



# Improve Your Top Line: Achieve Revenue Cycle Management Success with Visual Analytics

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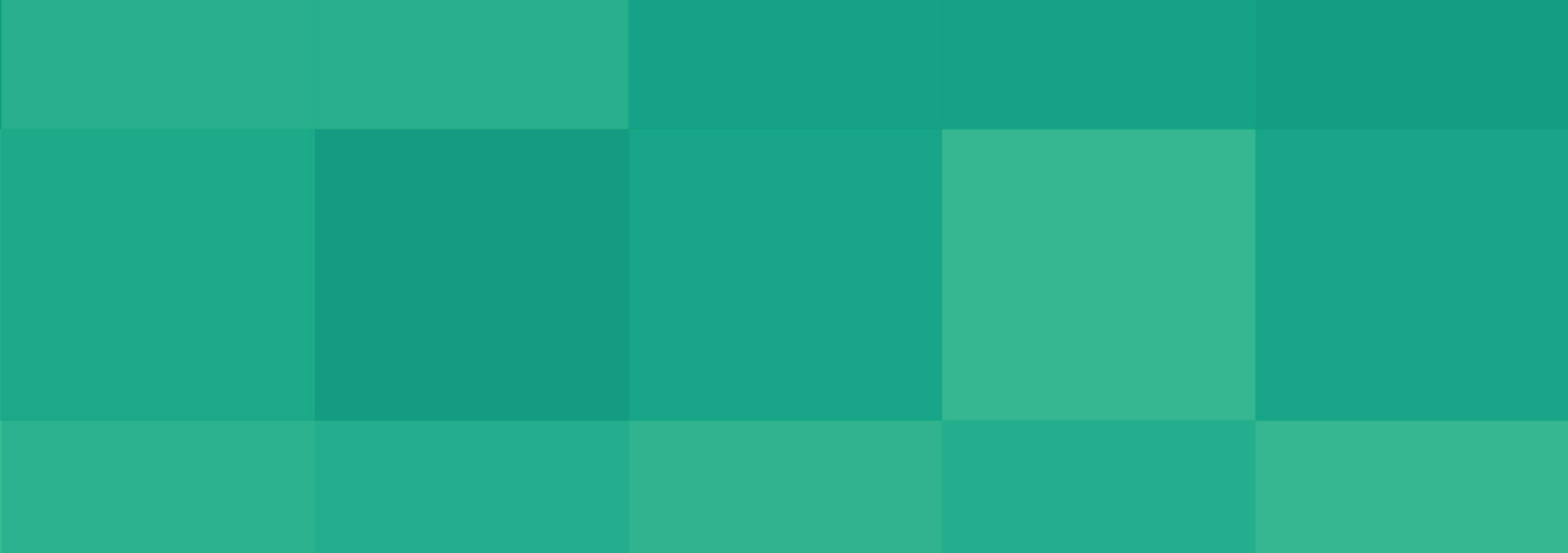
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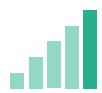
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## Introduction

In the complex world of healthcare, providers and payers are in a constant push-pull that requires them to deliver superior services, while managing the revenue cycle proactively and efficiently. Dependencies are the norm, with numerous processes that rely on accurate information from multiple systems and sources. Issues must be identified quickly to avoid costly delays: claims denials, charge capture and coding, payment posting, appeals and collections are among the processes that are impacted by delayed or inaccurate information.

Market forces—including evolving regulations, increased consumerism, value-based care, and growing patient financial burden—are forcing healthcare organizations to transform their approach to revenue cycle management (RCM). And increasingly, the healthcare sector is turning to technology to address the challenges of RCM. This includes a combination of software solutions, electronic health records systems, and business intelligence platforms.



### DATA POINT

98% of respondents to a HIMSS Analytics poll say that collecting data from disparate sources is a challenge for revenue reimbursement.

However, technology itself is not a panacea. When systems lack integration, it's impossible to drive efficiency or create workflows that can evolve and scale as your organization changes over time. The key to successful revenue cycle management lies in improved processes that focus on integration and insights—the ability to see and use all of your data, regardless of where it resides.

This eBook explores how managing your revenue cycle with Tableau, a best-in-class visual analytics platform, can help ensure that your organization is equipped to protect and augment your bottom line.

## Better decisions with data visibility



### DID YOU KNOW?

50%+ CFOs want access to easier report creation, better dashboards and visuals, and enhanced ability to drill into reports to understand underlying details (2/3 struggle to pull data from multiple resources). – [Kaufman Hall](#)

Forward-looking healthcare organizations aspire to exploit the potential of their data across every area of their operations, from diagnostics to customer service—but it's clear that revenue cycle management is one area where data and actionable analytics can make an immediate impact.

With the ability to aggregate data from all of your EHRs, ERP, RCM, medical billing and other HIT systems and create relevant visualizations and dashboards, you're finally able to connect the dots. Insights into billing, claims, contract analysis, coding and ICD-10 requirements, and clinical documentation gives you a 360-degree view that helps you identify patterns and respond appropriately.

End-to-end visibility also gives leadership what they need the most: the ability to create role-based reports based on near real time analyses, capturing trends and insights that empower CFOs, RCM leadership, analysts and others to make better decisions.

Without a cohesive view of your data, your organization—and your revenue cycle—is at risk. Lost time, wasted resources, and delayed resolution of even the most basic queries are all drags on productivity and profit. Furthermore, opportunities for process improvement and collaboration are lost when you don't understand the nuances and can't see the big picture.

### BY THE NUMBERS: Visual analytics and data-driven success

#### Receive payments

*0-13 days faster than  
MGMA averages*

#### Drive clean claim rates

*over 95%*

#### Increase revenue

*with improved collection rates  
as much as 25%*

## Mount Sinai Health System: enterprise-ready analytics at scale

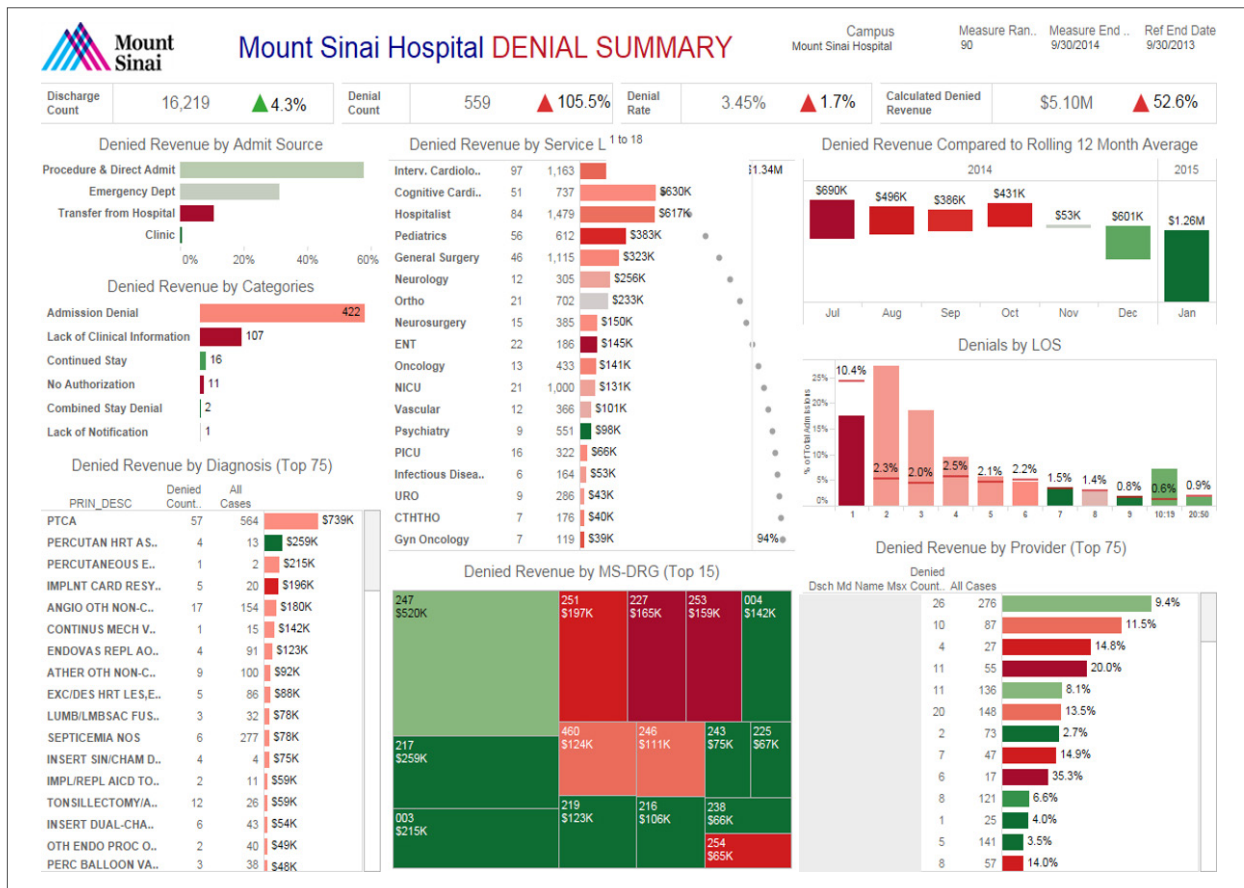
Mount Sinai Health System is one of the largest healthcare systems in the U.S., serving one of the most diverse populations in the world. With over 136,000 inpatient admissions and more than 3,100,000 outpatient visits to offices and clinics, revenue cycle management at scale is an enterprise imperative.

### Substantial revenue opportunity revealed

The first-ever interactive dashboard for denials data analysis identified \$125 MM in sub-optimal denials management opportunities, which the CFO's office had missed.

### Documented ROI

During the 2013-2014 budget cycle, Tableau was the only IT project funded, based on payback and time-to-value considerations.



Drill downs and root cause analysis helped identify over \$100 MM in revenue opportunities.

## Identifying red flags and taking action

In healthcare organizations, revenue leakage is a fact of life—emanating from complex processes with outcomes that are hard to predict or control. Claims denials, incorrect charges, collections, write-offs, and missing information are just some of reasons revenue is lost. Risk to revenue is substantial when your data is siloed, accountability is decentralized, and inconsistent auditing is the norm. Charge capture charges alone [can cost up to one percent of annual net revenue](#).

### CHECKPOINT:

#### Can you answer these questions with your data?

- How many days, on average, do accounts sit in A/R?
- How are claims denials impacting profit margins?
- What patterns are associated with fraudulent activity?

Identifying revenue leakage is a never-ending challenge. However, with an integrated visual analytics platform like Tableau, it's possible to use your RCM data holistically to see patterns and variations. It's possible to stop revenue leaks before they start once you have complete insight into your data, and can drill down to identify root causes contributing to the leakage.

Using detailed analyses from a wide variety of data sets—from electronic medical records to billing systems—you're able to detect patterns that impact revenue and take corrective action. Advanced insights can reveal:

- Underpayments
- Missed eligibility
- ICD-10 compliance
- Sub-optimal denials management

### RCM RX: a favorable prognosis with predictive analytics

Forward-leaning healthcare organizations are learning to use data to predict future outcomes and improve RCM. Instead of reacting to historical analyses, these organizations are asking new questions of their data to help predict and prevent outcomes where revenue leakage is likely to occur. Importantly, understanding trends over time allows organizations to create strategies that address entire categories of issues—instead of one-off solutions that are far more expensive.

#### How can predictive analytics be used to improve RCM?

Healthcare providers and payers can segment patients, claims, and accounts:

- Denial recovery and propensity to pay scoring
- Flags re: missing insurance
- Models to optimize contracts
- Example

## Stamford Health System: Reduction in operating costs and improved patient care

Stamford Health is an independent community hospital with 305 beds and 125 physicians. Like all community hospitals, Stamford is under pressure to deliver high-quality, cost-effective care in a highly competitive environment.

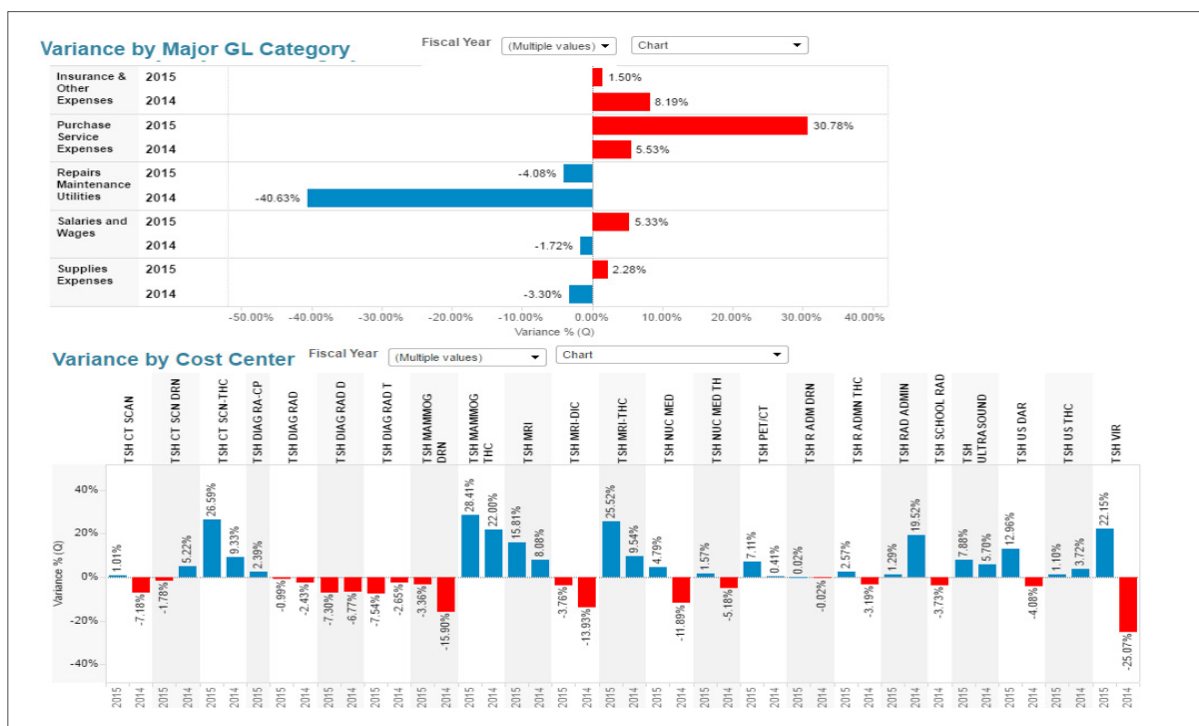
Manual data collection, disconnected systems, and spreadsheet-based reporting made it difficult to gain insight into processes and make improvements. Without a unified data platform, Stamford had no way to track clinical, operational, or RCM efficiencies using pertinent metrics or make much progress against Lean Six Sigma goals to enable continuous improvement.

### Going beyond spreadsheet solutions

After implementing Tableau, Stamford RCM executives, business leaders, and analysts had the power to access the right data at the right time and to proactively identify variances in expenses and price creep from suppliers.

### By the numbers

Stamford Health saved \$6.5 million improving its clinical, operational and RCM initiatives and over \$3 million from its value analysis.



This dashboard replaces manual reports to track variance by department, with drill down capability at expense category level.

## SECTION THREE

### Automation drives new efficiencies

Do more with less is the battle cry and the mandate in the increasingly resource-challenged world of healthcare. Cost pressures are forcing healthcare payers and providers to find new ways to achieve their KPIs and ensure future success—but with automation, healthcare organizations can do more. By automating many processes that used to require extensive administrative support and manual intervention, organizations can control costs by reducing staffing and manual, often repetitive back-office work, lowering collection costs, eliminating avoidable write-offs, and helping to create cleaner claims.



#### DID YOU KNOW?

36% of hospitals say less than a quarter of their revenue cycle process is automated using analytics

Using Tableau, your teams can build big-picture analyses using all of your data sets, drill into details of your automated processes, track key metrics and trends, and create comparative insights to benchmark your organization against national standards. Tableau helps teams leverage the value of automation in new, exciting ways. Simply stated, visual analytics empowers everyone in the chain of command, from department administrators to the C-suite, to make better decisions.

#### Smarter RCM with automation

Innovative healthcare organizations are automating these processes to achieve stronger results and reduce revenue leakage:

- Intake and authorization
- Charge estimation
- Coding and billing
- Denials and AR cleanup
- Posting and cash reconciliation
- Expense variance analysis
- Performance analytics and reporting
- Payer-provider data sharing
- Recovery audit contractor (RAC) audits



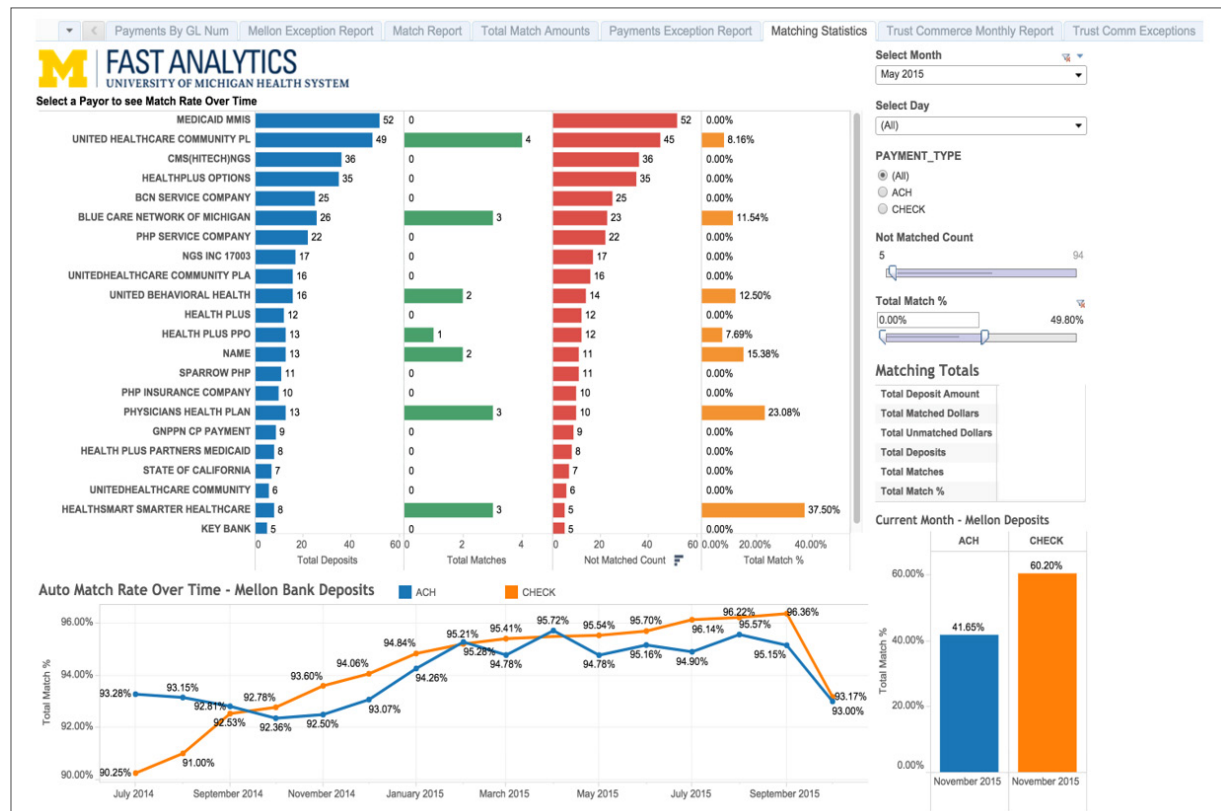
## University of Michigan Health System: good-bye to over 10,000 hours of manual tasks

Michigan Medicine is home to one of the largest health care complexes in the world, with three hospitals, 40 outpatient hospitals, and more than 140 clinics. Michigan Medicine’s Fast Analytics team, part of the Revenue Cycle Management Department, serves the data needs of over 30 internal groups. With Tableau, these 30 teams are able to allocate resources more efficiently—what was siloed information is now accessible, leading to faster decisions.

### Visual analytics unlocks new efficiencies

Michigan Medicine has achieved numerous process and productivity milestones since implementing Tableau, including 10,000 hours of cumulative manual work saved. Among the most significant:

- Automated reporting saved over 5,000 hours on four different projects
- 19 groups eliminated 48 hours of work per week with access to common dashboard
- Charge estimation dashboard accelerates a 4.5-hour process into a 4.5 second query
- 85–92% of reconciliation process is now automated, providing a baseline to reconcile the rest



Before Tableau implementation, only 13% of accounts were being reconciled—manually. Today, reconciliation is automated at a rate of 96%-97%.

## Summary

“I think you can have a ridiculously enormous and complex data set, but if you have the right tools and methodology then it’s not a problem.”  
– Aaron Koblin

Legacy processes and disconnected point solutions have had their moment in time as the cornerstones of RCM. Today, an actionable data analytics platform is foundational for healthcare organizations that are committed to eliminating revenue leakage, identifying gaps, improving margins, reducing risk, and delivering exceptional service. If your RCM process is not data-driven, it’s virtually impossible to have the right information to make the micro and macro decisions that support your KPIs and boost your bottom line.

And when you look at RCM as an information-driven workflow—that is, a synchronized ecosystem of data and insight—it’s easy to understand why data analytics must be a priority. Adopting a visual analytics platform like Tableau that provides visibility across multiple data sources and the power to create sophisticated, actionable visualizations using all of your data is the first step to optimizing your RCM processes and ultimately, improving patient satisfaction.

## Resources

[Tableau Healthcare solutions page](#)

[Healthcare Analytics at the University of Michigan Health System – A Cinderellesque story](#)

[RCM Dashboards on Tableau Public](#)

## About Tableau

Tableau helps people transform data into actionable insights. On the Tableau platform, it’s easy to explore your data, build dashboards, and perform ad hoc analyses in just a few clicks. Healthcare organizations are using Tableau to enable data-driven decisions at scale that can reduce costs, enhance quality, and ultimately improve the patient experience. [Download a free trial](#) and experience the power of Tableau for yourself.