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Prescriptions for Excellence in HEALTH CARE

A COLLABORATION BETWEEN JEFFERSON MEDICAL COLLEGE AND ELI LILLY AND CO.

TABLE OF CONTENTS

A Message from Lilly2

By Alex Azar

Overcoming Barriers to Quality Health Care: Performance Improvement Methodologies and Evidence-Based Medicine3

By Emad Rizk, MD

Establishing a Comprehensive Inpatient Clinical Safety and Quality of Care Data-Driven Decision Support System..... 5

By Sanjaya Kumar, MD, MSc, MPH

Improving Clinical Performance in Hospitals: A Difficult Challenge for Leaders..... 9

By Walter H. Ettinger, MD, MBA

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Editorial

Health Information Technology – The Essential Ingredient in Effective Quality Improvement Strategies

By David B. Nash, MD, MBA

Editor-in-Chief

It is hard to believe that this issue marks the completion of the initial volume (4 quarterly issues) of *Prescriptions for Excellence in Health Care*. I continue to be impressed by the cutting-edge work the authors describe in their articles, and heartened by the positive responses I've received from readers across the country.

From the initial group of articles that addressed quality improvement in general terms ("Doing Things Right and Doing the Right Things – Quality and Safety in Health Care," Fall 2007), we focused first on the hospital perspective ("Hospitals Take Ownership for Quality Improvement and Patient Safety," Winter 2007), and then on innovative strategies for improving quality of care in 4 different clinical settings ("Quality Improvement Strategies: Frontline Experience," Spring 2008). In this issue, we explore the vital role of health information technology (HIT) in greater depth, keeping in mind that it is only 1 ingredient in any recipe for quality improvement. The first article, "Overcoming Barriers

to Quality Health Care: Performance Improvement Methodologies and Evidence-Based Medicine," highlights a number of performance improvement strategies that rely on HIT for providing timely access to the right information at the right time for the right patients.

The second article, "Establishing a Comprehensive Inpatient Clinical Safety and Quality of Care Data-Driven Decision Support System," contextualizes the current data challenges. It then offers a clear, concise description of the comprehensive, integrated data infrastructure that is necessary to enable hospitals and other health care systems to monitor and track quality of care metrics and clinical safety issues.

Prescriptions for Excellence in Health Care is brought to *Health Policy Newsletter* readers by the Department of Health Policy in partnership with Eli Lilly and Company to provide essential information from the quality improvement and patient safety arenas.

(continued on page 2)

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We have chosen to end with “Improving Clinical Performance in Hospitals: A Difficult Challenge for Leaders,” a thought-provoking piece that reminds us that, despite the undeniable power of HIT to help us meet today’s health care challenges, human factors are

and will remain the key.

Looking ahead, I am delighted to report that the groundwork has already been laid for the second series of *Prescriptions for Excellence in Health Care*. These upcoming issues will explore the many facets of governance in health care quality improvement.

As always, I am interested in your feedback and you can reach me by email at david.nash@jefferson.edu.

David B. Nash, MD, MBA is the Dr. Raymond C. and Doris N. Grandon Professor of Health Policy and Chairman of the Department of Health Policy at Jefferson Medical College.

A Message from Lilly

Health Information Technology: A Priority for Patients, for Physicians, and for Lilly

By Alex Azar

Although health information technology (HIT) could become a powerful tool for enabling consolidation and coordination of medical information, systems barriers have impeded the integration necessary to share health care data and information within the health care system. To make the best possible use of the abundance of health care data and improve the quality of health care that patients receive involves 2 steps. First, we must improve the quality and quantity of data inputs. Second, we must support the development of secure systems to enable information exchange.

Data Quality

Significant work has been accomplished to leverage data from administrative claims databases to provide information to health care providers and, in some cases, to patients. These data may be useful to providers in their efforts to understand a patient’s treatment and preventive care utilization history, and to glean some information on treatment outcomes.

While information derived from claims may be helpful in a patient’s care, the clinical data recorded by the patient’s health care providers is richer and potentially more valuable. Providers transitioning from paper-based to electronic records may further enhance the value of clinical information by increasingly making it available to clinicians at the point of care. Clinical information in an electronic format may improve care by providing the necessary inputs for electronic decision support and may better enable providers to report efficiently on quality measures.

For health care providers, the adoption of electronic medical records (EMRs) is a key element in a broad approach to improving the quality of medical care. However, significantly greater adoption of EMRs will not occur unless incentives are appropriately aligned. While the cost of EMR systems is declining, the up-front investment for physicians remains significant. Incentive

payments to physicians for meeting performance goals would help to offset the initial expense as well as reward quality improvement. Further, EMR systems ultimately must support physician workflow, enabling physicians to accurately provide high-quality electronic data without disrupting – and while potentially enhancing – provider efficiency. The quality of the data inputs will be further enhanced if advances in electronic data capture better enable the routine incorporation of patient-reported outcomes in EMR data fields.

It is important to keep in mind, however, that we won’t wake up one day with an EMR system that perfectly meets everyone’s needs. It will happen piecemeal and it will constantly change; that’s how technology evolves. But that doesn’t mean we can’t or shouldn’t proceed. We can’t let a vision of the perfect system impede our ability to make progress toward better information. For example, if only lab and radiological work make the initial EMR

cut for a particular provider network, then so be it.

Secure Information Sharing

Numerous efforts are under way to develop health information exchanges, which are protocols and systems that allow electronic data to be shared among various stakeholders in the health care system. Such health information exchanges currently support large-scale pilot programs in disease management, electronic prescribing, transmission of test results, and analyses of health claims data. However, further progress in health information exchange, including data sharing across information exchanges in different geographic areas, will occur only with committed efforts to overcome the systemic barriers created by the lack of optimal interoperability of electronic health care information systems.

Improving Health Outcomes

Improving the quantity and quality of electronic data inputs and advancing health information exchange will enhance the ability

of health care providers to offer high-quality care. However, the benefits to health care providers and patients are not limited to the availability of health care data on individual patient encounters.

Patients also may benefit from research involving aggregated, population-level data. De-identified outcomes and utilization data are valuable resources that should be shared among various stakeholders for the purpose of expanding general medical knowledge and engaging in quality improvement efforts. The benefits of population-level research can only be realized if the public is assured that EMRs and health information exchanges are designed with safeguards to protect patient privacy.

Even with a workable infrastructure and the right policy decisions in place, a health care “information revolution” will require a new mindset among health care providers, payors, and suppliers such as the pharmaceutical industry. A commitment to greater transparency

with regard to health care information is essential to efforts to improve the quality of care.

Leading by example, 4 years ago Lilly became the first pharmaceutical company to publicly disclose the results of its clinical trials on the Internet (<http://www.lillytrials.com/>). The resulting increase in transparency has improved the company’s relationships with researchers and boosted the confidence of the doctors and patients who use our products.

In conclusion, improving patient outcomes relies on improving the quality of information. At Lilly, we understand that robust clinical information is critical for our patients and for us. That is why Lilly stands squarely behind HIT as an important means of improving the quality of health care for patients.

Alex Azar is Senior Vice President for Corporate Affairs and Communications at Eli Lilly and Company

Overcoming Barriers to Quality Health Care: Performance Improvement Methodologies and Evidence-Based Medicine

By Emad Rizk, MD

Health care consumers – both patients and payers – are very concerned with the performance of our health care system. Escalating costs, access to care, and wide variations in practice patterns are frequently cited problems. Research confirms that these concerns are valid and that performance in these areas must improve. As an industry, we know that we can do better.

The time is right for improving performance by leveraging the tools and knowledge at our disposal.

A number of powerful quality improvement tools have been developed across industries. One such tool that can be applied in the health care system is Six Sigma. Although it was developed for use in industries such as manufacturing,

health service providers across the country have achieved great improvements (eg, reducing variability in practice patterns) by using Six Sigma techniques.

Physicians’ lack of adherence to evidence-based medicine (EBM) is a major concern. Research has

(continued on page 4)

(continued from page 3)

revealed that evidence-based medical care is underdelivered across all geographies, all disease categories, and by all treatment providers in our country.¹ We have learned that proven medical treatments often go undelivered even when care is received from highly trained medical providers, and that the care we receive depends more on the zip code in which we live than what medical research has shown to be effective.² These conditions are distressing and our lack of progress is disheartening.

While difficult to reconcile given our excellent medical training facilities, these circumstances are, in part, the result of knowledge velocity. The rate at which new medical findings are introduced in our industry has outstripped the ability of our training facilities to adapt and update medical training. Established providers are expected to keep up-to-date with medical findings, but most providers find it difficult at best to do so without assistance.

Providers need tools to alert them to and inform them about new medical evidence. In addition, they need tools that show practice pattern variability, both at the individual and the aggregate level, to identify those areas in which they should modify their practices. It is through such knowledge, processes, and tools that we will see incremental improvements in performance and that our industry will be transformed.

Opportunities and solutions are literally at our fingertips. The following are some examples from our experience at McKesson Corporation:

Access to care

1. *Accurate telephone numbers for members enrolled in disease management programs.* Disease management

programs rely on contacting and counseling members individually by telephone (as well as in person, through their physicians, and via various print and electronic media), but the phone numbers on record are not always accurate. Securing a valid phone number is vital to offering the intervention. By applying Six Sigma methodology to analyze the source of the defects (bad phone numbers) and implement processes to correct the source errors, “reach” rates have improved by a significant percentage with a resulting reduced cost of delivery.

2. *Leveraging member contacts through 24-hour nurse-lines.* Members calling a 24-hour nurse-line may have an immediate health concern to be addressed. This interaction with a nurse is a “teachable moment” during which the individual may be enrolled into a condition management program. Again using Six Sigma methodology, the reasons for not engaging the member in this transition (from nurse-line to condition management) have been analyzed, revealing several areas of opportunity from both the member and nurse sides of the intervention. The solutions implemented have increased conversion to a condition management program by 30%.

Cost and Variation

1. *Encouraging adherence to evidence-based medical care* represents a striking opportunity to improve health care in the United States. Studies have revealed that, on average, physicians deliver only about half the evidence-based medical care that is indicated for patients during office visits.¹ The

greatest area of opportunity is patient counseling, but the reality is that the basics of good medical care (eg, cancer screening, chronic disease prevention) are delivered only 70% of the time.¹ Tools that supply updated EBM findings to providers in readily acceptable and adoptable form can dramatically reduce this gap. The availability of updated disease treatment guidelines (eg, pneumonia) for providers in select geographies has resulted in profound improvements in outcomes and reductions in practice variance.³

2. *Addressing variances in medical care across geographies.* Medical options and treatments for patients vary by geography. Such differences are not easy to explain, but they do exist. For example, health care costs for an average Medicare member are 2.5 times higher in Miami than in Minneapolis, even when adjustments are made for age, sex, and disease intensity⁴; a woman with breast cancer in Pennsylvania has a 3 times greater chance of having a mastectomy depending on the zip code in which she happens to live.⁵ Implementing processes and tools to address these variances through real-time knowledge availability and incentives for compliance are expected to have a positive impact on this issue.

Improving the training process for the next generation of providers

Much of the difference in the way physicians practice can be traced back to their training. The ability to keep up with advancements in medical knowledge is another key factor. With medical information doubling every 2-3 years by some

estimates, it has become increasingly difficult for time-pressed physicians to keep up-to-date on multiple conditions and treatment modalities.

It will be incumbent upon the industry to work with the medical community to offer solutions that will allow physicians to have real-time access to the latest medical evidence in order to apply it to the specific circumstances facing patients in the examining room. The expansion of decision-support tools will be even more critical in helping physicians to stabilize variations in medical care as the velocity of new diagnostic and treatment options make it impossible for even the most committed of practitioners to remain current.

Providing information is necessary, but not sufficient. In order to change the health care landscape it is essential for us to understand the root cause of variations and lead with purposeful steps beyond current practice. Like quality improvement, EBM is not a product – both are guiding principles for improving access to care and reducing cost and variation. Embracing these problems provides an opportunity to transform health care delivery with new solutions that will impact performance, satisfaction, and clinical outcomes. It is through these processes that our health care industry will evolve into the seamless, accurate, effective, and efficient system that we all know it can become.

Emad Rizk, MD is President of McKesson Health Solutions. He can be reached at: emad.rizk@mckesson.com.

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Establishing a Comprehensive Inpatient Clinical Safety and Quality of Care Data-Driven Decision Support System

By Sanjaya Kumar, MD, MSc, MPH

Introduction

In health care, providers and patients share the common goals of improving the quality of care provided and minimizing the incidence of preventable adverse events and medical errors that occur with alarming frequency. Studies have estimated that medical errors account for more deaths annually than breast cancer, HIV/AIDS, and road traffic accidents combined – about 100,000 deaths per year.¹ In addition, an evaluation of nationally accepted quality of care measures for common clinical conditions shows that only a small fraction (fewer than 10%) of physicians are providing “perfect care” to patients admitted to their hospitals.² There is much room for improvement.

Although safety and quality have been established as national priorities by health care providers, payers, purchasers, and politicians, improvement in these areas requires access to good quality data in a form that can be readily used to efficiently and proactively identify opportunities. An integrated data infrastructure for safety and quality allows for effective tracking of improvements over time and quantification of the impact that interventions and action plans have on the health care system.

Having a robust, comprehensive, and integrated data infrastructure in place to continuously track quality of care metrics and clinical safety issues has become paramount, and

rapid progress is being made to enable such systems and solutions. This article discusses the barriers to progress, challenges that must be overcome, and progress to date on emerging solutions, including a discussion of the value and benefits of having an Electronic Incident Record (EIR)TM management solution for addressing safety and quality (akin to an electronic medical record [EMR] system for point-of-care documentation).

Current Data Landscape and Challenges

Three landmark studies on medical errors – the Harvard Medical Practice Study,³ the Colorado and Utah Hospital Discharge Study,⁴

(continued on page 6)

(continued from page 5)

and the Quality in Australian Health Care Study⁵ - found unexpectedly high rates of medical errors and errors due to negligence in practice. The Institute of Medicine's (IOM) *To Err Is Human: Building a Safer Health System*¹ drew the nation's attention when the findings of these studies and others were highlighted. The report called for a national agenda aimed at reducing medical errors and preventing associated disabilities and deaths. The IOM report emphasized that future health care models must contain and actively explore a number of critical elements, including:

- Consider care to be a continuous process
- Allow knowledge to be shared among caregivers and allow information to flow freely among them
- Ensure that decision making is evidence based, with up-to-date protocols and care processes for support
- Make safety a key system priority
- Mandate that transparency become a requirement in health care
- Ensure that care delivery be team-based
- Encourage cooperation among clinicians

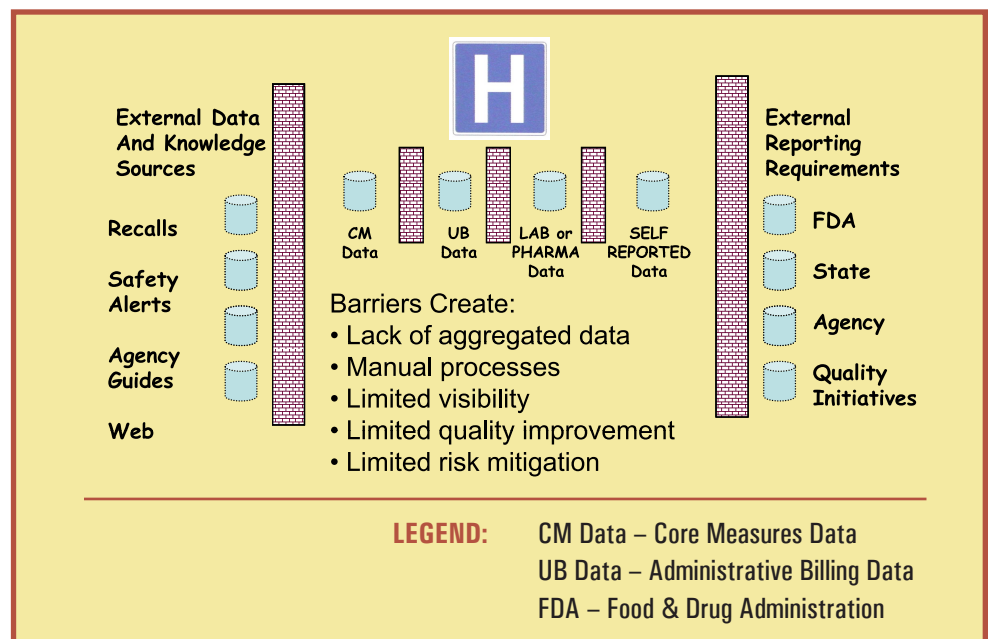
Several of these elements rely on health care systems having rich, integrated sources of data. Over the past decade, with support from

payers and government, health care providers have made great strides in integrating point-of-care data through the deployment of EMR systems and other ancillary support systems such as computerized physician order entry, bar-coding solutions, and HL-7 messaging solutions that allow for interoperability through data exchange between existing health information data systems (eg, laboratory, microbiology, pharmacy, EMR). Even though such systems are not totally integrated, they afford better insights for health care providers as they care for patients and share crucial information, thereby creating a much safer care environment.

data infrastructure are in place in larger health care systems; however, data exist in disparate silos with no comprehensive integration solution. Without integration, getting to the data required to enable efficient quality of care and safety tracking is expensive, time consuming, and very resource intensive (Figure 1).

In an environment where data is not readily accessible, decision making must be based on retrospective data, with a time lag of weeks or, in some cases, months. Under these circumstances, it is very difficult for the stakeholders within an organization to understand and prioritize issues in a proactive fashion. For those

Figure 1. Disparate Silos: Data Infrastructure Within Large Health Care Systems



Unfortunately, today's health care systems continue to lack data infrastructures that allow for continuous quality of care monitoring and data systems that permit proactive identification and monitoring of clinical safety issues and concerns. The underpinnings of the necessary

implementing corrective action plans and interventions, decisions are reactive "leaps of faith" because accurate measurement of interventions and their impact is almost impossible.

To practice continuous quality improvement (CQI), health care systems need access to rich, real-

time data with reporting feedback loops. In spite of the data challenges and barriers, as of 2003 over 31% of hospitals have embraced voluntary electronic incident reporting (Central Ohio Trauma System [COTS]-based or in-house) to capture information on recognized actual or near-miss medical errors.⁶ More than 90% of hospitals have adopted a data-driven methodology for conducting, achieving, and sustaining quality and safety improvement projects (eg, total quality management,⁷ Six Sigma, Plan-Do-Study-Act studies).

Today's methodologies rely on systems that require busy health care professionals to manually access and aggregate data across multiple sources (Table 1). Data access barriers greatly limit the scope and impact of CQI/continuous performance improvement (CPI) and safety improvement projects that can be initiated within health care delivery systems with widely distributed access.

Recent reductions in reimbursements represent a barrier to hospital investment in in-house safety and quality data integration solutions. At the same time, cash-strapped hospitals are facing increased demands to submit data to national and state data repositories for various programs, such as pay-for-performance initiatives by the Centers for Medicare and Medicaid Services.

Another limiting factor is the lack of a standardized, well-recognized, and accepted "taxonomy" for clinical safety events. For the nationally advocated quality of care measures, the definitions are now uniform with a strong evidence base to support them. However, this applies to only a small number of clinical conditions.

Table 1. Comparison of Manual vs. Desktop vs. Web-based Approaches to Centralized Integrated Data Solutions for Safety and Quality

	Manual (Pen and Paper)	Desktop (Spreadsheets)	Web-Based System
Data Collection	Record data on paper	Record data in spreadsheet or several local databases	Upload data from systems; supplement with online data entry
Aggregation	Manual tick marks	Cutting and pasting multiple spreadsheets together	Automatic through validated database processes and analytics
Statistical Analysis	Manual calculation or scientific calculator	Limited analysis through spreadsheets; export to MiniTab or other programs for analysis	Automatic through built-in statistical engines and robust COTS data mining tools
Report / Graph Generation	Manual, using graph paper	Limited ability and time consuming to generate reports and graphs	Automatic – advanced, real-time, parameter-based analysis capabilities

Emerging Integrated Clinical Safety and Quality Management Solutions

Web-based information technology (IT) is now available to easily distribute data-rich solutions to a wide network of users. It allows for ready access with minimal IT expenditures on the part of health care facilities. Deployment of data analytical tools in conjunction with such solutions greatly enhances the real-time data analytic and feedback capabilities.

Some solutions include HL-7 data interfaces that increase the capacity of health care organizations to capture safety events data directly from practitioners and from existing secondary data sources (eg, safety event triggers), creating an environment that is conducive to establishing CQI methodologies. The conceptual framework for this integrated data solution approach is depicted in Figures 2 and 3 on the following page. Based on data access rights, application users gain actionable knowledge for informed decision making from such solutions faster and without

additional resource expenditure. Such data and decision support solutions can be used by any health care system as long as they are agnostic to other data systems in place at the facility.

While almost all health care organizations have replaced "pen and ink" with desktop spreadsheets, databases, and statistical analysis tools such as Microsoft Excel, Access, and Minitab, the number of disparate data silos integral to quality have increased. The approach to safety and quality data integration represented by the EIR concept permits aggregation of disparate data silos by establishing batch or automated data feeds. Automated data feeds usually come from existing transactional data systems such as billing, payroll, EMR, pharmacy order systems, and laboratory data systems.

With such integration in place, the need for manual data collection or chart abstraction by quality

(continued on page 8)

(continued from page 7)

improvement and risk management professionals can be eliminated or significantly reduced. To achieve the integrated data framework portrayed in Figures 2 and 3:

- **Technology systems must “talk” to each other.** Use of HL-7 messaging and interfaces allows this to occur as long as all vendors create open architecture-based systems
- **Data must be centralized appropriately.** This requires careful consideration of the utility of the data being centralized and aggregated. Metadata layers can be created and made available from the raw data from disparate sources of information
- **Smart analytics must be applied.** Enhanced data mining tools and statistical methods used in other industries (eg, banking, broad-based retail industries) can be adapted to health care data.
- **Actionable knowledge from the data must consider different stakeholders.** Data rolled up and reported as a specific value or measure is subject to a variety of interpretations unless it is correlated and addressed together with other inferential data. For example, in the absence of corroborating data, a high length of stay might indicate a need for more beds or a need for improved discharge planning processes. The interpretation depends on who views the statistic (eg, the chief executive officer or the chief nursing officer).
- **The entire system must be easily accessible and user**

Figure 2. Conceptual Framework of an Electronic Incident Record (EIR) Management Data Repository

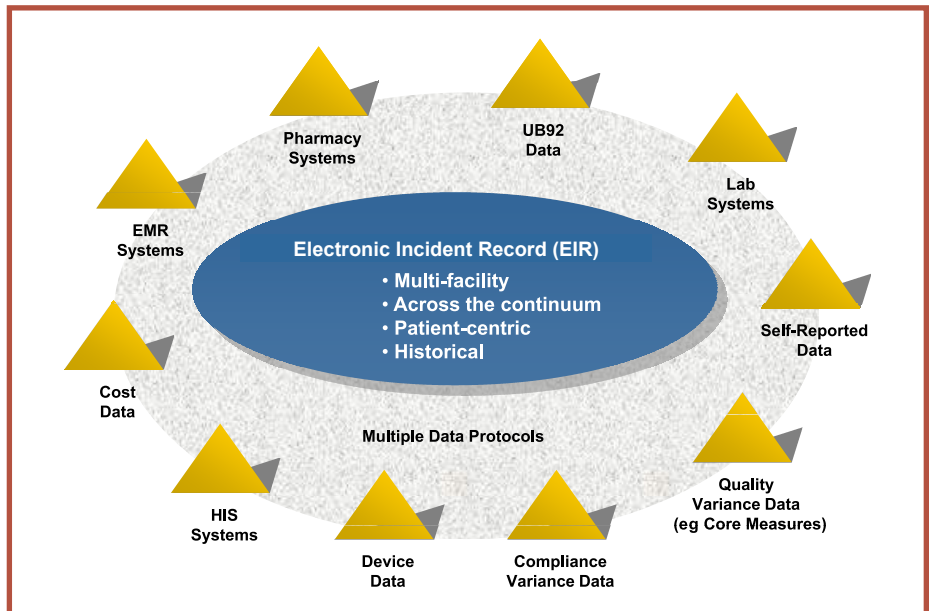
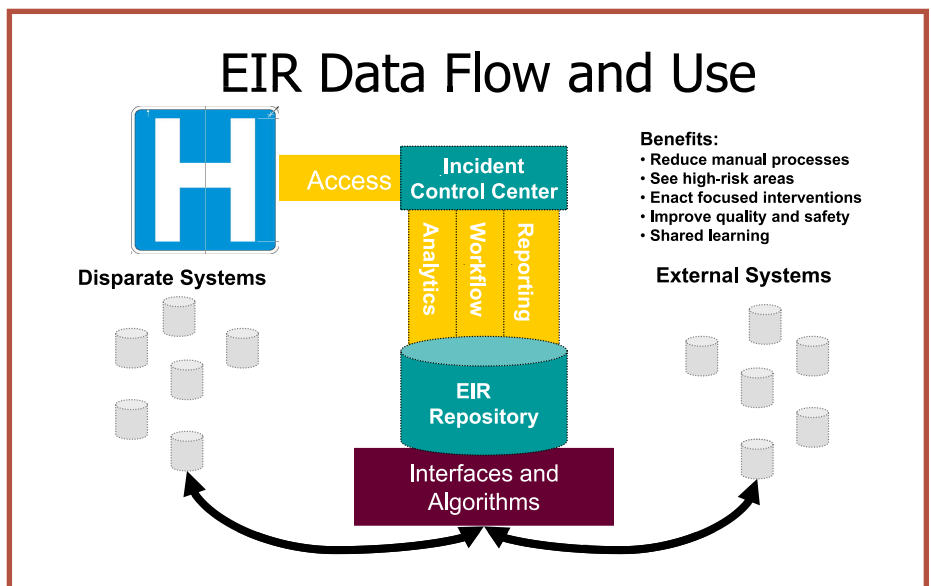


Figure 3. Value Benefits of an Electronic Incident Record (EIR) Data Repository



friendly. A high level of end user adoption is important to the success of data-rich systems. Data systems must be developed and deployed with end user feedback and buy-in.

A number of organizations are beginning to leverage such IT solutions to extend and enhance their quality improvement programs in the areas of patient safety,

monitoring of staffing effectiveness, and tracking of clinical quality outcomes – the 3 high-priority focus areas for all health care systems today. Over time, research conducted on such solutions will demonstrate how automating safety and quality improvement systems and processes can bolster decision making throughout the organization. At a minimum, these comprehensive integrated data systems will:

- Allow health care providers to proactively address and manage safety events and concurrently address quality issues while the patient is still in the hospital
- Enable stakeholders to delve deeper into causal relationships that become apparent on summary level analysis or through data mining
- Enable searches for trends that require a common intervention, or automate criteria sets to provide for active surveillance regarding specific safety events or quality of care items
- Allow active tracking of the impact of action plans and interventions and assessment of return on investment by decision makers
- Empower end users to establish a real-time “decentralized” CQI/CPI environment (eg, give department managers

access to tools through the EIR to identify and correct system problems in their departments rather than relying on the quality management department to identify issues and suggest solutions).

Conclusion

Readily available Web-based tools and data management technology can help health care organizations perform CQI activities and proactively address clinical safety concerns cost-efficiently. Automating manual data collection activities, enabling real-time data analysis, and using data visualization tools for end users frees up health care professionals to broaden and deepen their investigations. Moreover, it allows them to devote their limited time and resources to achieving results.

The EIR concept will be adopted as safety and quality of care taxonomies are developed and recognized. Common data definitions will make

data interfaces with secondary systems easier. The EIR will assist in establishing a culture that prioritizes CQI at all levels of the organization in a decentralized fashion.

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Improving Clinical Performance in Hospitals: A Difficult Challenge for Leaders

By Walter H. Ettinger, MD, MBA

The Challenge Facing Hospital Leaders

Over the next decade, hospitals will need to make significant improvements in clinical performance—the safety, effectiveness, and efficiency of medical care—in order to satisfy the demands of patients, regulators, and insurers. Hospital governance boards and administrators will need to lead changes in systems, work processes, organizational culture, infrastructures, and the collective behaviors of physicians and other staff in order to spur the high levels of performance that will be required.

Under any circumstances, leading large-scale organizational change is difficult. It requires a clear and compelling vision, a sense of urgency, an actively managed change process, and substantial resources and energy. Moreover, leading change in hospitals with the goal of improving clinical performance poses 3 unique challenges. First, the science of clinical performance improvement in health care is in its infancy. There are few evidence-based strategies that significantly improve clinical performance, and we still know very little about how

to successfully implement evidence-based practices in hospitals.

Second, hospital leaders have the unenviable responsibility of directing clinical professionals over whom they have little or no authority. The physicians, nurses, pharmacists, and other professionals who provide clinical care resist being followers. They have specialized knowledge and skills that are highly sought after and they often are leaders in their own right.

(continued on page 10)

Table 1. The Work of Hospital Leaders in Improving Clinical Performance

(continued from page 9)

Construct and Communicate the Vision for Quality and Safety

1. *Create Clear Goals and Objectives:* Build a clear, compelling, and quantifiable vision of improved safety and quality, with the active participation of other professionals who provide the care.
2. *Effectively Communicate the Importance of Improving Clinical Performance:* Communicate the goals, objectives, and a sense of urgency about improving clinical quality. Actively listen to and understand the interests and needs of the professionals with whom the leader works.
3. *Use Principle-Based Decision Making:* Make decisions about priorities and resource allocation with the well-being of patients as the highest priority.

Improve Performance

4. *Motivate and Engage Constituents:* Build support for safe and effective care among medical staff, nurses, and other professionals. Exploit the knowledge of these professionals in identifying problems and creating solutions.
5. *Assure Accountability:* Relentlessly pursue and achieve improvements in safety and quality; hold self and others accountable for results with time lines and precise measures of success.
6. *Deal Constructively with Failure:* Be willing to recognize failure, to change course, and to actively search for new solutions to difficult quality problems. Show patience and persistence in seeking solutions.

Build Organizational Capability

7. *Manage Talent:* Hire and develop people with relevant competencies and values.
8. *Build teams:* Integrate highly-skilled, autonomous professionals into teams to promote patient safety and quality.
9. *Broaden expertise:* Continually assure that the organization has expertise and skills in safety science and performance improvement.

Moreover, they frequently have loyalties to groups and organizations other than the hospital. Persuading these professionals to work together toward common goals requires well-honed leadership competencies.

The third challenge for hospital leaders is that patient care is delivered in clinical microsystems. A clinical microsystem is a self-directed team of people who work together on a regular basis to provide care to a specific population of patients. Examples of clinical microsystems include a cardiac surgery team, a renal dialysis unit, a primary care practice, or a critical care unit. Although a hospital's clinical performance is measured by how well the organization performs as a whole, care is actually delivered by different teams of professionals – each of which has its own culture, beliefs, and distinctive metrics of success.

What Do Leaders Do?

In a hospital, the leader's primary job is to assure that clinical performance is continually and materially improved. The work of a leader can be broken down into 3 broad functions across 9 tasks (Table 1).

A leader creates a clear and compelling vision for clinical performance improvement. He or she assures that other people in the organization understand the goals for clinical performance and the expectations for behavior and results. The professionals who provide the care should actively participate in defining the goals and expectations as well as in identifying problems and creating solutions to improve care. Leaders reinforce the importance of clinical

performance by making patient well-being the highest priority when allocating resources and rewarding behavior.

A leader assures that the organization achieves results. Leaders hold themselves and others accountable for improvements. To be successful, a leader must motivate and engage the professionals who provide the care by having them actively participate in identifying opportunities for improvement and crafting solutions.

Leaders build organizational capabilities. Organizations must continually enhance their capacity to improve performance. This goal is accomplished by hiring and retaining top talent and training staff to work in high-performing teams.

Leadership Structure

Medical centers have 3 levels of leadership that are crucial to improving clinical performance. At the top of the organization is the governing board (ie, board of trustees or board of directors), which plays a vital role in improving clinical performance. The board's responsibility is to hold the chief executive officer (CEO), senior management team, and medical staff accountable for achieving clinical performance goals. To do so, the board must regularly review key measures of clinical performance, demand explanations for variances from goals, and continually monitor clinical performance to assure that improvements are made.

An important role of the governing board is hiring and evaluating the CEO of the medical center. Effective boards will assure that the CEO has the essential competencies to drive organizational change and achieve the desired goals.

The CEO directs the second layer of leadership and has a unique role in guiding the changes that improve clinical performance. He or she must communicate a clear vision of improvement and a sense of urgency for change. He or she must engage other executives, medical staff officers, and clinical department chiefs in the vision and assure that organizational resources are aligned toward improving clinical performance.

The third layer of leadership is comprised of the clinical and operational leaders of the clinical microsystems. A clinical microsystem often has at least 2 leaders - a physician and a manager, who is often a nurse. The ability of these leaders to work as a dyad is an important determinant of their effectiveness.

All patient care is provided in the microsystems, and the effectiveness of the microsystem leaders is a key driver of clinical performance. The clinical microsystem leaders have 4 critical functions.

1. They serve as models for the highest level of professionalism and demand the same from clinical providers.
2. They mold the clinical providers and support staff into high-performing teams. These teams are characterized by a commitment to excellence in patient care, mutual respect, and effective and open communication.
3. They relentlessly pursue improvement in process and performance.
4. They assure communication and interaction with other microsystems in the organization.

In conclusion, hospital governance boards and administrators must be prepared to lead the way in making extensive and meaningful improvements in the effectiveness, safety, and efficiency of medical care within their institutions. To be successful, hospital leaders must be aware of the unique challenges involved and understand the key components of their role in managing the necessary changes.

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Quality Improvement/Patient Safety Meetings of Interest in 2008

August 24-27

7th Annual Quality Colloquium, Harvard University, Cambridge, MA.

► <http://www.qualitycolloquium.com>

September 18-19

The Joint Commission and Joint Commission Resources' Annual Infection Control Conference - Chicago, IL

► <http://www.jcrinc.com/28956>

November 20-21

The Joint Commission and Joint Commission Resources' 22nd Annual Conference on Quality and Safety - Chicago, IL

► <http://www.jcrinc.com/29500>

December 8-11

20th Annual National Forum on Quality Improvement in Health Care. Nashville, TN.

► <http://www.ihl.org/IHI/Programs/ConferencesAndSeminars>