For the quality improvement department at large hospitals, tracking and reporting core measures are monumental tasks. As the United States Department of Health and Human Services (DHHS) Centers for Medicare and Medicaid Services (CMS) agency increases its quality measurement requirements, the pressure to comply mounts for hospitals across the nation.

With patient care data buried in many different systems, hospitals are challenged to calculate and report core measures in a timely fashion. When patient service issues are identified, discovering contributing factors is a very difficult process. Often, hospitals discover medical care issues many months after services are rendered – making it too late to take meaningful, corrective action. As aging Americans become increasingly reliant on Medicare, hospitals likely will need to change the way they manage, investigate, and report quality measures, and be ready to implement improvements.

How can hospitals quickly and efficiently track core measures? Is there an easy way to investigate troublesome quality measures?

Designed to overcome these obstacles, automated CMS reporting solutions provide new levels of insight to quality improvement departments. CMS reporting applications intelligently aggregate and summarize core measures, while providing hospitals the ability to troubleshoot the root cause of problems in real time. Now, hospitals can ensure problems are identified and resolved immediately, maximizing CMS payouts. This white paper from Business Objects, an SAP company, explores the reporting challenges that hospitals face and examines the many benefits they can gain with automated CMS reporting.
According to a McKinsey report, "U.S. hospitals are under siege. Their operating model once was simple: amass – under one expensive roof – powerful technologies, skilled physicians working at arm's length, and a volume of patients sufficient to leverage enormous fixed costs. Now, however, intense competition from more focused healthcare providers, as well as the increasing ability of payers and consumers to obtain information about a hospital's quality, service, and pricing – in short, about the value it provides – threaten to change the equation."

Transparency: Pulling Down the Opaque Curtain

By broadly making quality measures available to the public, CMS will empower consumers with knowledge. "Medicare can and should take the lead in encouraging hospitals to improve the safety and quality of care and make better practices a routine part of the care they provide, not just to people with Medicare, but to every patient they treat," says CMS acting administrator Kerry Weems. CMS proposes adding 43 new quality measures to its list, bringing the total measures for fiscal year 2009 to 73.

Publishing a growing list of quality statistics for every hospital will influence consumer decisions. According to Forrester, "The healthcare industry must be willing to submit to a degree of transparency previously unseen by the consumer."

DHHS Secretary Mike Leavitt says, "Medicare is strengthening its commitment to use the transparency of quality information to help give consumers more choice about the quality of their healthcare and how they may be able to lower their healthcare costs."

In the near future, shopping for hospital services will be no different than shopping for a car or a carpenter.

The reporting of quality measures will force hospitals to transform their business.

---


Business Objects. Automating CMS Core Measure Discovery and Analysis
The impact of published reports on patient care quality will be dramatic for hospitals. "U.S. hospitals must learn to compete on value to cope with new competitive threats and greater transparency about quality, service, and prices. For most, this effort will require nothing less than a total transformation," states a 2007 McKinsey report.\textsuperscript{5}

Transparency has its benefits. "Our research shows that consumers will be more loyal to the healthcare institutions that are forthcoming," reveals a Forrester report.\textsuperscript{6} However, a McKinsey report says, "Patients are increasingly aware of the hospitals' deficiencies and more open to competing alternatives."\textsuperscript{7}

Consumerism: Patients Window-Shop for Hospital Services

As Medicare continues to promote public awareness of hospital quality measures, consumers will start shopping for the best hospitals, just like they shop for any other service. "Medicare beneficiaries tell us that just like the information they receive about other products and services they consume, they want to know what their neighbors are saying about the care they received while in the hospital; they want to know how much it costs; and they want to know about the quality of that care. We are now sharing that information," reports Weems.\textsuperscript{8}

Savvy consumers will be selective about where they receive care. A McKinsey report declares, "As the industry shifts from a wholesale to a retail model, a new market of consumers is demanding clearer information."\textsuperscript{9}

According to CMS, "For the first time, consumers have the three critical elements – quality information, patient satisfaction survey information, and pricing information for specific procedures – they need to make effective decisions about the quality and value of the healthcare available to them through local hospitals."\textsuperscript{10}

Transparency and consumerism mean greater pressures on hospitals to accurately collect and report quality measures.
CHALLENGES COLLECTING AND ANALYZING CORE MEASURES
Pulling together the mass of patient information needed to compile quality measures is an overwhelming task. Typically, many different systems must be mined for meaningful data, such as financial, admission, radiology, physical therapy, pharmacy, and patient systems. Because each system looks at and formats information differently, staff must manually interpret data, greatly slowing the core measure-collection process. Add replicated systems across different practice groups, and the complexity compounds.

Often, data is entered into intricate Microsoft Excel spreadsheets or Microsoft Access databases. This slow process drains the quality improvement department’s resources and increases the chance of error due to transposition or omission. For a large hospital, collecting and centralizing data are full-time jobs for multiple individuals. As a result of this manual process, hospitals cannot discover, correct, or reverse problems in a timely manner.

When committees or boards of trustees want to know why quality measures are low, these questions are difficult to answer; however, answers are expected quickly. Getting to the bottom of a problem is a slow and tedious process. For example, a person, department, or the institution itself may be the cause of problems. Because data is often located in spreadsheets that represent a snapshot in time, it is hard to discover when problems occurred or spiked.

Identifying the root cause of poor core measures typically starts with phone calls and other manual processes that can easily take weeks or months. By the time a doctor or nurse is identified as the cause of a problem, he or she will have likely long forgotten the reasons why the quality measure was not followed.

THE SOLUTION: AUTOMATED CMS REPORTING
Designed to eliminate manual quality measure processes, automated CMS reporting solutions greatly simplify the collection and analysis of core measures. These solutions are highly visual software tools that capture core measures without human intervention and enable effortless review and analysis.

Gone are laborious processes and the need to build complex spreadsheets. Now, quality improvement personnel can monitor all quality measures in real time and immediately determine the underlying contributors to poor outcomes.
Speedy information access provides many benefits. For example, when a committee or board wants to know why a quality measure has fallen, these tools provide immediate answers, eliminating months of research and ensuring accurate data. With the simple click of a mouse, a quality improvement staffer can drill down to investigate the source of problems. Having on-the-fly access to this type of information greatly speeds the identification of problems, allowing quick corrective action. Doctors, nurses, and administrators can also access the system to review quality measures.

Built to interface with all major computing systems within a hospital, automated CMS reporting solutions routinely track and trend core measures. All core measure data is stored in a central repository for quick analysis and data visualization.

A visual dashboard displays all critical quality measures, enabling quality improvement personnel to rapidly identify trends or outliers. Dashboards can identify negative trends early, empowering the hospital to resolve problems before they impact CMS payouts. Reports can also be generated, based on predefined criteria, such as a dip in a specific quality measure.

The solution also creates a document that can be transmitted to CMS. By monitoring core measures before they are reported to CMS, a hospital can quickly resolve problems, increasing the likelihood of an improved quality score at CMS reporting time and for Joint Commission reviews.
Automated CMS reporting provides quality improvement departments many unique benefits. Automated CMS reporting:

- Identifies trends before they become major problems, enabling hospitals to act quickly to improve processes that impact the quality measures
- Automates the collection of core measures, freeing staff from administrative tasks and providing more time for patient care activities
- Allows point-and-click root-cause analysis, eliminating months of research
- Scales to accommodate new core measure requirements
- Enables personnel to efficiently examine quality measures in a self-service manner
- Displays measures visually, allowing quick and easy interpretation
- Enables rapid analysis of problems and implementation of corrective action
- Shortens the research and analysis, and improves the quality of data needed to investigate poor quality measures
- Aggregates data from many different systems into a single database for a holistic view of quality measures
- Simplifies the collection and transmission of core measures

EXAMPLE: DISCOVERING THE SOURCE OF A PROBLEM IN MINUTES
The following example demonstrates the power of automated CMS reporting solutions and shows how, in only minutes, a quality improvement director is able to discover why a measure has dropped.

The quality improvement director presents the hospital’s core measure performance to a medical staff committee, revealing a significant drop in one of the core measures. For some unknown reason, the administration of antibiotics 30 minutes before surgery has dropped below acceptable levels. The group asks, “Why?”

During the meeting, the quality improvement director simply clicks on the bar chart in question, immediately displaying all of the contributing service lines. Sorting by date, it is immediately apparent that the problem occurred last month in Cardiology. Examining data on the doctors performing operations during the month reveals that while a senior surgeon was on vacation, the partner who performed surgery was responsible for the decline in the core measure. The discovery takes place in mere minutes.
When looking for an automated CMS reporting solution, consider the following important requirements:

**Healthcare industry experience**: Work with a company that has hundreds of healthcare clients and experience working with large hospitals. This will ensure experience with healthcare processes and longevity of the solution.

**Business intelligence expertise**: Seek a company that is a market leader in providing business intelligence (BI) based on complex data. This ensures system compatibility and advanced decision-support systems.

**Microsoft Office integration**: Look for a solution that allows charts and diagrams to be dynamically updated within Microsoft Word or PowerPoint (as well as in Adobe PDF documents), ensuring accurate and up-to-date information without recreating graphs.

**Threaded discussions**: The ideal solution should enable personnel to add comments to resulting core measures, providing a centralized, comprehensive history of the discussion.

**What-if analysis**: Seek the ability to project how changes in the administration of quality measures will affect reported core measure results. For example, issues such as an influx of patients can be analyzed to show how quality measures will be affected.

**Multi-source data integration**: Look for a solution that will pull, cleanse, and properly format data from multiple hospital systems for highly reliable and trusted core measure calculations.

**Visual dashboards**: The solution should include a highly visual, easy-to-use dashboard that provides intuitive insight into core measures and enables employees to drill deeper into data to examine contributing factors.
Designed to meet all of the requirements outlined in this paper, BusinessObjects™ XI solutions provide a premier automated CMS reporting solution for healthcare. Many of the nation’s largest healthcare providers rely on Business Objects solutions. As a trusted partner for more than 1,000 healthcare organizations, Business Objects clients include large hospitals such as Kaiser Permanente, Sisters of Mercy, Children’s Hospital Boston, and Hospital Corporation of America.

Built to ensure that all quality improvement staff, nurses, doctors, and administrators have access to up-to-date quality measure information, BusinessObjects XI solutions designed for healthcare makes it easy for staffers to access and discover quality measures. Highly automated, the Business Objects solutions greatly reduce error-prone manual inputs and enable comprehensive analysis in real time.

Able to mine data from all major hospital systems and create graphical dashboards, now quality improvement departments can effortlessly track, analyze, and report core measures. Advanced business intelligence also enables planning for what-if scenarios.

Simplify the core measure process with BusinessObjects XI solutions for healthcare.

For a FREE product demonstration, email healthcareDemo@SAP.com or to speak to an advisor, call 866-681-3435.
ABOUT BUSINESS OBJECTS, AN SAP COMPANY

As an independent business unit within SAP, Business Objects transforms the way the world works by connecting people, information, and businesses. Together with one of the industry’s strongest and most diverse partner networks, the company delivers business performance optimization to customers worldwide across all major industries, including financial services, retail, consumer-packaged goods, healthcare, and public sector. With open, heterogeneous applications in the areas of governance, risk, and compliance; enterprise performance management; and business intelligence; and through global consulting and education services, Business Objects enables organizations of all sizes around the globe to close the loop between business strategy and execution.