white paper

Mede/Analytics®

Can your EHR really provide a complete picture of your organization's performance?

Executive summary

Since the Health Information Technology for Economic and Clinical Health (HITECH) Act passed a decade ago, providers have embraced electronic health records (EHRs) to help improve care quality, patient safety, financial stability and efficiency.

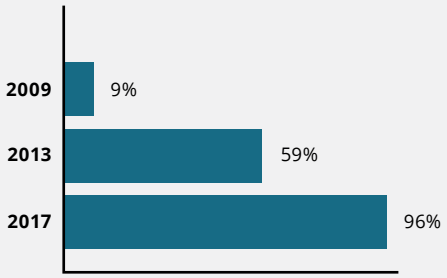
In 2009, only 9% of hospitals had an EHR. Today, that number has grown to more than 96% of hospitals.[1] No technology has been more impactful in IT transformation than EHRs. However, even after making significant financial investments, many healthcare executives remain uncertain about the ROI these systems provide.

Electronic health information systems capture and operationalize a range of clinical and financial data. EHRs also help providers successfully manage the patient record, but they have yet to live up to the expectations of improving care quality or connecting the dots between disparate technologies and data sources.

The reality is that most EHRs fall short on the promise of interoperability and the ability to extract insights from the vast amounts of healthcare data.

To capitalize on their EHR investments, more and more hospital systems want a solution that will turn data into meaningful information that can guide their business decisions. The data insights required to ensure a healthcare system's financial viability is only available through dynamic, end-to-end analytics.

EHR adoption by hospitals



The challenge: Fragmented, IT-dependent reporting

Today's healthcare data is often siloed, rarely standardized and typically generated in legacy IT systems with incompatible formats. Even with the new breed of integrated EHR platforms, the sheer volume of data files, data elements and reporting options available can be overwhelming.

To capitalize on this data, revenue cycle leaders need advanced analytics to glean the valuable, actionable insights that help improve the hospital's financial position.

Data interoperability

Eliminating data silos and homogenizing data is crucial for enterprise-wide insights. But high volumes of data can be complex and more than EHRs can handle.

The trend toward hospital consolidation brings an additional layer of complexity when disparate EHRs, billing systems and other legacy systems are used across different facilities. Investing in a single EHR can offer a solution; however, the cost can be so prohibitive that hospitals have no choice but to maintain these silos.

Without predictive modeling capabilities, EHR platforms are unable to identify future trends in the data. These reports simply lack the complex algorithms required to bring focus to important hospital initiatives.

1. Non-federal Acute Care Hospital Electronic Health Record Adoption, The Office of the National Coordinator for Health Information Technology, https://dashboard.healthit.gov/quickstats/pages/FIG-Hospital-EHR-Adoption.php.

Pre-defined reports and data accessibility

The reporting capabilities of EHR solutions often pose great limitations for revenue cycle leaders. In addition to the fact data can only be shared between like systems, reporting functionality is very different from advanced analytics. Pre-defined reports limit users' ability to drill down into details that enable revenue cycle managers to pinpoint the root causes of their most troubling issues.

Without predictive modeling capabilities, EHR platforms are unable to identify future trends using data. Current reporting solutions simply lack the complex algorithms required to bring focus to important hospital initiatives.

In the absence of advanced analytics, for example, managers are unable to identify compliance risk before claims are audited. Without logic that identifies which physicians, diagnoses and procedure codes are at greatest risk, managers have difficulty driving initiatives to improve coding and documentation.

Furthermore, EHR reports often exist in silos of their own. Even if the data offers actionable insights, the ability to integrate these reports with action planning and accountability tracking is limited.

IT-dependent reporting

With a plethora of reporting options and complex report-writing architectures within EHR solutions, advanced IT resources are frequently needed to configure new reports and run queries. The business decision-makers who require the data have very limited self-service analytics capabilities. Furthermore, because they are not always aware of their reporting options, they may request a report only to find that a critical piece of information is unavailable. The standardization of selection criteria, data elements and metrics remains challenging in an EHR environment, especially within large organizations.

Delays are often caused by IT backlogs. After turning over report requests to IT, decision-makers must wait for the request to work its way through the queue, a process that could take several weeks or even months. By then, the conditions surrounding the data may have changed, rendering the report moot. Even if conditions don't change, the delay can negatively affect the hospital's bottom line.

Plus, IT's expertise lies in technical matters, not revenue. Without insight into the inner workings of revenue cycle management, IT staff doesn't have the necessary knowledge to ask questions of the data. It takes repetitive interaction between IT and revenue cycle management to design reports that are complete, accurate and meet the needs of the request. This process is impractical in a rapidly changing environment and often results in a graveyard of unused reports and a backlog of report requests.

IT's expertise lies in technical matters, not revenue. Without insight into the inner workings of revenue cycle management, IT staff doesn't have the necessary knowledge to ask questions of the data.

Four ways advanced, healthcare-specific, self-service analytics can add value

Healthcare experts across the nation agree that data offers significant benefits to the healthcare organizations that capitalize on it. However, the pre-defined, IT-dependent reporting architectures of EHRs create significant limitations for revenue cycle leaders who need data to make crucial decisions that directly affect the hospital's bottom line.

The diversity of healthcare data requires sophisticated analytics platforms that can homogenize data across disparate legacy systems. Also, crucial to leveraging data is providing self-service capabilities to the business users who can act on the data.

And finally, a data analytics platform built for healthcare offers best practice industry analysis and benchmarking for comparative analytics.

1. Advanced analytics technology

Sophisticated analytics platforms offer revenue cycle managers the robust technology they need to ensure the viability of their organizations. This technology offers unlimited flexibility and enables users to perform ad-hoc analysis that helps them gain actionable insight from their data.

According to Gartner, augmented analytics—which uses machine learning to automate data preparation, insight discovery and model development—is a key trend shaping the evolution of analytics. "As it matures, augmented analytics will become a key feature of modern analytics platforms. It will deliver analysis to everyone in an organization in less time, with less of a requirement for skilled users and with less interpretative bias than current manual approaches."[2]

It is this type of analysis that is only available external to EHRs that empowers robust capabilities, including:

- Predictive modeling that incorporates business rules
- Easy-to-use, browser-based cloud technologies that enable widespread data access
- Proactive alerts and notifications
- Integrated action and accountability tracking with performance management workflow

While some EHR reporting offers a retrospective view of the past, advanced analytics offer real-time and prospective insights. This gives users the ability to trend, group, sort and drill down into the data to identify the root causes and transaction detail behind their most troubling issues.

"As it matures, augmented analytics will become a key feature of modern analytics platforms. It will deliver analysis to everyone in an organization in less time, with less of a requirement for skilled users and with less interpretative bias than current manual approaches."

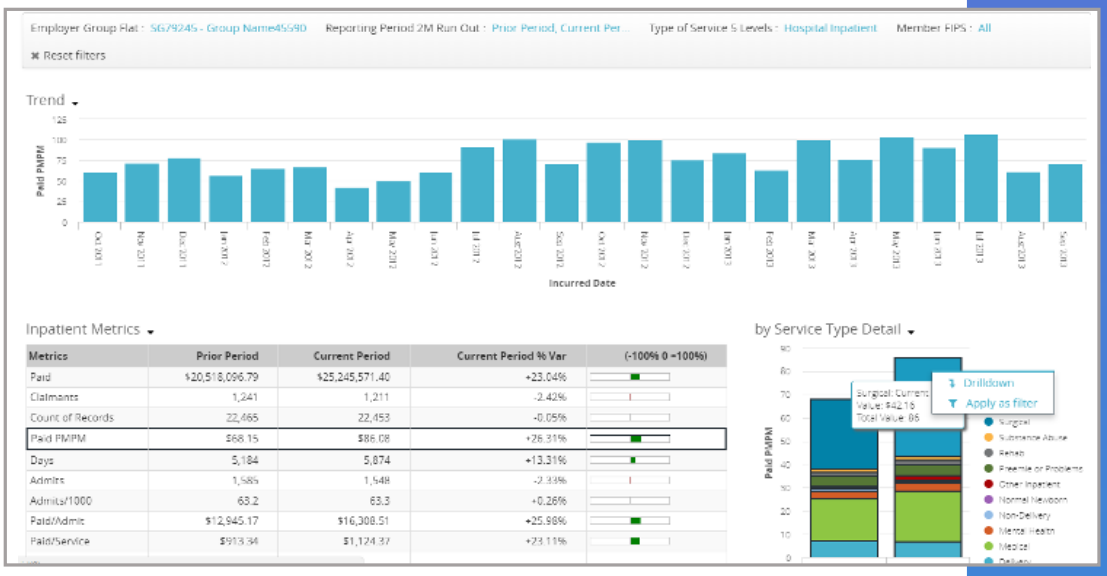
- Gartner

2. Gartner Reveals Five Major Trends Shaping the Evolution of Analytics and Business Intelligence, Gartner, October 2, 2019. https://www.gartner.com/en/newsroom/press-releases/2019-10-02-gartner-reveals-five-major-trends-shaping-the-evoluti

Similarly, sophisticated analytics platforms offer insights into all data no matter its source. Whether the data exists in EHR, legacy systems or multiple billing systems from consolidating hospitals, advanced analytics platforms effectively homogenize the data.

Advanced analytics enable users to examine data from multiple angles to get the answers they need. Many EHR platforms compartmentalize data into separate buckets, which creates limitations for analysis. For example, many EHR solutions put all self-pay accounts into one bucket. With advanced analytics, users can stratify self-pay accounts by amounts after insurance, coverage options and charity-care status. Analytics platforms go so far as to determine the patient's propensity to pay by integrating patient payment histories, demographics, employment status and other data.

Analytics enable revenue cycle leaders to perform trend analysis with insight into payer mix, case mix index (CMI), net revenue, AR days and cash flow. Analysis can be performed side-by-side with business units before and after major changes, such as system implementations, reimbursement model changes and provider consolidation.



Monitor enterprise-wide financial health from a single, unified view

In addition, executive dashboards offer seamless trending of key performance indicators across business units. With relevant data in one view, managers can examine Medicare volumes, CMI, cash and avoidable write-offs simultaneously and drill down as needed.

Lastly, advanced analytics offer insight into the entire revenue cycle. End-to-end analytics give CFOs and front-line personnel the insights they need to determine where threats to financial viability may exist or how to capitalize on resources to improve the bottom line.

End-to-end analytics give CFOs and front-line personnel the insights they need to determine where threats to financial viability may exist or how to capitalize on resources to improve the bottom line.

2. Self-service analytics

In addition to these robust capabilities, sophisticated data analytics platforms offer a self-service approach. Unlike complex reporting architectures that require IT support, self-service analytics give non-technical business users interactive, web-based access to their data. It also enables revenue cycle managers to analyze data in a way that is not possible with static reports.

Self-service analytics enable revenue cycle leaders to generate reports according to their exact specifications. These analytics platforms even allow users to generate reports based on what they didn't know they needed, letting them ask questions of their data and immediately investigate answers. In addition to ensuring business decision-makers get accurate reports, self-service analytics enable real-time insights, avoiding costly delays caused by IT-dependent reporting.

Online collaboration and performance management workflow tools are directly integrated into the analysis. When the data reveals an insight that needs to be acted upon by an individual, it can be easily shared with anyone in the organization from the CFO to front-line personnel.

3. Path to interoperability

The digital transformation over the last decade has revolutionized healthcare, but at the same time, it has created an environment of disparate systems, data sources and IT standards adding to health systems' lack of interoperability. EHRs are an important component in addressing the interoperability challenge; however, they are not designed to manage the complexities of data integration. Organizations heavily invested in their EHR systems can maximize the potential of EHRs by adding robust analytics capabilities.

At the core of analytics platforms is their ability to seamlessly orchestrate masses of data across systems. Robust analytic technologies have superior capability to intake, validate, normalize and map data across multiple host systems, formats and even multiple EHRs (which is especially critical when hospitals with different EHRs merge).

Case Study: Large Midwest Health System

This organization was already realizing the benefits of analytics for consolidation of disparate systems for month-end reporting and revenue opportunity analysis. After merging with another system that used Epic for patient accounting, it was determined that its analytics platform was necessary to retain critical capabilities that only a self-service analytics platform could provide.

Through MedeAnalytics, revenue cycle staff were able to pinpoint changes in trends, analyze root causes and quickly resolve problems. Analytics in the month-end reserves process helped improve efficiency and increase transparency between revenue cycle and finance management.

In addition, MedeAnalytics proved crucial in ensuring a smooth transition to Epic. With trust in the MedeAnalytics data, the organization found greater confidence in the integrity of their data in Epic.

"We didn't increase our bill days at all after implementing Epic," said the organization's VP of revenue management. "We dropped our first bill after three days, as usual. And we were back to cash flow and AR days in less than 60 days. The transition to Epic was very successful, and it had a lot to do with the fact that we had MedeAnalytics for comparison."

"MedeAnalytics has become an integral part of our financial reporting and analytical processes," the VP of revenue management added. "It was a primary factor in our success with our Epic conversion, and we continue to find new and innovative ways to analyze our data."

Having data synthesized in this way affords organizations a holistic view of their performance across facilities and departments to support better decision-making. Data viewed in isolation does not provide the context of data captured in other IT applications. Analyzing data across the enterprise allows leaders full visibility and speed to insights with actionable and repeatable analysis. Furthermore, unifying data in one software-as-a-service platform centralizes the data making it accessible to all those who need it.

4. Healthcare-specific insights

While advanced, self-service analytics are powerful, the complexities of healthcare require analysis built on industry-specific insights. Unlike reporting capabilities that are built on generic business intelligence technology, healthcare-specific analytics offer visibility into industry best practices and data models, strategically linking data sets to support healthcare business insights.

Moreover, healthcare-specific analytics offer external benchmarking and comparative insights. Hospital decision-makers get insights into how other healthcare organizations may be resolving an issue. They can also see how their financial performance compares to that of their peers.

In addition to the best practices and comparative analysis built into the platform, analytics typically include support from consulting teams with healthcare expertise. These teams ensure data analytics solutions offer value from the beginning planning stages through implementation and beyond.

Healthcare reporting and analytics at a glance

Legend
- poor
- average
- excellent

Features	Standard EHR reporting	EHR + Data analytics
Data integration and normalization	average	excellent
Transactional workflow	excellent	average
Self-service analysis (no IT support required)	poor	excellent
Drill down capabilities	average	excellent
Benchmarking	average	excellent
Advanced analytics capabilities	poor	excellent
Account-level detail	poor	excellent
Excel exporting	average	excellent
Extensive trending capabilities	average	excellent
Flexible executive dashboards	average	excellent
Enterprise Performance Management integration	average	excellent

Conclusion

Healthcare experts across the nation agree the industry stands to gain significant value by leveraging EHR capabilities with big data analytics. For healthcare CEOs concerned about their viability in a tumultuous healthcare landscape, data analytics offer the insights necessary to evolve with new reimbursement models, tighter regulations and other changes that have arisen from the Affordable Care Act.

While EHR solutions offer powerful capabilities in clinical and operational areas, revenue cycle leaders who lack advanced financial analytics and rely on EHR reporting are at a distinct disadvantage. They have limited ability to compare their performance to benchmark data, track their activity against goals and analyze business trends. They also experience delays in their requests for information due to competition for IT resources.

Advanced analytics platforms, on the other hand, are built on robust technology with benchmarking and best practices specific to healthcare. The self-service nature of these solutions enables business users to analyze the data on their own in an ad-hoc way, without the delays and inaccuracies accompanied by IT-dependent reporting. In the end, advanced, self-service analytics give revenue cycle managers the control and insight they need to ensure the viability of their organizations as healthcare continues to evolve today and in the years to come.

Analyzing data across the enterprise allows leaders full visibility and speed to insights with actionable and repeatable analysis.

Mede/Analytics

For more information about MedeAnalytics Business Office, visit our solutions page.

call us. 469.916.3300 | visit us. www.medeanalytics.com