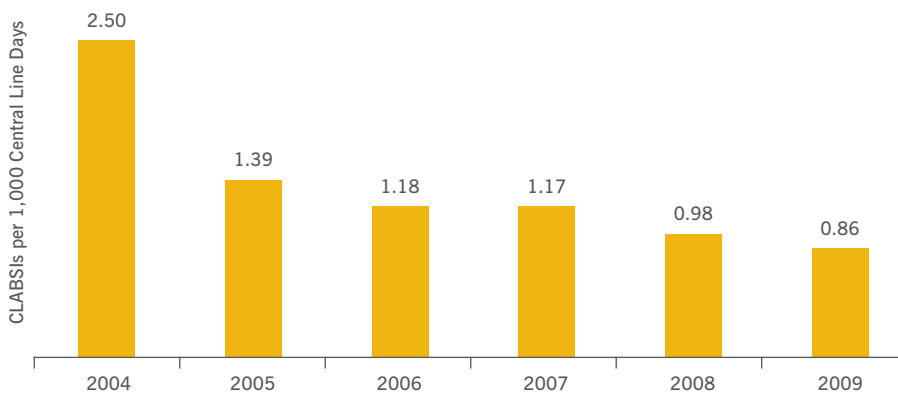
Hospitals use data to identify targets for quality improvement. From there they use clinical teams and other collaborative approaches to develop evidence-based protocols to standardize care processes to produce better outcomes.

For example, in 1998, The Joint Commission reviewed data on reported cases of wrong-site surgery and used their findings to develop a protocol, or care process, to mitigate factors contributing to the increased risk of wrong-site, wrong-procedure and wrong-person surgeries. The Joint Commission collaborated with five medical professional associations<sup>8</sup> and the American Hospital Association to better understand provider actions so as to eliminate confusion about site marking and facilitate communication among members of surgical teams. Under The Joint Commission’s three-step protocol, adopted in 2003, providers perform a pre-surgery verification process, mark the correct site for the procedure and conduct a “timeout” discussion as a final check before the procedure begins.<sup>9</sup> In 2011, organizations following the protocol reported reductions in the proportion of surgical cases in which there was a process-related defect that could result in a wrong procedure.<sup>10</sup>

Hospitals also have developed evidence-based protocols to reduce the occurrence of certain preventable conditions. Hospitals worked with the New York State Department of Health to standardize care to reduce the incidence of central-line-associated bloodstream infections (CLABSIs) in neo-natal intensive care units (NICUs). In 2008, all 18 regional referral NICUs in New York State formed a quality improvement network to create a bundle of evidence-based protocols to prevent CLABSIs. Elements of the bundle included performing hand hygiene before and after accessing a central line and

### Evidence-based protocols have improved quality in intensive care units (ICUs).

Chart 4: CLABSIs per 1,000 Central Line Days at Hospitals Participating in Michigan Hospital Association (MHA) *Keystone: ICU*, 2004–2009



Source: MHA Keystone Center for Patient Safety & Quality. 2010 Annual Report.

changing the dressing, disinfecting skin with appropriate antiseptic before central line insertion, and using a particular type of sterile dressing at the insertion site. After implementing a standardized CLABSI protocol, CLABSI rates dropped by 67 percent in NICUs statewide.<sup>11</sup>

Improving quality can entail the use of multiple protocol bundles. For example, in 2006, Stony Brook University Medical Center (SBUMC) assembled a 15-person committee to stem the growth in cases of sepsis and sepsis mortality among hospitalized patients. After reviewing accepted best practices, SBUMC implemented two sepsis treatment protocols that articulate care processes to be accomplished within defined timeframes.<sup>12</sup> The first protocol includes tasks that must be completed within the first six hours of identification of severe sepsis or septic shock, while the second protocol includes tasks that must be completed within the first 24 hours of initial presentation of sepsis. Together, the bundles aimed

to identify potential sepsis patients and ensure delivery of effective treatment. In the year after the protocol bundles were adopted, mortality for severe sepsis cases fell by more than 33 percent.<sup>13</sup> Additionally, the average length of stay for severe sepsis patients admitted through the emergency department decreased by an average of three days.<sup>14</sup>

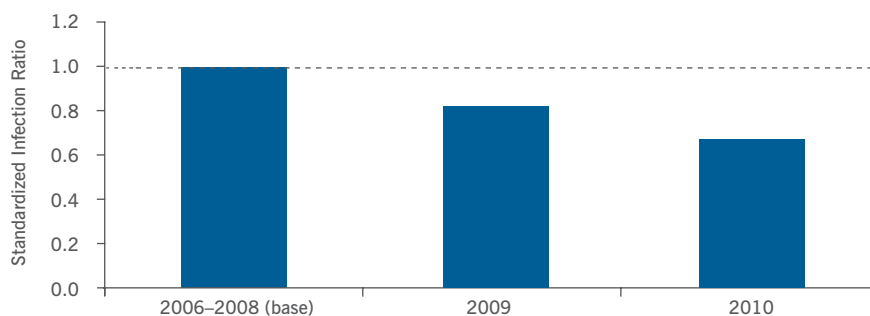
Hospitals also are collaborating with professional societies and associations focused on heart care to set guidelines to standardize care immediately following a cardiovascular event. One common area of collaboration is to hasten treatment time for a heart attack by targeting a process known as door-to-balloon (D2B) time. D2B is the interval between a heart attack patient’s arrival at a hospital to primary percutaneous coronary intervention (PCI), or coronary angioplasty. Although studies show a strong association between shorter D2B time and lower mortality, many patients are not treated within the guideline-recommended

timeframe of 90 minutes.<sup>15</sup> In 2006, the American Heart Association, American College of Cardiology, and several other organizations launched “D2B: An Alliance for Quality,” with the goal of raising the percentage of AMI patients who receive PCI within 90 minutes of hospital presentation. More than 1,100 hospitals have joined the D2B Alliance in the past six years.<sup>16</sup> They commit to instituting various evidence-based strategies to improve D2B time and to provide data and share best practices with the larger D2B network. Nationwide, there has been a progressive reduction in D2B time, which has been associated with a significant decline in in-hospital mortality.<sup>17</sup> One study determined that the greatest decline in D2B time occurred between 2006 and 2007, a period corresponding to the initiation of national campaigns to improve D2B times.<sup>18</sup>

When choosing where to focus quality efforts, hospitals need to identify potential benefits and the likelihood of success. For instance, hospitals participating in the D2B Alliance were encouraged by data demonstrating the impact of a discreet process change (reducing D2B time) on patient outcomes. The success of D2B and treatment protocols exemplifies that hospitals are more likely to succeed in developing protocols around care processes and episodes over which they have more control. For example, instituting protocols around proper catheter insertion requires educating and training clinicians, whereas reducing avoidable hospital readmissions often requires that providers monitor and influence

### Hospitals have progressed in combating hospital-acquired infections...

Chart 5: Central Line-associated Bloodstream Infection (CLABSI) Standardized Infection Ratio (SIR), 2006–2010

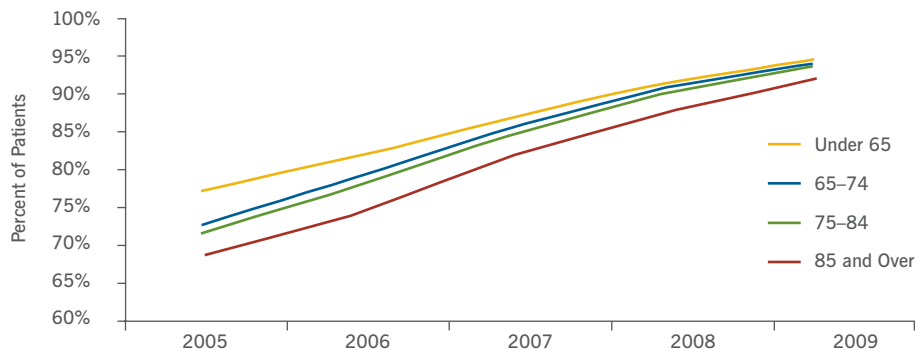


Source: U.S. Department of Health and Human Services. Health System Measurement Project. Central Line-Associated Bloodstream Infection Standardized Infection Ratio.

Note: SIR is a ratio of the observed number of CLABSI as reported to CDC's National Healthcare Safety Network (NHSN) each year to the predicted occurrence based on the rates of infections among all facilities reporting to NHSN during the referent period (January 2006 through December 2008). SIR below 1.0 means hospitals reported fewer infections than predicted.

### ...and in adhering to accepted treatment protocols.

Chart 6: Adult Surgery Patients Who Received Appropriate Timing of Antibiotics, by Age, 2005–2009



Source: U.S. Department of Health and Human Services. (2011). National Healthcare Quality Report. Washington, DC: Agency for Healthcare Research and Quality.

patient behavior post-discharge, over which they have little control. Hospital improvement initiatives often target healthcare-associated infections (HAIs),

as they are preventable. Serious HAIs can extend hospital stays, and ultimately increase costs and risk of mortality. Nationwide tracking and reporting have

“ ”  
from the field

“The AHA and hospitals across the country have partnered with AHRQ to implement the *On the CUSP: Stop HAIs* initiative. Since 2008, more than 1,100 hospital adult ICU teams have implemented this initiative and successfully reduced their CLABSI rates by 40 percent, saving more than 500 lives and preventing more than 2,000 infections. This is truly extraordinary.”

– Richard J. Umbdenstock, President and Chief Executive Officer, American Hospital Association

helped hospitals identify HAIs as a target for quality improvement.

Common HAIs include CLABSI, catheter-associated urinary tract infections (CAUTIs), surgical site infections (SSIs), and ventilator-associated pneumonia (VAP). Together, these four infections account for more than 80 percent of all HAIs.<sup>19</sup> Nationwide surveillance indicates that hospital efforts to implement

bundles, checklists and other protocols have helped curb national rates of HAIs. The Centers for Disease Control and Prevention (CDC) concluded that hospital quality improvement initiatives helped drive a reduction of 58 percent in CLABSIs in U.S. ICUs between 2001 and 2009, which represented up to 6,000 lives saved and \$414 million in potential health care costs averted.<sup>20</sup> In addition,

hospitals reported 6 percent fewer CAUTIs and 8 percent fewer SSIs to the CDC in 2010.<sup>21</sup>

Although hospitals have made significant strides in reducing HAIs, rates for these infections vary nationwide, suggesting that hospitals in certain regions are further down the path toward quality improvement efforts than others.<sup>22</sup>

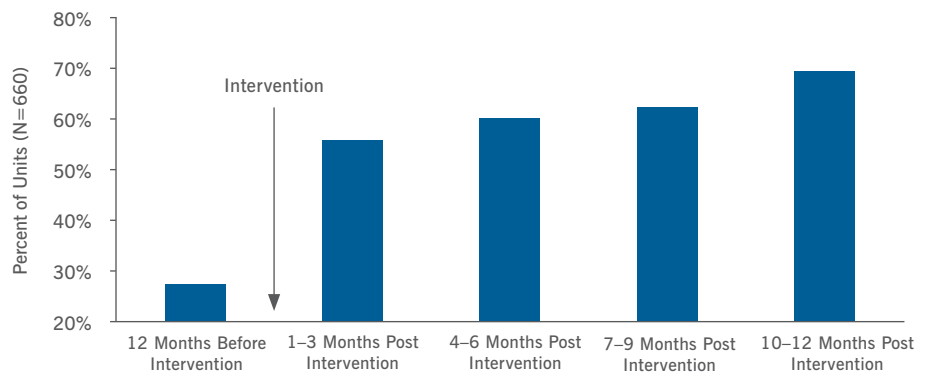
## Quality Gains and Cost Savings Come from Well-designed, Well-executed Strategies

Once hospitals decide where to focus their quality efforts and develop a better understanding of the evidence-base supporting care redesign, they begin to design and roll out initiatives that will produce measurable results. Providers often partner with independent organizations whose missions focus on advancing health care quality.

For example, Johns Hopkins University and the U.S. Agency for Healthcare Research and Quality (AHRQ) collaborated on the Comprehensive Unit-based Safety Program (CUSP), which educates hospital staff in evidence-based safety protocols. CUSP is composed of multiple steps that include training staff in the “science of safety” so that clinicians understand the basic principles of standardizing care processes and using checklists. CUSP also engages staff to identify potential areas of improvement based on review of incident reports and claims, and encourages senior leaders to perform monthly safety rounds with clinicians to discuss safety issues. After identifying breakdowns in care, clinicians and hospital administrators collaborate to implement CUSP tools for improvement. For example, hospitals may institute a morning briefing to enhance communication across staff or introduce a shadow program to encourage teamwork across providers.<sup>23</sup>

### Hospital efforts to curb infections have produced impressive results.

Chart 7: Percentage of *On the CUSP: Stop BSI* Intensive Care Units (ICUs) with Zero Percent Central Line-associated Bloodstream Infection (CLABSI) Rate



Source: Agency for Healthcare Research and Quality. CLABSI Update. <http://www.ahrq.gov/qual/clabsiupdate/clabsiupdate.pdf>. Note: To achieve a zero percent CLABSI rate, an ICU had to report no CLABSIs for each data point submitted during the period.

Because HAIs are the most common complication of hospital care, with an estimated 1.7 million HAIs occurring annually, hospitals nationwide have adopted CUSP techniques to reduce two common HAIs—CAUTI and bloodstream infections (BSI).<sup>24</sup> *On the CUSP: Stop CAUTI*—led by AHA’s Health Research and Educational Trust (HRET) through a contract with AHRQ—aimed to reduce rates of CAUTI in U.S. hospitals by an average of 25 percent from March 2011 through July 2012. More than 1,000 hospitals in 45 states signed on to implement CAUTI reduction practices

in hospital units.<sup>25</sup> In addition, *On the CUSP: Stop BSI* launched in 2009 and currently operates in more than 1,100 ICUs across 44 states.<sup>26</sup> Preliminary findings released in September 2012 indicate that participating hospitals reduced the rate of CLABSIs in ICUs by 40 percent and avoided more than \$34 million in health care costs.<sup>27</sup>

Hospitals also have partnered at the state level to implement CUSP, resulting in significant gains in patient outcomes. The Michigan Health & Hospital Association (MHA) and Blue Cross Blue Shield of Michigan installed CUSP in

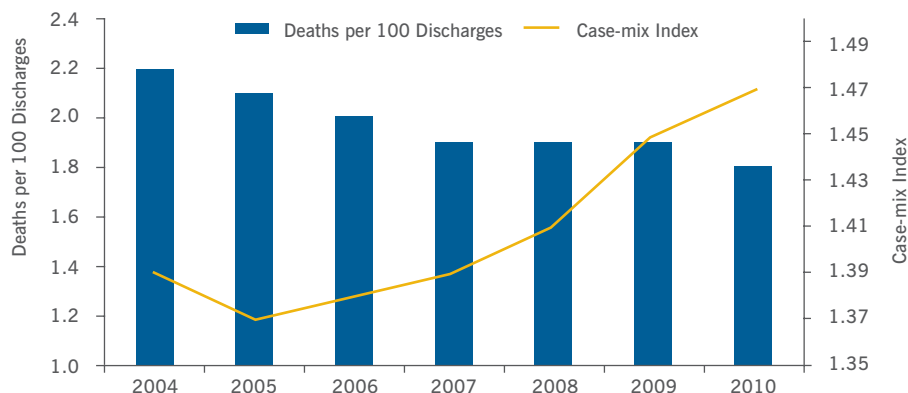


more than 100 ICUs in the state to reduce HAIs through a program known as the *MHA Keystone: ICU*. Launched in 2003, *MHA Keystone: ICU* uses a checklist strategy, along with culture change, to reduce CLABSIs and VAP that occur in ICU patients.<sup>28</sup> From 2004 to 2010, *MHA Keystone: ICU* saved more than 1,830 lives, prevented more than 140,700 excess hospital days, and avoided more than \$300 million in health care costs.<sup>29</sup> In addition, the overall VAP rate was reduced by 70 percent, to less than 1.5 per 1,000 ventilator days in 2010.<sup>30</sup> The checklist has also reduced deaths by 10 percent.<sup>31</sup> From March 2010 to March 2011, *MHA Keystone: ICU*'s efforts to reduce CLABSIs resulted in an estimated \$6.4 million in net savings.<sup>32</sup> *MHA Keystone: ICU* continues to enact new programs to improve patient safety. Led by a team of Michigan clinicians, efforts currently under way include delirium prevention and early mobility for patients.<sup>33</sup>

Effective quality strategies require facility-wide staff engagement. Missouri-based Ascension Health—one of the nation's largest non-profit health systems with 67 facilities—set ambitious quality goals and devised sophisticated strategies to improve care across its hospitals. In 2002, Ascension initiated improvement activities focused on eight priorities<sup>34</sup> by forming a clinical excellence team comprised of leaders across the health system.<sup>35</sup> Each hospital provided leadership for one of the eight priorities by creating or testing interventions that could then be put into practice at other facilities. To disseminate these interventions, the hospitals formed a learning collaborative that used in-person meetings, webinars and electronic communication to share best practices.<sup>36</sup> By 2010, Ascension facilities had reduced preventable deaths by more than 1,500 patients annually to achieve a mortality

### Collaboration to develop and implement multiple interventions across a system can yield quality gains.

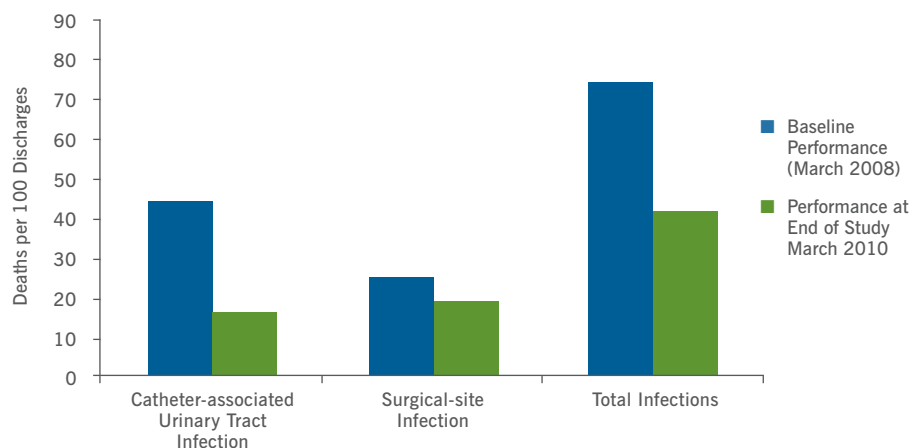
Chart 8: Unadjusted Mortality Decline and Case-mix Index in Hospitals in the Ascension Health System, Fiscal Years 2004–2010



Source: Pryor, D., et al. (April 2011). The Quality 'Journey' At Ascension Health: How We've Prevented At Least 1,500 Avoidable Deaths A Year—And Aim To Do Even Better. *Health Affairs*, 30(4): 604-611.

### Broad dissemination of quality improvement successes can improve outcomes across a hospital system.

Chart 9: System-wide Infection Counts at Legacy Health, 2008 and 2010



Source: Joyce, J., et al. (2011). Legacy Health's 'Big Aims' Initiative To Improve Patient Safety Reduced Rates Of Infection And Mortality Among Patients. *Health Affairs*, 30(4): 619-627.

rate that is 25 percent below the national average.<sup>37</sup> Notably, Ascension was able to reduce mortality rates despite an increase in patient severity.<sup>38</sup>

Effective quality improvement often requires tailoring to the unique

needs of a hospital system. In 2008, Legacy Health, a six-hospital system in Oregon, launched a quality and safety program, known as Big Aims, which hoped to eliminate needless deaths and preventable harm.<sup>39</sup> One project deployed

evidence-based, best-practice bundles to help prevent Legacy's four most common HAIs.<sup>40</sup> Multidisciplinary teams at the system's six hospitals spent several months reviewing the literature on their assigned bundle, including evidence-based guidelines, existing bundles and

proven implementation approaches. As each bundle was developed, tested and refined, the group solicited feedback on its work from a wide range of colleagues. The results were impressive—a 44.6 percent reduction in infections and a 13.5 percent reduction in mortality, as

well as annual savings of more than \$6.8 million for each of the first two years from the avoided costs of treating HAIs. In addition, compliance with hand hygiene procedures jumped from 52 percent to 89 percent.<sup>41</sup>

## Performance Tracking Spotlights Successes as Well as Areas for Improvement

Data collection and performance measurement are powerful ways to drive improvements in the nation's health care system. Currently, more than 3,000 hospitals voluntarily report data to the Surgical Care Improvement Project (SCIP). SCIP is a multi-year campaign initiated in 2003 by CMS and the CDC with the goal of preventing SSIs and substantially reducing surgical morbidity and mortality. Hospitals report

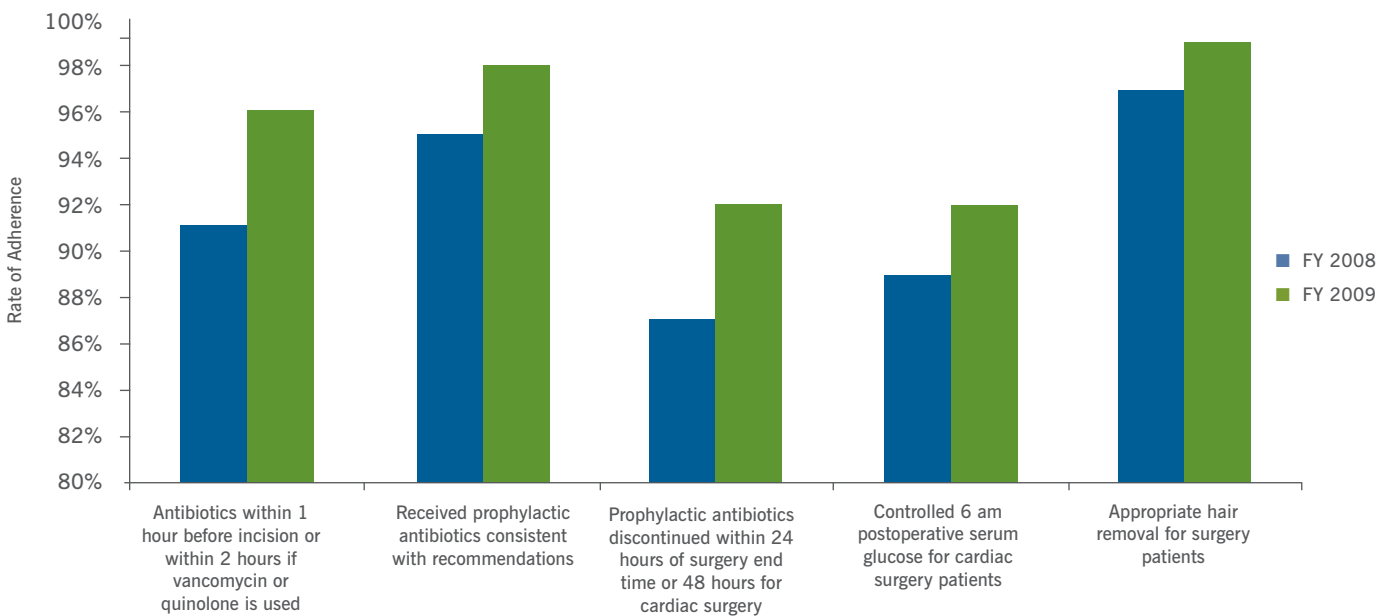
across multiple measures, representing evidence-based standards of care, such as administering antibiotics within one hour before incision and discontinuing prophylactic antibiotics within 24 hours after surgery. SCIP aims to encourage collaboration among surgeons, anesthesiologists, nurses, pharmacists and others to implement these evidence-based processes to improve surgical outcomes. Hospital adherence to SCIP measures has

improved since the program launched, though there is room for additional progress. SCIP's goal is to achieve 95 percent adherence to process measures in 2013.<sup>42</sup>

Data also can reveal areas where hospitals can improve. From 2008 through 2010, The Joint Commission partnered with eight hospitals to develop best practices around hand hygiene. In the project's initial stage—data collection and analysis—hospitals used observers

### More hospitals are adhering to accepted surgery care guidelines.

Chart 10: Rate of Adherence to Surgical Care Improvement Project (SCIP) Process Measures, Fiscal Years (FY) 2008 and 2009



Source: Centers for Medicare and Medicaid Services. Progress Toward Eliminating Healthcare-Associated Infections—September 23-24, 2010. [http://www.hhs.gov/ash/initiatives/hai/actionplan/cms\\_scip.pdf](http://www.hhs.gov/ash/initiatives/hai/actionplan/cms_scip.pdf).



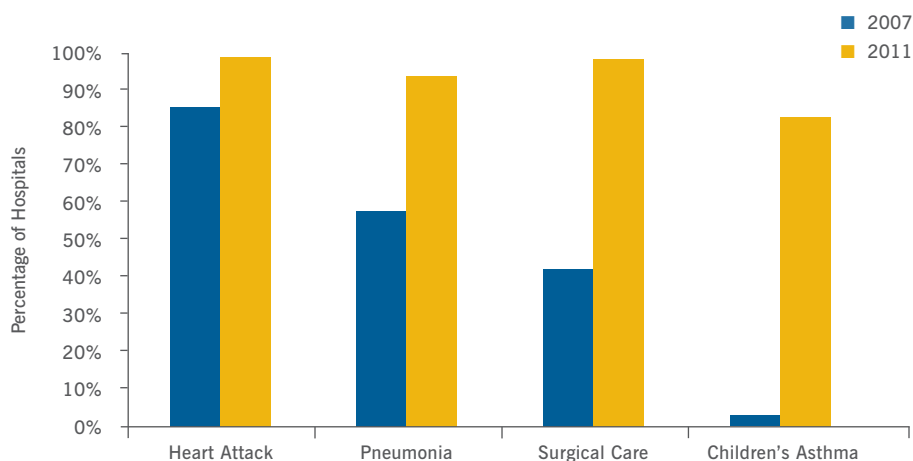
to track hand-hygiene and determine baseline compliance. The findings were surprising: the majority of facilities thought their compliance rate was about 70–90 percent, when it was actually less than 50 percent.<sup>43</sup> There were also unexpected sources of infection. For example, one hospital discovered that many privacy curtains surrounding patient beds were colonized with multi-drug resistant bacteria. The findings indicated that even if clinicians followed hand hygiene protocols, they could still spread infection by touching objects in patients' rooms. The hospital responded by modifying its process for cleaning curtains and addressed the potential spread of bacteria on other items, such as lab coats.

National efforts to track hospital quality have shed light on areas where hospitals have made significant quality gains. For instance, in 2010, hospitals achieved very high levels of performance on many of The Joint Commission's core measures, including AMI, pneumonia and surgical care.<sup>44</sup> For example, hospitals provided an evidence-based AMI treatment more than 98 percent of the time, up from about 87 percent in 2002.<sup>45</sup>

Another indication of improvement in hospital quality is the number of quality measures that CMS has retired from *Hospital Compare*. Each year CMS determines whether to “top out” or retire measures for which performance on the measures is high nationwide, with little variability among hospitals. For example, CMS has retired three adult smoking cessation counseling measures and suspended four measures including aspirin at arrival, angiotensin-converting enzyme (ACE)/angiotensin receptor blockers (ARB) at discharge, beta-blocker at discharge, and appropriate hair removal prior to surgery.<sup>46</sup> CMS also removed a measure of perioperative temperature management for surgery patients in

### More hospitals are delivering evidence-based care for key conditions.

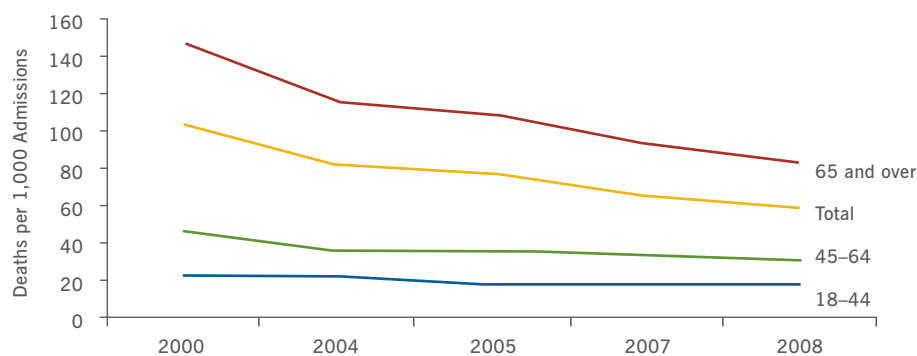
Chart 11: Percentage of Hospitals Achieving Composite Rates Greater Than 90 Percent for Accountability Measures, 2007 and 2011



Source: The Joint Commission. *Improving America's Hospitals: The Joint Commission's Annual Report on Quality and Safety 2012*.

### Hospitals' quality initiatives are yielding better patient outcomes.

Chart 12: Inpatient Deaths per 1,000 Adult Hospital Admissions with Heart Attack, by Age, 2000–2008



Source: U.S. Department of Health and Human Services. (2011). *National Healthcare Quality Report*. Washington, DC: Agency for Healthcare Research and Quality.

the FY 2015 Hospital Value-based Purchasing Program, as it is “topped out.”<sup>47</sup>

These inpatient care improvements also are producing better patient outcomes. From 2004 to 2008, the inpatient mortality rate for hospital admissions with heart attack decreased significantly

overall and for each age group and geographic location.<sup>48</sup> This improvement is tied to timeliness of heart attack care. For example, from 2004 to 2008, an increasing number of heart attack patients received PCI within 90 minutes and fibrinolytic medication within 30 minutes.<sup>49</sup>

## Broad Dissemination of Successful Quality Programs Amplifies Positive Outcomes

Broadly disseminating successful quality strategies is critical to maximizing the benefits of individual improvement programs. A small and successful quality initiative can be distilled into a step-by-step process that can be replicated at facilities nationwide. To accelerate this process, a handful of quality-focused groups compile and disseminate effective quality strategies to expand the breadth of quality improvement efforts. Many hospitals work with the Institute for Healthcare Improvement (IHI) — an independent, non-profit organization — to design, test and disseminate new models to improve care safety and quality. Over the course of several years, participating hospitals tested, refined and implemented changes to a model known as Transforming Care at the Bedside (TCAB). TCAB aims to improve medical-surgical unit performance by strengthening provider communication and redesigning workplaces to enhance efficiency and reduce waste. As part of TCAB, IHI coaches participating sites on how to identify, cultivate and share effective strategies. Participating sites then adapt TCAB techniques to suit their facilities. They designate a program organizer, target units for implementation, stress ongoing communication and identify nurse champions.<sup>50</sup>

To date, more than 100 hospitals have put TCAB principles into action to improve their medical-surgical units.<sup>51</sup> From 2005 to 2007, the number of harmful falls per 1,000 patient days at TCAB pilot sites dropped 38 percent, from 1.32 to 0.72. Between 2006 and 2007, the percentage of readmissions within 30 days of discharge dropped 25 percent. Staff at pilot sites also reported improved staff engagement as the initiative progressed.<sup>52</sup>

Many of the nation's leading hospitals and health systems are part of The Joint Commission Center for Transforming Healthcare. The Center develops and shares targeted processes and guidelines to improve health care safety and quality with more than 19,000 health care organizations.<sup>53</sup> Since its inception in 2009, the Center has developed safety programs targeting hand hygiene; wrong site surgery; patient handoffs between providers; preventable hospitalizations; falls with injury; surgical-site infections; and optimizing behavior to improve safety practices.<sup>54</sup>

For example, Lifespan-Rhode Island Hospital collaborated with the Center in 2009 to launch the wrong-site surgery project, which institutes safeguards to prevent an array of surgical errors. The project also aims to identify how

a hospital's organizational culture could contribute to wrong-site surgeries.<sup>55</sup> In 2010, four more hospitals and three ambulatory surgical centers joined the project, which included implementing checklists and processes that decreased the number of cases that could result in wrong-site surgery. The eight participating facilities reduced missteps during pre-op that could potentially lead to a wrong-site surgery — such as rushing the patient identification process — by 63 percent.<sup>56</sup>

Hospitals often partner with other hospitals at the state level to accelerate adoption of proven quality improvement strategies. One example is the Tennessee Center for Patient Safety (TCPS), which seeks to accelerate Tennessee hospitals' adoption of proven quality improvement strategies. TCPS shares best practices and successful hospital case studies through various methods, including its website and leadership summits. For example, hospitals use TCPS as an avenue to share their infection-control initiatives by listing bundle components and checklists and posting educational videos on their experiences with quality improvement. Since its 2007 launch, TCPS has reduced HAIs by 860 cases, avoiding more than 6,200 patient days, and saving roughly \$12.3 million.<sup>57</sup>

“ ”  
*from the field*

“When we raise the bar and provide the proper guidance and tools, hospitals have answered with excellent results. Their capacity for continual improvement points toward a future in which quality and safety defects are dramatically reduced and high reliability is expected and achieved.”

– Mark R. Chassin, President, The Joint Commission<sup>63</sup>

## Under Health Reform, Hospitals Have Entered New Partnerships on Quality

*The Patient Protection and Affordable Care Act (ACA) of 2010* promotes quality improvement in multiple ways. For instance, in April 2011, HHS announced a \$1 billion national initiative known as Partnership for Patients, which seeks to cut hospital-acquired conditions by 40 percent by the end of 2013.<sup>58</sup> The Partnership includes more than 3,000 hospitals along with physicians and nurses, consumer advocates, employers and unions.<sup>59</sup> As part of the Partnership, HHS awarded \$218

million to 26 hospital organizations to reduce hospital-acquired conditions through hospital engagement networks (HENs).<sup>60</sup> HENs will serve as “mobile classrooms” at the national, regional, state or hospital level to share best practices and lessons learned as they work to reduce the number of hospital-acquired conditions and hospital readmissions.

To further spur quality improvement nationwide, the ACA requires HHS to establish a National Strategy for Quality Improvement in Health Care (the

National Quality Strategy). In March 2011, HHS submitted a report to Congress outlining the agency’s initial National Quality Strategy and plan.<sup>61</sup> The National Quality Strategy will pursue three goals: better care, healthy people and communities, and affordable care. To achieve its goals, the National Quality Strategy encourages stakeholders—drawing from “pockets of excellence”—to measure and evaluate quality, and to collaborate in innovation and rapid adoption of successful quality initiatives.

## Hospitals Are Committed to Pursuing Quality Improvement on a Large Scale

Quality initiatives are large undertakings and require investments in staff, training and technology. Quality improvement programs often do save money, though savings may not appear in the initial years of a program. Furthermore, efforts to

improve quality do not end with the rollout. Effective quality improvement strategies require continued nurturing.<sup>62</sup> Hospitals face internal cultural challenges to making change, as many quality initiatives call for institution-wide changes

to process and workflows. Despite these challenges, hospitals are committed to improving patient care and have made steady progress. The result: better outcomes for patients and meaningful cost savings for the health care system.

### POLICY QUESTIONS

- In an era of increasingly limited resources, how should hospitals prioritize quality improvement efforts to achieve better patient outcomes?
- How can reporting be synchronized so as to minimize the data collection burden?
- What investments can be made to expand the evidence base supporting quality improvement?
- What can be done to support providers’ quality improvement efforts?

### ENDNOTES

- 1 Jimmerson, C., et al. (May 2005). Reducing Waste and Errors: Piloting Lean Principles at Intermountain Healthcare. *Joint Commission Journal on Quality and Patient Safety*, 31(5): 249-257.
- 2 Institute for Healthcare Improvement. (April 24, 2011). Plan-Do-Study-Act (PDSA) Worksheet.
- 3 Robert Wood Johnson Foundation/*Health Affairs*. (March 8, 2012). *Health Policy Brief: Public Reporting on Quality and Costs*.
- 4 Medicare Prescription Drug, Improvement, and Modernization Act. Public Law 108-173.
- 5 The Joint Commission. (August 2011). Facts about ORYX® for Hospitals (National Hospital Quality Measures).
- 6 Devers, K., et al. (March/April 2004). What is Driving Hospitals’ Patient-Safety Efforts? *Health Affairs*, 23(2): 103-115.
- 7 Ryan, A., et al. (March 2012). Medicare’s Public Reporting Initiative on Hospital Quality had Modest or No Impact on Mortality from Three Key Conditions. *Health Affairs*, 31(3): 585-592.
- 8 Other organizations included: American Medical Association, American College of Physicians, American College of Surgeons, American Dental Association and American Academy of Orthopaedic Surgeons.
- 9 The Joint Commission. *Speak Up: The Universal Protocol*. [http://www.jointcommission.org/assets/1/18/UP\\_Poster1.PDF](http://www.jointcommission.org/assets/1/18/UP_Poster1.PDF).

- 10 O'Reilly, K. (July 18, 2011). Wrong-site Surgeries Risk Reduced during Pilot Project. *American Medical News*.
- 11 Schulman, J., et al. (March 2011). Statewide NICU Central-line-associated Bloodstream Infection Rates Decline after Bundles and Checklists. *Pediatrics*, 111(127): 436-444.
- 12 Surviving Sepsis Campaign. *Severe Sepsis Bundles*. <http://www.survivingsepsis.org/BUNDLES/Pages/default.aspx>.
- 13 American Hospital Association. (2009). *Hospitals in Pursuit of Excellence: A Guide to Superior Performance Improvement*.
- 14 Ibid.
- 15 Rathore, S., et al. (May 2009). Association of Door-to-balloon Time and Mortality in Patients Admitted to Hospital with ST Elevation Myocardial Infarction: National Cohort Study. *BMJ*. 19: 338.
- 16 Door-to-Balloon Alliance. *D2B Participating Hospitals*.
- 17 Gibson, M., et al. (December 2008). Trends in Reperfusion Strategies, Door-to-needle and Door-to-balloon Times, and In-hospital Mortality among Patients with ST-segment Elevation Myocardial Infarction Enrolled in the National Registry of Myocardial Infarction from 1990 to 2006. *American Heart Journal*, 156(6): 1019-22.
- 18 Krumholz, H., et al. (August 2011). Improvements in Door-to-Balloon Time in the United States, 2005 to 2010. *Circulation*, 124(9):1038-45.
- 19 Agency for Healthcare Research and Quality. (September 2009). *Fact Sheet: AHRQ's Efforts to Prevent and Reduce Healthcare-Associated Infections*. Rockville, MD: Agency for Healthcare Research and Quality.
- 20 Centers for Disease Control and Prevention. (March 4, 2011). Vital Signs: Central Line-associated Bloodstream Infections—United States, 2001, 2008, and 2009. *Morbidity and Mortality Weekly Report*, 60(8): 243-8.
- 21 Centers for Disease Control and Prevention. (January-December 2010). *National and State Healthcare-Associated Infections Standardized Infection Ratio Report*.
- 22 Clancy, C. (October 13, 2009). Ten Years After To Err Is Human. *American Journal of Medical Quality*, 24: 525; Interdisciplinary Nursing Quality Research Initiative. (December 2009). *To Err Is Human Ten Years Later*. Princeton, NJ: Robert Wood Johnson Foundation.
- 23 Johns Hopkins Medicine. CUSP Framework. [http://www.hopkinsmedicine.org/innovation-quality\\_patient\\_care/areas\\_expertise/improve\\_patient\\_safety/cusp/five\\_steps\\_cusp.html](http://www.hopkinsmedicine.org/innovation-quality_patient_care/areas_expertise/improve_patient_safety/cusp/five_steps_cusp.html).
- 24 Agency for Healthcare Research and Quality. *Fact Sheet: AHRQ's Efforts to Prevent and Reduce Healthcare-Associated Infections*. <http://www.ahrq.gov/qual/haiflyer.pdf>.
- 25 Michigan Health & Hospital Association. MHA Keystone Center for Patient Safety & Quality.
- 26 Agency for Healthcare Research and Quality. (September 10, 2012). *AHRQ Patient Safety Project Reduces Bloodstream Infections by 40 Percent*.
- 27 Ibid.
- 28 Michigan Health & Hospital Association. MHA Keystone Center for Patient Safety & Quality. [http://www.mhakeystonecenter.org/icu\\_overview.htm](http://www.mhakeystonecenter.org/icu_overview.htm)
- 29 MHA Keystone Center for Patient Safety & Quality. 2010 Annual Report.
- 30 Ibid.
- 31 Johns Hopkins Medicine. (January 2011). Safety Checklist Use Yields 10 Percent Drop in Hospital Deaths.
- 32 Michigan Health & Hospital Association. Patient Safety and Quality Annual Report 2011.
- 33 MHA Keystone Center for Patient Safety & Quality. 2010 Annual Report.
- 34 Eight priorities included: the Joint Commission's National Patient Safety Goals and core measures; preventable mortality; adverse drug events; falls; pressure ulcers; surgical complications; nosocomial infections; and perinatal safety.
- 35 Pryor, D., et al. (June 2006). The Clinical Transformation of Ascension Health: Eliminating All Preventable Injuries and Deaths. *Journal on Quality and Patient Safety*, 32(6): 299-308.
- 36 Pryor, D., et al. (April 2011). The Quality 'Journey' at Ascension Health: How We've Prevented At Least 1,500 Avoidable Deaths a Year—And Aim to Do Even Better. *Health Affairs*, 30(4): 604-611.
- 37 Spugnardi, I. (May 2011). Much Work Ahead on Improving Health Care Quality and Safety. *Catholic Health World*, 27(8).
- 38 Pryor, D., et al. (April 2011). The Quality 'Journey' at Ascension Health: How We've Prevented At Least 1,500 Avoidable Deaths a Year—And Aim to Do Even Better. *Health Affairs*, 30(4): 604-611.
- 39 Joyce, J., et al. (2011). Legacy Health's 'Big Aims' Initiative To Improve Patient Safety Reduced Rates Of Infection And Mortality Among Patients. *Health Affairs*, 30(4): 619-627.
- 40 Ibid.
- 41 Ibid.
- 42 U.S. Department of Health and Human Services. National Targets and Metrics. <http://www.hhs.gov/ash/initiatives/hai/nationaltargets/index.html>.
- 43 Health Research & Educational Trust. (November 2010). *Hand Hygiene Project: Best Practices from Hospitals Participating in the Joint Commission Center for Transforming Healthcare Project*. Chicago, IL: Health Research & Educational Trust.
- 44 The Joint Commission. (2011). *Improving America's Hospitals: The Joint Commission's Annual Report on Quality and Safety*.
- 45 Ibid.
- 46 Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and the Long-Term Care Hospital Prospective Payment System and Fiscal Year 2013 Rates (Proposed Rule). (May 11, 2012). *Federal Register*, 77:92: 27870.
- 47 Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and the Long-Term Care Hospital Prospective Payment System and Fiscal Year 2013 Rates (Final Rule). (August 1, 2012). [http://www.ofr.gov/OFRUpload/OFRData/2012-19079\\_P1.pdf](http://www.ofr.gov/OFRUpload/OFRData/2012-19079_P1.pdf).
- 48 U.S. Department of Health and Human Services. (2011). *National Healthcare Quality Report*. Agency for Healthcare Research and Quality. Washington, DC.
- 49 Ibid.
- 50 Robert Wood Johnson Foundation/Institute for Healthcare Improvement. *Spreading Innovations in Health Care: Approaches for Disseminating Transforming Care at the Bedside*.
- 51 Institute for Healthcare Improvement. *Transforming Care at the Bedside*. <http://www.ihl.org/offering/Initiatives/PastStrategicInitiatives/TCAB/Pages/default.aspx>.
- 52 Robert Wood Johnson Foundation. (July 2011). *Transforming Care at the Bedside*. <http://www.rwjf.org/files/research/TCB.final.pdf>.
- 53 Joint Commission Center for Transforming Healthcare. *Facts about the Joint Commission Center for Transforming Healthcare*. [http://www.centerfortransforminghealthcare.org/assets/4/6/CTH\\_Fact\\_Sheet.pdf](http://www.centerfortransforminghealthcare.org/assets/4/6/CTH_Fact_Sheet.pdf).
- 54 Joint Commission Center for Transforming Healthcare. *Projects*. <http://www.centerfortransforminghealthcare.org/projects/projects.aspx>.
- 55 Joint Commission Center for Transforming Healthcare. *Facts about the Wrong Site Surgery Project*. [http://www.centerfortransforminghealthcare.org/assets/4/6/WSS\\_Fact\\_Sheet.pdf](http://www.centerfortransforminghealthcare.org/assets/4/6/WSS_Fact_Sheet.pdf)
- 56 Joint Commission Center for Transforming Healthcare. *The Wrong Site Surgery Project*. [http://www.centerfortransforminghealthcare.org/UserFiles/file/CTH\\_Wrong\\_Site\\_Surgery\\_Project\\_6\\_24\\_11.pdf](http://www.centerfortransforminghealthcare.org/UserFiles/file/CTH_Wrong_Site_Surgery_Project_6_24_11.pdf).
- 57 Tennessee Center for Patient Safety. *Annual Report 2010*.
- 58 U.S. Department of Health and Human Services. (April 12, 2011). *Partnership for Patients to Improve Care and Lower Costs for Americans*. <http://www.hhs.gov/news/press/2011pres/04/20110412a.html>.
- 59 U.S. Department of Health and Human Services. (December 14, 2011). *Partnership for Patients to Improve Care and Lower Costs for Americans*.
- 60 Center for Medicare & Medicaid Innovation. *Partnership for Patients*. <http://innovations.cms.gov/initiatives/Partnership-for-Patients/Partnership-for-Patients-page.html>.
- 61 U.S. Department of Health and Human Services. (March 2011). *Report to Congress: National Strategy for Quality Improvement in Health Care*.
- 62 Silow-Carroll, S., et al. (April 2007). *Hospital Quality Improvement: Strategies and Lessons from U.S. Hospitals*. Washington, DC: Commonwealth Fund.
- 63 The Joint Commission. *Improving America's Hospitals: The Joint Commission's Annual Report on Quality and Safety 2012*.



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American Hospital Association  
Liberty Place, Suite 700  
325 Seventh Street, NW  
Washington, DC 20004-2802  
202.638.1100  
[www.aha.org](http://www.aha.org)

Avalere Health LLC  
1350 Connecticut Avenue, NW  
Suite 900  
Washington, DC 20036  
202.207.1300  
[www.avalerehealth.net](http://www.avalerehealth.net)