



Providing holistic healthcare - Anywhere, anytime



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Abstract

The healthcare industry has made significant strides in the last few years. However, the demands on it continue to grow – better quality, accessibility, and affordability. To address these demands, the industry needs to embrace a dual ‘renew and new’ strategy – one that simultaneously focuses on renewing existing systems, tools, and processes and adopting new technologies. In this paper, we discuss the impact of ‘renew and new’ on the industry, helping it transform and achieve better patient outcomes.



Renew and New: Providing holistic healthcare - Anywhere, anytime

One statistic stands out on the health of the human race: one in nine people is undernourished. To put it in perspective, 795 million people are susceptible to chronic diseases and are not healthy enough to lead a normal life. The undernourished demographic segment languishes despite the combined effort of governments, business leaders, and humanitarian organizations to address global hunger. Another statistic reveals excess: more than 2.1 billion people are obese – three in ten people cannot contribute adequately to the economy due to weight-related health issues. Unless preventive action is taken immediately, 50 percent of adults will be obese by 2030, according to a study by the McKinsey Global Institute.

The Patient Protection and Affordable Care Act (ACA) seeks to improve the quality of healthcare in the US. However, there is less than one physician per 1,000 people in 44 percent of World Health Organization member states. Healthcare providers can deliver care in spite of societal and other constraints by renewing or innovating processes with digital and telecommunication technologies that drive new methods of healthcare delivery. We need a combination of public healthcare, personalized medicine, and accountable self-care to transform the state of healthcare, overall.



Impact of the 'renew' agenda

The industry should adopt enhanced healthcare platforms using smart technology to deliver cost-effective care and achieve better public health outcomes. Three major 'renew' initiatives include:

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Deliver patient-oriented healthcare outcomes

We need to implement a holistic strategy rather than make incremental – and sometimes short-lived – improvements in our healthcare system. “At its core is maximizing value for patients: that is, achieving better outcomes at a lower cost. We must move away from a supply-driven healthcare system organized around what physicians do and toward a patient-centered system organized around what patients need. We must shift the focus from the volume and profitability of services provided – physician visits, hospitalizations, procedures, and tests – to patient outcomes achieved,” according to Michael E. Porter and Thomas H. Lee, MD, in ‘The Strategy That Will Fix Health Care’ in the Harvard Business Review.

Digital solutions lead to superior clinical outcomes and minimize redundant procedures by facilitating collaboration among stakeholders in the healthcare ecosystem. Primary, specialty, and acute care providers can deliver better quality of service to a larger number of patients with the same personnel. Digital check-in reduces wait time for patients, while minimizing administrative costs, and can improve patient profile accuracy such as changes to the medical history. Significantly, digital healthcare ensures a consistent patient experience across the continuum of care.

An Electronic Health Record (EHR) implementation that integrates an enterprise clinical information system with Computerized Physician Order Entry (CPOE) capabilities streamlines healthcare delivery and management across the inpatient and outpatient environment. Secure access to real-time patient data enables medical teams, including doctors, nurses, therapists, and dietitians to collaborate on treatment, mitigate health issues, and improve clinical outcomes.

The Electronic Medical Record (EMR) system at Marshfield Clinic in Wisconsin stores patient data – diagnoses, vital signs, procedures, medications, drug allergies and reactions, test results, radiology images, and physician notes – for a 360 degree view of patients. The clinic maintains EMRs since

1985 and has a digitized clinical information archive since 1960. An EMR dashboard helps physicians schedule patient visits and follow-ups while an ‘Intervention List’ identifies high-risk patients for each physician. The EMR system helps the Marshfield Clinic offer vastly superior preventive and chronic care services.

Reform payment models

The traditional fee-for-service (FFS) reimbursement by payers is the primary reason for the escalating cost of healthcare. A panacea to the ills across the healthcare value chain is the value-based reimbursement (VBR) system that rewards providers based on the quality of service and effectiveness of patient care. VBR improves financial and clinical performance by correlating payment and outcome. In addition, it holds providers accountable for adverse clinical events such as readmissions.

The structure of VBR models is based on medical history, economics, and demographics. The pay-for-performance (P4P) VBR model is popular among small providers with limited IT infrastructure. It offers incentives for establishing clinical benchmarks and processes to collate, measure, and report performance. In the patient-centered medical home (PCMH) VBR model, the primary care provider delivers specific services to a defined population group at a specified rate or a per member per month (PMPM) payment in addition to the standard FFS payment.

The shared savings VBR model rewards providers whose cumulative patient healthcare spend is below the level set by the payer. Shared risk VBR models incorporate risk arrangements in which providers receive performance-based cost sharing / savings and disincentives such as sharing of additional costs of healthcare delivery. In this model, providers often partner with third-parties for stop-loss insurance to mitigate financial risk. Under the capitation payment model, healthcare providers receive payment for specified medical services, usually a monthly per patient fee determined via actuarial analysis of historical costs and risk level of the patient population.

Provider-sponsored health plans (PSHPs) are the most comprehensive value-based healthcare models. These healthcare systems adopt a strategy where a provider network takes 100 percent risk for a given member segment while a PSHP receives the insurance premium from the employer or individuals. The provider is the sole authority on how care is delivered to patients and is responsible for the healthcare cost to the insured.

Upgrade the infrastructure

A robust healthcare infrastructure is a prerequisite to improve the accuracy of diagnosis and effectiveness of treatment. According to the ‘Electronic Health Record vendors reported by hospitals participating in the CMS EHR incentive programs’ report of the Office of the National Coordinator for Health Information Technology, 179 healthcare software vendors supply certified EHR products to 4,567 hospitals participating in the Centers for Medicare and Medicaid Services (CMS) EHR incentive programs as of March 2015.

The top 10 EHR vendors provide ‘primary-certified’ EHR to more than 90 percent of participating hospitals. Among them, Cerner, MEDITECH, and Epic Systems serve nearly 60 percent of hospitals. Interoperability of primary EHRs between hospitals and clinicians is an imperative for seamless healthcare delivery. An integrated platform connects the dots between disparate healthcare organizations and builds intra-enterprise relationships. A healthcare enterprise may have up to 25 communication channels, which need to be aligned with internal processes for seamless communication with patients and caregivers.

Health information exchanges (HIEs) facilitate informed decisions at the point of care by providing medical and paramedical professionals with timely access to patient records. Joint review and collaboration improves assessment as well as treatment interventions. In addition, automated data flow minimizes errors in medication and billing. Significantly, HIEs with information exchange protocol such as HL7 support interoperability and ‘meaningful use’ of certified EHRs.



Impact of the 'new' agenda

Investment in healthcare IT and innovative delivery models help providers improve the management of chronic ailments and ensure well-being of patients. Three major initiatives under the 'new' agenda include:

Expand TeleHealth

Healthcare providers can capitalize on the mass adoption of mobile devices and the low cost of advanced telecommunication technology to serve remote areas with limited healthcare infrastructure. More than half the population of Cameroon in West Africa is rural and the density of physicians is extremely low at 1:5,000. However, a majority of citizens use mobile phones. Orange, a leading telecom operator in Cameroon, partnered with the country's Ministry of Health to launch 'My Healthline', a healthcare hotline for preventive medical care. Likewise, in India, a majority of the population in rural areas cannot afford primary healthcare. HealthFore's TeleHealth solution in rural India offers video consultation and on-demand health information services across medical categories.

Sophisticated TeleHealth solutions ensure timely delivery and reduce the cost of healthcare in developed countries. For instance, HealthSpot, a start-up based in Ohio, has installed teleconsultation booths in office buildings and shopping malls. HealthSpot stations are equipped with medical devices, and enable patients to consult with doctors for primary care as well as chronic conditions.

Motion sensors and 'Internet of Things' wearable devices automate the flow of clinical data, facilitate remote monitoring of patients, and streamline the management of chronic conditions. Mobile medical equipment can be used beyond hospitals to minimize the movement of patients. Remote monitoring devices trigger alerts to caregivers / medical teams in the event of unusual patterns of vital signs. Moreover, remote monitoring, diagnoses, and consulting provide universal healthcare by reaching out to patients in the comfort of their homes or assisted-living residences.

Leverage data for diagnostics

VBR models that enhance performance and optimize revenue cycles demand robust data management. The data repository should incorporate member demographics, patient records, claims and financial data, and administrative data. Healthcare providers can easily embed advanced analytics into data systems to realize personalized healthcare, while addressing statutory requirements across the value chain.

A data enterprise combines agile data architecture with predictive modeling to transform disease management, ensure the success of treatment plans, and offer a consistent patient experience. Analytical tools with visual data mining capabilities correlate structured and unstructured healthcare data and reveal the cause-effect cycle by evaluating symptoms, causes, and cure.

Analytics-based healthcare platforms improve diagnostics as well as clinical care management. Healthcare IT applications support public healthcare by predicting segments of population that are at risk and identifying measures to manage pandemics. Payers use analytics to prevent healthcare fraud and improve claims processing. Insights into member behavior and claims patterns enable payers to design targeted campaigns to attract new members and retain existing ones.

Deliver more holistic care

We can develop a sustainable healthcare ecosystem by encouraging digital natives to adopt a healthy lifestyle and be responsible for managing their medical conditions. Smart gadgets and healthcare applications enable patients to monitor, record, and share data. Mobile devices encourage working professionals to maintain a fitness regimen, while patients with chronic conditions achieve better clinical outcomes through reminders, timely advice, and emergency services.

Fitness bands help individuals make healthy dietary choices, while pedometers in shoes provide updates on the number of steps required to achieve the daily target of 10,000 steps, recommended by the American Heart Association and the Centers for Disease Control and Prevention.

HealthFore offers wellness and preventive care solutions across Africa, Middle East, South East Asia, and India. The HealthFore Weight Management program helps subscribers achieve ideal body weight in 45 days by consulting doctors and dieticians. Regular monitoring of diet and physical activities is supported with intervention via IVR / SMS. The provider's 'Health on SMS' is a reminder service for appointments and medication of patients.

In the pink of health

A sedentary lifestyle causes or aggravates a majority of diseases. Almost 10,000 new patients visit hospitals in the US every day. Several patients with two or three chronic conditions are on 14–15 prescription drugs. The high cost of healthcare adds to the patient's woes. The healthcare ecosystem can address the root cause as well as symptoms by using appropriate technology in a timely manner.



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