

Healthcare Tech

OUTLOOK

CONNECTING THE HEALTHCARE TECHNOLOGY COMMUNITY

HEALTHCARETECHOUTLOOK.COM

In My Opinion

Leveraging Data and Analytics to Measure, Benchmark, and Transform Healthcare Systems

E. Kolker, PhD, Chief Data Officer, Seattle Children's (Hospital-Research Institute-Foundation)

CIO INSIGHT

A Prescription for the Health Industry: Interoperability

Brian LeClaire, CIO, Humana

Kurt Garbe,
CEO



IMAT Solutions:
**Breakthrough
in Healthcare
Analytics**

Healthcare Tech Outlook
44790, S. Grimmer Blvd,
202 Fremont, CA - 94538

COVER STORY

IMAT Solutions: Breakthrough in Healthcare Analytics

By Ankit Tripathi

Modern day healthcare organizations are an athenaeum of rich data. With an exploding amount of health records, patient reports, and bills, hospitals and healthcare enterprises are readily looking for technologies that can squeeze out value from the data inside their systems to facilitate improved care. “For these organizations, Big Data analytics is the way forward,” says Kurt Garbe, CEO of IMAT Solutions. “It not only simplifies the convoluted task of retrieving relevant information from structured and unstructured sources, but also provides important insights.” Garbe’s statement is supported by a recent Gartner study that predicts that Big Data-propelled organizations will improve their performance by as much as 20 percent by 2015. Adherence to the regulatory requirements like HIPPA compliance and Affordable Care Act will be an added benefit for these organizations. However there is a hidden fact: the market is filled with a plethora of Big Data analytics solutions that fail to provide real time, actionable insights across all of the available patient data. Garbe considers these standard offerings as ‘compromising solutions’ for the healthcare industry that seldom work to deliver desired outcomes. “Analytics in healthcare is not keeping up,” Garbe opines. “Healthcare organizations and communities continue to look for better ways to make informed decisions at the point of care utilizing all of the available patient data.”

Integrated Medical Analytics Technology or IMAT Solutions stands apart from these standard solutions with its best-of-breed technologies that help organizations to personalize and tailor analytics products to fit their needs. Based on the innovative and patented technology from Perfect Search, a renowned provider of enterprise search solutions, IMAT provides actionable and valuable insights into an enterprise’s data, in a manner that is as easy and immediate as performing a Google search. The basis of the company’s solutions is its unique combination of strong domain knowledge; effective use of natural language processing tools; and expertise in data management. “We address the



Kurt Garbe,
CEO

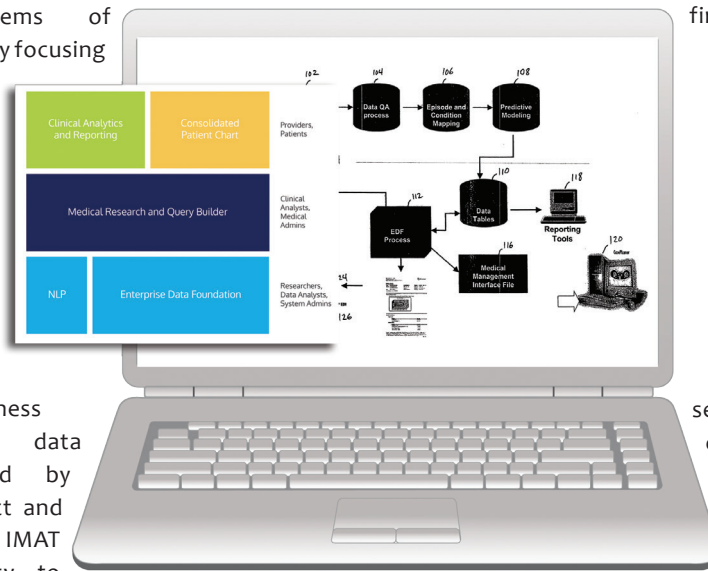
underlying problems of analytics in healthcare by focusing on traversing through vast amounts of data comprehensively to bring out information in real time,” says Garbe. Efficacy of offerings of IMAT roots back to its simple philosophy that, ‘organizations cannot have business intelligence without data intelligence’ instituted by Rob Marsh, VP, Product and Program Management, IMAT Solutions. “The ability to identify specific concepts and more importantly the intersections of these concepts across clinical data in real time is crucial. IMAT has 11 patents that help address this complex requirement on a user friendly and scalable platform,” Marsh explains.

New Approach to Analytics in Healthcare

IMAT’s solutions help customers to leverage on their existing investments in technology while gaining real-time, interactive access to all of their data—



IMAT’s patented indexing and search engine enables even the most complex, ad hoc, multi-step queries, and reports to be run in real time



both structured and unstructured—for analytics purposes at the point of care. “Our customers have complete insight into structured data in the form of HL7, CCD, CCDA, DFT and EDI (Claims) and unstructured data in the form of transcriptions, admissions notes, discharge summaries, follow-up outpatient office visits, and consultation reports,” says Garbe. “Each of our customers is running the same version of our solutions, but they have configured it to meet their specific needs.”

In addition, the comprehensive tools offered by IMAT are adept in providing useful insights in a labor and time-effective manner. The foundational module, IMAT Foundation Services leverages patented indexing and search technology to deliver a 360-degree view of all data, and addresses the big data and interoperability challenges endured by healthcare organizations today. “The primary purpose of the Foundation Services is to provide our customers with data transparency and intelligence using intuitive tools that allow them to interact with their data in real time,” asserts Marsh. The

firm’s HIPAA-compliant tool is highly efficient for data aggregation, normalization, indexing, and storage irrespective of format, source or type of data. Furthermore, the Foundation Services module incorporates terminology services that allow customers to cross map multiple industry code sets as well as define their own. As an example of their breakthrough results, IMAT was able to process over 1.8 billion records from 19 sources representing 20 million patients and identify cohorts in anywhere from 2 to 20 seconds—a dramatic improvement from the 20 hours it normally took.

IMAT Clinical Reports, on the other hand, performs comprehensive data analysis by taking input from data processed by IMAT Foundation Services. “With our patented indexing and search engine, even the most complex, ad hoc, multi-step queries, and reports can be run in real time,” says Garbe. Additionally, the solution aids users to journey through the high level aggregated data, all the way down to the patient and records level of detail in real time. Using insights from IMAT Clinical Reports, organizations can have an interactive charting and graphical representation of patients’ data to monitor clinical performance through IMAT’s Medical Analytics module. The module is a business intelligence solution that places up-to-date clinical information in the hands of providers via OLAP-like reporting tools to improve patient outcomes, ensure compliance and reduce the overall cost of healthcare.

To further streamline the patient management processes, IMAT



Our customers have been able to achieve tangible benefits through the use of IMAT. These include the ability to reduce the cost of data management, reporting on quality measures and engaging communities to support Population Health Management Programs



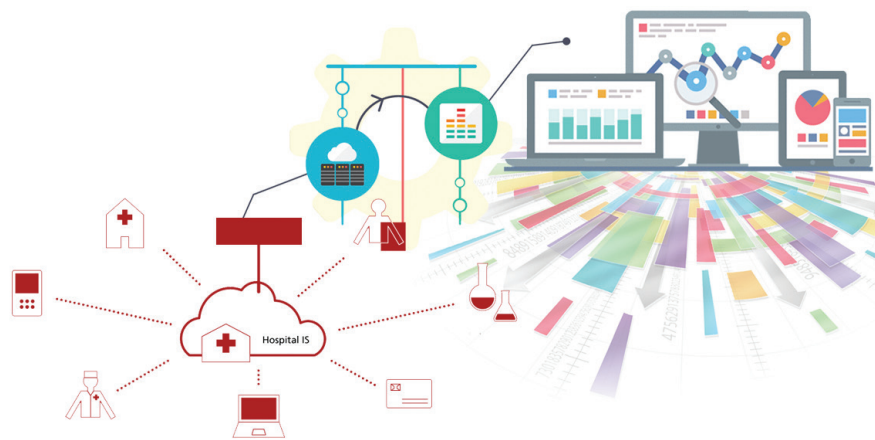
Kurt Garbe,
CEO

Consolidated Patient Chart (CPC) brings together all patient encounters in a single user interface. The module presents a user defined summarized insight into the longitudinal care of patients and allows access to detailed information within a single “click”. With access to the most comprehensive data available, the CPC enables more accurate and timely identification of diagnosis, effective treatment, and improved outcomes for the patient. “The IMAT CPC also features a Patient Scorecard, which displays gaps in care delivered to the patient and their specific conditions,” says Marsh. “For example while treating an Asthmatic, the healthcare experts offer treatment suggestions based on the information like patient’s respiratory health, current smoking behaviors, and cessation history that are included in his charts. Absence of any of the vital information can affect healthcare providers’ treatment decision.” The solution ensures that doctors and healthcare providers will have appropriate information at their fingertips in order to take actions based on real time data to improve the patient’s health.

Tangible Benefits of Using IMAT

“IMAT continues to deliver tangible benefits to our customers. These include the ability to reduce the cost of data management, reporting on quality measures, and engaging communities to support Population Health Management Programs,” remarks Marsh.

One of IMAT’s clients bring together a regional network of physicians, nurses, pharmacists, hospitals, health departments, social service agencies and other organizations to provide cooperative, coordinated care through the Medical Home model. Bringing together such an ensemble of professionals was a strenuous task for the customer in terms of data management. The colossal volume of information compounded the task of converting the available data to be exchanged among the peers, performing QA, and normalizing output of data. “Our client had limited insight into the completeness or accuracy of the data at hand,” explains Garbe. Employing IMAT’s solutions dramatically changed the scenario. Using the insights provided by IMAT’s solutions, the client was better positioned to respond quickly and pursue additional business opportunities to increase revenue. “Data conversion became a simple and less time consuming process. We were able to receive the data in any format they wanted in less than 30 minutes and convert them to almost any industry standard format like XSD, HL7, XML, or CSV,” adds Marsh. As a result, the customer was able to perform quality assurance within an hour and confidently expect results. Also, IMAT’s solution brought down the time spent by the customer’s



workforce in normalizing data by nearly 70 percent.

IMAT currently processes HL7, CCD and CCDA sourced from multiple EHR solutions and records into actionable data. By implementing the enterprise’s solution suite, their clients are able to process nearly thousands of records as well as execute over ten thousand validation rules in a second. These processes take place every day, hour, minute and second and bestow clients with complete transparency, control and interaction with all their data. In one instance, a client of IMAT had invested significant time, and resources to implement a recognized data integration engine to collect, validate, and normalize data from multiple facilities across 20 plus EHR solutions. The processed data served as an input in the client’s downstream health information exchange (HIE) and analytics platforms. “After the implementation of the integration engine, the customer found that they were still required to spend hours of resource time to achieve these objectives, using SQL extracts, XLS spreadsheets and manual processes

to move data through multiple stages of quality assurance,” recalls Garbe. “In addition, invalid, missing or incorrectly formatted data caused their downstream system to underperform or lead to incorrect reporting and data analysis.” Once IMAT Solutions was contracted for a license and related services of the IMAT Enterprise Data Foundation, the data feeders were able to effortlessly process records and perform the same validation in a manner that was similar to the client’s existing manual processes. IMAT’s processing included executing almost 15 validation rules against the source records, identifying record format, content, and accuracy.

IMAT provided the users with reports regarding consistency of data, errors identified and data augmentation. “Our client is able to process, validate and transform their incremental and historical data within minutes. About 100 percent of all records were checked and validated regardless of source or record type,” beams Garbe. “In this case, thousand of records were processed in a matter of seconds

by running on modest hardware systems. Also, the client was able to execute 15,000 validation rules per second.”

IMAT’s intervention empowered the client to direct their resources to focus on specific errors and provide feedback to their contributors on data completeness and accuracy. This helped the customer have a substantial reduction in resource requirements for validation process. “Our solutions have given the client an increased level of confidence in processed data and improved performance in downstream systems as the data they receive is complete and valid,” adds Garbe.

IMAT as a Healthcare Data Management and Analytics specialist has disrupted the traditional healthcare analytics with a simple approach—combating against the impeding issues in analytics. Its impresarios—Garbe and Marsh believe in creating and engineering analytics modules that provide a profound perspective on data by solving the inherent problems around data management regardless of its volume and source to derive results in real time. With a strong market focus and customer-oriented outlook, IMAT believes and values in listening to the customers and working with industry leaders. The company prides itself for being able to help customers to achieve visibility over their data, to extract and transform it over a cup of coffee instead of waiting for weeks and months. “Our message to prospects is simple—we deliver on the promise of using all enterprise healthcare data in real time. Give us an opportunity to show you how,” concludes Garbe. **HT**

20 Most Promising Healthcare Analytics Solution Providers

With the increased rate of technology adoption, the U.S., healthcare sector is undergoing a transition through the three wings of data management: data collection, data sharing, and data analytics. The healthcare organizations are appreciating effective usage of analytics tools that ensure statistical and qualitative analysis of clinically rich information. The real promise of analytics lies in the ability to transform healthcare into a truly data-driven culture.

While organizations are using analytics to achieve a broader range of objectives in terms of innovation, and faster workflows, the innovative approaches to healthcare delivery is increasing complexities and competition. To tackle this, the next target for analytics is to be more prescriptive—means it doesn’t stop at

showing a likely outcome, but continues to demonstrate suggested actions to make healthcare providers more successful, profitable or responsive to patient needs.

In the last few months, a distinguished panel comprising of CEOs, CIOs, VCs, analysts including Healthcare Tech Outlook editorial board reviewed the top companies in the healthcare analytics space, and shortlisted the ones that are at the forefront of tackling industry challenges.

The selection panel looked at the vendor’s capability to fulfill needs of buyers with effective solutions that curb the challenges associated with healthcare analytics. In this edition of Healthcare Tech Outlook magazine, we bring to you “Top 20 Healthcare Analytics Solution Providers 2015” featuring the companies creating an impact in the analytics sector.



Company:
IMAT Solutions

Key Person:
Kurt Garbe
CEO

Website:
www.imatsolutions.com

Description:
IMAT Solutions provides fast and reliable medical data for search and analytics solutions