OPTUM®

The enterprise data platform:

Modernizing the payer business with fluid exchange and analyses of big data

Digital modernization is happening across all industries. At the same time, health systems hold a vast amount of patient data. Given these realities, consumers today expect a high degree of digital prowess from payers and providers. Consumers expect to have access to their records, convenient billing and data-driven decisions at the point of care. They expect support in maintaining or improving their health — affordably. Unfortunately, many payers and providers are not currently able to meet those expectations.

Modern data strategy

Disconnected and unintegrated patient data — including clinical, claims, pharmaceutical and other data sets — leads to:

- Excessive administrative and medical costs
- Gaps and redundancy in the care continuum
- Lower quality of care
- Poor customer experience

Resolving the entrenched issues around health data is an urgent undertaking. We believe it can be addressed using the same powerful digital technologies that have transformed commerce in the last decade. To remain competitive and relevant, payers must adopt cloud capabilities that support the fluid movement and analyses of data.

The changes required inside the organization cannot be solved with incremental innovation. Instead, health plans will need to migrate to enterprise data platforms (EDPs). They need to shift the company mindset beyond existing business boundaries — or risk obsolescence.

Strengthen competitive advantage through enterprise data strategy

The modern payer organization requires data to achieve its business goals. Without data and powerful analytics, payers will be unable to find efficiencies or deliver the transparency consumers demand. We live in a new world of outcome-based, consumer-driven health care. Payers must shift from a transactional and retrospective view of members to a 360-degree, prospective view of every member, in real time.

As much as 30 percent of stored data worldwide is generated in health care.[1] This data has clinical, financial and operational value if it can be captured, contextualized and used effectively in practice. However, across all industry sectors, payers are the least advanced in using data to deliver digital business strategies.[2] Legacy technologies that do not "speak" to one another are at the root of waste and redundancy and make it difficult for payers to respond to market changes. At the point of care, consumers and clinicians wonder why.

> **DATA IS THE NEW CURRENCY IN HEALTH CARE.** With the volume of members in managed Medicare and Medicaid plans, we are approaching an environment where complete, connected data on every member will help plans profitably manage medical spend for population health and give providers the information they need at point of care.
>
> – Zahoor Elahi, Senior Vice President of Strategic Product Management

As much as **30 PERCENT OF STORED DATA WORLDWIDE** is generated in the health care industry.[1]

Modern data strategy is a mix of capabilities

Traditional data strategy for payers is merely defensive. A modern data strategy is a mix of proactive and reactive capabilities. This new alternative helps payers stay agile in responding to the full range of organizational and market pressures.

DEFENSIVE STRATEGY MINIMIZES RISK AND SUPPORTS:

- Legal, financial, compliance and IT concerns
- Data governance and integrity
- Data security/identity needs
- Rules governing data privacy and integrity of financial reports
- Data consistency
- Data architecture and orchestration

OFFENSIVE STRATEGY SUPPORTS BUSINESS OBJECTIVES AND:

- Increases revenue, profitability and customer satisfaction
- Generates customer insights to support decision-making
- Requires adaptive, flexible data
- Focuses on information architecture and data relationships

Part of the above was adapted from Leandro DalleMule and Thomas H. Davenport's article "What's Your Data Strategy?" published in Harvard Business Review, May–June 2017.

Resolving interoperability issues with an enterprise data platform

By migrating data sets to a cloud-based enterprise data platform, CIOs can:

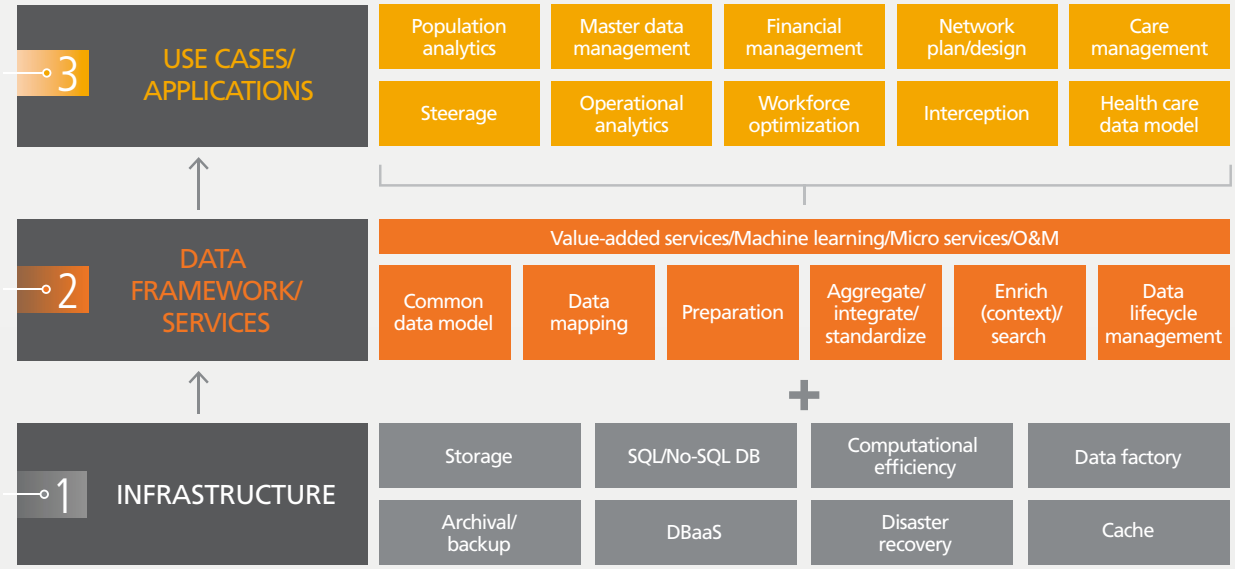
- Respond to interoperability and data access issues
- Support data-driven decision-making in health care
- Prepare the organization to derive insights from existing and emerging data sources
- Help the organization move from a CAPEX infrastructure model to an as-a-service, OPEX model

As machine learning takes hold, an EDP prepares payer organizations for big data analytics

Plans that move their data stores to a single cloud platform, purpose-built for data sharing, analytics and reporting, will be capable of understanding members and populations. They will be able to predict and prescribe the next right move on the health care continuum. Leading the organization to an EDP enables CIOs to quickly expand capabilities inexpensively and to accommodate new data sources.

An EDP enables organizations to adopt agile principles, methods, practices and tools. EDPs inform a DevOps approach in which the entire software delivery chain is viewed strategically. (Figure 1: Software delivery chain and Figure 2: Enterprise data flow)

Software delivery chain

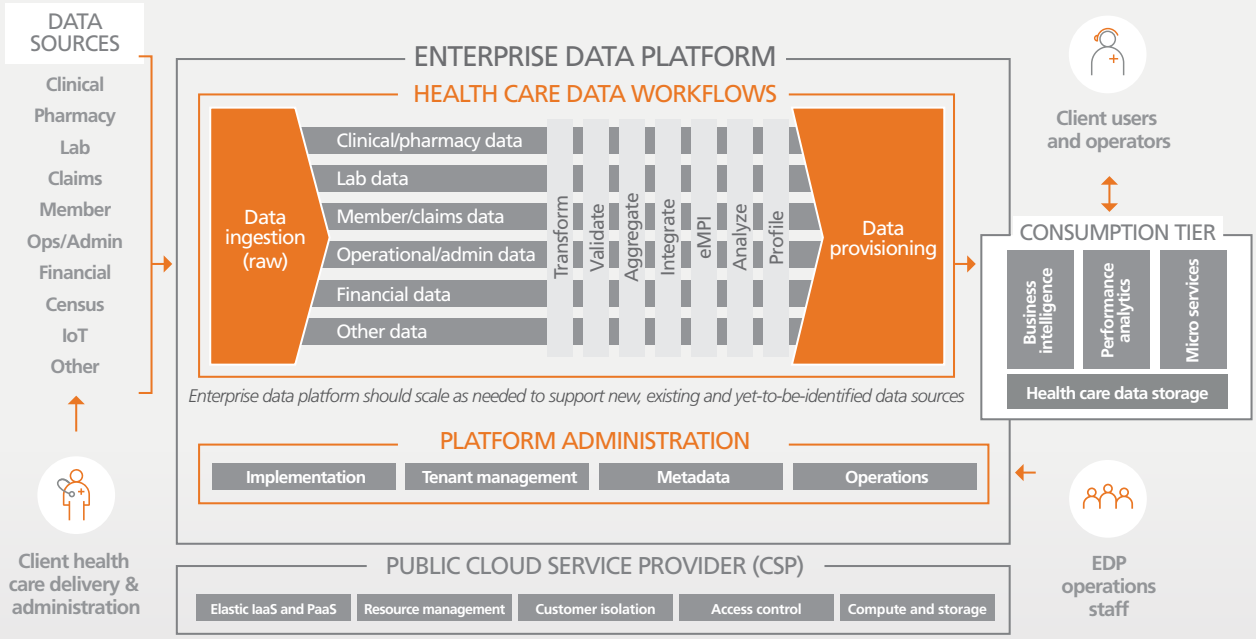


As the foundational element, an EDP enables a multitude of business use cases. It shifts the organization to a consumption-based storage and computational model in which infrastructure (software and hardware) and best-in-class services are provisioned as needed. Once established, the business challenges that follow can be addressed using the power of the data framework and infrastructure with only incremental changes. CIOs can create faster ROI for their key stakeholders to support specific business needs.

The enterprise data platform shifts the organization from a CAPEX to an OPEX scenario in a pay-as-you-go framework, where business units are not burdened with legacy and upfront costs.

> **PUT SIMPLY, THE EDP DOES TWO FUNDAMENTAL THINGS.** One, it helps with managing data assets to provision different capabilities. And two, it creates a cohesive repository where all the health-care-specific data elements are talking to each other to unlock contextual insights.
>
> – Sameer Siraj, Vice President of Strategic Product Management

Enterprise data flow



Key features and requirements of an EDP

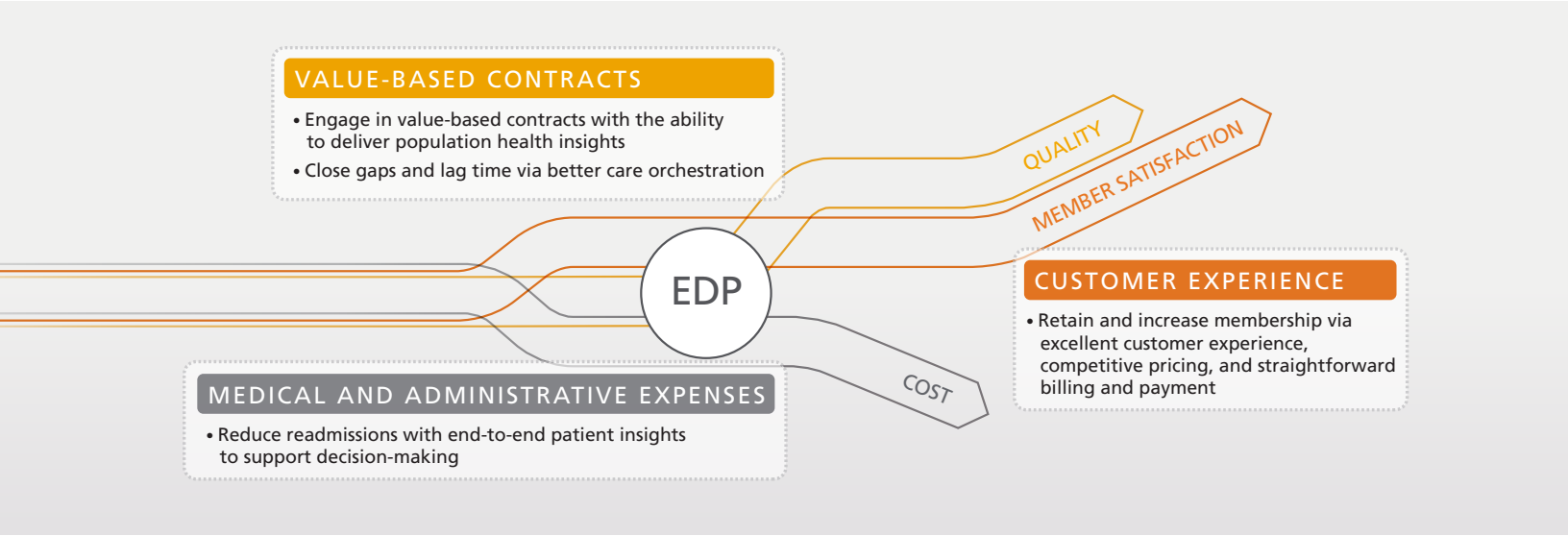
An EDP should provide tools for data ingestion, aggregation, standardization, cleansing, governance and metadata management and include:

- Support for a range of end-user and analytical tools
- Fast access to data to support decision-making
- Data reservoir for scale-out storage and parallel processing
- Data factory for management and orchestration of data between data reservoir and enterprise information store, and rapid provisioning of data to a discovery lab
- Big data stores
- Data lab with a set of data stores, processing engines, and analysis tools

Begin with the end in mind

The payer is fighting for relevance in a marketplace where pressure is coming from all sides. In particular, consumers and government payers are pressuring them, but so are organizations that have mastered consumer analytics. Plans must move swiftly to close data gaps, improve collaboration and optimize processes to measurably improve the business of health care.

To begin, payers need their CIOs to help the organization formulate an enterprise data strategy. This involves defining how the organization will harness data-related and data-dependent capabilities to orchestrate better health outcomes, lower costs and attract new members.



The CIO harmonizes the business of health with technologies

During the strategy phase, the CIO has an opportunity to bring key stakeholders together. The CIO can champion an enterprise-wide data strategy and platform that will break down barriers within the plan ecosystem. This approach will require plan leaders to shift from a cultural mindset of solving transactional issues with proprietary technology tools. The new approach capitalizes on enterprise cloud capabilities that enable fluid movement and analyses of data.

The first step toward modernization is a coalition of line-of-business owners, executive leaders, data scientists and information technologists. This coalition comes together to establish a comprehensive vision for using enterprise data. The CIO has to build the confidence of stakeholders in both the benefits of a scalable, single platform and its ability to meet strategic goals.

The CIO leads the technical evaluation and implementation of enterprise technologies and ensures the provenance, quality and interoperability of data. Creating an open, enterprise-wide platform shifts the role of the CIO from keeping the lights on to a full-fledged partner in growth.

Cost and ROI of digital transformation

The way to affordably monetize big data is via the computational power and scale of the public cloud. The pay-as-you-go cloud model relieves financial pressure, which is critical to lowering the cost of care. It also delivers immediate value in decision support. In the OPEX model, data storage is inexpensive and computational power is available on demand. As stakeholders define use cases, they access the EDP to explore, analyze and innovate. Data supply can be expanded to the EDP over time to widely scale intelligence throughout the payer organization and health care ecosystem.

Choose a technology-enabled partner with health care expertise

Only an organization grounded in health care can effectively help you:

- Understand where and how to integrate infrastructure, programs and care settings
- Optimize connectivity with providers
- Improve the member experience
- Support business line and market growth

It's important to partner with data and analytics consultants who have deep health care expertise — in addition to cloud technologies. This is especially important during the data planning phase. Their insights reflect industry best practices and changing regulations and payment models. They can reveal the value of your data in a way that aligns most precisely with your goals.

Timing

Most health plans are still in the early days of digital transformation. However, those that rapidly initiate an enterprise data strategy and platform can more quickly position themselves to orchestrate care in value-based contracts. They will also be in a position to improve the fragile relationship with consumers in a shifting marketplace.

JOIN THE ERA OF INSIGHTS

Just as consumer data has enabled granular customization and prediction in commerce, the EDP enables precision medicine. With machine learning and artificial intelligence, this cumulative knowledge empowers clinicians to create individualized care for each patient.

In the era of information, all that is known about a person — from family history and genetics to location history and environment — can be balanced against all that is known in the medical domain. This provides a big-picture view of medical decision making. A data-driven view allows care providers to focus prevention and intervention techniques on appropriate individuals. At the same time, it helps them avoid unnecessary costs or unwanted side effects for those patients who would not benefit.

The return on investment for using the data trapped in health plan systems is the availability of analytics to improve outcomes, manage costs and improve access to appropriate care and therapies.

Learn more about the CIO's role in modernization. Visit optum.com/cio

SOURCES

1. Huesch MD, Mosher T. Using it or losing it? The case for data scientists inside health care. NEJM Catalyst. May 4, 2017. catalyst.nejm.org/case-data-scientists-inside-health-care/. Accessed March 30, 2018.
2. Holmes B. 2018 CIO Agenda: U.S. healthcare payers industry insights. Gartner. Oct. 2, 2017

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