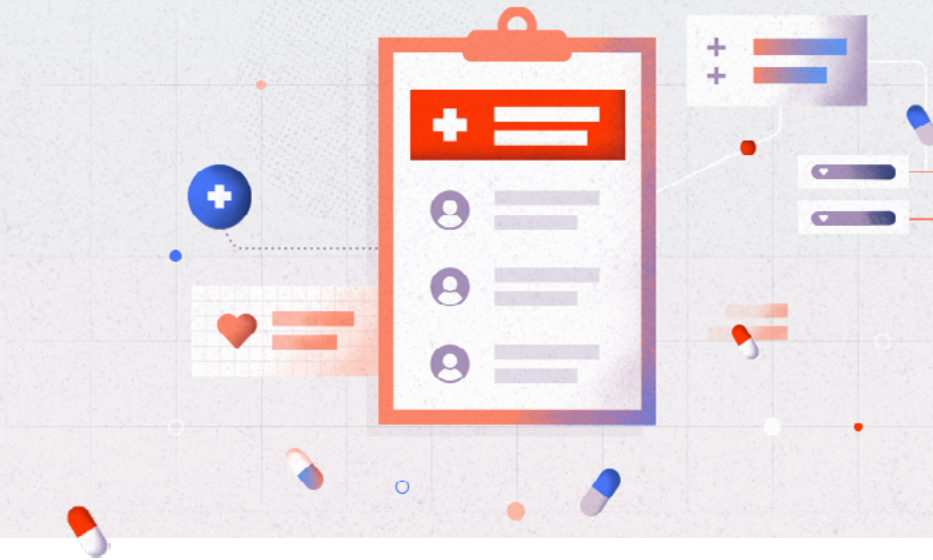




Planning for Healthcare Data Visibility in 2023

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The healthcare industry is at a pivotal moment, and it revolves around data. On the cusp of the new year, it might pay to briefly consider some key moments in the recent history of healthcare:

A Brief History of Healthcare

In the 18th century, [the first American medical society and general hospital were founded](#), and there was a concerted worldwide effort to inoculate against smallpox. The 19th century saw the American Civil War, which plainly demonstrated the need for widespread healthcare. The U.S. Army established the Hospital Corps, the Library of the Surgeon General's Office was built, and half of all doctors joined the American Medical Association (AMA) by century's end. The 20th century brought the expansion of Blue Cross / Blue Shield across the nation, the onset of employer-sponsored healthcare and the HMO model, and the HIPAA act which established privacy standards for patients.

Now, in the present, we are facing a global pandemic, an economic recession (again), and

rapid digitalization. Patients need personalized preventative care, hospitals are experiencing both increased admissions and rising telehealth demands, providers are facing high administrative costs, insurance companies are sorting through a massive amount of claims while trying to set rates, and everybody is working with legacy systems that are complex and siloed. Meanwhile, [according to Forrester](#), bankruptcy filings for large healthcare organizations are 28% higher in 2022 than in 2021. There is enormous pressure on every part of the healthcare system.

Data in Healthcare

As it turns out, there is a common thread running through the entire history of healthcare that has only grown more pronounced over time: data.

Accurately disseminating knowledge about effective healthcare practices was of paramount importance to the eradication of early diseases. The trove of medical information collected during the Civil War necessitated methods to sift through records for [manual pattern recognition](#). Government regulations meant (and still mean) that healthcare organizations must practice responsible data governance to facilitate easy access while protecting patient privacy.

Data may help solve many healthcare challenges, but the sheer volume and complexity of data presents a problem in its own right. The generation of worldwide data is growing at an unprecedented exponential rate, and [according to RBC](#), 30% of that data is produced by the healthcare industry. Such a great supply of information can be enormously profitable, but left unchecked, can end up costing a fortune in non-compliance, management errors, and missed opportunity - and literally put people's lives at risk.

This brings us to the big question: How can those in the healthcare industry ensure their data is properly utilized?

The short answer: Data visibility through data lineage.

Here are some of the pain points different branches of the healthcare industry will face in 2023, and how data visibility through data lineage can help.

Hospitals and Healthcare Providers

Personalized Preventative Healthcare

A combination of rising hospital admissions, advances in medical knowledge and technology, and an overall evolving approach to healthcare has led to a reality where both patients and providers want [value-based, personalized, preventative care](#). 6 in 10 Americans live with chronic conditions, which

are often being tracked with at-home biometric sensors or mobile apps, and Forrester predicts that in 2023, a full quarter of the U.S. population will be treated with remote patient monitoring tools (RPM).

Additionally, [ADSC notes](#) that the pandemic nearly tripled the cost of telehealth medical services. More healthcare organizations are using data for descriptive, predictive, and prescriptive analytics, and continuing their efforts to cut costs and hospital admissions by creating longitudinal patient records [\(per Gartner\)](#) capable of identifying early who actually needs inpatient attention.

The entire shift towards preventative care is built on a foundation of data, and data visibility and lineage aid in effective decision-making.

Administrative Costs

Over 25% of medical expenses are administrative, [according to JAMA](#). This includes activities such as payment transactions, back-office



operations, patient services, and clinical support. There are [twice as many administrative staff](#) members as physicians and nurses, but even still, administrative workflows behind these activities can be inefficient, non-standardized, siloed, and mismanaged. As a result, the healthcare industry has actually decreased in productivity over the past half-century.

Identifying which administrative tools can be integrated with one another, where those tools are located and who can access them, and which manual processes can be automated or moved to the cloud are all tasks supported by data lineage. The data visibility afforded by data lineage can save a small fortune in administrative costs.

Regulation of Electronic Records

The [impact of COVID-19 on data usage](#) in healthcare cannot be underestimated, according to the University of Pittsburgh School of Health and Rehabilitation Sciences; now more than ever, data is coming in at a near-constant rate. 97% of U.S. hospitals use [electronic health records](#) (EHR), and according to [Forbes](#), petabytes of EHR data are generated weekly or monthly across the globe. As structured, unstructured, and semi-structured data comes in like a firehose, healthcare

organizations must comply with regulations like HIPAA, GDPR, and [TEFCA](#) to ensure patient privacy and secure information-sharing. Moreover, McKinsey notes that regulatory changes have historically [followed economic recessions](#), which means providers need to be ready to adapt at a moment's notice. Most clinical systems are not configured for bulk data retrieval, which can limit healthcare organizations from being proactive.

Using data lineage to see exactly where your data came from and where it currently sits will prevent unintended privacy breaches and data silos.

Insurance Companies

Expanded Use of Managed Care

Managed healthcare programs such as Medicare and Medicaid have increased enrollment by 7-8% from 2021, [according to KFF](#). Since these programs are federally subsidized, insurance companies are mandated to act as middlemen between the government and the patients or doctors submitting insurance claims. Those same insurance companies are also working to build provider networks of doctors and collecting information from providers to see what patient procedures have been done.



There is an enormous amount of healthcare data that must be modeled for insurers to set premiums, and must travel between multiple sources to arrive at a final cost per claim. Accuracy and transparency are critical for insurance companies to properly manage their expenses, and data visibility is a key tool for ensuring sound financial health.



Clarifying Claims Information

One of the most troublesome miscommunications between patients, doctors, and insurance companies stems from diagnosis coding. As medical science advances and more patient conditions are discovered to be the result of complications from other underlying conditions, coding diagnoses becomes complicated for doctors and insurers. Insurance claims can [easily be miscoded](#), and since different patient needs are allocated different insurance payouts, even small mistakes can compound and cost millions in missed revenue.

Data visibility through data lineage can support data quality and maintain low costs.

Mergers and Acquisitions

The organizational makeup of insurance companies changes frequently due to increasing mergers and acquisitions, [per Deloitte](#). With every new business transaction of this nature, insurance companies have to map out a potentially unfamiliar claims system to integrate into their existing systems. Just one claim can account for ten or fifteen different records as it changes owners, and it can take up to two months to finalize claims, and that is before any merger or acquisition even begins.

This is an area where data lineage plays a hugely important role for the success of the business - generating a highly detailed data map so no information gets lost in the shuffle.

Across the Healthcare Data Ecosystem

Migrating from Legacy Systems

Many large healthcare organizations have been around for decades, if not over a century, and they have accrued legacy systems over the years that are siloed from one another, do not have the most modern functionality, or both. In the healthcare world where rapid, accurate, and secure data-sharing is critical, more healthcare organizations are [investing in modern technology](#), according to the NIH. Data visibility supports the complete transfer of data from one system to another and protects against the loss of sensitive information.

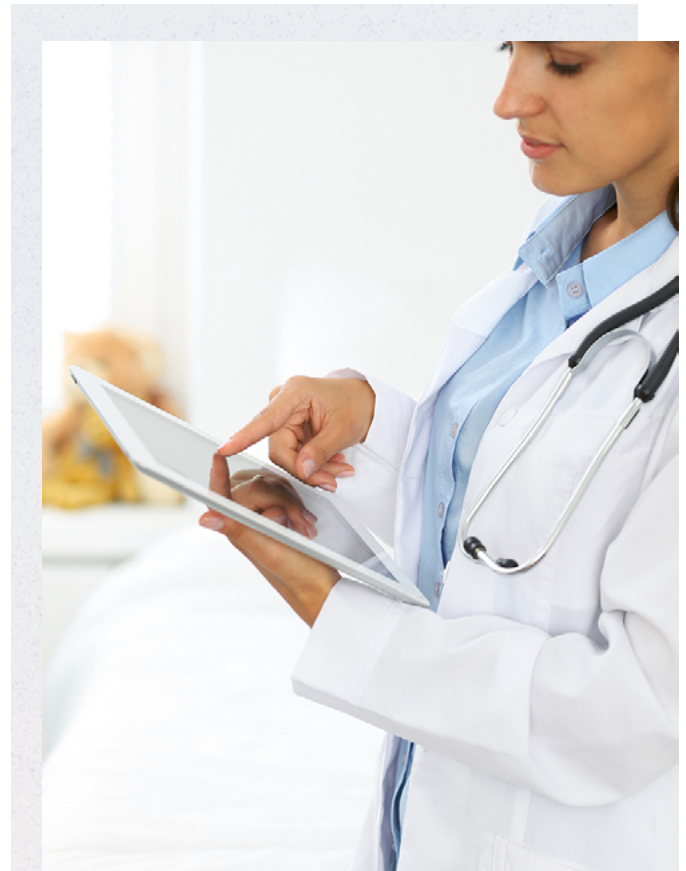
Improved Patient Care with Data Governance

Robust data governance systems are required to ensure that personally identifiable information (PII) is both freely accessible to the various healthcare professionals who need it, and kept under lock and key to ensure the trust of patients. This data can be anything from medical histories to biometric data to insurance claims - anything to help create a longitudinal patient record.

Responsible and efficient data usage [improves patient outcomes](#), according to Tulane School of Public Health and Tropical Medicine. Data governance can also assist with administrative management by providing insights into staffing schedules, supply chain metrics, or average waiting room times. Data lineage can help with all of it.

Growing Role of Data-Focused Workers

New roles have been gaining traction of late to help healthcare organizations manage all the data they receive, such as Health Data Analyst, Data Architect, and Director of Data Platforms. Within hospital systems, a [Health Data Analyst](#) might be tasked with evaluating data for business intelligence and creating reports that will help the hospital run more efficiently. Data Architects at insurance companies are responsible for maintaining the back-end systems processing all incoming data, and Directors of Data Platforms will be making the final calls on which technology to use. All three roles and more can benefit greatly from data visibility through data lineage.



Conclusion

Ben Franklin once said: “An ounce of prevention is worth a pound of cure.” He meant his words metaphorically, but their literal meaning could not be more apt. Imagine cutting hospital admissions by just 5% based on predictive analytics, or preventing 10% of insurance claims from being miscoded - over time, those fixes can add up to millions, even billions of dollars across the entire healthcare ecosystem. Q12023 is fast approaching; meet tomorrow's healthcare challenges by prioritizing data visibility. Patients all over the world - and your wallet - will thank you.

