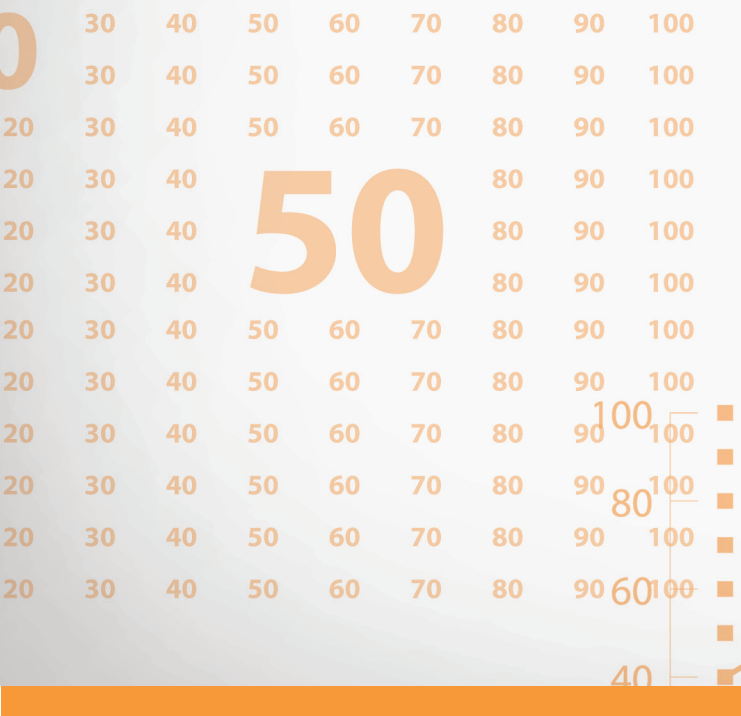
DATAWATCH | GET THE WHOLE STORY™

WHITE PAPER

USING INFORMATION OPTIMIZATION TO IMPROVE REVENUE CYCLE MANAGEMENT IN HEALTHCARE



USING INFORMATION OPTIMIZATION TO IMPROVE REVENUE CYCLE MANAGEMENT IN HEALTHCARE

DATA RICH AND INFORMATION POOR

It is no secret that healthcare costs have been increasing at an alarming rate over the last number of years. By most measures, healthcare spending is rising faster today than at any other point in history. In the provider market, rising costs and shrinking profit margins have created an unsustainable financial position for many healthcare organizations. As a result, it is estimated that the average healthcare provider is losing $70.2 million or 15% of additional revenue per hospital annually (1).

As healthcare organizations are attempting to reign in rising costs, they are turning to cross-functional, operational data to help them improve their revenue cycle management. Recognizing that their organizations could enhance their revenue cycle management if they could simply harness available, clinical, financial, and other operational data, (1) hospital CIOs and CFOs are now turning to Information Optimization solutions to help improve their bottom line.

INFORMATION OPTIMIZATION

Information Optimization solutions provide the entire organization with easy access to trusted information and content without having to redesign the way content is created. As a result, information optimization solutions help improve processes, productivity, and accelerate the creation of purpose-built, trusted analytic data sources.

Information Optimization solutions allow users to unlock the critical data buried in reports and other business documents, as well as import and combine information from additional data sources such as PDFs, databases, XML, invoices, billing statements, and spreadsheets. From semi-structured, static data that already exists in ANY traditional report created within ANY healthcare information system, Information Optimization solutions offer an access to, and understanding of, what has happened, why it happened, and what is currently happening.

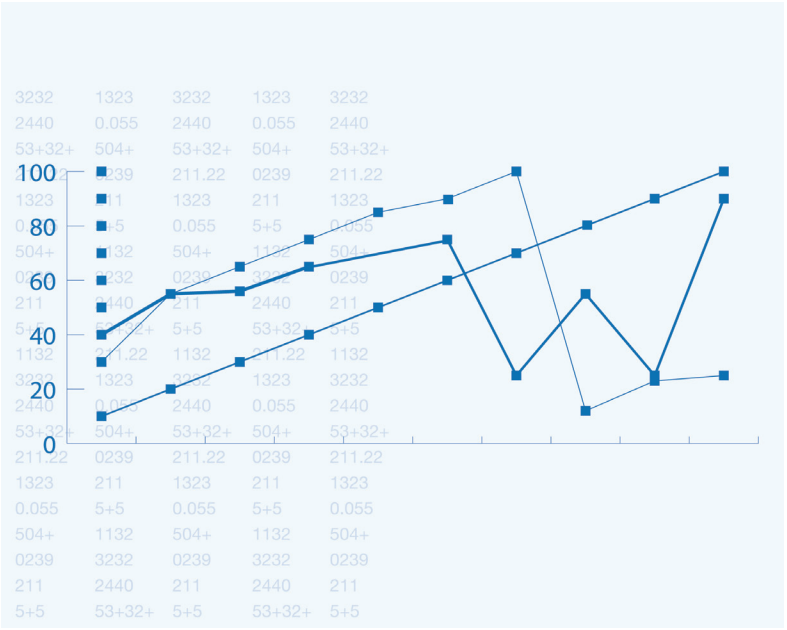
Within healthcare, Information Optimization Platforms help users work smarter and faster – providing the information they need, in the format they want, to better manage the revenue cycle. An Information Optimization Platform is a full-service, web-based, data-mining solution that is uniquely capable of extracting user-specified data from ANY traditional report created within ANY healthcare information system. It is equally adept at pulling data directly from SQL database tables and from other structured data sources. The Platform provides data analysis, graphing and data exporting to other applications, and takes information currently "hidden in plain sight" and transforms it into live, actionable data for rapid analysis and enhanced revenue cycle management. According to Fred Bazzoli of CHIME, accountable care organizations (ACOs) will need more data analysis capabilities because revenue cycle management is a high priority. (3)

WITHOUT INFORMATION OPTIMIZATION: ROADBLOCKS TO EFFECTIVE REVENUE CYCLE MANAGEMENT

Two-thirds of healthcare organizations need additional resources in order to provide required reports on quality performance and quality outcomes. More than 75% of healthcare organizations say their clinical data are presented in a different view or in a different format from their financial data – making reporting difficult, manual, and time consuming. For example,

- Inability to get at data trapped in complex reports – data rich, information poor;
- Inefficient revenue cycle process, fraught with potential data quality errors when staff must manually update accounts with remittance data;
- No way to link hospital revenue cycle Charge Data Master (CDM) to supply chain Item Master (IM), thus leading to manual updates and inaccuracies in the billing process;
- No actionable information to enable improved revenue cycle management;
- Needing to create complicated formulas to coax data out of some reports;
- Running existing reports multiple times in order to capture different levels of detail for different end-users.

USING INFORMATION OPTIMIZATION TO IMPROVE REVENUE CYCLE MANAGEMENT IN HEALTHCARE

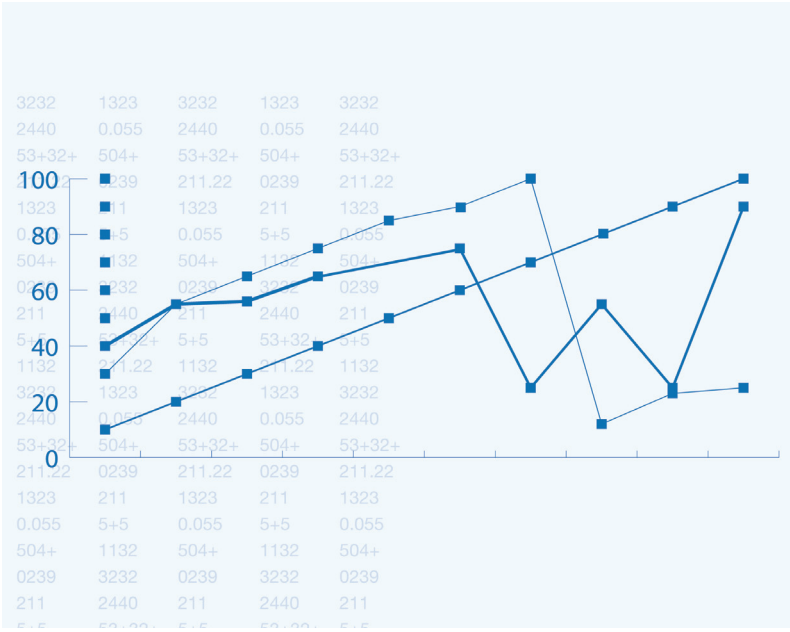


SUCCESSFUL REVENUE CYCLE MANAGEMENT WITH INFORMATION OPTIMIZATION

By sourcing from the trusted data within their own systems and within their own reports, hospitals can gain more insight using Information Optimization. Healthcare providers need to extract the data from these static reports and databases in order to manipulate that information into desired views. This is information optimization. Now hospitals and other healthcare organizations can:

- Integrate static report data with an enterprise reporting solution that can supply vital financial, clinical, and operational metrics, dashboards, and reports to end-users via a web portal;.
- Data mine any computerized report or document (e.g., EDI files), regardless of format;
- Transform ancillary reports into live, customized, web-enabled data;
- Allow viewing of data, such as HTML, Excel, dashboards, and PDFs; and then export data locally, any time;
- Combine financial data with clinical data for more complete insight into revenue cycle management;
- Reduce IT's burden by eliminating the need for ad hoc reports, subreports, or live database connectivity;
- Include dashboard capabilities to help users visually analyze KPIs;
- Map the data sources to models that allow data to be combined, restructured, and analyzed in different ways.

Being able to access this semi-structured data and mine reports is of particular value in revenue cycle management. Individual end-users can access the data and customize the reporting, without requiring the IT department to provide countless customized reports for these individuals. The Information Optimization Platform can access any documents, without the time and expense of integrating with the hospital's existing systems. This means that financial data can be combined with clinical data, enabling information to be shared or acted upon for better decision-making across the organization.



UNLOCKING 835 REMITTANCE FILES FOR INCREASED REVENUE

Accessing and understanding the data trapped in 835 EDI remittance files can have a significant impact on the financial health of hospitals and providers of all sizes. Doing so in a timely fashion has significant implications for revenue cycle management. Plus, unlocking key data elements at the file, claim header, and service line data offers immediate value and can provide a competitive advantage to the hospital.

For example, a reduction in denials of 3% to 5% has the potential to produce a $5 million to $10 million revenue increase. By identifying denied service lines, the hospital is able to fix incorrectly billed CPT-4, e.g., to ensure not only correct payments for existing claims, but also for future claims. This will be of particular importance with the upcoming conversion to ICD-10 – specifically in understanding the financial impact of claims in the new format, integrating with EHRs, and where documentation would need to be enhanced.

OTHER OPPORTUNITIES FOR REVENUE CYCLE IMPROVEMENT

Improving revenue cycle management enhances the efficiency, quality, and financial performance of hospitals, including:

- Resolution of denied claims – whether measuring denials by payer, DRG, procedure code, adjustment reason code, or other cause, the data just needs to be unlocked, transformed, and analyzed to quickly determine the real drivers for denied claims.
- Reconciliation of outbound claims with inbound remittances – automated tracking correlates 837 claims submitted with paid or denied 835 claims.
- Crossover/ Coordination-of-Benefit Claims – identifying complex claims with multiple payers.
- 4010 v. 5010 – different formats, with new data elements to accommodate ICD-10 coding structure. The need to interpret and report on 835s, whether in 4010 or 5010 format, is more critical than ever.
- Provider Level Adjustments – adjustments that are neither at a claim level or service line level, still impact the actual payment to a provider and need to be taken into account.

By accessing and employing 835 EDI files for revenue cycle management, your Information Optimization Platform can be used to manage cash flow, see revenue across service lines, drill down to claims. Analysts can now look at aging by accounts, by payer, by age, by patient type, by service line, by procedure in a more dynamic environment. They can identify gaps in processes, or denials by service line, and determine where corrections are needed, in order to recapture potential lost revenue. The platform allows for distribution of information to all users, via the web, in a secure environment.

One children's hospital bills services every 14 days, regardless of length of stay of individual patients. However, the services occurring in these cycles are joined in batches for insurance companies, providing an inaccurate picture of the patient's stay. The result is that the insurance company rejects the claim because the automated bills don't match the batch claims. Now, using Information Optimization, the hospital can consolidate service dates with dates on batch reports to produce a complete date range and an itemized bill.

For the more advanced analytic users, an Information Optimization Platform provides a web-based interface to interact directly with the sourced report. Given that the platform can store the sourced reports, users can search across time periods to create trend analyses. And annotations can be added on any piece of data on the report or in any section of the report.

The application model provides basic analytic views, and each end-user can create his/her own filter from which to sort and view data. The analytic module interacts with data trends by service line, aging, patient type, payer, patient name, and more as requested. Trends are displayed by medication, by patient, by unit, by nurse to uncover medication errors. Labor distribution can be viewed by hours, salary, pay rates, overtime, and more in order to improve efficient use of staff. The more graphical-oriented user can aggregate views into dashboards.

The Manager of Patient Accounts at a Texan children's hospital group can data mine patient information, financial information, and clinical information in order to create the robust reporting needed. He can "slice and dice" the data across several locations and lines of business, reimbursement rates; as well as by individual facility performance and individual provider productivity.

THE DATAWATCH INFORMATION OPTIMIZATION PLATFORM

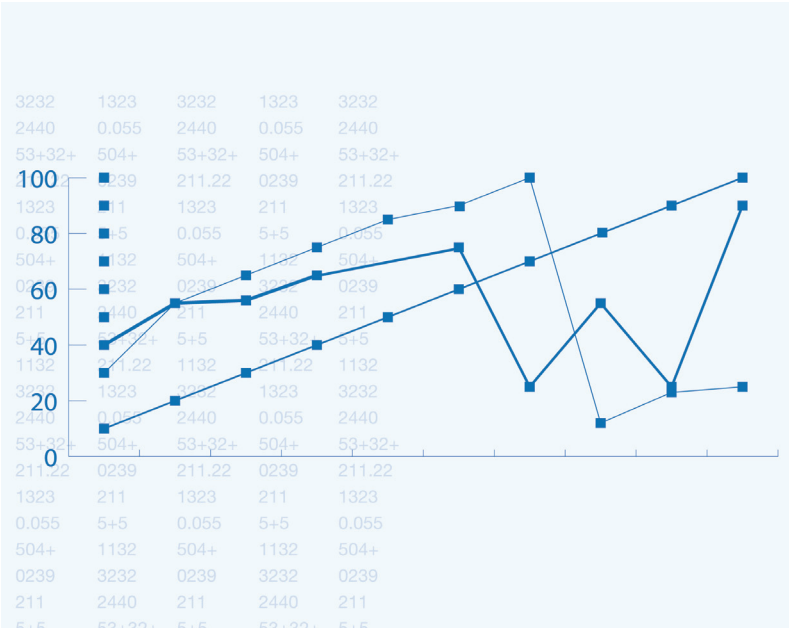
Few industries offer as many challenges to CIOs and CFOs as healthcare provides. Amid the political firestorm of healthcare reform, and increasing pressure to cut costs, is the general reluctance among healthcare professionals to trust technology. Yet, providing less expensive healthcare requires significant investment in robust clinical data analytics. And looming is the awesome task of implementing ICD-10, albeit with the goal of streamlining onerous billing processes. (4)

Fortunately, Datawatch Corporation, a leader in Information Optimization, helps healthcare providers make better decisions and solve business problems by simplifying access to information. More than 3,000 healthcare organizations worldwide maintain or reduce costs, improve decision making, support strategic objectives, increase ROI, and improve the quality of care provided by relying on Datawatch's Information Optimization platform for reporting and data mining solutions.

At an affordable price, hospitals and other healthcare providers can purchase the enterprise-wide revenue cycle management solution. With an ROI that is typically measured in days, not months, healthcare providers realize savings almost immediately. Within two weeks, individual users are up and running, creating and sharing basic reports.

USING INFORMATION OPTIMIZATION TO IMPROVE REVENUE CYCLE MANAGEMENT IN HEALTHCARE

With the Datawatch Information Optimization Platform, Sophia Charles-Irby of Cancer Centers of the Carolinas, can achieve "in less than one day what used to take me three days. I can get information and reports in a level of detail never before achievable." Using models that have been "built and tested for both accuracy and repeatability," Charles-Irby can report on past trends and predict future trends.



HEALTHCARE PROVIDERS EXPERIENCE ENHANCED REVENUE CYCLE MANAGEMENT

Cancer Centers of the Carolinas is a community-based physician-owned practice. For them, the number and frequency of reporting challenges increased as the amount of data increased. As part of their revenue cycle management, reports were needed on the status of previously submitted claims, as well as requests for details about denied claims. With the Datawatch Information Optimization Platform, Sophia Charles-Irby, Business Systems Analyst, can achieve "in less than one day what used to take me three days. I can get information and reports in a level of detail never before achievable." Using models that have been "built and tested for both accuracy and repeatability," Charles-Irby can report on past trends and predict future trends.

By using the platform to extract data from daily charge files that are flagged for review when they violate preset business rules, staff is freed from manually digging through each patient's file for insurance information. Now, reports "give our revenue cycle team a clear look at the payments coming in daily and what outstanding charges need to be billed to insurance." CCC now submits clean data for all claim types. Denial rates and payables have significantly decreased.

Datawatch Customer Success Story: For a nonprofit, multispecialty, pediatric health system in Texas, the financial impact of Information Optimization was significant. The Assistant Vice President of Business Services was able to make sense of the data coming out of different systems, combine the data to get a full picture for revenue cycle management, and do so without requiring manual reporting from staff and without needing to outsource any work to a vendor.

The Assistant Vice President of Business Services can data mine patient information, financial information, and clinical information in order to create the robust reporting needed. He can "slice and dice" the data across several locations and lines of business, reimbursement rates; as well as by individual facility performance and individual provider productivity.

In fact, he is easily able to develop individual reports for each of almost 500 providers. The Assistant Vice President of Business Services downloads information into Excel and distributes revenue cycle PowerPoint reports to almost 600 administrators, operations staff, providers, managers, and to the system's Finance Committee.

Datawatch Customer Success Story: Discovering the "hidden issues" provided insight into revenue cycle management for the Director of Patient Accounts at a Midwest children's hospital. "Some reports can take our aging accounts and drill down into an age bucket, but they reach a point where they can't drill down to a specific patient." On average, the reports are 130,000 rows and 18 columns of data, forcing the Director and his team to deal with large amounts of data manually. After implementing Information Optimization, they were able to reframe reports, blend information from various systems, and produce automated targeted spreadsheets. "This level of detail was never available before."

Hospital billing specialists would agree that tracking down payers is not easy. It must be determined who owes how much, if the claim was denied, and which insurer is involved in the claim. Key information often gets overlooked. With the Information Optimization platform, "you have a depth of information and can understand the cause of the problem. You know what is right and what is wrong."

According to the Director of Patient Accounts, "mistaken assumptions have decreased significantly." The children's hospital has been able to institute more audits for claim processing, enabling the hospital to have more visibility into -- and better management of -- its revenue cycle performance.

For example, the hospital bills services every 14 days, regardless of length of stay of individual patients. However, the services occurring in these cycles are joined in batches for insurance companies, providing an inaccurate picture of the patient's stay. The result is that the insurance company rejects the claim because the automated bills don't match the batch

Now, using Information Optimization, the hospital can consolidate service dates with dates on batch reports to produce a complete date range and an itemized bill. The Director of Patient Accounts is able to deliver accurate numbers and strategic information to hospital executives as quickly as they need it.

"In our business, we deal in such high volumes of data that finding the needle in the haystack can take too much time. Getting at that 'hidden' data or 'missing' information is critical. You can't do that with simple snapshot reports." You need to extract all the data and leverage all the reports to make informed revenue decisions.

Within healthcare, Information Optimization helps users work smarter and faster – providing the information they need, in the format they want, to make better business decisions, and to better manage the revenue cycle. Datawatch Information Optimization is a web-based, data-mining solution that is uniquely capable of extracting user-specified data from any traditional report created within any healthcare information system. It is equally adept at pulling data directly from SQL database tables and from other structured data sources. The Platform provides data analysis, graphing and data exporting to other applications, and takes information currently "hidden in plain sight" and transforms it into live, actionable data for rapid analysis and enhanced revenue cycle management. According to Fred Bazzoli of CHIME, accountable care organizations (ACOs) will need more data analysis capabilities because revenue cycle management is a high priority. (3) "It is a correct claim; it's the way the billing department works. But an insurance company tries to match the bills by exact dates and they won't match. All of a sudden they think they have detected an error."

Footnotes

(Ftnt 1 -- Mercom Capital Group, Healthcare IT Market Intelligence Report, July 30, 2012)

(Ftnt 2 -- Hospitals and Health Networks Daily, John Glaser and Veronica Ziac, June 12, 2012)

(Ftnt 3 – CHIME Survey Results and Industry Overview of the Use of Data and Analytics within the Hosptial Setting, Fred Bazzoli, August 30, 2012)

(Ftnt 4 -- www.cio.com, "Top Challenges Facing Healthcare CIOs", Brian Eastwood, Aug 21, 2012)

About Datawatch

Datawatch Corporation (NASDAQ-CM: DWCH), a leader in Information Optimization, empowers healthcare organizations to transform the massive amounts of information -- trapped in static reports, PDF files, text files, and other content-rich, but difficult-to-use data sources -- into a dynamic information analytics system that accelerates and improves decision making throughout their operations. Datawatch's technology allows its 1,000+ healthcare customers worldwide to leverage the investments they have made in reports -- from ERP, CRM, and other custom applications – into high- performance analytic information at a fraction of the cost and time of traditional approaches.

Founded in 1985, Datawatch Corporation is headquartered in Chelmsford, MA, USA, with offices in London, Sydney, Manila, Singapore, and Munich. Datawatch has partners and customers in more than 100 countries. For more information, visit us at: www.datawatch.com

Contact Datawatch

For more information about Datawatch and its healthcare solutions, contact us directly, www.datawatch.com, 978-275-8222, or sales@datawatch.com.

Datawatch Corporation, Quorum Office Park, 271 Mill Road, Chelmsford, MA 01824, USA

Toll free US (800) 445-3311 or +1-978-441-2200.