IMPROVING

DATA
USABILITY

AMONG PAYORS

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Table of Contents

The Business Case For Comprehensive Healthcare Data

The healthcare industry is experiencing unprecedented change - technology, service offerings, federal and state regulations and value-based care initiatives have converged to create an outcome based, patient-centric system. This emphasis on value-based care and accountable care has put increased pressure on payors to glean additional healthcare data that is not solely focused on claims information. With the ability to access and analyze RX data, hospitalization data, clinical data, EMR data, provider data, demographic data, disease data, population data and genomic data, as well as free-text physician notes, payors gain a more comprehensive view of the member.

With this data-enabled, holistic picture in place, member profiles become full of useful and actionable information. This enables the payor to work closely with providers to deliver targeted and accurate care, close care gaps and improve health outcomes through timely interventions, while also reducing unnecessary utilization, conducting population health management and focusing care on high-risk populations. Ultimately, a comprehensive perspective of the member has a significant impact on the bottom line, as payors can better negotiate contracts with providers and develop better pricing strategies for members.
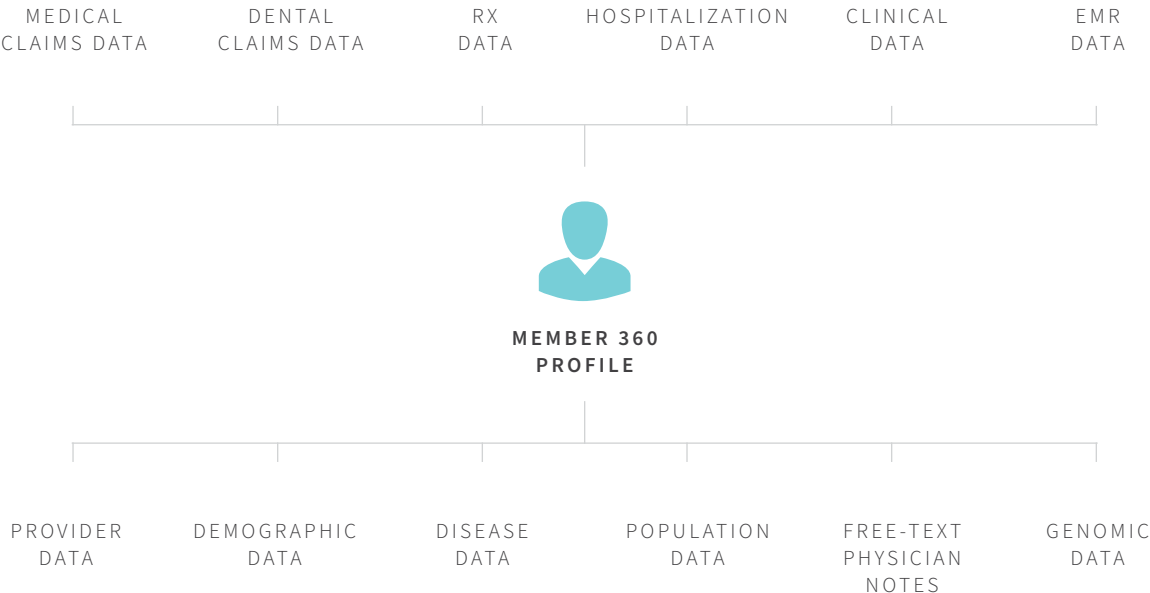
This white paper will explore data challenges in the industry, how leveraging new technologies can improve data usability and why an overarching big data strategy is crucial for payor organizations.

360° VIEW

PREDICTIVE AND PRESCRIPTIVE ANALYTICS FOR COST AND QUALITY OF CARE

PHARMACY

NATIONAL LABS

CLAIMS PROCESSING

HOSPITAL

AGGREGATED CLINICAL VIEW OF MEMBER

PRIMARY CARE

SPECIALIST

Challenge #1: Looking Beyond Claims Data

One key challenge is identifying how payors can effectively obtain comprehensive data given the ever increasing amount of healthcare information. Many payors are exploring options to acquire healthcare data, such as incentivizing members or forming partnerships with providers. Some payors compensate members with financial rewards, or other perks, if they fill out personal health records, while others work individually with specific hospitals and labs to establish a steady flow of data. To keep up with incentive programs, payors need platforms and systems that can also manage incentives to entice members to provide healthcare information, including data from their wearable devices.

Without an inclusive data-sharing policy across the entire healthcare industry, payors will be left with siloed information and the inability to view members holistically. If payors resort to conducting a manual census to receive, sort and analyze data, they will suffer from steep labor costs and the inability to effectively coordinate care due to inaccurate and delayed information. By implementing Member 360 programs with built-in incentive platforms, payors can continuously communicate with their members, reminding them to schedule yearly appointments and check-ups with providers to better manage their health and ultimately achieve better health outcomes.

| MEDICAL CLAIMS DATA | DENTAL CLAIMS DATA | RX DATA | HOSPITALIZATION DATA | CLINICAL DATA | EMR DATA |

MEMBER 360 PROFILE

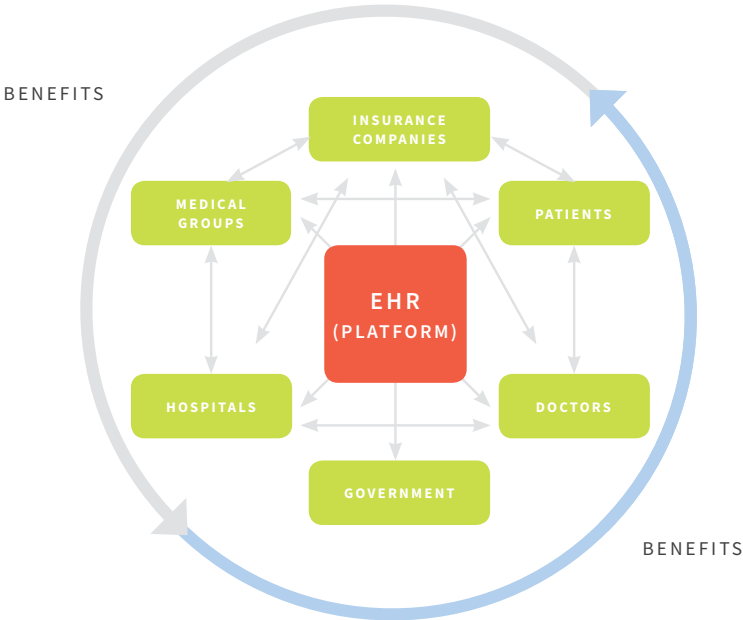| PROVIDER DATA | DEMOGRAPHIC DATA | DISEASE DATA | POPULATION DATA | FREE-TEXT PHYSICIAN NOTES | GENOMIC DATA |

Challenge #2: Integrating Unstructured Data

Even if payors conquer the challenge of obtaining comprehensive member data, they are faced with a lack of standardization among different data sets. Healthcare data is fragmented and unstructured with little uniformity in clinical data forms, code sets or identification. As the volume of healthcare data continues to grow, there's an increase in the velocity and variety of data, especially with the influx of mobile and wearable information. Even with standards such as HL7 and FHIR, the data can vary among payors and include image files, such as faxes or physician notes, making it difficult to get a holistic view of the member.

Like many industries, the healthcare sector faces legacy system challenges. McKinsey & Company recently ranked the pharmaceutical and medical technology industry in their digitization efforts compared to other industries. The industry ranked 28/100 in its Digital Quotient score, which measures organizations' maturity and capabilities against benchmark companies in various industries and geographies, and considers companies' digital business strategies, culture, organization and capabilities in determining scores.[1] In addition to the tactical challenges payors face with gathering and integrating data, many health plans are struggling due to internal misalignment and conflicting business goals between IT and healthcare departments. Data solutions often focus on addressing departmental business needs, not on providing a common data strategy collocated in a single database.

To remain competitive and withstand disruption, payors should develop an overarching big data approach to address disparate internal needs and then establish an action plan to move forward. To maintain a data-first mindset, payors need to rely on technology partners to look beyond traditional BI tools and embrace next-generation systems that both integrate with legacy systems and properly analyze multiple streams and diverse data sets.

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1   https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/four-keys-to-successful-digital-transformations-in-healthcare
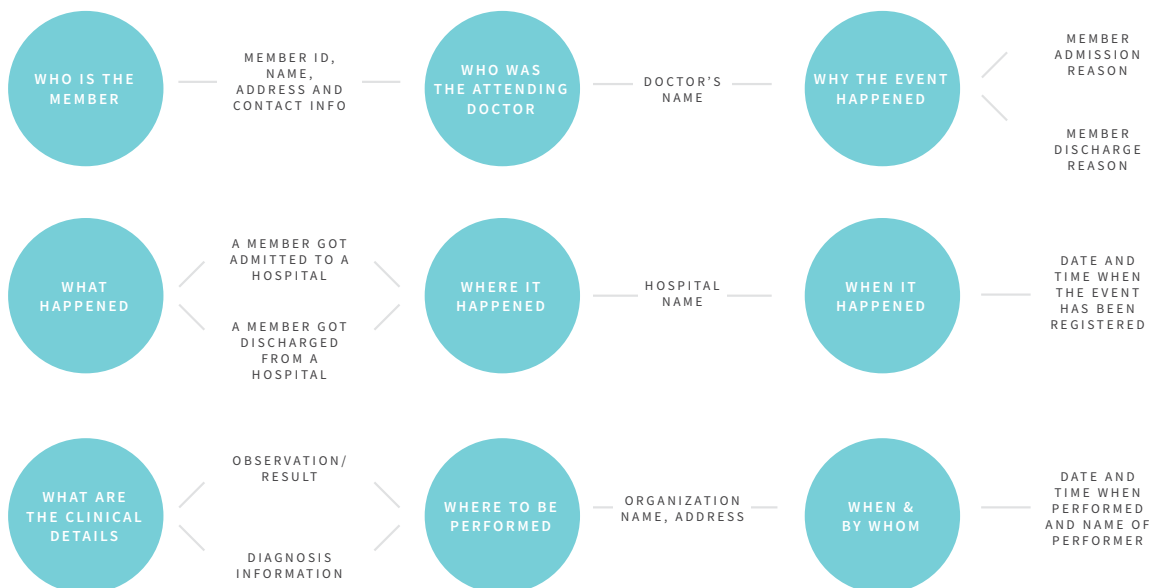
Using Technology To Solve Data Challenges

Payors are starting to invest in artificial intelligence, machine learning, robotic process automation and predictive modeling to expedite data discovery and analysis. These technologies are paving the way for health plans to solve data challenges more efficiently compared to manual approaches. Let's explore some use cases:

USE CASE #1: MEMBER IDENTIFICATION

While the industry has made progress in using standards like HL7 and FHIR, often something as simple as identifying members is difficult for payor organizations. If a member visits two different providers in a week, two unique records are generated, creating a challenge for the payor to decipher that the records are in fact the same member due to conflicting formats and standards. Until now, health plans have been left with manual solutions that require an employee to compare social security numbers or other identifying factors to analyze records data.

Many other industries face similar issues – for example, it's difficult for the retail industry to identify that a person who purchased a product on an eCommerce site and an in-store location are the same customer. While this challenge is not unique to the healthcare industry, the sensitivity of medical information and HIPAA regulations make it even more complicated. Leading technology providers often suggest utilizing fake information that mirrors real data when building and testing a big data solution to minimize the risks of tampering with sensitive member information.

By deploying technology solutions that use machine learning and robotic process automation, member identification can be streamlined, saving payors time and money by improving operational efficiencies.

Payors must be able to accurately identify members and analyze member data in real-time, such as with this HL7 ADT (Admit, Discharge, Transfer) message.

USE CASE #2: FRAUD & ABUSE

According to the National Health Care Anti-Fraud Association, the extent of financial losses due to healthcare fraud in the US is not entirely known but is conservatively estimated to be in the range of tens of billions of dollars annually.[1] To address these challenges and exorbitant costs, predictive modeling can be used to alert payor organizations of possible fraud and abuse cases. These predictive analytics solutions identify key features in a data set that are typically characteristic of such cases and produce a list of potentially fraudulent claims, such as performing medically unnecessary services or prescribing medically unnecessary prescriptions. The claims list is then audited, improving workload efficiency by focusing on claims that are more likely to be fraudulent.

Similar data mining and modeling can be used to identify prescription drug abuse in cases where a member visits one provider to obtain a prescription and then visits another provider for an additional prescription. With the current opioid epidemic in the US, reducing drug abuse will not only result in decreased healthcare costs, but most importantly will address a major societal problem.

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1   https://www.nhcaa.org/media/127538/nhcaa_ushealthcaresystem_2017.pdf

How Payors Should Move Forward With Big Data

To start, payors must develop an organized plan for how data can be accurately collected, identified and analyzed to make informed decisions. Payor organizations should consider investing in a data lake with the ability to dump any variety of data with any velocity from virtually any source. With this approach, health plans have access to fresher and richer clinical data, including a view of member profiles in one central store. Additionally, data loads should occur immediately as information is captured, and distributed processing should be used to provide the quickest analysis to ensure organizations always have the most up-to-date member profiles. While HL7 standards aren't fully adopted across the healthcare system, a common data format like HL7 allows for easier integration and scalability without requiring a proprietary format. A data lake approach with cloud-enabled technology provides payors with the agility to react to new business needs, stability from the distributed system and scalability to broaden data sources.

An effective big data solution should provide timely notice of hospital encounters, doctor visits and lab results that are integrated with population health data and demographic information to give payors a comprehensive view of their entire member database. With these comprehensive Member 360 profiles, health plans will be able to better facilitate coordination and case management with providers to prevent costly re-admissions and unnecessary healthcare utilization. Taking it a step further, a data lake approach generates Provider 360 profiles, which enable payors to evaluate the quality of the provider by member outcome and by National Committee for Quality Assurance (NCQA) ratings, identify fraud and abuse cases, and bundle payments through the continuum of care for accurate reimbursements. As healthcare data continues to proliferate and there is increased pressure on delivering accountable and value-based care, payor organizations should focus on implementing an effective big data solution and ultimately realize the business benefits of improving data usability.

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