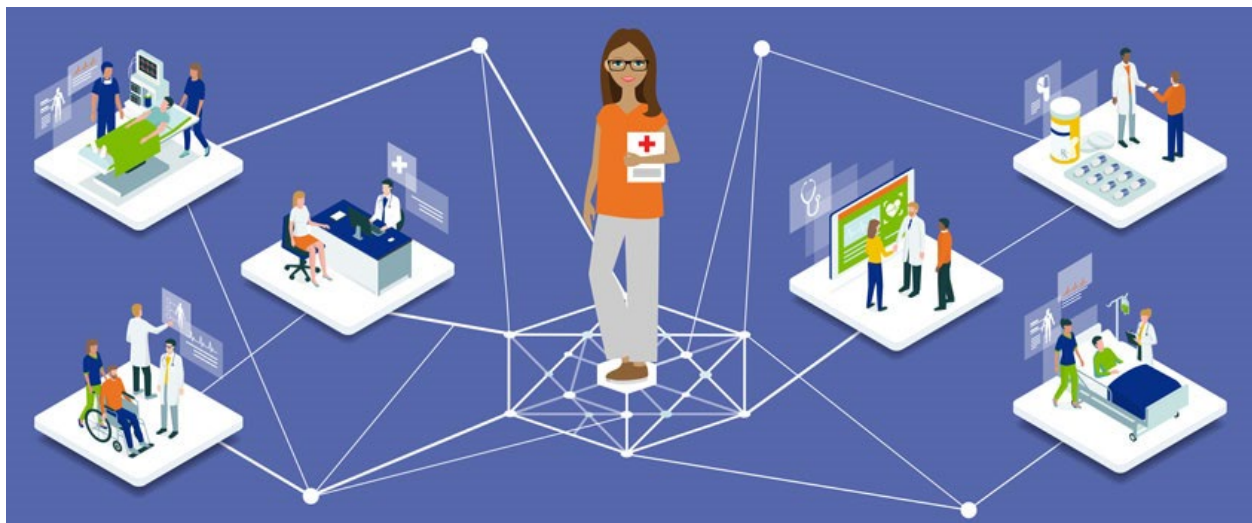


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# Why Poor Data Quality is Holding Back Healthcare

**Gevik Nalbandian**



Garbage in, garbage out. It's a truism used all too frequently in healthcare when discussing data quality. While immensely powerful, data becomes a double-edged sword when the information collected, stored and analyzed is inaccurate and incomplete. Today's evolving healthcare organizations (HCOs) need unprecedented clarity and reliability of their data to enhance reporting and analytics, avoid duplication of services, streamline billing and boost patient safety.

As the industry continues to drudge toward advancing interoperability among a growing digitized environment of infinite applications and systems, HCOs must ensure that the idolized paradise of an open, interoperable healthcare system is in fact sharing and exchanging data that is exceedingly reliable.

## Half of Healthcare CIOs Lack Trust in Data



High quality data is a pivotal requirement in the migration toward value-based care. However, a [recent survey](#) by Dimensional Insight reveals that healthcare IT leaders have a long way to go in trusting the integrity of their data. According to the survey, more than half of healthcare CIOs lack confidence in their data, and approximately three-quarters plan to invest more heavily to improve quality and accessibility.

Deriving value and insight from health data isn't purely a matter of availability and consumption. The data being aggregated must be de-duplicated, free of errors and managed in a manner that securely moves with the patient across the continuum.

The best path for HCOs to instill trust in their data begins and ends with accurate patient identification. If we are ever to deliver on the promise of a fully integrated, highly interoperable healthcare system, consistently and correctly matching the right data to the right individual will be required to enable a fully-connected, 360-degree view of patients for more informed decision-making, enhanced care quality and effective risk management.

Reliance on electronic health records (EHRs) for patient matching can no longer support the reality of today's complex health IT ecosystem. This is because a master patient index (MPI) within EHR systems are designed for a single vendor-based environment and lack the sophisticated algorithms for linking data across various settings of care. When sent downstream, duplicate and disjointed patient demographics trigger further harm, including increased inefficiencies, suboptimal outcomes, lost revenue and hordes of meaningless digitized information that will never be utilized to achieve the goals of the Triple Aim – improve the patient experience of care, improve the health of populations and reduce the per capita cost of healthcare.

A [recent report](#) by Pew Charitable Trusts found EHR matching rates within the same HCO as low as 80 percent – meaning one out of five patients may not be completely matched to their record. When exchanging medical records outside the organization, match rates were far lower – just 50 percent – even when the providers were running the same EHR vendor system. The result is inconsistent, unreliable demographic information, triggering further harm in data quality and synchronization.

## Enterprise Challenges Require Enterprise Solutions

As HCOs become more dependent on initiatives such as population health, social determinants and precision medicine – all of which rely on high-quality data – use of robust, best-in-class tools that positively identify patients will be required. CIOs and other HCO leaders should consider investing in automated, enterprise-grade patient identification technology that facilitates fluid health information exchange while improving data integrity.

Implementation of an enterprise master patient index (EMPI) is an industry best practice essential to any HCO's data management and governance framework. Without common technical standards in place, EHR systems continue to collect information in various formats that only serve to perpetuate the issue of duplicate record creation. A robust, automated identity-matching solution like an EMPI, that uses both probabilistic and deterministic matching algorithms to account for minor variations in patient data, generates a single best record that links the right patient to the right data. Mature and reputable EMPI platforms can boost record matching accuracy as high as 99 percent.

Advances in cloud computing, mobile technologies and machine learning create an even greater need for EMPI tools to ensure that the HCO is capable of integrating emerging applications and linking new data streams into an individual's medical record. As the complexity of interconnected systems grows, EMPIs are in a position to help organizations swiftly aggregate and unify patient data to keep pace and remain competitive.

Delivering the right information, on the right individual, at the right time is essential to helping busy clinicians and physicians provide the best care possible. Rethinking the current approach to maintaining demographic data quality is the first step. We have to stop believing that EHR data will hold any value if the information being collected is inaccurate, incomplete, outdated or inconsistent. And that can only occur with technology that ensures positive patient identification at every touch point.



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