

# Six Critical Steps for Data Governance: A Roadmap for Effective Healthcare Data Stewardship



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## INTRODUCTION

With a sophisticated IT ecosystem sourced from multiple vendors, an avalanche of data from third-party sources, and the demand for real-time operational insight, effective data governance has become both challenging and mission critical. Without strong data governance practices, strategic business initiatives will slow, or worse yet, stall completely, as a result of incorrect or incomplete data. Anticipating and preparing for the ever-increasing volumes of data requires supporting data stewardship with processes and technology that enables best practices.

The following are six critical steps that a data steward should be able to undertake with a quality Enterprise Master Patient Index (EMPI) in order to create and maintain the highest-quality, “golden view” of the patient—in turn leading to high-quality, comprehensive care for patients and cost-savings for hospitals.



## 1. Assess the **QUALITY** of your **DATA**

This step is all about building a realistic picture of where you stand. It's crucial to gain insight into the quality—and limitations—of the data that is available to you. Start by looking at the types of processes that are generating the data in the first place—it's likely that you're gathering data from a range of different systems and different departments within the organization on the front end, and those systems will have certain limitations, properties, and processes that will have an impact on the data itself.

You may, for example, have systems where the data is gathered via forms that are then processed and transcribed. The nature of transcription means that errors will be introduced. If, for example, information is being gathered via phone from a patient, a name may be misheard and consequently entered incorrectly, or "15 Main Street" may sound like "50 Main Street." Or a date of birth may be required by the automated system, but the operator may leave it blank, causing the system to incorrectly assign a default date to that field. In understanding how data is captured and processed, you can begin to understand its quality and the level of trust you can place in its source.

Another factor that influences the level of trust that can be placed in a source of data is the process that leverages that data. For example, a billing department is likely to have high-quality, accurate address information, because that data is crucial for billing. An emergency room, on the other hand, is more focused on information about acute care and medical conditions, but might have less complete

address information. Assessing this quality in each of your separate systems will inform what kinds of data cleansing will be needed downstream, while also helping you identify any failings—let's call them opportunities for optimization—in your existing data input processes. For example, if part of the process in one system requires an address field, but the field is often captured as "not known," there is opportunity for improvement here, either by eliminating that field if it's not crucial information for that particular department or system or by reengineering the process to verify that information.



## 2. **INTEGRATE** your **DATA**

Once you have a sense of the quality, integrity, and trust you can place in the source data, you'll need to integrate all the disparate information and start building a "golden view" of the patient. This brings all the available information together, using a reliable EMPI software solution. There are three steps to effective data integration, as follows:

- **Implement integrations to maximize benefit while minimizing cost**—  
Consider the priority of the data. Which information is crucial to creating the golden view and serving the business need? In what order should systems be integrated to enable the fastest time to value at the most efficient cost to your organization?

- **Implement data priorities within EMPI**—Lay out a model, or template, of how you want the data to be rendered within the system. Map out which fields are important for creating that golden view. For example, some of your systems may have captured a middle name and some may not.

- **Implement integrations in line with rate of change; real-time, overnight batch, or once a month**—Decide whether there is value for your organization in implementing integration in real-time. If the data you're looking at isn't information that will change on a daily or weekly basis, there's little value in using a more sophisticated real-time integration.

At this stage, you'll want to set up an initial template for what you'd like your golden record to look like, then start running all your data through that template to see how the system is matching. Can you bring together all the disparate information you have on a patient called Kelley Smith and match it to create the golden record? Can you differentiate the Kelley Smith that lives on Main Street and the one that lives on Park Avenue?

This matching stage will require collaboration between your organization and the EMPI solution provider. The solution provider understands how to maximize the value and create the best record based on their experience with the EMPI, and you have a deep understanding of how the golden record needs to look to maximize value to your business. Additionally, the right EMPI provider will engage with you early on in the process and guide you through each of the stages while empowering you and your team to take ownership of the ongoing process.

This is really the stage where you bring it all together and start to understand the quality of the outcomes that you can achieve.

## 3. **DISCOVER** a good **MATCH**

Explore how the data is going to interact between systems; how it will blend to create the golden record for each patient that will generate a more complete and accurate picture. This blending process also gives you the opportunity to discover relationships hidden inside your existing data sources.



## 4. **MANAGE** ongoing **CHANGES**

Once you've completed the matching in step three, from this point forward, what you are doing is assessing and refining your data quality through a process of continuous improvement. Patient data is ever in flux, with new patients, changes of address, and changes in your own business process. It's necessary to establish and maintain your business rules so you can improve the quality of your data in real time.

Your EMPI system should now have enough confidence in the raw data that you've input that it can automatically merge all the records together into the golden view. However, oftentimes the reality is that you'll have confidence that there is some level of quality matching going on, but not enough for the system to merge the data automatically. In that case, a data steward within your organization will need to assess the data as an appropriate match of information and then merge it into the golden record, or investigate the source data to resolve any missing or erroneous information.

That investigation may require internal phone calls between departments to verify or gather more information, or external calls to patients. The EMPI solution you choose needs to have the right tools to help the data steward decide which matches are accurate and which need more work, and to act accordingly.

If you are finding a large number of these "grey area" matches—where there's just not enough information to identify whether the data is the right information or the right patient in order to add it to the golden record—this may point towards quality issues in

your source system. If this is the case, it's advisable to take this as an opportunity to improve your source systems—say by implementing a data quality initiative that would improve input of date of birth or address—rather than trying to force incomplete matches into your golden record. A good EMPI software solution is only as good as the data you feed it.



## 5. **OPTIMIZE** your **DATA**

Step four will have naturally revealed any potential gaps within your data. A critical mistake many hospitals make is trying to maintain the quality of their data based exclusively on information from within the four walls of their own organization. But if you use only your own internal data, there is a maximum level of quality you can achieve. By using third-party reference sets, you can often bring in a much higher level of quality that will lead to better matching and ultimately more complete records that eventually get pushed back out to the rest of your organization.

As just one example, since one in nine patients moves every year, and years may pass between interactions with your organization, you simply have no way of knowing if patient address information is inaccurate. Having an EMPI partner that can enrich your data using real-time, third-party sources can make or break your master data management strategy.

**There are three ways that the use of third-party sources can help improve your golden patient record:**

- **Verify Information**—Some EMPI solution providers work with third-party sources to verify data. This may involve sending out an address (stripped of name or other sensitive patient information) and finding out whether it is accurate.
- **Enrich information**—In this case, you can provide incomplete information to a third party and get back a more complete view of the patient. This is most often used not for sensitive information, but for activities such as analytics and marketing. For example, you could provide a third party with a name and address (no medical information) and they might provide you with demographic information such as household income and education level. This data can then be used for general marketing efforts, such as sending out direct mail to notify people in your area that a new oncology wing has opened or that advanced breast cancer diagnostics are now available at your facility. Enriching information is a way for a marketing or analytics department to help partition customer groups and identify how they want to be communicated with and what material they might find interesting or relevant.

- **Access brand new information**—Many individuals in the US, for example those with lower incomes who rent rather than buy homes, change addresses often—even as much as once per year. When that happens, the only way you can know something has changed is if you try to contact the patient (to send a bill or schedule a follow-up appointment, for example) and fail to reach them, or if they reach out to you, which may only happen when they need medical attention, months or even years after they have moved. There are a variety of reasons, including marketing and billing, why it would be beneficial for you to have your patients' most recent address information. For this reason, some EMPI solution partners are now working with the US Postal Service to offer a mechanism to proactively update address information on a monthly basis, whether or not the patient has reached out or made contact. This feature allows your organization to be confident that you will have the most up-to-date contact information for your patients when you need it most.

Your EMPI partner should offer these third-party data enrichment options as features you can customize and choose to utilize based on the specific needs of your business. Such features are not without cost, so it's important to think strategically about which options will offer you the highest degree of confidence in your golden record.



## 6. **SHARE** information **DOWNSTREAM**

To realize the true value of your newly developed patient golden record, it's important to efficiently push this view back out to the enterprise, including the source systems from which the data was originally gathered.

That involves setting up “business rules” for fine-grained control of this process. If you have a high degree of confidence in a particular data field that has come from a source system (for example, you know the billing system already has accurate address information), then you should be able to implement an automated business rule that pushes that address information back out to all the other systems in the organization. This allows each individual system to enrich and build out their golden record of each patient.



## **TRANSPARENCY** is the **FOUNDATION**

- **Transparency** – Offering actionable insights into the data that allow users to gain critical perspective and make informed business decisions
- **Empowerment** – Providing an intuitive, self-service interface that allows the technology to fade into the background while the data and insights come into sharp focus
- **Speed-to-value** – Giving users the ability to see measurable results and return on investment quickly, without months of complicated onboarding or a steep learning curve

When selecting an EMPI solution provider, look for a true partnership that offers full data transparency, advanced customer service, and robust data stewardship capabilities. The best EMPI solutions deliver unparalleled integration, cleansing, and matching capabilities and speed-to-value that will enable your organization to drive advances in data management for years to come.

The above steps are only possible if you build trust within your organization, from data owners through to executives. Choosing the right technology partner who will provide transparency at each step along the journey is necessary to gain buy-in and to maximize the value hidden in your existing data assets.

Any good data management partner will recognize that this process of mastering data is very complex. With data quality assessment, matching and its associated outcomes, and the need to integrate many systems and workflows, there will be many stakeholders and many viewpoints within your own organization.

That's why it's so important to have a data solutions partner who will work with you and offer complete transparency—to help you get a realistic view of the state your data is currently in, so that over time, you are able to see the benefits of continuous improvement. The best road to transparency between a solutions partner and a hospital or health system has the following landmarks:

# VisionWare

a Master Data Management company

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**Contact VisionWare to find out how a Master Data Management (MDM) solution could benefit your hospital or health plan**

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VisionWare is a leading provider of Master Data Management (MDM) and Enterprise Master Patient Index (EMPI) solutions for healthcare organizations and state and local governments. We provide the tools for both government entities as well as healthcare providers, payers, and technology companies to make critical advancements in digital transformation, analytics, citizen/patient engagement, quality improvement and compliance. Our solution suite will match, verify, govern, and integrate your data, providing one rich, comprehensive view of your organization's patients or constituents. We have the flexibility to work with multiple systems and connect data from a variety of data silos within those systems. Coupled with our world-class consulting team, our software can deliver value in days, not weeks or months. Visit [www.visionware.com](http://www.visionware.com) for more details about our comprehensive suite of MDM solutions