Healthcare Data Management for Providers

Expanding Insight, Increasing Efficiency, Improving Care

White Paper

Table of Contents

Executive Summary

The United States healthcare industry is changing dramatically. From the Patient Protection and Affordable Care Act (PPACA), reductions in Medicare and Medicaid spending, shifting consumer buying behavior, to the continued threat of international economic uncertainty—all of these factors have an impact on both healthcare payor and providers (see Figure 1). The result is rising costs and falling revenues.

External Pressures Affecting Healthcare

Decreasing Revenue

Legislation
Consumerism
Reduced Reimbursements
Pay for Performance
Unemployment

Healthcare Organization

Regulation
Litigation
Medical Technologies
Staffing

Increasing Cost

Figure 1: External factors are driving down healthcare organization's revenues while driving up costs.

Many healthcare providers are turning to their data—and the deeper understanding of their business—as a way to cope with these profound industry changes. Clinical leaders are seeking insight into patients, care teams, and services to uncover opportunities to improve care quality and leverage efficient best-practices. Health system network executives are trying to better understand physicians, locations, and encounters to stem referral leakage. And senior officers of all stripes are pressing for insight into relationships amongst these entities to fuel patient growth strategies.

While business demand for data is on the rise, the quality of this data is in question. Data errors and inconsistencies are common. This is particularly pervasive with business-critical data used in processes across the enterprise including patients, physicians, providers, locations, employees and procedures—known as "master data." Healthcare providers needs trustworthy, authoritative master data to gain insight into their business.

Informatica helps healthcare providers gain control of core business information or master data. The Informatica healthcare data management for providers solution is a combination of Informatica® MDM, robust master data management software, and a business intelligence tool of the healthcare provider's choice. This solution helps healthcare organizations create a single view of data to:

- Improve quality of care across care teams and services with trusted information for reporting and operations

- Reveal opportunities to increase efficiency through best practices

- Increase market share and stem referral leakage using relationship analytics

- Adapt to the demands of the Affordable Care Act (ACA) by eliminating data inconsistencies across systems

This white paper introduces the Informatica healthcare data management for providers solution and discusses the ways in which it enables healthcare organizations to transform core business data into greater insight and increased strategic agility. This solution is designed to make information easier to manage, analyze, and put to use in a healthcare setting. Most importantly, the solution delivers actionable business insight so healthcare organizations can drive value for patients, cultivate network relationships, and build a foundation for future industry changes.

The Common Data Challenges for Healthcare Providers

When data about patients, physicians, employees, services, and locations is incomplete and fragmented across multiple systems, it's virtually impossible to manage the relationships among all these entities and derive insight from their interactions.

The most common information-based challenge for healthcare providers is the lack of complete, consistent master data. The lack of master data leads to these key operational problems:

- Inaccurate reporting for quality improvement
- Difficulty supporting patient growth strategies
- Lagging organizational response

Inaccurate Reporting for Quality Improvement

Patient, provider, and facility data needs to be aggregated and analyzed in order to improve service and quality of care. Multiple patient and provider identifiers, and even facility names, can be inconsistent. Data that varies from source to source introduces duplications, inaccuracies, and inconsistencies that fundamentally undermine the integrity of reports—and the success of initiatives based on those reports. In effect, Chief Quality Officers and other clinical executives often have poor if not misleading information on which to base decisions affecting patient outcomes.

Difficulty Supporting Patient Growth Strategies

Undertstanding patient origins (and by extension, the associated revenues) and the relationships among patients, physicians, and other key participants is critical if a healthcare organization is to to allocate the appropriate resources to meet growth objectives. Without this insight, leaders struggle to determine the relative value of various referral sources and the relationships between them, identify geographic and other gaps in service areas, and establish the most efficient use of marketing budgets.

Lagging Organizational Response

Healthcare organizations need to respond nimbly to the fast pace of change in the industry. Companies need to differentiate themselves in an increasingly complex market, avoid the risks of regulatory noncompliance, and keep pace with payment models. IT infrastructures must be able to access to authoritative data quickly so that business users can use it for strategic benefit.

The Barriers to Change

Many healthcare providers have made sizable investments in electronic health record/electronic medical record (EHR/EMR) applications that meet "meaningful use" guidelines, enterprise data warehouses and other efforts that include ad hoc data quality efforts. However, truly trustworthy and authoritative information that is available enterprise-wide remains elusive, for several reasons:

• Data remains inconsistent, inaccurate, fragmented

• Business requests are complex and resource-intensive

• Future requirements are unpredictable

Inconsistent, Inaccurate, Fragmented Data

Far from integrating vital information from legacy systems, many enterprise EHR/EMR applications simply increase data fragmentation across departments or provider locations, as shown in Figure 2.
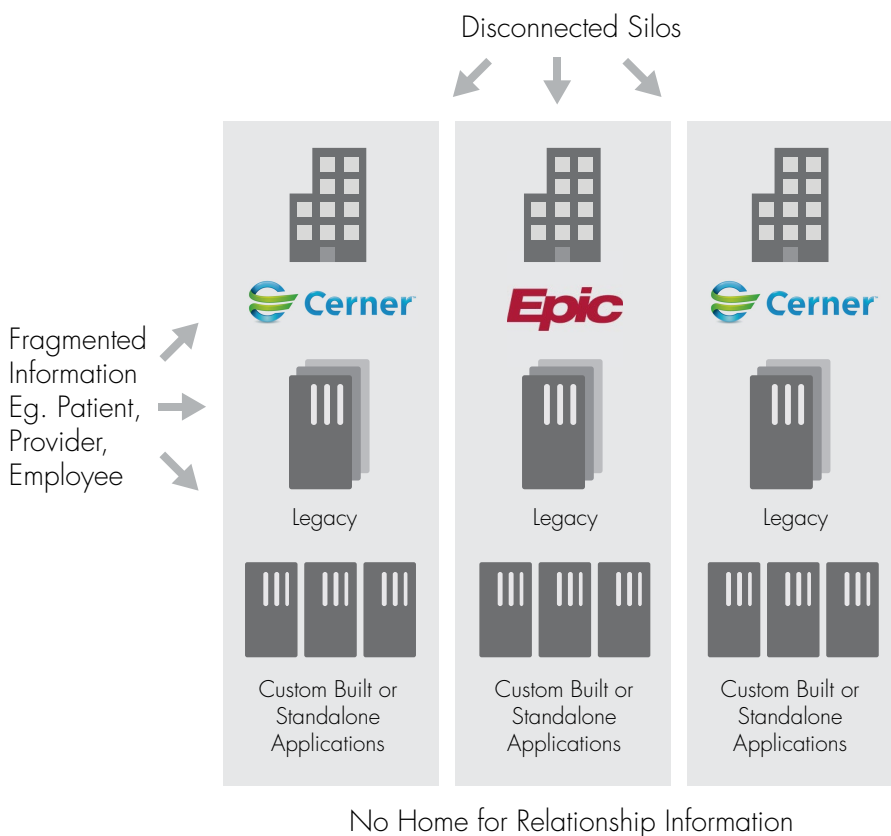

Figure 2: Trustworthy, authoritative information about the patient, services, locations, referral networks and relationships amongst entities remains elusive, due to technology constraints.

Even when EHR/EMR solutions integrate successfully with legacy systems, important master data often remains outside of the application. Although it is common for disparate applications to interface through HL7 messaging to share transaction data, it is rare (if ever) that these same applications coordinate master data. For example, the data warehouse may retain its own set of master data for reporting purposes disconnected from more timely production data. Standalone systems supporting in-patient admissions or infection control may have another set of master information. Yet none of these systems is capable of managing all the data needed across the enterprise, nor do they store all relevant relationships among the data.

Complex, Resource-Intensive Business Requests

Business users need more data than ever before, for more reasons than ever before, and their changing, unanticipated needs are giving rise to isolated and uncoordinated data consolidation and data quality efforts. Business may start by asking IT to establish a holistic view of the patient, requiring a cleanup and consolidation of patient information, but that may morph into a request from marketing to delineate relationships among patients, other household members, and their primary care physicians. Without a consistent, flexible process for handling these requests, IT departments have little ability to reuse past investments in data consolidatation, cleansing, and reporting for new requests. That places extra burdens on IT organizations and their budgets—and delays their ability to deliver results in a timely fashion.

Unpredictable Future Requirements

Financial uncertainty, new regulations, interoperability issues, and changing payment models are ongoing stresses on IT teams. However, every impromptu solution cobbled together to meet the latest business demand makes IT infrastructure more brittle and less able to respond flexibly to future needs.

The Healthcare Data Management for Providers Solution

Master data is core business information used repeatedly across applications and business processes. In the context of the healthcare industry, common master data includes information about patients, health plans, services, locations, other related entities, and the relationships among them. Centralizing this data creates a single version of the truth on which a healthcare organization can base its analysis and planning.

Informatica has created a healthcare data management solution that enables healthcare providers to infer relationships among core business entities (Figure 3) and deliver rapid, reliable insight.

The Informatica healthcare data management for providers solution is a combination of **Informatica MDM**, industry-leading master data management software, and the healthcare provider's business intelligence technology of choice. Based on a single platform with a flexible framework, this solution meets current needs while creating a foundation for future change.

Improving Quality of Care and Service

The Informatica healthcare data management for providers solution leverages MDM for **consistency in patient, provider, procedure, and facility information**. Using this data both specifically and in aggregate, healthcare organizations can achieve a deeper understanding of patient populations and pinpoint procedures and facilities ripe for quality improvement. The solution also **centralizes information about specialty provider relationships**, making it easier to compare provider performance as well as to identify and replicate best practices from in-network physicians.

Supporting Patient Growth

The Informatica healthcare data management for providers solution reveals data and relationships previously concealed by multiple systems and processes, giving business users fast, reliable answers to queries that uncover overlooked growth and revenue opportunities. The solution helps **reduce out-of-network referrals** by showing relationships between patients, physicians, and referral behavior to eliminate sources of referral leaks. It also **improves marketing accuracy** by delivering facility and patient information to help analysts forecast future needs and relevant services. In addition, the solution **identifies key provider relationships**—in particular, comparing the geographic distributions of providers and their patient populations—to identify opportunities for organic growth or practice acquisition.
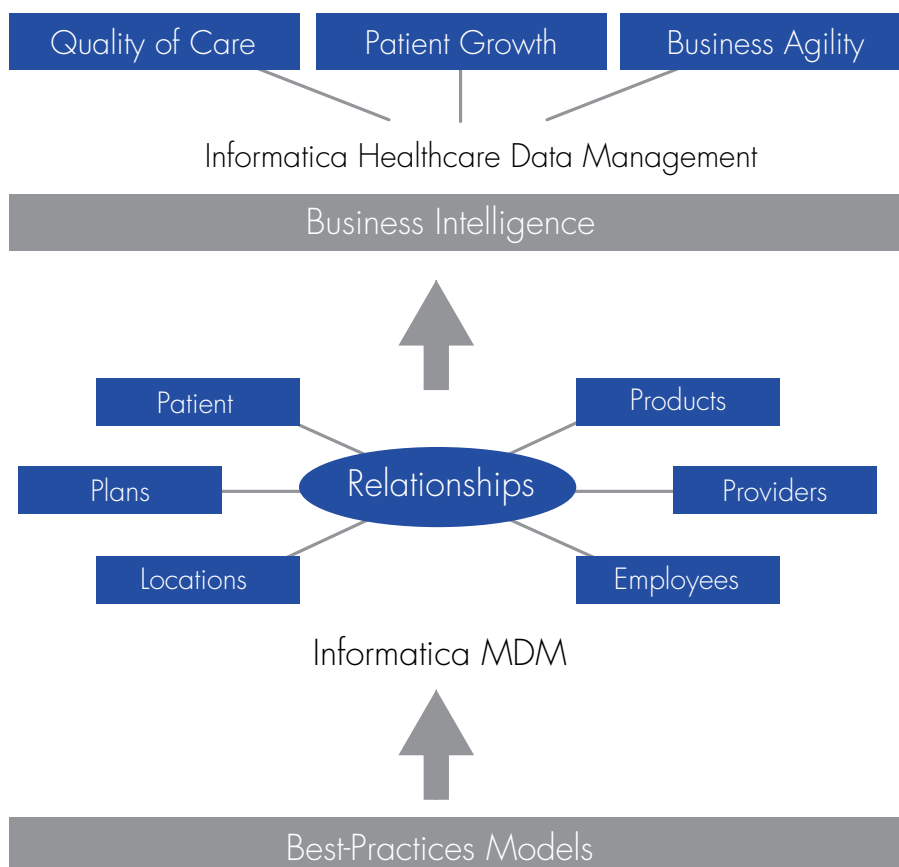
Figure 3: The Informatica- healthcare data management solution reveals relationships among multiple entities to improve quality of care, facilitate patient population growth, and create a foundation for business agility.

Enhancing Business Agility

The Informatica healthcare data management for providers solution increases healthcare organizations' **responsiveness to external pressures**, both now and in the future. A single platform supports a wide range of data types and is easily extensible to others, enabling healthcare providers to keep pace with changing business requirements instead of investing in new solutions to meet new needs. The solution supports a variety of strategic initiatives, such as:

• Facilitating the integration of new business information from mergers and acquisitions

• Providing a common repository to support health information exchange

• Identifying the need for new procedures and services and accelerating their introduction

• Improving overall strategic decision-making as well as the quality of operational information

Meeting Healthcare Providers' Data Requirements

The Informatica healthcare data management for providers solution provides comprehensive, trustworthy data to the organization's choice of business intelligence technology. As shown in Figure 4, the solution meets healthcare providers' information requirements in both operations and analysis. The solution delivers business model-driven MDM to healthcare organizations across the world.
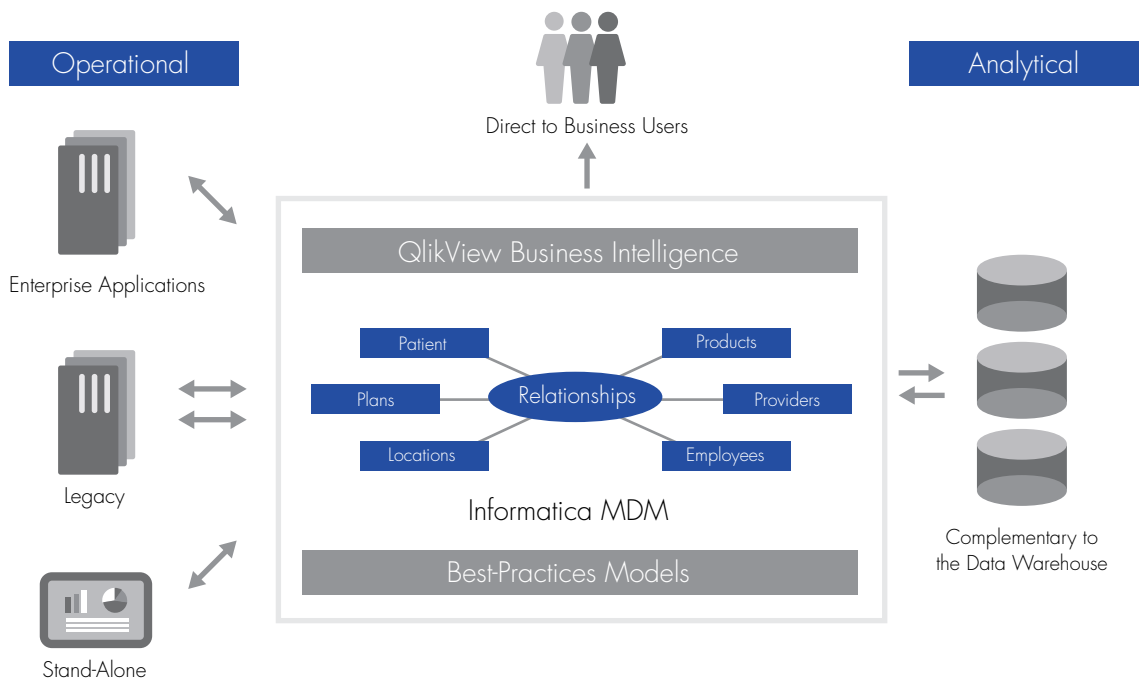

Figure 4: The Informatica healthcare data management for providers solution meets information requirements in both operations and analysis.

Informatica MDM

Informatica MDM **adapts to data**. The best practices data model allows healthcare organizations to choose to manage the master information most relevant to them. Start with the patient, provider or employee data domain, then extend to accommodate health plans, locations, or any other master data entities as needed.

Informatica MDM **adapts to projects**. Within the healthcare data management solution, Informatica MDM is optimized to deliver master information to the QlikView for Healthcare business intelligence layer. The solution can be extended beyond analytical business use; it includes the necessary tools for operational deployments.

Informatica MDM **adapts to the business**. Designed to handle all types of data entities, integrate with a wide variety of systems across the enterprise, and serve as both a tactical solution and a strategic platform, Informatica MDM leverages existing IT investments and lowers total cost of ownership (TCO).

Conclusion

External consumer, financial, and regulatory pressures will continue to place increasing demands on American healthcare providers' available resources. Whether a healthcare organization seeks to enhance quality of care, tap unmet market needs, improve provider relationships, or ensure regulatory compliance—or all of these—the Informatica healthcare data management for providers solution leverages existing data for the kind of deeper insight and understanding that leads to greater value and increased efficiency.

About Informatica

Informatica Corporation (Nasdaq:INFA) is the world's number one independent provider of data integration software. Organizations around the world rely on Informatica to realize their information potential and drive top business imperatives. Informatica Vibe, the industry's first and only embeddable virtual data machine (VDM), powers the unique "Map Once. Deploy Anywhere." capabilities of the Informatica Platform. Worldwide, over 5,000 enterprises depend on Informatica to fully leverage their information assets from devices to mobile to social to big data residing on-premise, in the Cloud and across social networks.

informatica

Put potential to work.™