



# What's next in healthcare analytics



**D**ata and analytics have been central to healthcare for decades. Now a major shift in how data is generated, aggregated and used is brewing. The shift promises to turn data into the equivalent of a new performance drug, if you will, powering the industry towards evidence-based care and new outcome-based models.

The nature of the shift is deceptively simple. Participants in the industry, from patients to providers, payors, pharma and device manufacturers, will share their data and healthcare knowledge, triggering a massive surge of interest in analytics. When the data is

integrated, the industry can expect to deliver a leap in the quality of care and a dip in the cost of care.

When compared to other industries such as manufacturing and banking, the healthcare industry has lagged in the use of Big Data and analytics. Forecasts suggest the industry is about to catch up. The global healthcare analytics market is being pegged at US\$24.55 billion by 2021, up from US\$7.39 billion in 2016<sup>i</sup>. The reasons for the increase of interest in sharing and analyzing data provide us with indicators to where the industry is headed.



**Regulatory compliance** is among the top drivers of adoption. Accountable Care Organizations (ACOs) are spearheading the cause of evidence-based treatment and outcome-based care. Adherence to ACO standards provides financial incentives and penalties based on performance. In order to meet ACO standards, physicians and caregivers require answers to questions such as, “What treatment to provide? How much time will the patient take to recover? Are remissions likely? Will the patient require readmission to the hospital? How can adverse events be avoided? How can duplication of services be avoided? What will be the cost of care?” The key is to integrate data across physicians, clinicians, hospitals, laboratories, imaging systems, Electronic Health Records (EHRs), payors and wearables. When done, analytics will provide a clear and dependable view of treatment and efficacy.

**Change in the doctor to patient ratio** is the second factor responsible for the interest in analytics. Physicians have traditionally used their training, experience and judgment to arrive at diagnosis and treatment decisions. Now they can supplement their expertise with data. This is good, were it not for the fact that the growth in data is too fast and complex. Studies suggest that digitization in healthcare is currently responsible for a 48% per year growth in data, compared to the average of 40% across industries<sup>ii</sup>. Without sophisticated analytical tools, data is already placing a mammoth cognitive load on physicians. Fortunately, analytics is stepping in with Clinical Decision Support (CDS) systems to ease that pressure. CDS tools organize and present data for clinical and diagnostic guidance, flag patient-specific disorders and allergies, and provide insights into optimal treatments.

**The availability of low cost technology** could not have happened at a better time. It is proving to be a boon for the industry. EHRs have traditionally been maintained by capital intensive legacy systems. Today’s low cost technology—Cloud, SaaS and IaaS, etc.—is putting cheap and scalable tools into the hands

of care providers. More importantly, from a data and analytics point of view, the technology is also driving greater transparency, making it possible for payors and regulators<sup>iii</sup> to use EHRs for compliance. The growing access to reliable data has already encouraged around 70% of payors in the US to move to outcome based plans. For patients, the upside of the data glut is just as striking. Payors are offering plans that are specific to their conditions such as plans for therapeutic areas like infectious diseases, respiratory and cardiac issues. This change is a quiet revolution for patients who have had no option until now but to pay vast amounts for broad medical insurance that doesn’t necessarily benefit them.

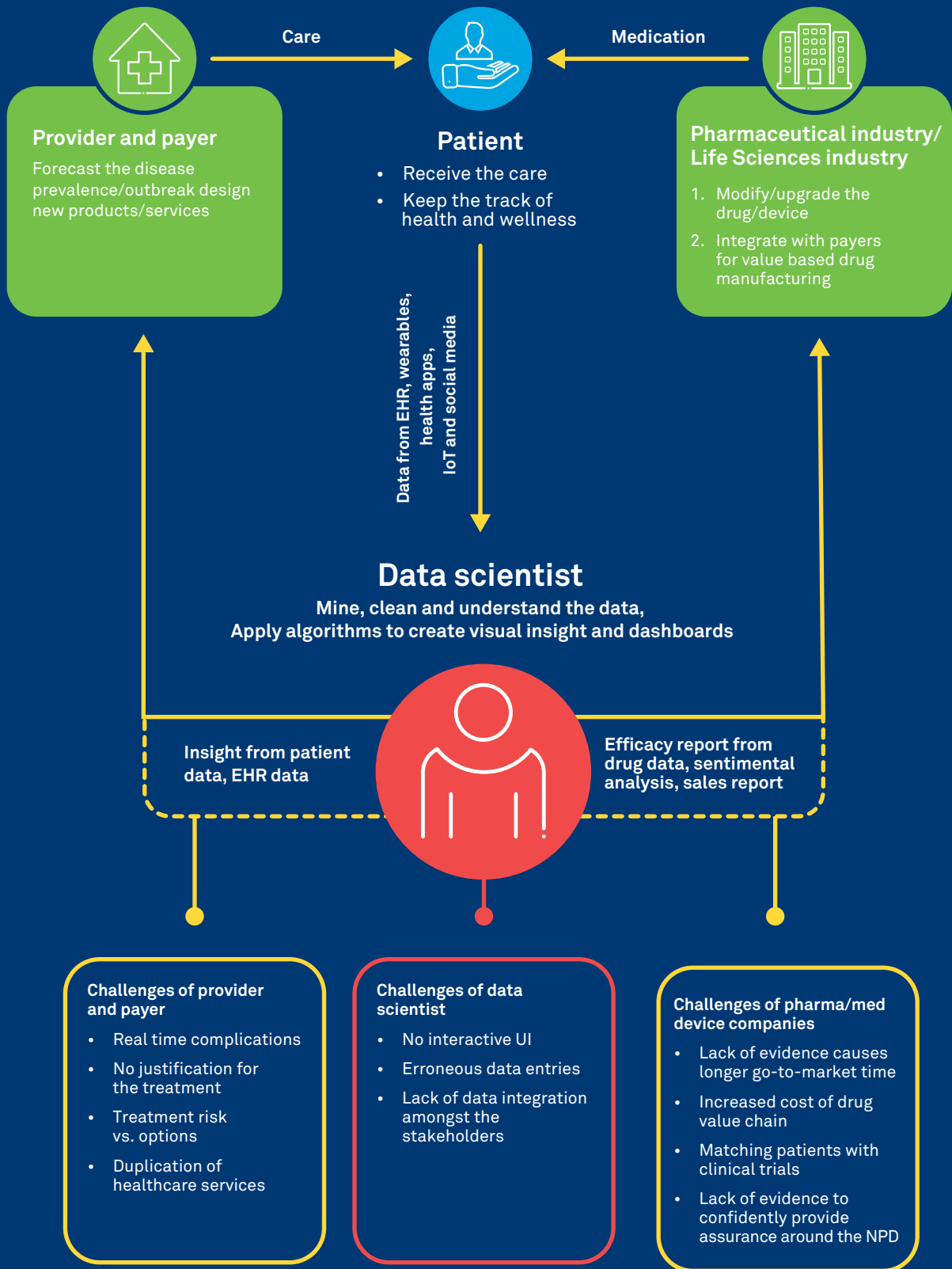
**Better treatment plans in collaboration with pharmaceutical organizations** is adding to the analytics-driven revolution in healthcare. With access to broader and deeper data, pharmaceutical organizations can come up with better formulations for diseases. But the more immediate outcome is of greater interest. With data and analytics, pharmaceutical organizations will be able to confidently provide assurance around their formulations. This will shift the trend from volume discounts to evidence-based outcome models.

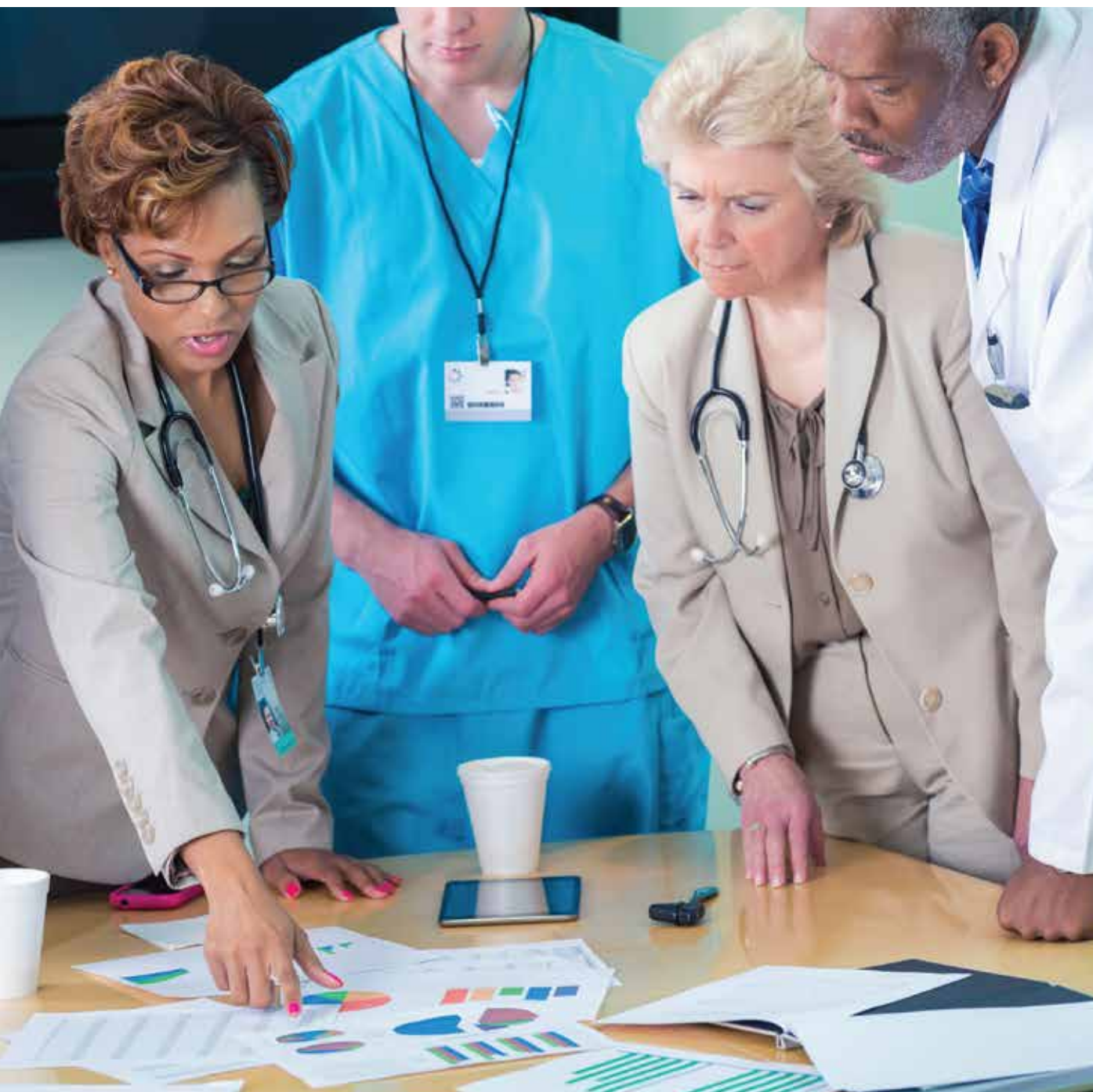
Doubtless, there is urgency in the industry to adopt analytics. But the urgency can result in uncertainty and chaos: Applications are talking to one another across organizations over a variety of networks and platforms; traditional ways of exchanging data are being bypassed with the growing risk of security; and there are difficult-to-answer-questions such as, “Who owns the data, the care provider or the patient? Who provides the authority to share the data?” These are not intractable issues. They will ultimately find answers using data masking techniques, advanced security measures, and patient permissions. What is certain is the march of analytics as the next big trend in healthcare. It has the power to transform medical care as we know it, starting with discovery (of disease, treatments and care plans) and ending with recovery (of patients).

<sup>i</sup><https://www.researchandmarkets.com/research/t6zb6m/healthcare>

<sup>ii</sup><https://www.emc.com/analyst-report/digital-universe-healthcare-vertical-report-ar.pdf>

<sup>iii</sup>Such as the Centers for Medicare and Medicaid (CMS) which is responsible for compliance to the Health Insurance Portability and Accountability Act (HIPAA)





## About the author

Dr. Vegi is Vice President, Global Head for Integrated Solution Design Services, Health Business Unit. He is a senior member and a part of HLS business unit vision, strategy planning and management. He provides thought leadership on integrated solutions for CxO's and leading digital initiatives for healthcare and life

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