



Entity Match & Resolution

Improving healthcare performance by accurately matching patient and provider entities

Features

- ▶ Improved accuracy using natural language and machine learning
- ▶ Active Integration to avoid creation of duplicate entities
- ▶ Biometric device support to maintain unique identities and avoid identity fraud
- ▶ Just-in-Time adjudication of duplicate profiles
- ▶ Advanced prioritization workflow with queue and team management features
- ▶ Data profiling tools and analytical reports
- ▶ High-performance, service-oriented architecture
- ▶ Rapid deployment options and flexible entity configurations

Minimizing Duplicate Rates

Industry studies show that the rate of duplicate patient records ranges from 4-12 percent, and this rate may increase as healthcare organizations share patient health information. Further, according to the American Health Information Management Association, many errors and adverse incidents in healthcare occur as a result of poor data and information. In addition to threatening patient safety, poor data quality increases healthcare costs, inhibits accurate analytical research, and impacts performance measurement initiatives.

ARGO Entity Match & Resolution provides an Enterprise Master Patient Index (EMPI)/Master Data Management solution. This solution can lower duplicate rates below 0.5 percent, exceeding the Office of the National Coordinator for Health IT 2020 accuracy goals.

Benefits of improved matching accuracy include:

- Improve searching to prevent duplicate entity records
- Remediate potential duplicates faster
- Reduce incidence of adverse clinical impacts
- Achieve regulatory compliance
- Improve quality and safety of patient care
- Increase reliability and trust in population health quality measures
- Expand revenue cycle performance

Along with low duplicate rates, the ARGOS solution enables healthcare organizations to systematically enforce data governance and quality policies of patient and provider entities across systems.

Employing Probabilistic Models

Entity Match & Resolution achieves these results by employing probabilistic models with typographical error, natural language processing, and cultural phenomena to determine the probability of two matching records. The matching engine uses intelligent machine learning techniques to fine tune parameters for implementing organizational, regional, or departmental data characteristics. The result: unparalleled levels of precision and matching performance without regular and expensive match engine tuning.

Designed to work across data-intensive healthcare technology environments, the solution accurately matches and links records including hospital electronic health records (EHRs), and clinical and physician practice management systems. Entity Match & Resolution also fulfills data analytics requirements of health information exchanges, accountable care organization models, and population health initiatives.

Optimizing Entity Data Quality Management

The solution's workflow, task, and entity management application provides an intuitive, browser-based user interface for matching and resolving adjudication tasks, maintaining unique entities within the master entity repository. It also identifies entity data quality issues, such as potential overlays, duplicates, or overlapping source system records.

ARGO Entity Match & Resolution

Entity Match & Resolution provides:

- Dynamic facility and skill-based workflow
- Event- or visit-based task assignment and prioritization
- Service level agreement management
- Overlay, link, and merge resolution facilitation and guidance
- Performance and accountability-based analytical reports

Supporting Large Data Volumes

Solution architecture supports large volumes of data required for any size healthcare organization:

- Allows quick and adaptive scaling to meet changing needs
- Supports logical and physical multi-tiered configurations
- Provides database independence
- Delivers web services-based integration

Quantifying Existing Duplicate Rates

ARGO has evaluated more than 130 million patient records across multiple EHRs. Applying this experience, ARGO helps organizations identify their actual duplicate rates and recommends concrete actions for resolution. The **ARGO Duplicate Profile Analysis Service** brings together its team's expertise and analytics toolset to profile the organization's patient index and provide details on anomalies and strategies for remediation.

