

Progress in Healthcare Analytics Lies in Leveraging Data

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Analyst(s): Laura Craft

Healthcare provider CIOs are rapidly accelerating the deployment of advanced analytics across clinical care and operations. Yet familiar bad data governance practices continue to plague projects and hold back progress. Learn how your peers have overcome common obstacles to drive success.

Key Findings

- Progress toward digital transformation lies in leveraging data, but healthcare providers have persistently ignored the practice of good data governance. This puts healthcare providers at increasing risk of not being able to execute strategies needed for population health and digital care delivery.
- Healthcare data is becoming more complex as every facet of health and wellness gets digitized and collected.
- Many clinicians mistrust the integrity of the data and discount generated insights that might actually help improve patient outcomes and lower costs. Distilling the mistrust becomes a critical success factor.
- Sustainable data governance requires time and commitment of resources. Too often it is thought of as an add-on responsibility and/or done on a project-by-project basis without any consistency across the efforts.

Recommendations

To develop an innovative healthcare analytics strategy:

- Reorganize your data governance by conducting a thorough outside-in review of its effectiveness and ask yourself: Do our clinicians and the rest of the enterprise trust our data? If you have no data governance, then initiate your program by following best practices outlined in this research.
- Manage and understand the persistent flood of new data sources by mapping out your ecosystem of data.

- Implement a sustainable data governance program by dedicating a multidisciplinary team. Ensure this includes resources who are knowledgeable across data domains — clinical, claims and administrative.

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Strategic Planning Assumption

By 2020, 30% of healthcare deliver organizations will have hired a chief data officer to oversee stewardship of all enterprise data and information.

Analysis

Introduction

The major take-away from Gartner’s “Hype Cycle for Healthcare Providers, 2018” is the critical role digitized data will play in the transformation of care delivery, quality and financial outcomes. The pervasive need for real-time data and analytics is accelerating and making it a top priority for CIOs and senior leadership together but their data management capabilities limit effectiveness. Results from Gartner’s 2018 CIO survey showed that 21% of provider CIOs selected BI and analytics as the technology area where they will spend the most new or additional funding in 2018. Analytics was the top investment category and has become the largest initiative for healthcare providers, eclipsing the EMR (see “2018 CIO Agenda: Healthcare Provider Industry Insights”). This trend has been apparent for the past several years, as noted by the following industry business drivers (see “Business Drivers of Technology Decisions for Healthcare Providers, 2018”):

- The industry shift to new business models, population health and value-based reimbursement is driving new demand for exceptional data information, exchange and convergence.
- New industry structures are blurring lines as nontraditional partners and competitors enter the space and new ecosystems are created. Population health management and advanced analytics will be a competitive dynamic between industry participants.
- Massive medical science advancement and the accelerated movement toward personalized and precision medicine are increasing the data sources, sharing and collaboration across providers and life science companies. Data rights, access and privileges are becoming more complex.
- More patient data is being collected as the voice of the consumer and patient become more important. The industry needs to become more sophisticated at measuring complex determinants of value that include health status, outcomes, consumer experience and cost data.

The implication of every industry business driver is that healthcare delivery organization (HDO) leadership needs to master data and advanced analytics. Therefore, it makes advanced analytics the new critical core competency, which is a requirement in effective healthcare delivery. New healthcare delivery models are all about thinking out of the box, breaking traditional methods, and leveraging data and technology. As healthcare moves toward real-time predictive and proactive delivery of care, and hospitals become smart machines (see “The Hospital as a Smart Machine”), data becomes absolutely indispensable in the real-time health system.

Yet, even with such a striking data imperatives, many Gartner clients still struggle to establish an effective and respected data governance program. These programs rarely get the necessary visibility and priority they should be afforded. Too frequently, these programs become the responsibility of a middle-tier IT project manager who runs around trying to chase down those who really know something about the data. The tragedy of poor data governance is that instead of acting on valuable analytic insights, the data is discounted, argued over and devalued. Sound familiar?

The Path to Analytics Adoption Depends on Trust in the Data

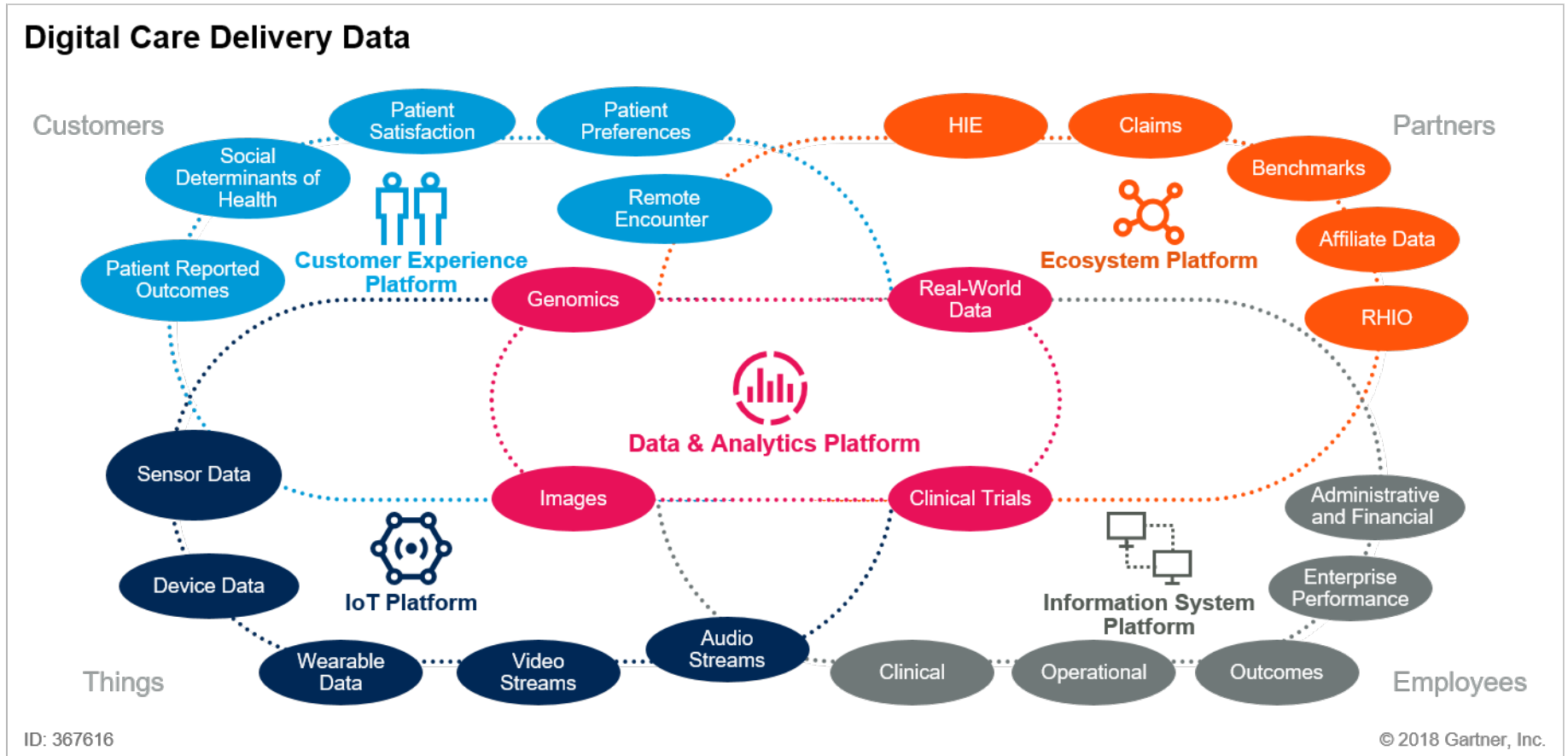
There is a healthy amount of resistance within healthcare provider organizations, particularly with clinicians, to rely on data and analytics to augment decision making. Building trust in the foundational data begins with good data governance. In 2013, Gartner correctly predicted that through 2016, 85% of HDOs will have weak or no enterprisewide information governance processes in place. In “Predicts 2017: Healthcare Providers Take a Step Toward Digital Business,” Gartner again commented on that 2013 prediction: “Shame on healthcare providers for making us write with this prediction; and shame on Gartner and all industry advisors for apparently inadequately hammering in the importance of good data governance.”¹ It’s now 2018 and client inquiry calls, conversations with clients at Gartner symposiums and summits, focus groups, and surveys all still indicate a lack of pervasive data governance across healthcare. This is not just IT’s issue. HDO CIOs and their executive partners have failed to recognize the importance and shared ownership in data integrity — and their responsibility to advance insights to responsibly improve performance. Neither adequate data governance nor strategic information governance is in place. As a result,

healthcare providers are at increasing risk of being unable to build the capabilities needed to create the real-time health system (RTHS) for digital care delivery (DCD). Also, they will be unable to leverage advanced analytics or be successful under new payment models.

Strategic information governance is the process for making decisions about information to drive important change. Governance isn't a conversation; its goals are about decisions and actions that ensure opportunities are understood and priorities are established. Data governance is about making sure the data that supports strategic imperatives is available, accurate, safe and accessible.

Healthcare data is complex, and getting more complex as more data is being generated (see Figure 1).

Figure 1. Ecosystem of Data for RTHS and DCD



Source: Gartner (September 2018)

The growing scope and complexity of healthcare data create systemic challenges. Symptomatic across the industry are datasets wrought with data quality errors, and missing and incomplete data — it's no wonder trust is in question. Compounding this is the growing demand to use the data for diverse needs in diverse ways. For example:

- Standardizing and normalizing data across multiple sources and EHRs to create the longitudinal view of the patient
- Preparing data for research datasets that have different semantic needs
- Deploying real-time analytics at the point of care

Data integration and management tools have gotten better (see the Health Data Curation and Enrichment Hub profile in the “Hype Cycle for Healthcare Providers, 2018”). But, there is no way to get around the human element to data governance. People and processes must be in place to make decisions around and look out for the integrity of important data assets. There are ways to make governance less onerous, more collaborative and aligned to business need, but it also takes time and investment.

Lexington Clinic seems to be the exception to the rule and an industry leader that sets high standards in enabling advanced analytics. Lexington Clinic, a multispecialty medical group with 200-plus providers, is on a pervasive transformational path to population health management. Forming a partnership with local employer groups in a direct-to-employer arrangement, Lexington set out to return direct savings back to the employers. Board-level leadership established a very prescriptive and deliberate path to organizational transformation.

Case Study

Lexington Clinic

Lexington, Kentucky

The Opportunity: Lexington Clinic, a multispecialty medical group with 200-plus providers in Central Kentucky, established objectives to define definitive clear pathway to a new care model for addressing industry payment transformation. Partnering with employers in a direct-to-employer model, the goal of the program is to manage employee health by creating engagement on the part of the employees and return savings back to the employer. Using population health analytics technology from Optum, the Lexington Clinic worked with employers in the area to customize benefits plans around a care network that emphasized the use of their facilities and providers. Layering on best practices and a comprehensive approach to population health, the goal was to lower costs and improve the health status of their catchment population. To do this, the clinic required data and analytics around patient/physician attribution, gaps in care, quality and outcomes.

Challenges: It was clear to Eric Riley, chief administrative officer, that correcting data quality was going to be a critical success factor. Validity and integrity of the data were often questioned by clinicians as they are flooded with various amounts of disparate data by insurance companies, payers and other sources. The risk that bad data would interfere with ongoing trust and adoption, and compromise results was great. By spending the time to normalize and correct the data and

present a “whole picture” for the physicians, it was going to make viewing, analyzing and accepting the data much easier. And a *learn-and-correct-as-you-go* approach was not going to work. Data quality needed to be addressed before any go-live or production implementation. The downside was the time to value. Correcting the data was going to take a while. Patience and honest expectation setting had to be part of the process.

This isn't unique to Lexington Clinic. It characterizes a pervasive and growing problem in healthcare as more analytics and advanced analytics are deployed into the clinical workflow. Trust is tantamount to adoption. Yet the innate inclination by the end user is to discount what the data is showing, for example: that's not my patient or my patients are sicker than hers/his. The challenge is to distill any mistrust in the data, address the cause and avoid these types of distractions. But, because this is tough work, critical front-line users of this data persistently skirt around participating in doing it right and sustaining it.

Approach: Lexington Clinic was not willing to fall into the trap of sustaining poor data quality. It was fortunate that Riley is also self-professed data geek who understood the importance of what was required. The initiative to clean up the data was led outside of IT, largely due to the clinical nature of the data. There was no delegation to an IT lead or project manager, but there was a very strong operational relationship with IT. This relationship was pivotal because there were many changes to interfaces and applications.

A deliberate investment was made in human capital. Riley identified four dedicated team members with knowledge spanning claims, clinical and administrative data, who became a permanent team. Job descriptions were modified and stewarding data excellence became part of the culture of their job. They were the liaisons working with the clinical and end-user communities to understand and gain trust in the data. Physician/clinical engagement and participation were led by Dr. Michael Horn, a medical oncologist, who played a vital part in supporting this program's success. The team established a methodology to go diagnosis by diagnosis to understand the data, the integrity of it, the root causes of bad elements and the needed remedy.

Vendor partnerships were also paramount. Lexington Clinic leveraged analytics technology from Optum for population health management risk analysis, registries and care management. The data governance team used this tool to identify trends and helped the employers understand their claims. The Optum liaisons were a critical success factor for the overall data governance program because they created vendor accountability. This was crucial. Riley's team made sure that all vendors involved in data creation, movement and ingestion of any of the data were part of the solutions to clean up and sustain good data quality. The vendors made changes to interfaces, applications and the EHR. Data was cleaned and fixed at the source as much as possible. In some cases, it also meant streamlining and redesigning workflows. For example, Riley noted that they found that smoking cessation was documented in four different places. The governance process got this down to one place, one process. Weekly team meetings brought together vendors and IT to look at changes they needed to make and to validate work that was done.

It took six months of effort before the data was ready to go live.

Results: Data has become a competitive driver. Overall, the results of the population health initiative have been remarkable. The accuracy of the data had pervasive results across the initiative from adoption to ownership to outcomes. One measurable result realized was on the accuracy of the attribution of patients to physicians — achieving a 98.6% accuracy rate. This immediately got rid of the age-old excuse, “that’s not my patient.” From a clinical perspective, use of the tools has helped to decrease the A1C level of the diabetic population by over 22%. The best testimonials are from the practitioners. They are now heavily engaged in fully taking advantage of the data and insights to:

- Identify missed key quality indicators
- Close gaps
- Improve outcomes and financial performance

What I Would Have Done Differently: Riley led a very successful effort. He had the tenacity and genuine passion to make sure data governance was successful. His mission was to make sure the lack of trust in the data was taken out of the equation when looking at performance and clinical care needs. But there was one thing Riley noted he would have done differently: more marketing. It’s an odd concept, but many roles must be engaged in tracking progress and opportunities to drive successful, sustainable outcomes. The initiative and ongoing successes must be showcased and marketed, and preached internally to demonstrate and celebrate big wins. Also, to improve and enhance awareness. Marketing has an actual job description for the direct-to-employer program: to tell the story of the progress, results and so forth as the program grows and advances.

Lessons Learned/Recommendations: CIOs can learn from the efforts of Lexington Clinic. Take immediate action to initiate or reorganize your data governance. Conduct a thorough review of its effectiveness. Take a critical look at the integrity and trust in your HDO’s data and ability to sustain the oncoming tsunami of new data sources. Keep in mind the following best practices executed by Lexington Clinic:

- The right skills and resources need to be committed and dedicated. Resources who can apply a repeatable process and methodology are needed to sustain ongoing data quality efforts. It’s also not a one-time-only type of activity.
- Clinical data is almost always involved, so clinician involvement is critical. Involve clinicians who know how the data needs to be represented for any type of consumption from simple reports and dashboards to complex advanced analytic algorithms.
- Visibility at the senior level is a must. Most organizations will not have the good fortune to have a champion such as Riley on the senior leadership team. CIOs will need to push to make this a senior team agenda and priority. Apply tenacity and be persistent.
- Market the program so confidence and trust in the data grow incrementally and do not become a roadblock at time of implementation. Good marketing, messaging and inclusion will alleviate data ignorance. After all, it’s not the small team working on the data who needs to be convinced of the data’s integrity — it’s everyone else.

- Create solid partnerships across clinical, IT and vendor partners as everyone's input and cooperation will be needed. Expect that, if being done correctly, data governance will involve changes to applications, interfaces, processes and workflows.

Conclusion

Our industry must mature the practice of data governance. The ability to collaborate effectively within provider organizations and across the care delivery ecosystem is dependent on an abundance of rich data. Each CIO should expect their peers across the ecosystem to also be paying attention to their data and providing the same kind of programmatic diligence around data quality that the Lexington Clinic has established. Leadership is needed to bring forward the imperative and initiate the effort. CIOs must embrace the responsibility to ensure that data governance is appropriately prioritized, positioned and resourced.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

“Enterprise Information Management Is Critical for Next-Generation Healthcare Provider Analytics”

“Use the Three Rings of Information Governance for Classifying Healthcare Data”

“Business Drivers for Healthcare Providers, 2018”

“2018 CIO Agenda: Healthcare Provider Industry Insights”

“The Hospital Will Become a Smart Machine”

“Data Governance Step-by-Step Guide”

Evidence

¹ “Predicts 2017: Healthcare Providers Take a Step Toward Digital Business”

GARTNER HEADQUARTERS**Corporate Headquarters**

56 Top Gallant Road
Stamford, CT 06902-7700
USA
+1 203 964 0096

Regional Headquarters

AUSTRALIA
BRAZIL
JAPAN
UNITED KINGDOM

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