

OPTIMIZING THE REVENUE CYCLE: CREATING, IMPLEMENTING & CAPITALIZING ON DATA DASHBOARDS



BY FIERCEHEALTHFINANCE

► So, you know you need to take action to increase your hospital's revenue and rein in costs. Maybe you've experienced a dramatic increase in insurance denials or are worried that government auditors – the dreaded Recovery Audit Contractors, Medicaid Integrity Contractors, Zone Program Integrity Contractors, just to name a few – will identify areas where clinical and financial information doesn't match up and demand you return massive overpayments. Or perhaps you are experiencing the rise of patients in high deductible health plans struggling to pay their large deductibles out of pocket.

A growing number of hospitals and healthcare systems are meeting these challenges head on by implementing revenue cycle "dashboards" to automatically mine clinical and financial data and objectively analyze their revenue cycles.

While data analysis is nothing new in healthcare, using a data dashboard can enable your organization to spot a trend of denials within a few days and take correc-

tive action immediately and can help key executives and stakeholders, such as the CEO, CFO, and hospital board of directors, to quickly and easily bring their organization's financial picture into focus – in real time.

"Historically we waited for reports, but by the time we got them, it was later than we hoped to get our hands around the solution. Thirty days of a negative trend is a serious issue for a facility," says Donna Gilley, a Nashville-based consultant at Lattimore, Black, Morgan & Cain.

This eBook by FierceHealthFinance highlights how some hospitals are using comprehensive dashboards to boil down sophisticated trending analyses into quick, easy-to-read snapshots that highlight potentially costly errors. You'll learn what a revenue cycle dashboard is, what it can measure, how it can help your organization prevent millions of dollars in claims denials and wasted labor costs, and why a top-notch system can more than pay for itself – sometimes within the first year.

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What is a Data Dashboard and What Does it Do?

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► A data dashboard – sometimes called a scorecard – is a software system that allows you to extract selected financial metrics from other health information systems and feed the information into charts, graphs or other visual displays so you can track your performance on everything from average length of stay and percentage of beta blockers administered to insurance denials and bad debt. The software system pulls the data and sends it to the dashboard as often as it's programmed to do so.

It can either be built into a hospital's health information system or sit on top of it. The program can be leased or purchased; and some are web-based, which enables users to access it from any location.

"The dashboard helps you know if you're in the range of where you want to be," explains Cathy Dougherty, assistant vice president of revenue management at Lawrenceville, Georgia-based Gwinnett Medical Center, which installed a comprehensive dashboard system in 2008. Gwinnett, which operates two hospitals and other medical facilities in several

locations in Georgia, has more than 4,100 employees and 800 affiliated physicians.

The metrics on a dashboard are specific and measurable towards a numeric target. When metrics dip below target levels, the hospital can take corrective action. Many data dashboards use the traffic light colors of green, yellow and red to flag the status of areas being measured, giving the viewer a quick sense of issues or trends that may sig-

a bill is finalized, send an alert that a managed care contract is up for renewal, and report that the number of surgical procedures are down from the prior week. That might mean checking to see if the claims contain an outdated CPT code, comparing the codes used to the services provided and contacting the payer to get the claims corrected and resubmitted, says John Freedman, M.D., of Freedman Healthcare in Newton, Mass. If

"The dashboard helps you know if you're in the range of where you want to be."

CATHY DOUGHERTY, ASSISTANT VICE PRESIDENT OF REVENUE MANAGEMENT AT GWINNETT MEDICAL CENTER

nal that further action is needed, says Gerry Blass, a consultant in Colts Neck, N.J.

For instance, the dashboard can monitor claims coding to flag possible missed charges before

your dashboard shows that surgical procedures have dropped, for example, you may want to look into whether area physicians are referring patients to a competitor and why. ●



Benefits to Using A Dashboard

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► A data dashboard enables users to view detailed, specific information on the data being measured and can be programmed so that different people receive different reports on the same data. For instance, while the board of directors, CEO or CFO may only need a larger snapshot of billing and collections, the director of patient accounts requires more details about the codes on a particular bill.

"It's not as useful to [only] have the data on the CEO's computer. One of the points of a dashboard is creating alignment and impacting behavior," says consultant John Hansel, Emeryville, Calif.

OTHER BENEFITS INCLUDE:

- More efficient use of resources, time: Gwinnett Medical Center's duplicate medical record rate is now less than

one percent, far less than the national average of eight percent, thanks to its two-year-old data dashboard, says Wallace Ed Brown, Gwinnett's senior vice president and CIO.

Here's why: When a patient is admitted, staff look for any existing medical records the hospital may already have for the patient. But this is not a fool-proof method. Gwinnett's medical record computer system did not always identify patients who were already in the system, perhaps because the patient sometimes used a middle name or due to an input error in which letters or numbers were transposed.

This sometimes resulted in duplicate medical records for the same patient. With financial and clinical data housed in multiple records for the same patient, staff might spend hours working to identify and correct the snafu downstream, Brown says.

"Before the new system, it took a lot of manpower to go through bills, claims, and put them on spreadsheets to identify trends, et cetera. Just to extract information was very time consuming and expensive," he says.

Gwinnett's revenue cycle dashboard helped alleviate this costly time-suck by reducing the effort needed to gather, review and monitor the data.

"We knew we needed to change the revenue cycle system," says Cathy Dougherty, Gwinnett's assistant vice president of revenue management. "You have to find ways to work smarter, not just harder. "You have to bring money in to provide quality care."

Because dashboards are exception-based, they filter and report only what you want to measure.

- **Better billing accuracy:** Gwinnett's new bill estimation software on the dashboard now eliminates the need for employees to try to predict for a patient how much of a procedure that patient will have to pay out of pocket. Previously, the employees would need to manually pull clinical data, the charge master, a patient's insurance coverage, reimbursement history, and Gwinnett's managed care contracts and analyze what that bill may be.

"Just to extract the information is very time consuming and expen-

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YOU DECIDE WHAT THE DASHBOARD SHOULD MEASURE

► Revenue cycle dashboards measure what you want to see, which will vary from facility to facility. For instance, a specialty hospital or a hospital with a high Medicaid population may track different measurements or apply different clinical standards. A hospital undergoing a renovation may want to track capital expenses, while another one may determine that's less important.

However, there are certain standard components that most hospitals would likely want to measure, including:

- Eligibility
- Patient insurance coverage and ability to pay
- Patient/bed census
- Number of surgeries per week
- Point of service collections, including copayments and deductibles
- Estimation of patient's bill
- Bad debt
- Claims coding/charge master management
- Denials, by payer
- Aging of accounts receivable
- CMS core measures and other industry benchmarks
- Employee turnover/satisfaction
- Performance at different locations

It's important to track and measure many of the up-front processes, such as registration, patient scheduling, insurance verification, point of service collections and the like so that

problems can be prevented down the road. The dashboard should catch billing edits and errors before a bill is generated.

A hospital undergoing a renovation may want to track capital expenses, while another one may determine that's less important.

"Billing should be a nonevent, a pass-through," says Cathy Dougherty, assistant vice president of revenue management at Lawrenceville, Ga.-based Gwinnett Medical Center. "Everything should have been done on the front end. You don't want to be in the position to fix things in

the back end. That's a bunch of repeat work."

Gwinnett Medical Center's system measures the quality of the

registration process, so the registration department can see within a day if they've mis-keyed something and can fix it right away so the bill is not impacted. They also measure insurance verification, insurance authorization, and point of service collections, among other things. ●



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sive," warns Brown. The new software eliminates these arduous steps, enabling the facility to "marry" the data electronically to provide a more accurate bill estimate for patients shopping for a price quote for services.

"You can't do that manually. It's not accurate. This is fairer to patients so they shop better, and we collect the money more easily because we feel good about the quote," Dougherty says.

• **More concise metrics:**

Because dashboards are exception-based, they filter and report only what you want to measure.

"You don't want to look at a whole bunch of data to get to the [problem]," says consultant Gerry Blass, Colts Neck, N.J. Since they automate the monitoring of data, they also reduce the cost and time of staff to manually pull and analyze data, such as updating the charge

master to reflect CPT changes.

And because the data is automatically generated, no one has to be tasked with pulling the information and creating reports for the C-suite executives – leaders can view the information at any time, Dougherty notes.

• **Audit risk mitigation:** Detecting coding errors earlier in your revenue cycle allows you to correct them before they might trigger a CMS or Medicaid audit. It can also mitigate any overpayments an auditor finds. Your use of the dashboard can also demonstrate in an audit the steps taken to monitor coding compliance and correct inefficiencies, says Blass.

• **Increased accountability:** As lawmakers and consumers clamor for hospitals to increase the transparency of their prices, a revenue cycle dashboard enables a hospital to defend its pricing by showing its true operating expenses and better estimating the cost of a procedure

or patient stay. Moreover, it can provide each department with a better understanding of how it contributes to or drains the facility.

• **Help with ICD-10 transition:** The impending transition to the ICD-10 code set means hospitals will need to support a whopping 68,000 codes, up from 13,500 contained in the current ICD-9 set.

"A lot of the old legacy systems are less flexible and can't provide the elements that hospitals are looking for, such as scheduling, case management, and eligibility checking. So hospitals will have to replace their legacy systems and look at integrating and moving to these newer systems at some point," Brown points out. A dashboard can help verify whether the correct code is being used for a particular procedure, whether a more accurate code could be applied, and whether every procedure is accounted for in the bill. ●

What's the Return on Investment?

BY FIERCEHEALTHFINANCE

A revenue cycle dashboard is a not a modest investment; the systems can range from \$20,000 to \$100,000 or more, depending on your level of customization.

▶ A non-customized, “off-the-shelf” dashboard will be cheaper than one that is more customized. If you eliminate some of the color coding and simplify the dashboard further, you can save more money.

But there are other ways to shave the costs. For instance, if a vendor has already built a dashboard interface for the system for a different client, the vendor may be able to “piggy-back” it to your system. A hospital that doesn’t have the time or budget to design a customized program can install a dashboard “starter set” which offers less customization but takes less time and training to implement.

It can take several years to realize a return on this sizable investment, especially as a hospital continues to revise and enhance the system.

“We’re still looking at our current state and processes and analyzing how much equipment, people and supply time will be saved if this is automated and compare it to what our new system costs,” says Wallace



Ed Brown, who heads up the information services department of Georgia-based Gwinnett Medical Center.

At this pace, Brown estimates his organization will reap a full ROI within two to four years.

One year after its implementation, Gwinnett decreased days in accounts receivable from about 60 to 54, increased cash on hand by four percent, and increased clean claims by two percent. At this pace, Brown estimates his organization will reap a full ROI within two to four years.

“Eventually this will pay for

itself,” says Cathy Dougherty, assistant vice president of revenue management at Gwinnett.

Some hospitals experience immediate successes. One not-for-profit hospital in Maine identified and recovered \$153,000 the first day it used its dashboard to analyze bills. The dashboard flagged a charge related to an upgrade in its radiology department that the hospital had inadvertently missed and thus not billed for several months.

A four-hospital health system in North Carolina predicted a return on investment gain of \$200,000 five years after installing a revenue cycle dashboard; the actual gain was \$500,000, more than double its prediction. ●

How Did Seattle Children's Analyze Patient Data to Increase Hospital Revenue?

▶ When you're an organization committed to saving lives, the more you remove waste from systems and processes the more resources become available to put toward patient care. Seattle Children's—the 7th highest ranked children's hospital in 2011 according to *U.S. News & World Report*—discovered ways to “virtually increase beds” and treat more patients.

MORE PEOPLE TURNING DATA INTO INSIGHT, MORE QUICKLY

“We are continuously looking for new ways to improve our quality, safety, and processes from the time a patient is admitted to the time they're discharged,” says Senior Vice-President and Chief Information Officer at Seattle Children's, Drexel DeFord. “So we spend a lot of time analyzing data associated with those visits.”

To more quickly turn patient and hospital data into insight, Seattle Children's implemented Tableau Software's business intelligence application. Tableau fundamentally changed what Seattle Children's could do with data by providing browser-based, easy-to-use analytics to stakeholders throughout the organization, making it intuitive for

individuals to create visualizations to understand what the data means.

“We're seeing Data Analysts, Business Managers, and Financial Analysts as well as Clinicians, Doctors, and Researchers all using Tableau in different

ways to solve different problems in ways that we couldn't do on our own before, largely because we didn't have enough time or enough people,” explains Director of Knowledge Management at Seattle Children's, Ted Corbett.

“With Tableau, more of our staff are able to develop visual

Tableau fundamentally changed what Seattle Children's could do with data by providing browser-based, easy-to-use analytics to stakeholders throughout the organization, making it intuitive for individuals to create visualizations to understand what the data means.

systems on their own resulting in dashboards and scorecards, which really help us define what the standard is, how are we achieving against it, and how are we growing into the future,” he says.

Seattle Children's Administrative Director of Surgical Services Jason Jio explains, “In the past, we spent days, sometimes weeks developing something as simple as a patient volume-based dashboard. With Tableau, we've converted that to

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monthly dashboards and are looking at daily dashboards to improve day-to-day decision making.”

SHORTER WAIT TIMES MEANS HIGHER THROUGH-PUT

The Surgical Services team at Seattle Children's started using Tableau to see if they could measure patient wait times. What they discovered were steps they could take to reduce wait times and increase the number of patients served at the hospital.

“We were able to set up a fantastic visualization that showed some of the root causes and contributing factors for patient

waiting,” explains Jio. “For example, we looked at some of our rooming practices and saw that delays early in the day cascaded to the rest of the day. It became very effective for us to really focus on on-time starts, and we've already seen significant improvement in patient waiting overall.”

“We have to continue to be able to treat as many kids as possible,” explains DeFord. “By making those processes more efficient, for all intents and purposes, we created more beds, even though we didn't physically build them.”

[Read more](#) about how Seattle Children's is getting the most out of its data to make an impact. ●

Roll-out Is A Process, Not An Event

BY FIERCEHEALTHFINANCE

► One year after implementing the first phase of its dashboard rollout, Gwinnett Medical Center – whose mantra is “collect every dollar owed” – is taking the next step: integrating its financial and clinical data so that the computers do the work and give staff the analytics to view on the dashboard.

Gwinnett opted to create a new, customized software system rather than place a dashboard system on its existing programs because so many of its

other programs would be feeding into it, and it was time to get rid of their older systems, notes Wallace Ed Brown, Gwinnett’s senior vice president and CIO.

To get buy-in from executive management to install a new revenue cycle system, he showed them how cumbersome and time consuming Gwinnett’s existing legacy system was. For example, the old system used 18 different screens just to register a patient – and it did not have dashboard capability to measure

how accurate the registration process was. Without the demonstration, the executives may have been less inclined to spring for a new system.

It takes time to roll out the system properly. “We’ve had the registration access management pieces up and running for 16 months and we’re still enhancing it,” Brown says.

It takes time to roll out the system properly.

When ready to go live, Gwinnett and its vendor trained more than 300 people in five weeks.

Keep in mind, though, that few system rollouts ever go off without a hitch. “It’s a new application, so it takes work to make sure the end users understand how to work the dashboard and get all the bugs out,” says Brown.

Gwinnett has tweaked the system so that it can now extract data from its electronic medical records. Previously, medical records were on paper. Now when a patient is admitted, the dashboard pulls up any existing medical records and the doctor or nurses can view them from their computers. “The A/R billing and collections pieces are ready to be installed but we wanted to install our clinical system and get it ready first,” he explains.

“It’s cutting edge here,” says Cathy Dougherty, who oversees Gwinnett’s revenue cycle management. “It’s pretty exciting.” ●



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Tips for Choosing a Vendor

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► Like other important decisions, your team will need to perform their due diligence before selecting a vendor to help them implement a dashboard. It's not a decision to be taken lightly, says Donna Gilley, Practice Leader, Healthcare Consulting, with Lattimore, Black, Morgan & Cain, Nashville.

This is where your evaluation of your hospital's needs and strategy pays off. If you take the time to assess your facility's current and future priorities, you will know better what to look for in a vendor and analyze if that vendor has the capabilities you are after.

"It's like choosing an electronic medical record or health information management system," Gilley notes.

Insiders suggest creating a short list of vendors from

colleague recommendations, professional societies, conferences and suggestions from your current information system vendors. Then use a request for proposal (RFP) to whittle down the potential vendors further.

"Come up with a checklist of what you want in terms of content, staff training, clarity of dashboard, and price," says Gerry Blass, a consultant in Colt's Neck, N.J.

Once you've narrowed down the list of vendors, ask for a demonstration and/or use a system on a trial basis, and get a team of people to evaluate it from different hospital departments, including finance, medical records, legal and risk management, Blass suggests.

It took Georgia-based Gwinnett Medical Center six months

to undertake the RFP process and choose a vendor, which they chose based on the vendor's experience and willingness to let Gwinnett help design a custom system.

It is also important to choose a vendor that provides superior customer service. "Problems always occur. A module may not be delivered on time, or you may want to replace a vendor representative you are not comfortable with. Talk to enough people in the company so when a problem comes up down the road you can get it resolved. The last thing you want to do is go back to the contract and point fingers. Make sure – it's a long term commitment," says Wallace Ed Brown, Gwinnett's CIO and information services senior vice president. ●

10 Things to Consider Before Diving In

BY FIERCEHEALTHFINANCE

► Before you plunge into the world of revenue cycle dashboards, you will need to undertake some research and planning. Some of the steps you should take include:

- 1. Identify who will champion the project and spearhead implementation.** Assign someone who wants to help facilitate this change and who sees and appreciates the big picture. Gwinnett Medical Center has two champions for its dashboard project, Cathy Dougherty, its assistant vice president of revenue management, and Wallace Ed Brown, CIO.
- 2. Identify the key indicators you want to measure.** Determine your organization's strategy by consensus, advises John Freedman, M.D., Freedman Healthcare, Newton, Mass. This should be based on the current needs of your hospital. A hospital that tends to bill accurately, for example, may still need to get a handle on runaway costs associated with lengths of stay for certain DRGs or aging accounts receivable. The indicators can also differ from department to department.
- 3. Determine the capability of your current systems.** You may

have some rudimentary dashboard functions already that you are not using. For example, if your system already has bill estimation software in it, you do not need to purchase that from an outside vendor. Ask your IT department.

4. Start small and expand from there. Gwinnett first implemented a dashboard to monitor patient registration and is now rolling out dashboards for the remainder of the revenue cycle.

5. Customize the dashboard based on what you want to measure. Even dashboards that are more 'off the shelf' have some flexibility in what to measure and what you see on the dashboard.

6. Determine your budget. The costs of a dashboard depend on how many data points you want to track, what you want to invest, and how customized you want your system to be, says consultant Gerry Blass.

7. Make sure the dashboard is easy to read. "It's important how the dashboard is presented," says Blass. If your business people cannot use it, it will not be very helpful.

8. Be prepared to take action when an issue is uncovered. The dashboard is a tool that is meant to support decision-making. "If there's a negative trend, go in and figure out what's going wrong. It's an opportunity to improve the process and move in the right direction," says Brown.

9. Revise the dashboard as necessary. For example, one hospital system in the Midwest

was having trouble getting different departments to report changes in the use of space, which caused its cost reports to be inaccurate because they were not properly identifying allowable costs. So the hospital system added square footage tracking to its dashboard, which required the departments to account for all use of space. It worked.

10. Appoint someone to educate staff and management. Dougherty used the movie *Toy Story* to teach personnel about the need to move from old fashioned pull-string doll Woody who feared change to technologically-advanced Buzz Lightyear who tackled problems head-on.

Note that installing a revenue cycle dashboard may require making a sea change within the organization, as it will likely affect how the hospital operates, says Dougherty. For example, since a dashboard is designed to report exceptions, her hospital's staff no longer needed to touch every account – only those that require action.

Gwinnett's dashboard uses a "propensity to pay" system which evaluates if patients are likely or able to pay their bills. The dashboard does not report patients who are likely to pay, enabling the hospital to focus on the other patients, who perhaps may need financial counseling. As a result, staff no longer need to contact every patient, which frees them up for other tasks, says Dougherty. "It changes their workflow," she says. ●