



HealthIMPACT WHITE PAPER

Decision Making Post-COVID - Use the Data You Have to Drive Efficiency and Quality

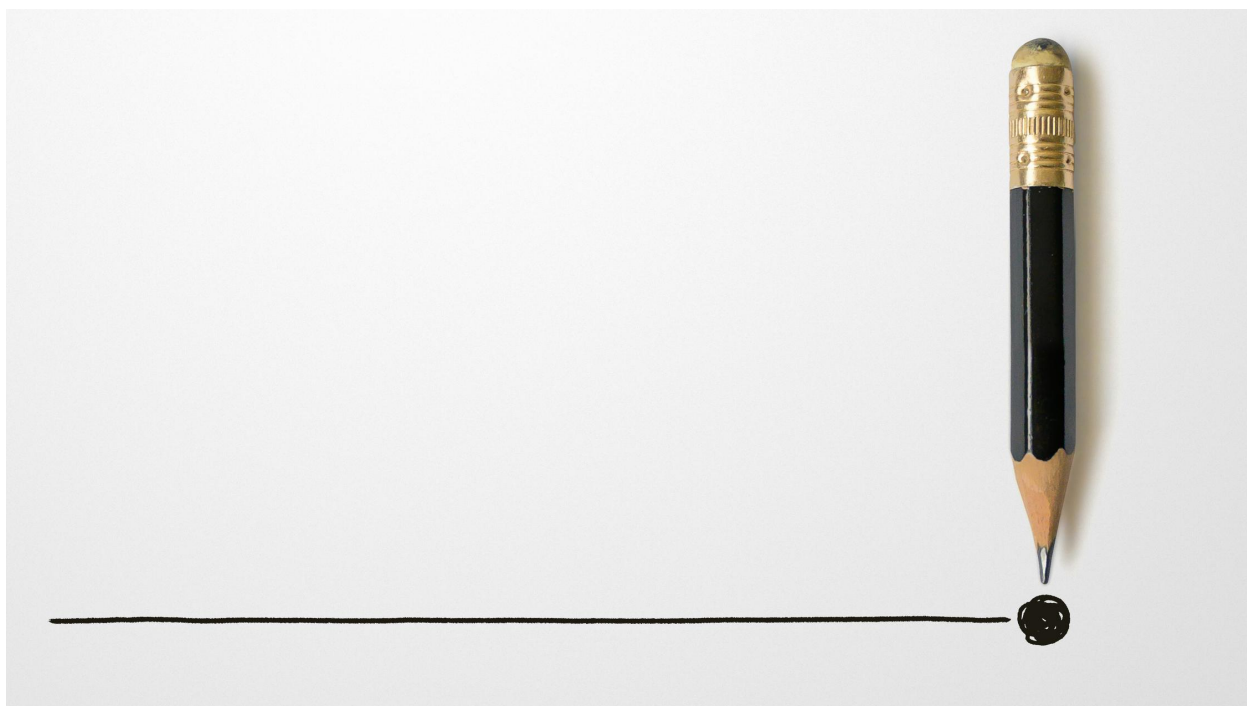


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Abstract

Data is generated at every point in the patient's healthcare journey. How this data is protected, shared, governed, and used is paramount both to patient and business outcomes. As data continues to drive business and services, healthcare systems must employ the talent and skill sets necessary to make the most of this data and ensure its security. Additionally, decision makers must implement a strategy and business culture with a data focus to be effective. Join us as we explore how health systems can help develop the data skills to thrive in the digital era.

What We'll Cover in This White Paper

- Addressing disparities in data exposed by the pandemic
- Improving data governance to ensure quality data collection and management
- Leveraging predictive analytics to overcome challenges presented during and after the pandemic

Methodology

HealthIMPACT Live held a webinar panel discussion in November of 2020 with Rebecca Mishuris, MD, MS, MPH, CMIO, Boston Medical Center Health System, Deb Muro, CIO, El Camino Hospital, Scott Harrison, VP, Chief Data Officer, Parkland Health, Lee Pierce, BS, MIS, Healthcare Chief Data Officer, Sirius Healthcare; and Bill Russell, Managing Editor and Host, This Week in Health IT. This white paper is the output of that discussion and surveys of the audience of over 100 Health IT leaders.

Results

Health Systems across the country have been overwhelmed with the demand for data resulting from the COVID pandemic. State and local public health agencies, hospitals, clinicians, and media need that data to understand the evolving state and impact of the virus on patients, populations, and communities and respond effectively.

A panel of healthcare CxOs expressed just how severely the demand has been felt by their organizations in a recent HealthIMPACT panel discussion, **“Decision Making Post-COVID.”** “The last 9 months have felt like 9 years,” said Dr. Mishuris, CMIO at Boston University School of Medicine. “We’ve been building the plane while flying it,” said another panelist. The panelist discussed a variety of topics during this panel discussion, but three topics in particular made the opportunities for improvements in data and analytics apparent: disparity in data capabilities, data governance, and predictive analytics.

Addressing disparities in data exposed by the pandemic

The conversation addressed the fact that there are “haves” and “have-nots” when it comes to even “sufficient” data capabilities in provider organizations across the country, never mind really good ones. These disparities have always existed in healthcare, but our ability to respond to COVID really brought this problem to the fore for healthcare leaders and data experts. In the early days of the COVID outbreak in the US, all healthcare organizations had to rally their data resources to meet the initial demand in order to understand how the looming pandemic was going to impact them. Some were at an advantage, having already largely invested in the technology and skill sets that could support such an exploding demand for COVID related data and analytics, but just as many found themselves not knowing where to start or looking to their EMR vendors for help with even the most basic data and reporting capabilities. Such data needed to include the supply and availability of PPEs and ventilators, ICU bed availability, number of COVID tests performed, test results, and number of COVID related deaths, to name a few. Some organizations stood up COVID command centers and included their data leaders as part of their

COVID response leadership, while others struggled to just identify who to reach out to for getting answers to basic questions. Even today, the means by which COVID data is documented and reported, and the quality of the data generated, differs so broadly that it is hard to know what to trust or not. What all of the panel discussion participants agreed on was the existing opportunity to establish a more solid foundation on which to build analytics—data governance.

Improving data governance to ensure quality data collection and management

Data Governance is a program of decision-rights and accountabilities to treat data as a strategic asset, including managing, leveraging, and protecting it accordingly. COVID brought to light the lack of data governance maturity that exists inside health systems, payors, and government health agencies. Areas of focus for data governance include metadata management, data stewardship, data quality, and data literacy, among others. Not being able to merely define and document who is accountable for data-related decisions (data stewardship), data inventory and data/metric definitions (metadata management), and data quality processes and metrics represents a gap in foundational data capabilities. This gap has impacted all of COVID data reporting, predicting, and response. Establishing disciplines around all areas of data governance is necessary to ensure all data supply chain stakeholders and health-systems decision makers are armed with better data and data capabilities in order to respond effectively to future events. A rising tide must lift all boats, instead of some sinking because of holes in their data foundation.

Leveraging predictive analytics to overcome challenges presented during and after the pandemic

Where organizations do have the ability to provide good descriptive analytics, most healthcare organizations and agencies lack the means of predicting what impact COVID will have on their patients, operations, and bottom line. Predictive analytics is the statistical discipline of using data from the past to prepare for what is likely to happen in the future, or to determine the probability of future outcomes and trends.

Predictive algorithms are developed through statistical means and modeling such as linear regressions, decision trees, and neural networks. All of these models require data, or factors, that the predictive models use to capture and calculate relationships. In the HI panel discussion, panelists noted factors for predictive algorithms related to COVID outcomes included the following:

- Social determinants of health
- COVID test results (number of positive tests)
- Patient zip codes
- Gender
- Waste-water data
- Employee sick call-ins
- Number of people wearing masks and social distancing
- Patient co-morbidities
- Death rates
- Data from communicable diseases from the past

Data on vaccinations has become a critical focus for organizations and will certainly be a predictive factor to add to the algorithms being developed.

What became clear as panelists discussed the issue is that many are trying, but few are succeeding to generate reliable, meaningful predictive algorithms that could provide a foundation for important decision making in navigating both the pandemic and future events. To start using data predictively, healthcare systems must invest in their own data discipline and capabilities, and work together with county and state public health agencies as well as EHR vendors.

Conclusion

There are many efforts underway in healthcare organizations of various sizes to use data to drive efficiency and quality in their organizations. But as a whole, the industry has much to do to bridge the chasm between the haves and have-nots in terms of data and analytic capabilities. An unfortunate pandemic forced cooperation and sharing among health systems to enable effective response. It now demands the

continuation of that trend in addition to improving data literacy, data governance, and healthcare data standards into the future so that we'll be equipped to collectively handle whatever widespread healthcare challenges arise going forward.

References

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