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Is Your Healthcare Geared Up for Smart Data?

Healthcare as we know is going through a massive change - from episodic to continuous, from disease focused to patient-centric, wellness and quality of life focused, from clinic centric to anywhere a patient is, from clinician controlled to patient empowered, and from being driven by limited data to 360-degree, multimodal personal, public, population, physical, cyber and social big data driven.

The ability to generate and store Big Data is already available, and the upcoming innovations will be on converting this Big Data into smart data through contextual and personalized processing, such that patients and clinicians can make better decisions and take prompt action for augmented personalized health.

The healthcare system's digital transformation has aimed to help providers work smart instead of hard, but there are plenty of investors who firmly believe that the electronic health record revolution has completely missed the mark.

Irregular and inconsistent health information exchange and insufficient workflow integration are two of the major concerns when it comes to accessing the right data at the right time within the EHR (Electronic Health Record).

Changing Healthcare Scenario

Providers' limits are stretched by inputting data into their electronic health records (EHR) and are now being asked to pull actionable insights out of them and apply those learnings to complicated initiatives that directly affect their repayment rates.

The rewards are huge for healthcare organizations that successfully assimilate data driven insight into their clinical and operational processes. Healthy patients, low healthcare cost, more visibility into performance, and high staff and consumer satisfaction rates are among the many benefits of turning data assets into data insights.
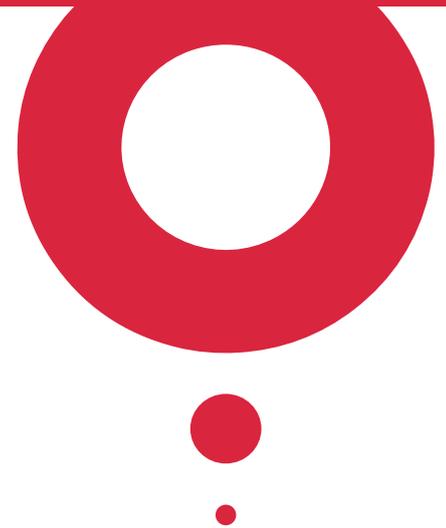
Here are some pointers on how Healthcare is changing:

- Introduction of new federal rules and incentive programs

- Hospitals are forced to change the process (30-day readmission, quality measures etc.)

- Free and open health information

- Rise of discussions/forums/social media

- Internet usage for online health related information

- Rapid growth of health-related devices

- Variety of cheap sensors for health status/activity monitoring

- Adaptation of technology to Healthcare

Big Data challenges in transforming to Smart data

It is important to remember that Big Data is more than just an aggregate of information; it is an opportunity to find insights in new and emerging types of data and content. Hospitals and healthcare organizations face numerous challenges on their path to utilizing smart data. Huge amount of data is being generated.

- Scientific knowledge, social forums, patient records

- Variety of data formats (text, images, videos)

- Locate actionable information (differentiate signal from noise)

- Experts can't keep up with the new information

- Expert data analysts to interpret data (esp. combination of observations)

- Trustworthiness, especially on social forums

- Privacy

The next question is how organizations can overcome these challenges to make a positive impact in their healthcare data management approach.

GAVS for differentiating Big Data from Smart Data

Organizations are under the impression that the Big Data they are collecting and storing will be adequate for applying analytics and gain potential insights. But without careful monitoring of what they are recording, the quality and quantity of the same data five years from now will not be enough.

These organizations might think that five years of historical data to start their analytics is enough, but the data is often not of the expected quality or quantity, or even the type, that is required.

Collaborating with GAVS Technologies allows providers to focus on Smart data - on the type of data that they have, the volume of data, and the validity of that data. They help to make sure that what you're collecting is what you're expecting through our various infrastructure management services, Zero Incident Framework and GAVel (their proprietary analytics solution).

- Help to develop your strategy. Using the standard data models and approaches other industries are using doesn't necessarily translate to healthcare IT. Given the data complexity, the plan must be flexible. Develop a peer network with other healthcare leaders who are ahead in terms of industry tools and practices. Help healthcare organizations who are in "stage two" of the data maturity model, where they could start looking at predictive and prescriptive approaches to data.

- Assure quality of the data. Organizations often make mistakes in identifying the quality of the data that's collected and when it gets closer to the time to use the data, they don't have the quantity that they thought they had. If they are collecting incorrect information, the analysis will be wrong, and they won't even be aware of it. It could lead to wrong business decisions.

- Asses the data on a regular basis to ensure that what organizations think they're collecting is actually what they are getting. This allows freedom to depend on the accuracy of that data when it's time to start analyzing. About 80 percent of hospitals expect to use unstructured data in their data warehouse. Turning that data into structured data or finding a tool that can do that for you with accuracy, becomes a huge push.

- Validate and trust the accuracy of your data. How do you know your Electronic Health Record (EHR) is collecting data and not changing it any way when its transferred to the data warehouse? Does it remain accurate? Was it accurate to begin with?

Cover the basics to benefit from Smart Data

Healthcare market research survey found that 65 percent of providers do not have the ability to view and utilize all the patient data they need during a meeting, and only 36 percent are satisfied with the limited abilities they have to integrate big data from external sources into their daily routines.

When it comes to using EHR data to determine risk for readmissions, including patient-centered risk factors such as socio economic and behavioral health challenges in future, predictive analytics tools may be a first step towards helping providers make smarter, more targeted decisions about how to manage patients before and after they leave the hospital.

Big Data is omnipresent which means that healthcare organizations can lay the groundwork for years to come. Compromising on data quality for speed is not acceptable, especially since clinical analytics is intended to improve the way organizations deliver safe, effective, cost efficient care.

Providers now have tools that can process and analyze unstructured data and are becoming more accessible as Analytics, Automation, Machine Learning and Natural Language Processing become more sophisticated realities.

Healthcare providers can learn from industries that are a few steps ahead in harnessing Big Data in order to ensure that they are building their infrastructure for smart data access, in a way that makes sense to deliver quality healthcare for all.

About GAVS

GAVS Technologies (GAVS) is a global IT services & solutions provider enabling digital transformation through automation-led IT infrastructure solutions. Our offerings are powered by Smart Machines, DevOps & Predictive Analytics and aligned to improve user experience by 10X and reduce resource utilization by 40%.

For more information on how GAVS can help solve your business problems, write to inquiry@gavstech.com
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