



Putting Privacy First:

Independence Health Masks Data to Protect Millions of Insureds



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Gary Morreale
Director, Data Services
Independence Health Group

Goals	Solution	Results
Safeguard Protected Health Information (PHI) for 8.3 million insureds to protect customers and avoid the high cost of healthcare data breaches	Use Informatica Dynamic Data Masking to de-identify data, anonymizing member names, birthdates, social security numbers, and other sensitive data in real time	Improves data privacy and security for individuals and families, boosting customer loyalty, trust, and retention while helping protect the bottom line
Allow on- and off-shore developers to test applications using real data, but with sensitive and/or personally identifiable information obfuscated	Apply data masking in structured, non-production environments first, including a Teradata data warehouse and Microsoft SQL Server and Oracle databases	Empowers developers to quickly build and test high-quality applications without the risk of unauthorized data access
Create value by opening up data for safe collaboration with outside data processing partners	Mask data when partnering with other organizations that provide healthcare data services but will not accept production data in their non-production systems	Makes data safe for use outside the organization, including collaboration on data processing

Business Requirements:

- Use the same data for masked and non-masked requirements
- Avoid passing encryption keys from every application or connection
- Set rules for different IDs to determine if and how masking is applied

About Independence Health Group

Serving more than 8 million people nationwide and nearly 2.5 million in the Philadelphia region, Independence Health Group is a leading health insurance company that helps people lead healthier lives. Both AmeriHealth Administrators and Independence Blue Cross fall under the umbrella of Independence Health Group.

A data breach is painful in any industry, but the cost is highest for healthcare at \$408 per compromised customer record, on average, [according to the HIPAA Journal](#). For a large insurer such as Independence Health Group, that means billions of dollars could be at risk if Protected Health Information (PHI) about its 8.3 million customers fell into the wrong hands.

To protect its insureds and avoid the high cost of healthcare data breaches, Independence Health embarked on a multi-year data masking strategy. Masking nonproduction data was the first goal: Independence Health wanted to allow on- and off-shore developers to test applications using real data, but with PHI and other personally identifiable information obfuscated from their view. It also wanted to prepare to comply with future healthcare regulations that will likely require data masking, without impacting established business and clinical workflows.

“Data breaches in the healthcare industry are highly publicized and can be extremely costly from both a financial and reputation perspective,” says Gary Morreale, Director, Data Services at Independence Health Group. “To mitigate that risk, we wanted to use data masking to secure the data and make it harder for someone to compromise it.”

More secure development using real customer data

Instead of creating new copies of the data on a secondary infrastructure and manually masking the fields that contain PHI, Independence Health looked for a more flexible solution that would allow it to use the same data for masked and non-masked requirements. It considered using encryption, but did not want a performance penalty or key management hassles. After considering various options, it decided to use Informatica Dynamic Data Masking to mask member names, birthdates, social security numbers (SSNs), and other sensitive data in real time as developers pull down data sets from a Teradata data warehouse, Microsoft SQL Server, and Oracle databases.

Built on a patented database network in-line proxy, Informatica Dynamic Data Masking installs transparently between applications and data sources. The proxy then listens for requests, processing and analyzing all inbound application requests from application screens and development tools. Requests are sent to the data source for execution. An intelligent rules engine uses specified criteria to identify which SQL statements or results should be modified. When there is a match, Informatica Dynamic Data Masking applies masking in real time, preventing unauthorized access to sensitive information.



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Peter Meredith
Manager, Test Data & Architecture
Independence Health Group

“With Informatica Dynamic Data Masking, we can immediately mask new fields and data added to tables,” says Peter Meredith, Manager Test Data & Architecture at Independence Health Group. “There’s no need to modify data on the way in. We can roll out masking one column, table, or database at a time.”

Using Informatica Dynamic Data Masking, Independence Health can set different rules for different account IDs. For example, it can apply masking to user accounts but not service accounts, as applications that only display one customer at a time via service accounts pose little breach risk compared to those that display many customer records simultaneously. It can also block access to data that is not masked using inherent DBMS security controls and network segmentation capabilities.

“Informatica Dynamic Data Masking supports all the data platforms we require, and the flexibility to set rules on how the data is masked based on our needs was another big plus,” says Morreale. “It’s truly a dynamic tool that can do it all, and we don’t have to ask end users to do anything differently.”

Meredith agrees: “The fact that we don’t have any key management to deal with is great from an administrative standpoint. We looked at other solutions that would have required us to set up the application’s connections differently in order to handle keys or do something special. With Informatica Dynamic Data Masking, we didn’t have to do any of that. We had pretty close to zero effort on the application development side in order to implement this.”

Protecting families while mitigating financial risk

Developers still work as they always have, except that certain aspects of the data are not visible to them. They can see enough of the data to do their jobs, but nothing that would reveal a complete SSN, for example, or identify with whom the data is actually associated.

Masking non-production data in this manner improves data privacy and security for insureds and their families, ultimately boosting customer loyalty, trust, and retention. It also helps protect Independence Health’s bottom line from the high costs associated with data breaches. Meanwhile, developers can quickly build and test high-quality applications while mitigating the risk of unauthorized data access.

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Inside The Solution:

- Informatica Dynamic Data Masking

Masking production data for security and compliance

Independence Health's next challenge will be applying data masking to its production environments as business and compliance requirements dictate. As healthcare compliance requirements change and Independence Health's business evolves, Informatica Dynamic Data Masking provides a flexible, cost-effective way to protect business applications and production databases from data breaches and provide logs for audit without impacting employees' existing workflows.

The solution also creates future value, making data safe for collaboration in environments outside of the organization's traditional network boundary. That makes it easier for the business to partner with other organizations that provide healthcare data services but will not accept production data in their non-production systems.

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