OPTUM ADVISORY SERVICES

Provider data management

Provider data is the lifeblood of a health plan.

Payers are increasingly investing in digital capabilities to drive emerging member-centric solutions. Maintaining current, accurate provider data will be critical to maximizing the usability, adoption, effectiveness of the solutions and the return on the investment.

There are two primary types of provider data. The first is **contractual data**, which includes reimbursement method and rate, line of business and contracted services. Contractual data codifies many of the contractual terms a provider or group of providers has with a given health plan.

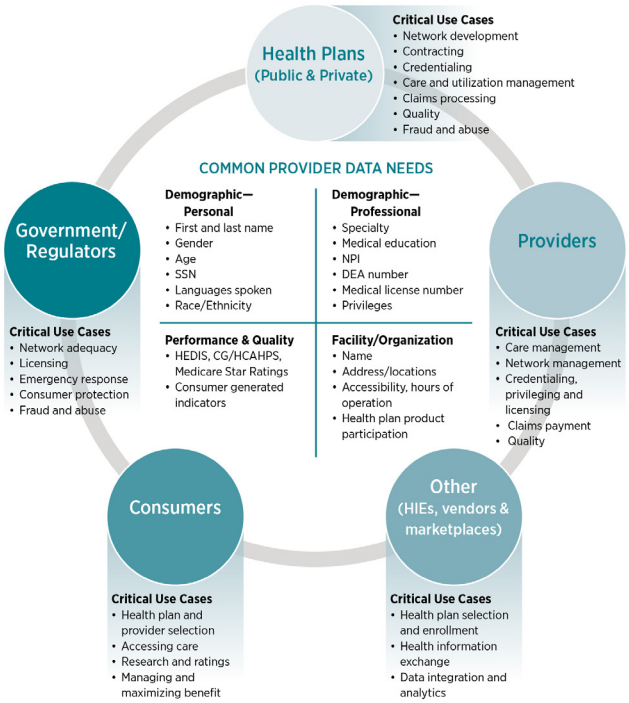
The second type is **demographic data**, which includes elements such as name, specialty, location information and credentials. When combined, contractual and demographic data drives or supports nearly every essential process, transaction and system in a health plan. Furthermore, it serves as part of the primary connective tissues between the health plan and two of its most important stakeholders — members and the providers from whom those members receive care.

Collecting, loading and updating provider data is an expensive endeavor for the health care industry. Commercial health plans and providers spend at least $2.1 billion annually to maintain provider databases.[1] The estimated cost to maintain provider data for a mid-sized payer with 1 million members, 250,000 providers on file, and 10 million claims a year, ranges from $6 million to $24 million annually.[2]

EXTERNAL ARTIFACT

CAQH. Defining the provider data dilemma. 2016.

Critical Provider Data Use Cases and Common Data Needs



1. CAQH. Defining the provider data dilemma. 2016.
2. LexisNexis Risk Solutions. A business case for fixing provider data issues. 2014.

In a recent study, the Centers for Medicare & Medicaid Services (CMS) found that 45.1% of provider directory locations were inaccurate.[3] So it's clear that despite the significant financial resources spent maintaining provider data, sustaining the quality of that data over time remains an elusive goal. This suggests that the answer may lie in how and where health plans focus their efforts in provider data management, not in how much they spend.

EXTERNAL ARTIFACT

Centers for Medicare & Medicaid Services. Online Provider Directory Review Report. 2018.

Deficiency Types by Occurrence

Deficiency Type	Number of Deficiencies Identified	Percentage of Total Deficiencies *(Number of Deficiencies Identified Divided by the Total of 5,271 Deficiencies Found)*
Provider should not be listed in the directory at this location	2,088	39.61%
Provider should not be listed at any of the directory-indicated locations	1,393	26.43%
Phone number needs to be updated	690	13.09%
Address needs to be updated	364	6.91%
Address (suite number) needs to be updated	239	4.53%
Provider IS accepting new patients	235	4.46%
Provider is NOT accepting new patients	221	4.19%
Specialty needs to be updated	24	0.46%
Provider name needs to be updated	17	0.32%
Total	**5,271**	**100%**

Note: Some locations had more than one deficiency; therefore, the total number of deficiencies (5,271) is greater than total number of locations with deficiencies (5,120).

This paper will look at:

- Four primary drivers of poor data quality
- How inaccurate and outdated data impacts a health plan's core operations
- Actions every health plan can take to improve their provider data quality

A CASE STUDY *on*

The cost of outdated provider data

A large national health plan recently experienced firsthand how a delay in processing provider data promptly can have significant financial impacts on their business. The plan received a notice of a change in ownership for one of its network hospitals. While the plan received the notice in March, they did not process it until January of the following year. Throughout that nine months, the plan paid all claims under the prior hospital name and ID. Once the plan processed the change in the system the following January, they had to reprocess nine months of claims, resulting in millions of dollars in interest and penalties.

3. Centers for Medicare & Medicaid Services. Online Provider Directory Review Report. 2018.

Four top drivers of provider data inaccuracy

Provider data comes into a health plan through many different channels. Once received, one or more owners will be responsible for that data. This means they own the collection and maintenance of the data and the responsibility for its accuracy. Owners may include network development, provider services, credentialing, finance, claims or clinical services.

Regardless of who owns the provider data, there are many reasons why inaccuracies occur. Four of the top drivers of provider data inaccuracies include:

1. Missing or multiple sources of truth
2. Data and regulatory complexity
3. Inefficient data management processes and systems
4. Dependence on timely and sustained provider engagement

1. Missing or multiple sources of truth

Some provider data elements have a single accepted source of truth, such as the National Plan and Provider Enumeration System (NPPES) for a provider's National Provider Identifier (NPI) or a state licensing board for a provider's license number. However, many others do not.

Data elements such as practice address and provider type lack a single, industry-recognized form or point of reference, making provider matching and detection of discrepancies difficult.[4] Furthermore, providers supply a considerable amount of the data used in a provider directory. Content such as a provider's office hours or whether a provider accepts new patients or not, is unique to each provider's practice and location. For these and other data elements, there will never be an authoritative source of truth beyond the provider.

Finally, there are few aggregators that can authoritatively combine the primary sourced data elements into a complete provider data record.[5] One source estimates that 75% of the costs to maintain provider data could be managed if an external source of truth existed.[6]

Beyond the lack of an external source of truth in the industry, payers themselves often keep multiple provider databases for different purposes. Health plans use these databases for functions such as processing claims, producing provider directories or credentialing providers. Rarely do all sources of provider data within a plan originate from a single source of truth. This often leads to inconsistent data within the health plan itself. Where no authoritative source exists, data users may interpret available data in ways that are not broadly shared, creating compatibility issues when data is combined or compared across or within organizations.[7] Extracting provider data from multiple sources does not easily allow for the creation of a single source of truth.[8] Fundamentally, if there are multiple sources of truth, there is no source of truth.

4. CAQH. An industry roadmap for provider data. 2018.
5. CAQH. An industry roadmap for provider data. 2018.
6. CAQH [Analysis completed by Booz & Co., now Strategy&, Inc.]. Issue Brief: Administrative Provider Data. Dec. 2011.
7. CAQH. An industry roadmap for provider data. 2018.
8. CAQH. An industry roadmap for provider data. 2018.

2. Data and regulatory complexity

Complexity is a second key driver of poor data quality. Provider data is inherently complex, due in large part to the many relationships that exist among different providers and between the providers and a health plan. Providers may have a solo practice, practice as part of one or more groups, or both. Their participation with a given health plan may differ based on those practice affiliations. Health plans may restrict providers to delivering only specific services in a specific location. These relationships and the various rules that govern them, combined with the changing nature of the data (provider data changes at an average rate of 2.4% monthly and 30% annually), make maintaining provider data a challenging and costly effort.[9] Researching and updating provider information typically takes 20 to 40 minutes per provider, with a cost averaging $8 to $15 per provider. Updating and maintaining 100,000 providers annually costs between $800,000 and $1.5 million.[10]

Beyond the complexity inherent to provider data, health plans must navigate a complicated regulatory environment with many state and federal mandates around provider data. For example:

- Medicaid Managed Care requires plans collect information on whether a provider offers cultural and linguistic capabilities as well as accommodations for physical disabilities. Because each state sets forth requirements for Medicaid within their own state, these requirements differ by state and are in addition to what is standard for a Medicare Advantage product.[11]
- To address provider directory formatting and accessibility concerns, CMS established requirements to ensure that there is an outlined update frequency, inclusion of mandatory data elements, and penalties in place for incompliance.[12]
- In 2015, the National Association of Insurance Commissioners finalized legislation establishing a minimum data set that health plans should have readily available for members to access via provider directories with search capabilities. This legislation also included a mandate for health plans to update provider data within their directories at least monthly.[13]

Health plans face competing, contradictory and changing regulations from different stakeholders. They may respond with storage and maintenance decisions that enable compliance but introduce increased risk to data integrity.

3. Inefficient provider data management (PDM) processes and systems

While the demand for real-time provider data has increased, new procedures, tools and business processes to support this faster pace across the industry have not materialized.[14] Each payer has unique technology flows, business processes and manual intervention. Additionally, within a payer, each individual department (e.g., credentialing, claims) has their own system and processes and considers them to be the source of truth. If an update to an element is made in one system, such as

9. LexisNexis Risk Solutions. Optimizing provider network data to boost efficiency, patient experience and compliance. 2020.
10. LexisNexis Health Care. A business case for fixing provider data issues. 2014.
11. BRG. Network adequacy in a nutshell: Requirements and Regulations.
12. CAQH. Under one roof: Simplifying provider data management. 2020.
13. National Association of Insurance Commissioners. Health Benefit Plan Network Access and Adequacy Model Act. Nov. 2015.
14. CAQH. An industry roadmap for provider data. 2018.

claims, but not another, discrepancies emerge. As a result, supporting multiple systems leads to increased administrative burden for payers and a redundant engagement with providers as they work to resolve these discrepancies.

To add complexity, health plans networks now include non-standard providers, such as home and community-based services, to holistically support members. However, the systems and processes have not kept pace with the needs for capturing and maintaining information on who these providers are and how they can be utilized. The scope available and potentially useful data elements have not been fully defined and, therefore, may not be captured by payers upfront.

4. Dependence on timely and sustained provider engagement

With the provider being the "source of truth" for many key data elements, health plans depend on providers to take part in the data collection process. Accuracy of provider data is contingent on providers sending the correct information at the onset of the relationship and promptly updating that information whenever it changes. An incentive for providers to send timely, accurate information to the health plan is to receive prompt claim payments in return, since inaccurate provider data can delay such payments. Although provider agreements specify timeliness to send updates in information to the health plan, the incentive is de-prioritized over time due to the administrative burden that comes with keeping all health plans informed. Often, providers do not send in updated information until they do so reactively to a billing or directory inaccuracy. Furthermore, they may not send the update using the process or format that the health plan requests. Providers today submit directory information in various ways, including:

- Fax (38%)
- Credentialing software (13%)
- Email (13%)
- Provider management and enrollment software (5%)
- Phone, mail and other methods (14%)[15]

Although administration is a necessary part of business for both payers and providers, providers continue to experience an increase in these burdens. Requests for provider data come from multiple departments and payers with different formats, schedules and methods.[16] Additionally, when payers send the data update requests to providers, they rarely communicate in advance the reason for the request and how they will use the data. Engaging and informing providers about their role in data quality and maintenance needs to be a coordinated and ongoing effort.[17]

With the responsibility for data accuracy falling to payers, it is in their best interest to develop processes that reduce, rather than increase the burden on providers. Data quality and maintenance play a vital role in preserving a positive relationship between the health plan, providers and members.

15. CAQH. Under one roof: Simplifying provider data management. 2020.
16. CAQH. An industry roadmap for provider data. 2018.
17. CAQH. An industry roadmap for provider data. 2018.

Impacts of provider data integrity across the health plan

With provider data driving most key processes and systems within a health plan, the impacts of outdated and inaccurate data can be costly and widespread. We will look at three of those impacts.

IMPACT AREA	CONSEQUENCES OF INACCURATE DATA
Provider directories	If provider directories are outdated, both the health plan and members can face high out-of-network costs and a level of distrust from the member.
Claims processing	If data in the claims processing system is inaccurate, it creates costly rework efforts as well as significant costs related to interest and penalties for claims paid incorrectly or denied.
Encounter data	If there are discrepancies between the encounter records and provider data on file, this leads to additional administrative costs required to correct the data and resubmit the encounter data.
Appeals and grievances	If a health plan has consistent data integrity challenges, they may see a sustained increase in the volume of appeals and grievances submitted by providers and members. This leads to additional rework efforts and further avoidable costs for the health plan.
Demonstrating network adequacy	If this provider data is inaccurate, health plans risk seeing an increase in regulatory oversight, member dissatisfaction for higher out-of-network care and increased administrative costs in data clean-up efforts.

Provider directories and member-centric solutions

Provider directories are the primary way in which health plans communicate information about the providers from whom members can receive care. This information includes providers' names, specialty, contact information, education and other qualifications. Members expect the information in a plan's directory to be correct so that they understand their options and make informed decisions about where to seek care.

When there is incorrect information within a provider directory or when plans do not update the data often enough, health plans and members may both incur higher costs for out-of-network care. For example, depending on the specifics of their benefit plan, a member may be responsible for the entire cost if they seek care from a provider the payer lists in its directory, but at a location different than the one the payer has on file.

Furthermore, as the industry continues the shift toward more member-centric care, health plans looking to optimize their members' experiences are introducing new tools and solutions. The design of those tools is critical as they must meet customer needs and expectations. The data that drives the tools, however, will determine whether customers perceive them as reliable and therefore worthy of adoption and use. A new app or utility may provide exactly what the customer wants, when they want it. But they will discard it quickly with one experience that makes them question the accuracy of the information it provides.

Claims, encounters and appeals/grievances

One of a payer's key responsibilities is to process claims. To do so quickly and correctly, the payer must rely on the quality and availability of up-to-date provider data. When a health plan receives a claim, it executes processes to ensure that provider and patient information on the claim matches the information on the payer's claims platform. The system cannot finalize the claim if there are any discrepancies and will suspend the claim for review and update of the relevant data.

Health plans with outdated or inaccurate provider data in their systems may experience frequent claims processing delays, failures and potentially denials. These issues create unnecessary administrative work to confirm and correct information, so the system can process the claim. Beyond the administrative costs of rework, health plans may also experience significant costs related to interest and penalties for claims paid incorrectly or denied due to inaccurate provider data contained within their systems. Such "prompt pay" regulations vary by state and create a healthy financial incentive for payers to process claims correctly the first time. In Texas, for example, if a health plan underpays a claim, the plan must not only correct the payment, but must also pay a penalty based on the number of days the correct payment was late.

FIGURE: TEXAS PROMPT PAY REGULATIONS[18]

DAYS LATE	PENALTY	INTEREST
1–45	50% of the difference between the billed charges and the applicable contracted rate OR $100,000, whichever is less	N/A
46–90	100% of the difference between the billed charges and the applicable contracted rate OR $200,000, whichever is less	N/A
91+	100% of the difference between the billed charges and the applicable contracted rate OR $200,000, whichever is less	18% annual interest on the penalty amount, accruing from the date payment was originally due through the date of actual payment

18. TX Insurance Code Title 8. Subtitle D. Chapter 1301 Subchapter A. Section 1301.137.

Like claims, the quality of provider data directly affects encounter data. Encounter data, which consists of claims records from both health plans and their delegated entities, is used in regulatory reporting for both Medicaid and Medicare lines of business. It shows the number of members a plan serves, what services they pay for, the amount they pay and other key information.

For health plans that receive encounters from the delegated providers, the data is critical to understanding the complete medical cost of their business. It also provides insight into the financial and operational health of their providers. This data is also one of the ways a plan proves their medical costs to regulatory agencies. Agencies will reject encounter records with errors or that do not match the provider data they have on file. This leads to issues from increased administrative costs required to correct and resubmit the encounters to lower capitation or other incentive payments if the data remains incomplete.

A further impact of inaccurate claims payment due to incomplete or outdated provider data is an increase in appeals and grievances for the health plan. Providers and members may send an appeal or a grievance to a payer when they want to challenge a denial or payment amount of a claim. One of the key root causes of appeals and grievances includes claims that the plan paid incorrectly. If a plan has consistent data integrity challenges, they may see a sustained increase in the volume of appeals and grievances.

Regulatory agencies measure and monitor health plans on the amount of appeals and grievances they receive and how quickly they respond. They may sanction a plan if they do not perform to expectations in this area. Furthermore, appeals and grievances create unnecessary administrative work and rework, adding avoidable administrative costs for the plan.

Demonstrating network adequacy

Demonstrating network adequacy is a key process for plans looking to enter new markets and to maintain good standing for their existing markets. It is one of the standards for National Committee for Quality Assurance (NCQA) accreditation and federal and state regulatory agencies both mandate network adequacy guidelines for specific products, such as Medicare Advantage and Exchange products.

To prove their provider network meets the needs of their current and expected membership, health plans must be confident that their provider data accurately represents the number, type and specialty of the providers within their network. They must be able to show provider locations relevant to their membership, their providers' availability to see new patients and the languages spoken at the office. A health plan with inaccurate or outdated information may overstate or understate the sufficiency of their network. This inaccurate reporting may give rise to risks for the health plan, including:

- Increased regulatory oversight in the way of sanctions or corrective actions
- Member dissatisfaction as they endure barriers to accessing care and potential higher cost sharing if they seek care with out-of-network providers
- Increased administrative costs and increased medical costs for non-network providers

Actions to improve provider data integrity

Payers often focus on provider data to the minimum extent needed to remain compliant and pay claims correctly and promptly. Viewing provider data only through this tactical operational lens misses the more strategic value that this data holds.

Provider data is one part of the larger explosion of data happening in health care. It's a critical component to acquiring new and retaining existing members, understanding total cost of care, introducing new payment models and collaborating with providers. It also is foundational to improving member experience and reducing administrative costs through digital transformation.

Four areas of focus for payers looking to improve their provider data quality include data governance, operational processes, provider contracts and provider engagement. Additionally, there are emerging technologies such as blockchain, which show promise in improving data quality while reducing administrative cost.

Single source of truth (SSOT) and data governance

Establishing the internal SSOT for provider data is key to improving its accuracy and critical to ensuring the organization is using the same data for its decision making. If a health plan produces provider directories from a different source than it pays claims, the potential exists for conflicts and errors. Members will believe a provider is in network because the provider was listed in the directory, but their claim is paid as out of network because the data is different in the claim system.

Plans need to review their data governance strategy that defines how the organization collects, stores, manages and protects all their data, including provider data. For provider data specifically, the organization should identify all data elements and establish the trusted external source for each of these elements (i.e., the provider or some other entity) and the internal owner of each element.

The plan then identifies or reviews the policies and maintenance standards for each element. These include how often they will validate the data, the means they will use to do that validation, any triggers that necessitate an update outside of that validation schedule and who is authorized to make changes.

Without a strong data governance process in place that addresses these key areas of ownership, policies and standards, organizations will continue to struggle to solve the provider data dilemma. Compounding that with multiple sources of the same data will further compromise the organization's decision making and the speed at which they respond to changing market dynamics.

Operational processes

A second area of focus should be a comprehensive review of the technology and processes the plan uses to collect, load and update provider data across the organization. This assessment should include mapping the current state. This current state assessment includes understanding not only the processes that provider data teams follow, but also reviewing where and how the plans stores its provider data and how the flows throughout the organization's systems for different purposes.

Finally, it includes a review and analysis of the policies, procedures, controls and key metrics that the organization uses to drive and measure its operations and performance. Detailing out the current state workflows and processes will highlight process gaps and inefficiencies that may cause issues with accuracy and timeliness, illustrate challenges that staff may face in keeping data current and loading it accurately, and show areas where automation may improve operational performance.

Reviewing how provider data flows throughout the organization will uncover gaps in the data flows that result in stale data as well as situations where the plan may not be using data correctly. Overall, the purpose of the assessment is not to simply uncover issues, but to identify and resolve their root causes in order to improve the quality of the plan's data and consequently improve the reliability and accuracy of all the functions, reports and decisions that use the data.

Provider contracts

With many of the key fields coming directly from providers, a best practice is for plans to evaluate their provider contracts to ensure they have provisions that cover the submission and validation of provider data. How clear are the requirements? What recourse does the plan have if a provider is not responsive to requests for information? Payers may want to include provisions that give them a tangible means of holding the provider office accountable for not notifying the plan of changes within their practice.

Beyond the contract, payers can use their provider manual to supply details on how to send updates and how to confirm the information the plan has on file. If a payer has contract language that holds the provider accountable for the information in the manual, this provides the means of providing much more detail on what the payer needs from the provider in a way that makes the provider responsible.

By providing information on what data the plan collects, why they need it, how they use it and why it is important to for the provider to participate in the collection and validation, payers can begin the bridge the gap between themselves and their providers. One large national health plan dedicates multiple pages at the front of its manual to the topic and provides a detailed Q&A on its website on the topic that's easy to navigate and understand.

Provider engagement and collaboration

One of the key ways to improve the quality and timeliness of provider data is to engage providers in the solution to the problem and develop processes and tools that will ease rather than increase the burden on them.

A quick way to implement this is to incorporate provider data review, validation and/or attestation into every touch point they have with a plan. The plan can roll this out with a low-tech approach by incorporating new processes into provider relations visits or calls. The plan can expand or enhance those processes over time using push messaging or provider portals.

Payers are in the best position to ensure providers understand the consequences of outdated provider data. Certainly, claims payment accuracy and timeliness are critical and at the top of the list for most providers. But to the degree that providers understand the other ways poor data quality impacts them, they are more likely to buy into the processes from the payer. Depending on the payer, this could include

reduced financial incentives for the provider because the plan's data is not correct. The shift to value-based care has introduced an inherent need for improved data sharing between payers and providers. And this starts with having accurate data on the provider's practice.

The bottom line is that while payers are responsible for the accuracy of their provider data, they are dependent on their providers for much of that data. That makes it an imperative to increase collaboration in this area and to reduce the administrative burden on providers.

Emerging technologies

One area of promise for provider data integrity is the emerging technology of blockchain, which is the technology that enables cryptocurrency such as bitcoin. At its core, blockchain is a secure, distributed ledger in which multiple entities have access to data at the same time. It is a chain of digital information ("blocks") stored in a public database (the "chain"). Records are not copied or transferred, but rather shared across the members of the blockchain in a way that is tamperproof.

Multiple organizations have begun to evaluate the applications for blockchain technology in health care, including around provider data management. The Synaptic Health Alliance, which includes a partnership between Optum, Humana, Quest Diagnostics, MultiPlan, and UnitedHealthcare, has demonstrated the value of blockchain to facilitate provider data management. "Blockchain technology enables the efficient creation of a synchronized, shared source of high-quality provider data through a decentralized, distributed ledger across a peer-to-peer network. Transactions are recorded chronologically in a cooperative and tamper-resistant manner, and updates entered by any party on their record are replicated almost immediately across all the other parties' copies. All transactions and updates remain visible and unchanged, providing a real-time audit trail and ensuring data integrity."[19] Such a process reduces expenses while increasing accuracy.

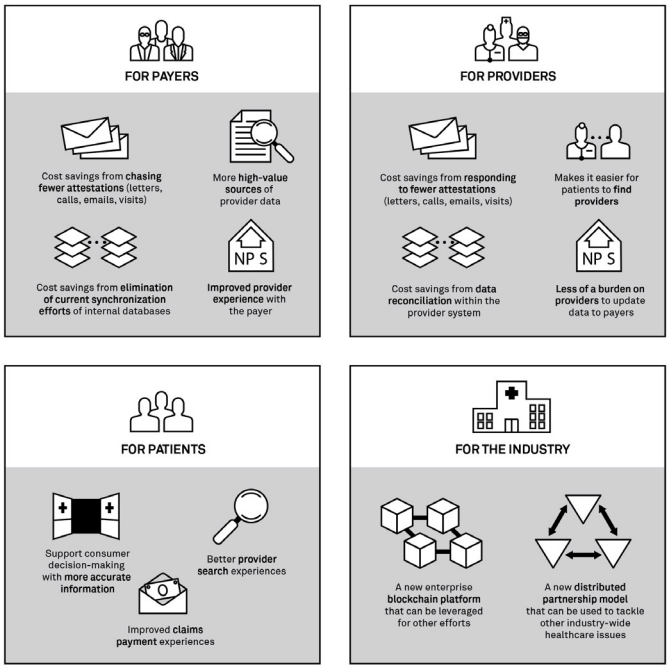
One of the keys for this application of blockchain is the creation of an alliance of partners who have a need and desire to share data and to share in the maintenance of that data. A key starting point for a health plan would be to investigate setting up such an alliance or joining one that exists to contribute to the work already done.

While still relatively new and certainly not a panacea for all the challenges with provider data integrity, blockchain appears to hold promise for solving at least some of those challenges.

EXTERNAL ARTIFACT

Synaptic Health Alliance. Improving provider data accuracy.

Potential Benefits of Blockchain Technology in Healthcare



19. Synaptic Health Alliance. Improving provider data accuracy.

Conclusion

The health care industry spends billions annually to maintain provider data. Yet inaccurate and outdated data remains the rule, not the exception. With continued cost pressures for health plans, the digital transformation in health care and the increased scrutiny of provider data by regulatory agencies, it's more important than ever for payers to focus on implementing permanent solutions to their data integrity issues. It is a critical asset for health plans where the right strategy, technology and processes support improved decision making, and enable transformational cost savings, member retention and provider satisfaction.

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