Healthcare Data Access and Consumption: Exploring the Advantages of a Platform Approach
Executive Summary

The healthcare industry faces a multitude of data challenges on both payer and provider sides:

- Evolving healthcare interoperability standards
- Staffing shortages
- Lack of real-time visibility into volumes of payer, patient, and provider data

>1.2B¹

Clinical documents produced/year in the U.S.

48%

Yearly increase in clinical documents

Healthcare Data Sources
- Electronic health records
- Billing systems
- Pharmacy records
- Insurance claims
- Internet-connected wearables
- Implantable devices
- More

Data Challenges for Providers
- Achieving a longitudinal clinical view of patients
- Automating claims submission
- Maintaining compliance with patient data regulations
- Reducing data fragmentation
- Maintaining strong data governance

Data Challenges for Payers
- Consent and permissions management
- Eligibility verification and preauthorizations
- Claims processing
- Provider data management
- More

With the rapid expansion of available data, healthcare providers and payers often find themselves adrift in a sea of information that is tantalizingly close at hand, and yet paradoxically, inaccessible for the kind of deep analysis that yields meaningful insights. Siloed systems, each with different coding systems and potentially different identifiers for the same patients, make it difficult to get a coherent, comprehensive view of patients and their data.

In short, healthcare payers and providers face significant data challenges—from access to consumption.

In an effort to address these challenges, many healthcare organizations have adopted a piecemeal approach to solving data problems, adding point solutions as pressing issues arise. The problem with that approach is that it fails to deliver a streamlined, holistic solution that eliminates data access and consumption gaps.

Rather than implementing reactive point solutions, it’s time for healthcare organizations to adopt a proactive platform approach that eliminates gaps and streamlines the collection, management, and use of data.

This ebook explores how an enterprise data platform:
- Addresses the issue of interoperability
- Alleviates some of the pain of staffing shortages
- Provides real-time visibility that leads to optimized operations
Meeting the Interoperability Challenge with a Platform Solution

Healthcare interoperability, the ability for two or more healthcare technology systems to exchange, interpret, and use data correctly, is a hot topic among payers and providers; Mandated interoperability deadlines are fast approaching.

The benefits of interoperability are clear. It can:

• Improve quality of care and the patient experience
• Enable greater efficiencies in healthcare processes
• Reduce the cost of care
• Reduce the impact of staff shortages
• Protect patient data security

The issue is that interoperability comes with some significant challenges, including:

• Managing inconsistent information from disparate sources
• Validating requests for patient information
• Continually evolving standards
How a Platform Approach Helps with Interoperability

Choosing a platform solution that includes API-led data management integration capabilities and analytics gives payers and providers the tools to access and make sense of shared data in their systems.

A platform approach facilitates a single source of truth for healthcare data, providing stakeholders with a 360-degree view. Such a platform harmonizes data from disparate sources, eliminating data silos.

Using a canonical model, a data platform built specifically for healthcare is based on industry standards such as Fast Healthcare Interoperability Resources (FHIR) and Health Level Seven International (HL7). In such a model, data is categorized as mastered or unmastered. Mastered subjects and codes become dimensions, while non-mastered subjects revert to being simple facts. From there, codes are mapped and harmonized to match the industry’s current standards.

The single version of truth and reference data harmonization provided in such a canonical model enables streamlined reporting and accelerated analytics. A healthcare-specific data platform can include data mapping templates for the canonical model, and data quality and mastering tools to help a healthcare organization move quickly to improve data integration and healthcare interoperability.
Meeting the Challenge of Short Staffing with a Platform Approach

It’s no secret that the healthcare industry is facing a particularly acute case of short staffing. The most recent American College of Healthcare Executives annual survey found that, for the first time in nearly 20 years, staffing shortages replaced financial challenges as the top concern among healthcare CEOs.

Staff shortages are impacting every part of the healthcare system, including both clinical and non-clinical staff. From nursing aides to IT staff, the effects of the global pandemic and the so-called “Great Resignation” are straining an already overtaxed system. The American Hospital Association noted that staffing shortages have cost hospitals $24 billion over the course of the pandemic.2

The challenges inherent in staff shortages are likely to continue. Credit rating agency Moody’s noted: “Over the next year, we expect margins to decline given wage inflation, use of expensive nursing agencies, increased recruitment and retention efforts, and expanded benefit packages that include more behavioral health services and offerings such as child care. Even after the pandemic, competition for labor is likely to continue as the population ages — a key social risk — and demand for services increases.”3

2 Data Brief: Health Care Workforce Challenges Threaten Hospitals’ Ability to Care for Patients, American Hospital Association, Oct. 2021
How a Platform Approach Helps with Staffing Shortages

In the wake of widespread staff shortages, healthcare organizations must find ways to do more with less. With mandates in the US for healthcare systems to switch from paper to electronic health record systems, more clinician time has been devoted to data entry than ever before. That additional work burden leaves already overtaxed clinicians facing burnout, job dissatisfaction, and less time for face-to-face interactions with patients.

A data platform specifically designed for healthcare can help organizations alleviate the challenges that come with fewer staff members and larger data entry loads. By giving organizations the ability to integrate, clean, and harmonize data from disparate sources, a data platform can provide providers and payers with a centralized repository of information categorized and ready for analysis. By accelerating time to insight, a data platform enables organizations to identify gaps in care and free up resources for value-added services.

The consolidated view of patient data that a holistic data platform can provide helps clinical and non-clinical healthcare workers quickly access the data they need to make informed decisions in real time. Further, a data platform that includes strong data visualization capabilities enables healthcare leaders to easily identify areas of need. Armed with data insights, leaders can make the most of available resources, optimizing workflows and schedules to mitigate the effects of the staffing shortage.

When internal systems can seamlessly integrate and cleanse data, and that data can be shared reliably among care teams, a more efficient healthcare ecosystem evolves. When compared with gap-prone point solutions that only solve niche data issues, a data platform empowers payers and providers to operate with increased agility and rapidly respond to new opportunities and competitive threats. It enables healthcare organizations to shift strategies as needs change so that they can do more even in the face of staffing issues.
Meeting the Challenge of Lack of Real-time Data Visibility

Every industry can benefit from real-time visibility into data, but for healthcare, real-time data visibility is especially critical. When data can be captured, aggregated, normalized regardless of structure, analyzed, translated into actionable insights, and delivered into a shared record accessible to all stakeholders with the proper authorizations in real time, healthcare transformation is well on its way.

Visibility into real-time data:

- Supports stronger care coordination
- Provides a better patient experience
- Gives clinicians the information they need to provide proactive care
- Gives payers the ability to streamline claims processing and member onboarding
- Accelerates time to insight
- Enables greater organizational agility and transparency
How a Platform Approach Helps with Data Visibility

A platform-based solution integrates and manages data, serving up a single source of truth in real time. It serves up operational intelligence combined with digital automation to optimize key workflows and ensure healthcare organizations remain agile, efficient, and capable of delivering on the promise of data.

A data platform designed for healthcare breaks down data silos, integrating and harmonizing data from internal and external sources in real time. Once data is categorized and stored in a central repository, it is immediately accessible for real-time reporting and analytics. Reporting backlogs become a thing of the past, and previously inaccessible analytics become possible.
TIBCO Healthcare Enterprise Data Platform: A Holistic Healthcare Solution

The TIBCO Healthcare Enterprise Data Platform incorporates the tools healthcare organizations need to succeed in a rapidly changing healthcare environment.

TIBCO’s unique platform approach delivers:

• A single version of truth for a healthcare organization’s data
• A 360-degree view of patient, provider, facility, and other critical healthcare domains
• A multi-level data repository, with mastered subjects, transactional subjects, and a healthcare data warehouse
• API-led integrations
• Broad-reaching data governance capabilities
• Real-time data access for key stakeholders
• Intelligent analytics
• Real-time reporting and compliance

TIBCO’s platform approach for healthcare is helping organizations across the healthcare ecosystem to leverage data quickly and effectively across the entire healthcare landscape.

With TIBCO, healthcare organizations are transforming data into optimized decision-making tools to improve processes and workflows and achieve new efficiencies.
TIBCO Healthcare Enterprise Data Platform Use Cases

TIBCO Healthcare Enterprise Data Platform helps healthcare payers and providers face data challenges successfully. Here are just a few ways organizations use TIBCO today:

Optimize Revenue Cycle Management (RCM)

Revenue cycle management (RCM) is crucial for the healthcare industry. Medical practices, large healthcare systems, and even local hospitals can benefit from expert money management, and TIBCO’s data platform can maximize claim reimbursements and increase any system’s bottom line.

With the TIBCO platform, healthcare systems gain access to the most complete EDI solution available. Providers can streamline the revenue cycle management process through all stages, and standardized transactions can be used to:

- Verify benefits and eligibility for patients
- Submit authorization requests and claims
- Check claims status
- Make electronic payments
- Attach necessary documents to their respective claims
- Manage HIPAA code sets
Maintain Regulatory Compliance

One of the most regulated arenas in the world is healthcare. Organizations within the industry are often required to comply with laws set forth by the Health Insurance Portability and Accountability Act (HIPAA), which is designed to ensure privacy and security for all parties. Facilities that fall out of line may face harsh penalties, but TIBCO provides the most trusted products available to aid healthcare systems in maintaining full HIPAA compliance. Through the TIBCO Foresight validation engine, EDI transactions remain in line with present healthcare-related laws.

Improve Partner Management

If system partners are not providing a healthcare organization with appropriate data, the enterprise can be negatively impacted. Non-compliant or inaccurate information leads to problems like:

- Fewer members
- Claim processing delays
- Payment delays
- Higher administrative costs

Through TIBCO’s Healthcare Enterprise Data Platform, organizations gain access to statistics that fully assess the healthcare transactions of their partners. Organizations can identify problems or errors with the data surrounding those transactions, and can work together with partners to achieve accuracy and compliance. TIBCO’s platform portal guarantees partners only use industry-approved forms to improve and resubmit necessary data. Partners can also use this tool to upload files that support claims.

Other Use Cases for TIBCO Healthcare Enterprise Data Platform

The platform can also be used to:

- Detect fraudulent activity
- Uncover at-risk patients
- Boost improvements in population health and more
TIBCO’s Real-world Results

TIBCO’s tools and services have already been used in many areas of the healthcare industry to provide better experiences to patients and ease reporting duties for providers. At the University of Iowa, TIBCO’s analytics solutions have been used to create more personalized treatments for individual patients. This has resulted in a 74 percent drop in overall surgical infection rates.

Through its work with Washington University in St. Louis, TIBCO has helped treat genetic mutations with precision medicine. Advanced analytics and machine learning have been established to pioneer genomic insights. TIBCO has paved the way for cell imaging, machine learning, and feature extraction to establish a model in the university’s medical division that’s now being used to predict mutations and support research and development in medicine.

The University of Chicago Medicine has implemented TIBCO’s services into its platform so it can anticipate multiple health-related complications. This has resulted in a 20 percent drop in overall cardiac events amongst patients. The university has also saved more than $1 million annually.

TIBCO’s data analytics have further been used by organizations like NASA, which saw an 83% reduction in project review time; JetBlue, which optimized its available aircraft to account for weather delays and accommodate disadvantaged travelers; and Caesar’s Entertainment, which attained a 50% change in non-gambling revenue mix.
Leverage TIBCO’s Platform Approach to Streamline Your Processes

A platform approach to healthcare data avoids the deficiencies and data gaps found in using multiple point solutions. TIBCO Healthcare Enterprise Data Platform is designed to effectively and efficiently handle the data needs of your healthcare organization, taking your data from integration to intelligent insights.

Are you ready to take the next step in the evolution of your data strategy? Ask a TIBCO expert about the TIBCO Healthcare Enterprise Data Platform today.