

ARGO EMPI

Overview

An interview with David Engebos



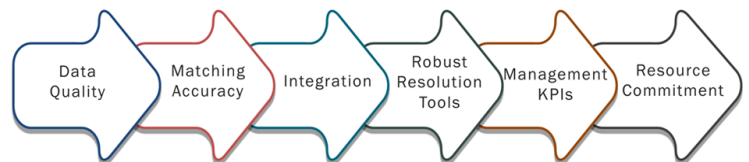
EMPI improves performance and decreases risk by identifying and preventing duplicate data through evaluation, linkage, and resolution of multiple patient records across systems.

Q: What is the importance of an Enterprise Master Person/Patient Index (EMPI) solution to a healthcare provider?

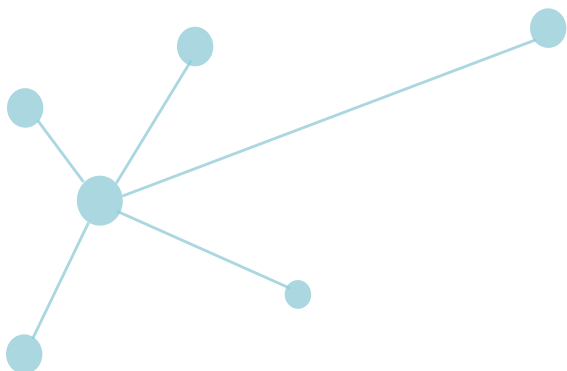
David Engebos: “Every healthcare provider has at least one index of patients, and that index must be carefully curated within the organization to ensure each patient record reflects the correct person and all of that patient’s identities across the organization. We know how easy it can be for a patient index to get ‘messy’ with records containing any number of identity issues, such as duplications, overlaid records, and overlaps across sources. The U.S. Department of Health and Human Services (HHS) Office of the National Coordinator (ONC) defined the target identity issue rate in an organization’s EMPI to be at or below one-half of one percent. However, today’s electronic health record (EHR) and hospital information system (HIS) applications do not have the specialized capacity or technology to achieve and maintain such a low level of identity issues. ARGO strives to assist its customers to meet and exceed the ONC target by aiming for the ideal condition within any organization’s EMPI, which is ‘One Person, One Record’ across all systems and sources.”

Q: Which factors do successful institutions consider when choosing an EMPI?

David Engebos: “Choosing the right EMPI for your organization can be a challenge in a marketplace that offers varying philosophies, technology approaches, and degrees of accuracy with respect to the management of patient identities. In addition to these differences, successful organizations consider a number of key factors contributing to the choice of EMPI solution:



Let’s explore these one at a time.”



David Engebos,
ARGO President & COO



Overview

Q: What contributes to poor data quality?

Data
Quality

David Engebos: “Data quality and intake practices drive the health of an EMPI. Poor data quality with inconsistent intake practices are responsible for most duplicate and overlay records in healthcare.

Sparsely-populated records offer little to work with during the matching process, and incorrect data speaks for itself—‘garbage in, garbage out.’ When intake practices at the point of patient registration are inconsistent or when placeholder or bogus data is used for common situations such as trauma patients, newborns, patients experiencing homelessness, and others where data is not yet available or known, values can vary widely and wreak data havoc when there are no clear procedures to standardize these values for consistency across all systems and users.”

Q: How can a low issue detection rate be a misleading indicator of record matching accuracy?

Matching
Accuracy

David Engebos: “It’s natural to assume that the system components responsible for catching patient identity issues in records is working well if there are few issues flagged, but that’s not always the case. The

responsible system may not prioritize this function in either its usability or its outputs. When an organization relies on a clinical system or a ‘jack of all trades’ application to be strong in every function, it is often true that the system’s duplicate, overlay, and overlap detection capabilities are weaker than a solution dedicated solely to patient identity matching and EMPI functionality. As a result, a ‘merely adequate’ system leaves many issues undetected.

Patient matching accuracy becomes an organizational priority when the consequences of poor matching accuracy and undetected matches are exposed through rising patient safety issues, clinical confusion, and lost revenue. This reactive posture leaves the organization ill-equipped to know the full depth and complexity of identity issues living and growing within the organization, leaving them without the proper tools to respond appropriately.

A proactive approach begins with a side-by-side comparison of matching accuracy between a more generalized system and a specialized solution, which results in the deployment of a specialized dedicated solution with high levels of accuracy to detect every suspected identity issue in real time.”

Q: What is your experience with system integration?

Integration

David Engebos: “Disparate systems must integrate with the EMPI within an organization—usually via HL7 or APIs—so that patient records and activities such as merging and linking are communicated between

all participating systems in real time. Interoperability—particularly through APIs—is foundational to an effective EMPI strategy, and it is a major goal of the Health & Human Services Office of the National Coordinator (ONC), which governs HealthIT in this country.

While HL7 standards are widely known, the true challenge of system integration lies at the data layer. ARGO’s EMPI team has worked with data from over a dozen healthcare organizations and dealt with varying degrees of quality and completeness. The team is well versed in ARGO’s data extensibility capabilities, which integrate with the most complicated data.”

Q: Describe how your matching processes and workflows improve resolution efficiency.

Robust
Resolution
Tools

David Engebos: “When an organization is able to be proactive about its data quality, intake practices, and patient matching accuracy, the onus of attaining a ‘clean’ EMPI falls on the organization’s

available tools to resolve identity issues detected during the matching process. With robust issue resolution tools, identity issues detected during the matching process can be quickly and accurately confirmed and appropriately reconciled. The question is, ‘Do these records represent the same person?’ This is answered through additional automated matching methodologies and manual review by data stewards, where decision workflows depending on the type of issue detected and actions to resolve it can be automated and customized as needed.”

Overview

Q: How does your EMPI solution support a long-term strategy through management insight?

Management
KPIs

David Engebos: “Reporting is a key factor when choosing an EMPI. The organization’s data governance teams must have access to real-time data as well as retrospective visibility into their challenges and

their progress for addressing identity issues, and management must be able to assess its EMPI health from many different perspectives. By providing insightful KPIs for both of these audiences, an EMPI solution becomes a responsive vital partner in both daily operations and in long-term strategic planning.

Through extensive experience in monitoring solution environments, the ARGO Early Detection Monitoring Service (EDMS) team identified specific metrics that indicate the ARGO solution’s performance and operational health and status. These metrics are useful in predicting impending issues and improving performance.

Metrics are grouped into the following categories:

- Operational Health
- EMPI Statistics—MPI lifetime through the reporting month
- MPI Health—New records created in the reporting month
- MPI Health—New tasks created in the reporting month
- Productivity—Tasks resolved in the reporting month
- Workload
- DP Utilization
- Data Quality
- System Performance

Reports detail registration activity, linkage and duplicate issues, workload, and audit information at the organization, facility, and individual user level. These reports provide insight into trends and issues across all levels of the organization.”

Q: What resource commitment is required for a successful EMPI implementation?

David Engebos: “After considering all of these factors, an organization choosing an EMPI solution will succeed by making a fundamental commitment to providing the necessary resources to deploy, implement, and maintain its daily operational needs. The organization commits to hardware and other technical equipment, and implementation and maintenance by its IT staff and EMPI professionals to oversee and manage data governance. When an organization prioritizes its EMPI needs, not only in high visibility but also in its internal operational budget, it has the best opportunity to achieve and maintain a ‘clean’ healthy, responsive, and accountable EMPI where ‘One Person, One Record’ is a reality.”

Can you identify Maria?

- Maria Lupe de Garcia
- Maria L. Garcia
- Maria Lupe Garcia
- Maria Garcia Johnson
- Maria G. Johnson



“When an organization prioritizes its EMPI needs not only in high visibility but also in its internal operational budget, it has the best opportunity to achieve and maintain a ‘clean’ healthy, responsive, and accountable EMPI where ‘One Person, One Record’ is a reality.”

David Engebos, ARGO President & COO

Q: In what ways are your customers able to customize the ARGO EMPI solution?

David Engebos: “Our applications allow customers to build out their existing organizational structure of source systems and entities so that operational units, revenue streams, cost centers, and those held accountable for overall EMPI health can be optimally organized and managed on a daily basis. No matter the size of the organization, its structure can be mirrored within the applications in great detail and reflected throughout the reporting as well, including individual end users and their teams. ARGO’s application security drives appropriate access privileges to task queues and electronic personal health information (ePHI) based on this organization structure, so users can only access data, functions, and reports per organization authorization. Our applications tap the organization’s active directory for end-user authentication, and all interface messaging transactions to and from our Entity Match engine are encrypted.

Another key area for customization is in the Auto-Decision Rules, or data governance business rules. For example, if the customer’s EMPI professionals only merge two records when data conditions a, b, c, and d are true, our Auto-Decision Rules can be customized to specify these data conditions after our matching process has taken place, and the customer can define specific actions that should be taken on the records based on the results of those data condition rules. This flexibility empowers customers to automate decisions and actions exactly as if a human data steward resolved the issue manually, applying the same rules for the same data conditions, and then taking the same actions.

Finally, our customers can configure the upper and lower probabilistic match weight thresholds to automate decisions and actions on the highest match weight tasks and defer attention to the lowest match weight tasks, optimizing staff utilization.”

Q: Why should a healthcare organization choose ARGO for its EMPI needs?

David Engebos: “ARGO’s EMPI solution offers proven high-quality matching accuracy through multiple methodologies to arrive at the industry’s best results. We used our internal Data Profile Analysis as our initial data review process using our many matching methodologies to analyze more than 165 million patient records for identity issues, and this analysis process yielded far higher accuracy than can be achieved using the major and minor HIS/EHR applications in today’s marketplace. The ARGO Entity Match and Entity Resolution solution works seamlessly to manage patient matching and identity issue and task resolution for our customers.

Our solutions offer a Duplicate Prevention application. By deploying this API-driven, real-time intake tool, registration professionals at every point of patient intake employ matching methodologies and biometric tools to select the correct patient record and, when one does not exist, to create a new record with the strongest possible data quality. This allows our customers to drive data quality strategies and process improvements organization-wide while preventing duplicate records from being created and perpetuated.

ARGO’s EMPI solutions work together to drive our ‘One Person, One Record’ goal directly into patient identity harmonization within every source and downstream system across an organization. Our management KPIs provide meaningful insights into an organization’s EMPI health, task volumes, data quality, and resolution outcomes organization-wide in real-time, near-time, and over time, and our Early Detection Monitoring Service improves real-time monitoring of the organization’s EMPI health, system performance, workload, and productivity so that technical and operational issues are rapidly detected and resolved. ARGO’s end-to-end solutions offer the highest accuracy and the best tools to achieve and maintain ‘One Person, One Record’ organization-wide.”

“This flexibility empowers customers to automate decisions and actions exactly as if a human data steward resolved the issue manually, applying the same rules for the same data conditions, and then taking the same actions.”

David Engebos, ARGO President & COO

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Q: How has ARGO been able to leapfrog the industry on patient matching accuracy?

David Engebos: “ARGO has been providing mission critical software solutions to the financial industry for 40 years. With our expertise in scheduling, fraud detection, person demographic matching, predictive solutions, and person data protection, it was an easy decision to transition to healthcare solutions, particularly into the EMPI market space. ARGO has a long history of delivering high-quality products that solve complex customer challenges. Our EMPI Entity Match & Resolution solution along with our Duplicate Prevention product use a proprietary probability matching algorithm along with an array of additional matching technologies (including an ARGO-patented address parsing component), which together consistently identified more record agreements and disagreements with higher precision and recall than our competitors. We add to that a series of customer-defined data governance business rules that allow our solutions to expand our matching capabilities directly into automated decision-making and action-taking processes, freeing our customers from manual review and tedious research while maintaining high confidence in outcomes. Our unwavering goal of ‘One Person, One Record’ drives our matching accuracy and our automated decisions and actions to minimize identity issue tasks requiring data steward time and expertise so that our customers can focus on the business of healthcare with confidence in a healthy trustworthy centralized EMPI.”

Q: As a market leader in patient matching accuracy, how does the ARGO EMPI solution stack up against the HIS/EHR applications that include EMPI functionality?

David Engebos: “While most industries have application vendors claiming to ‘do it all,’ patient matching and the ongoing maintenance of a ‘clean’ centralized EMPI are highly specialized.

The big gain from relying on a modular enterprise-wide HIS or EHR application is interoperability. However, the big loss in that reliance is a significant lack of depth, expertise, and focus. From an EMPI perspective, that loss can negatively impact patient safety, revenue, and reputation. Often, the loss of depth may not be worth the breadth gained when deploying a large enterprise-wide application. This is particularly common in specialty areas where the greatest value is gained only when specialized tools are exercised to their maximum potential.

In an age when many disparate applications need to work together across an organization, interoperability has greatly matured with the HL7 and API standards now in place across the healthcare marketplace. Past challenges to seamless interoperability are readily addressed with common approaches that easily handle accurate real-time communications between differing systems and platforms.

Additionally, most of the disparate applications in healthcare organizations today bring their own independent master person index (MPI) but are not able to support and manage all of the other MPIs within an organization. What is really needed is an independent EMPI sitting in the middle that can integrate and manage all of the MPIs within an organization—an agnostic, centralized hub within which to resolve detected identity issues and from which patient identity can be brokered across all of the participating systems.

With a dedicated, specialized focus on patient identity and all of the intricate details involved in managing a centralized enterprise-wide MPI, the ARGO EMPI solutions bring both depth of purpose and breadth of usability to our customers. Our unwavering dynamic focus on patient identity means that we excel in the vital fine details where other vendors are only able to offer a ‘good’ general set of tools that in reality barely scratch the surface on patient identity and matching accuracy.”

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