

# Taking the Next Step in Revenue Cycle Management

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Many clinical experts acknowledge that electronic health records are an important first step toward a much broader effort to study what treatments yield the best outcomes, paving the way to changing the practice of medicine. Similarly, many financial experts say that revamping revenue cycle management through automating claims and related transactions is just step one toward improved fiscal health. They say that achieving maximum cash flow requires diving into financial data with the help of business intelligence software.

For example, Baystate Health has spent several years fine-tuning revenue cycle management by taking such steps as improving the patient registration process and automating transactions, including insurance eligibility verification. Now it's launching a data mining project to drill down to the root causes of denied claims in hopes of identifying trends, taking corrective action and reaping more cash.

"We had struggled to gather data from all our systems in the revenue cycle to create one comprehensive view so we can get a picture of where to focus our efforts," says Nancy Robinson, director of guest services for the Springfield, Mass.-based delivery system.

Eric Neil, interim revenue cycle director at University of Washington Medical Center in Seattle, boils down using BI applications for revenue cycle management to this: "It's like holding a cube of data that I can flip around and look at from different angles."

Business intelligence is a term used to describe a broad category of applications for gathering, storing, analyzing and providing access to data to help users make better business decisions.

Despite its potential, relatively few hospitals have made significant progress in applying BI in the financial arena. A key reason why is that many organizations lack rich enough sources of detailed, meaningful data to support robust data mining, says Marc Holland, program director for health care provider research at Health Industry Insights, a unit of IDC based in Framingham, Mass. "To really effectively make use of data warehousing you have to have the underlying applications in place," Holland says. "Hospitals still have a long way to go."

Those hospitals taking the plunge, however, are demonstrating the value that BI can bring to a financially beleaguered industry. Hospitals are using BI software to accomplish a broad range of tasks involved in revenue cycle management. In addition to analyzing denied claims to find patterns of payers' rejections so they can take corrective action, they are:

- \* giving CFOs and other executives dashboards that offer an "at a glance" look at key financial indicators;
- \* tracking how long it takes to enter charges to identify bottlenecks;
- \* identifying high-dollar cases that have not yet been billed and finding out why; and

\* completing trend reporting down to the level of individual physicians' profits and losses.

## Analyzing Denials

Some pioneering hospitals are taking a deep dive into their claims data in hopes of accomplishing a clear goal-cutting back on the number of claims that payers deny.

For example, the nine hospitals in the Sacramento/Sierra (Calif.) region of Sutter Health are using business intelligence software to analyze data from electronic remittance advice. The large delivery system runs reports for executives to identify denied claims that fall into two categories, explains Heide Fraser, regional manager for non-government claims. She labels one category as "self-inflicted denials," such as claims that lacked eligibility verification at the front end. The other category includes "payer denials" based on such issues as disputes over the medical necessity of the treatment.

Before it installed BI software from Accuro, a unit of MedAssets Inc., Alpharetta, Ga., staff members would analyze denied claims on a case-by-case, chasing down missing information or resolving disputes. Using the software, they can quickly detect patterns and correct errors in procedures, Fraser says.

Recently, Sutter used data mining to discover that one payer was repeatedly denying claims as untimely because they were not filed within six months. When the provider determined that the contract with the payer gave the organization up to a full year to submit claims for extraordinary cases, such as those involving a secondary payer, it quickly reaped \$400,000 in payments and likely avoided about \$3 million in additional denied claims, Fraser says.

Another query determined that one payer had a large number of claims on hold for the same reason-the lack of appropriate insurance eligibility verification. Fraser and her team identified a problem with registration processes for these patients, altered the procedure and improved cash flow by \$1 million over six months.

Baystate Health, a delivery system with three hospitals, is launching a similar effort to analyze denied claims using software from DaVincian Technologies, Austin, Texas. The organization will mine electronic remittance advice to find the causes of denials and take action, says Robinson, the director of guest services.

Robinson theorizes that some claims denials tied to medical necessity issues may be avoided by pinpointing diagnosis codes that are routinely lacking in certain categories of claims for certain payers.

Likewise, University of Washington Medical Center is in the early stages of using business intelligence to streamline the analysis of denied claims.

## Dashboards

In addition to using BI software to analyze denied claims, a growing number of hospitals are using the technology to support financial dashboards or report cards for CFOs and other senior executives.

Children's Hospital in Omaha was a beta test site for a revenue cycle dashboard from Eclipsys Corp, Atlanta. The hospital had attempted to develop a dashboard on its own "but we ran into some challenges in being able to efficiently retrieve data to create a very robust scorecard," says Allana Cummings, vice president and CIO.

Executives now use the dashboard to watch key indicators of financial health, such as cash collections and days in accounts receivable, Cummings says. "The dashboard allows us to not just see pictures of trends occurring across the revenue cycle but also to problem solve from within the tool," she explains. "Our CFO can click and drill down and see the details at a more granular level."

Without the dashboard, executives would have to work with I.T. staff to run multiple reports, which would prove difficult and time-consuming, the CIO says.

The children's hospital chose to implement the dashboard before launching a denials management effort because executives were anxious to monitor performance throughout the revenue cycle, the CIO says. In phase two, the hospital will use Eclipsys' denial management and work quality monitor functions to analyze denied claims and apply rules and alerts to assign the accounts to staff for resolution.

At Sutter Health, senior executives use a dashboard to receive regular reports on financial details for each major payer, says Fraser, the claims manager.

Fraser also brings custom reports to monthly meetings with the CFO to track the status of high-dollar accounts, claims involving secondary payers and performance indicators for individual collectors.

Following a strategy similar to Sutter and Children's Hospital, University of Washington Medical Center in Seattle also is creating a CFO dashboard. It will be fueled by McKesson BI software fed by data from 30 applications, says Neil, the interim revenue cycle director.

### Timely Charges

The medical center's top-priority project, however, is using data mining to pinpoint and solve specific problems, such as delays in entering charges.

For example, Neil can slice and dice data to track the specific total value of claims for which charges were entered into the billing system more than 10 days after the service was delivered at a specific site. "I can drill down within seconds," he notes. He then can use the data to analyze the cause of the delay, such as a staff shortage due to vacations or a problem with processes.

This approach has yielded substantial improvements in cash flow. For example, an analysis discovered the radiology department was taking an average of six days to enter its charges. Once corrective action was taken to improve business procedures, that figure dropped to two days.

Overall, the medical center now enters charges, on average, within 2.3 days, down from 3.3 days before the data mining project, Neil says. "With over \$1 billion a year in charges, one day improvement is very substantial," he adds.

Business intelligence software enables the provider to identify cash flow impediments more quickly. "What we are trying to do is look at what's happening right now and then determine how we can make changes in the middle of the month so we can have the financial outcome we want at the end of the month," Neil says. "We look for bottlenecks before the cash slows down and the CFO is on the phone screaming at us."

Late postings of charges are particularly problematic if they involve big-ticket hospital stays. Sutter Health is using BI software to carefully track its largest patient accounts to help ensure those claims are filed promptly, says Fraser, the regional manager for non-governmental claims.

When the BI software flags high-dollar accounts not yet billed, Fraser uses the application to help pinpoint the reasons why and take action, such as assigning the case to a coder. "I'm pulling these claims to me rather than waiting for somebody to discover them and deliver it to me for action," she says.

BI software enables the hospital to more easily initiate the timely filing of partial claims for extended hospital stays, as permitted by many payers. "I track those accounts that have hit the \$500,000 mark and involve a patient who is expected to stay in the hospital several more weeks," she says. "Then I initiate a partial claim."

### A Powerful Tool

Data mining gives hospitals a way to generate reports that are far more detailed than otherwise possible.

For example, the University of Virginia Health System's department of medicine is using BI software from Information Builders, New York, to create P&L reports for all its physicians. The software gathers aggregate data, stripped of patient ID's, from two disparate patient accounting systems, says Elizabeth Wildman, vice chair and COO.

The health system also uses the software to create trend reports, such as in-depth analysis of areas where expenses are rising in various divisions.

Wildman estimates the organization invested about \$200,000 in hardware and software to support data mining. It saves about \$150,000 a year in salaries that would have been devoted to paying staff members to painstakingly program custom inquiries, she says.

The health system expects to reap further benefits when it begins to use the software to analyze denied claims.

"We were rich with data, but it just was not very accessible," Wildman says. The Information Builders software, accessed remotely using the application service provider computing model, "allows us to mine that data at a moment's notice."

This is the third and final installment in a series on revenue cycle management. This series, along with others on CIO issues, point-of-care technologies and EMRs, EHRs and PHRs, represent our effort to provide insightful, concise and timely information on the technology and business issues that shape strategic initiatives. We'll offer several series again in 2009, including a continuation of our in-depth reports on revenue cycle management.

-Gary Baldwin, Editorial Director

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