

The Necessity and Value of Automating Provider Data Management

By Theja Birur

New approaches to value-based care have accelerated demand for accurate administrative provider data. United States health plans and provider organizations are now spending almost \$5 billion per year developing, maintaining and communicating accurate personal, professional and practice information.

Health plans, TPAs, health systems and other provider organizations are recognizing that traditional rules-based methods of developing and managing provider network data are not working. These legacy methods are slow, manpower-dependent, difficult to maintain and have significant gaps in provider data that are strong indicators of fraud, waste and abuse (FWA) risk.

Now, with the power of artificial intelligence, automated anomalies detection and continuous machine learning, organizations can automate data insights that enable real-time provider data management and network optimization while reducing costs. In addition, deploying technology such as the APATICS HALO AI™ intelligence platform helps organizations improve provider network integrity and performance while reducing manpower, reducing FWA risk and improving provider network data quality.

The Gaps In Current Provider Data Management Approaches

Health plans use provider data to contract with physicians, manage networks, create directories, manage claims and measure quality. Maintaining accurate provider directories are 'table stakes' required to provide healthcare, yet these efforts have historically been either manual or rules based. Payers and providers need technology and data solutions to automate this process.

These historical approaches also have major blind-spots when it comes to identifying potential FWA risk. This is because more consequential problems lie beneath the surface of keeping basic location and demographic data up to date. Complex provider relationships and behaviors that are indicators of FWA risk generally go undetected by most provider data management approaches.

2021 Study: Large Scale Provider Network Data Analysis

Industry analysis shows that U.S. physician practices spend \$2.7 billion annually on directory maintenance.¹ Healthcare payers also spend another \$2 billion a year to maintain administrative provider data.²

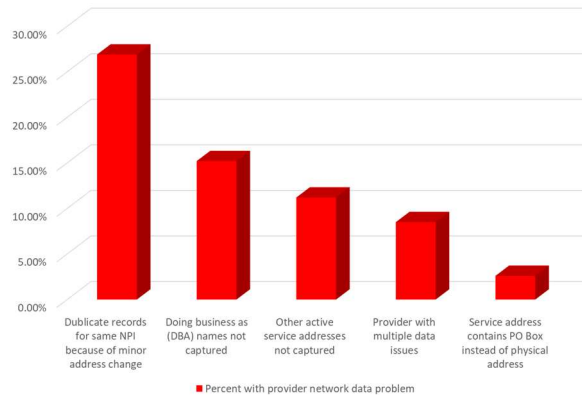
APATICS recently conducted a provider network data analysis of 2,700,000 National Provider Identifiers (NPIs) for a major third-party administrator (TPA). The analysis was performed using our *Provider Network Integrity & Performance* solution powered by HALO AI™. This analysis also leveraged the APATICS proprietary database of 6.7 million NPIs with over 70 unique datapoints for each provider.

Key Finding: The Scope And Risk Of Provider Network Data Errors Is Big

The initial database analysis and clean-up identified that about one-third of NPIs were duplicates. This means that the 2,700,000 initial NPIs submitted actually represented only 1,800,000 unique NPIs after the provider network data clean-up. The initial clean-up execution and validation was rapid and required no actions by the TPA staff after submitting the original data files to APATICS.

Within the 1,800,000 unique NPIs, sixty-seven percent (67%) of the provider records were found to contain at least one data quality problem. The most common data problems are highlighted below:

Percent Of Provider Records With Data Quality Problems (N = 2.7M)



Key Finding: A Significant Number Of Provider Data Issues Require Immediate Action

APATICS internal analysis identified that 0.25% of records with unique NPIs exhibited at least one of the problems shown below. Each of these issues required immediate action by the TPA.

Data Problems in Provider Records Requiring Immediate Action
Provider Not Alive or Identity Theft
State License Revocation/Termination
State License Surrendered
State License Suspended
Sanctions Levied by SAM (System of Award Management)
Sanctions Levied by OIG (Office of Inspector General)
Sanctions Levied by CMS (terminated for cause, ineligible, excluded, debarred, or precluded from participation)
Sanctions Levied by State and Federal Medicare/Medicaid/CHIP

Key Finding: Issues with Major Impact that Require Monitoring

One especially critical aspect of the data quality issues are those problems that can cause a major clinical or financial impact. APATICS internal analysis identified that 3.03% of the Unique NPIs in the TPA database had at least one of the issues listed below. Each of these issues are strong indicators of fraud, waste and abuse (FWA) activity.

Data Problems in Provider Records with Major Impact
Provider Under Current Disciplinary Review
Provider Reprimanded/Probation/Monitor/Accusation/Reeducate/Summary Suspension
Provider has Financial Interest in another Medical Enterprise
Provider is Receiving Remuneration from Medical/Pharmacy Enterprises ("Sunshine")
DEA Certificate Revocation
Business/Provider Having Multiple Tax IDs
NPI Missing
Improper provider research payments by drug firms

Investing in other medical enterprises was a common potential FWA indicator in this data set. Provider records with potential 'financial interest' conflicts averaged \$66,300 in problematic investments per NPI. Of those identified and flagged, providers received an average annual remuneration of \$38,600 from medical manufacturers and research enterprises identified in this analysis.

The Urgency For Timely Provider Data Updates

New Health and Human Services (HHS) regulations are creating a need for health plans to maintain accurate provider network information to members. Section 116 of the *No Surprises Act* specifies that as of January 1, 2022, commercial health plans need to establish a provider directory verification process. The health plan must verify and update their provider directories at least every 90 days. Most importantly, the database must be updated within two (2) business days of the health plan receiving information that a provider or facility has changed its network status. Current technology employed by most providers does not provide a solution to these mandates.

The APATICS *Provider Network Integrity & Performance* solution powered by HALO AI™ automates continuous provider data accuracy for seamless and immediate compliance with this mandate.

The Need for An Advanced, Automated Provider Network Data Technology

Analysis of the 2,700,000 provider network data NPIs clearly demonstrated that traditional approaches to provider data management will not be sufficient to meet future demands. Developing and maintaining rules in the traditional paradigm demands increasing numbers of manual reviews and updating of new rules into the engine to stay current. You need a 24/7 automated solution that is 'always on', constantly delivering updated provider network data and providing continuous FWA surveillance of behaviors and transactions.

By adding machine learning capabilities, your system can be far more flexible to identify problematic areas as they emerge to spotlight patterns that rules-only approaches cannot detect. Machine-enabled anomaly detection can surface patterns overlooked by manual review or conventional technology methods.

The APATICS *Provider Network Integrity & Performance* solution powered by HALO AI™ meets your future provider network data demands now. The advantages of using this intelligence platform based on machine learning and deep learning include:

- Continuous detection of relationships, behaviors and inaccurate data that impact data integrity and financial performance
- Continuous surveillance of changing data, including changing relationships between providers and plans
- Evaluation of data from multiple sources to detect patterns across datasets
- Automation of data cleansing and directory maintenance
- Collusion mapping from structured and unstructured data to evaluate financial relationships between providers and other entities
- Increased accuracy over time as the models process more data and recognize more anomalies.

Managing Provider Data Needs to be Efficient and Integrate with Existing Systems

Adopting a smarter approach to provider data management does not have to mean ripping-and-replacing EMR or other data systems. In fact, it should not involve ripping-and-replacing.

A far better approach is an over-the-top, API-driven strategy to simplify the effort required to gather provider data from existing sources. Common, accurate provider data leveraging master data management principles needs to be used to develop a single source of truth for clean and mastered data. The mastered data should be easy to access and available to all the existing functions that consume and use provider data as part of their operations. The APATICS *Provider Network Integrity & Performance* solution powered by HALO AI™ meets all of these requirements to enable your organization improve provider network data integrity and performance immediately and continuously.

1. (Reference: CAQH white paper 2019. The Hidden Causes of Inaccurate Provider Directories.)
2. (Reference: <https://www.managedhealthcareexecutive.com/view/five-provider-data-challenges-groups>)

For more information about the APATICS solutions discussed in this paper, please contact us at info@apatics.net.



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