IG 101: Developing Clinical Business Intelligence

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by Diana Warner

One of the key objectives of an information governance program is to produce strategic clinical business intelligence (CBI) by leveraging the information assets of the organization. Many see advanced analytics performed on longitudinal data for patients within a population as a key to healthcare reform and the creation of true "healthcare intelligence." Obtaining this intelligence requires the combined analysis of clinical and financial healthcare data, something healthcare entities are beginning to do through the exchange and aggregation of health data. The goal is simple but endlessly complex; use this intelligence to achieve the triple aim of healthcare reform by improving the patient experience and quality of care, improving the health of populations, and reducing the per capita cost of healthcare.

Gaining a Competitive Edge

With new care and payment models, healthcare organizations must move to predictive modeling or prescriptive analytics in order to be successful in improving care and remaining financially viable. Predictive modeling looks to answer the question of what will happen, while prescriptive analytics looks to answer the question of how an organization can bring about a result. Analytics are essential for population health management and managing financial risk associated with pay for value.

Many organizations need to re-think their approach to data and information and how they manage it. Health IT is well into in the age of big data with mobile apps and social media—not to mention genomics. In order to realize full value of all this information, new and more structured approaches to handling and managing all the information is where information and data governance are needed.

Healthcare organizations will use CBI to measure their compliance, effectiveness, benchmarks, and comparisons in areas such as:

- Population health
- Quality and cost effectiveness
- Public reporting
- Clinical research
- Business and financial performance
- Regulatory compliance

Information Governance Ensures Integrity

Who has not had the experience of the accuracy of coded data being called into question when it was time to do quality reporting or public reporting of the hospital's data? We have all seen these or similar situations that erode trust in data or information. When trust is eroded people find work-arounds, and create inefficiencies that have downstream effects that can turn out to be very expensive. Healthcare organizations are beginning to realize how much time is spent on clean-up of data/information before it can be released (i.e., claims, state reporting, quality measurements and outcomes).

CBI is not only dependent on data and information that is accurate, timely, reliable, valid, and complete, but also on the capability to apply analytic tools to this data. The analysis is the process of deconstructing or breaking a complex issue, part, topic, or substance into smaller parts to gain a better overall understanding. HIM has historically done analysis within the context of a health record (i.e., abstracting, coding, documentation deficiency analysis, workflow analysis, quality improvement). Analysis may or may not use technology, but with the right inputs all of these types of analyses can be done by computers and used to produce reports that show gaps, sequences, and measures.

The advancement of technology is now allowing us to not only analyze the data/information through deconstruction, but we are also exploring many more useful applications of the data/information. This is where analytics comes into play. Analytics is a science that involves the use of math or quantitative methods to identify patterns (statistics, algorithms, data mining) that allow us to find and communicate meaningful patterns within that data. Analytics also often includes data/information mapping and visualization techniques like dashboards to further communicate knowledge.

With analytics healthcare organizations can do things like minimize losses, optimize operations, model situations, and predict trends. CBI uses data analytics and data quality/integrity to enable data analytics and use of data (i.e., quality measures, research). It is the why and how in taking the data and transforming it into information. Analytics, patterns, and trends offer knowledge about why events or results happen and how they came about.

This is the fifth article in a six-part web series, Information Governance 101, that discusses information governance programs and seeks to define the terms associated with information governance. The final article will discuss the HIM professional's role in initiating the information governance program.

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