Aite PARTNER. ADVISOR. CATALYST.

IMPACT NOTE

JULY 2018

Mike Trilli
+1.617.398.5058
mtrilli@aitegroup.com

Provider Data Management: A Digital Transformation

Prepared for:

pitney bowes

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

INTRODUCTION

The struggle is real for health plans in their quest to manage network providers' data. It is an age-old pursuit for plans, but it is a pursuit that burns with great intensity within C-suites across the U.S. The struggle is defined by low data quality, and the unrealistic ramifications fall squarely on the shoulders of plans at a national level. However, the path forward could be blazoned at the state level, in which more collaborative models with providers are emerging to improve data quality. The shared consequences of maintaining the status quo extend beyond financial penalties, cutting into more meaty business imperatives, such as revenue losses, decreased network and physician utilization, and frustrated consumers, which are taboo in the age of consumer-driven healthcare.

The rationale for a digital transformation in the provider data space is straightforward. High-quality data will generate high-quality results when consumers search for a provider at their point of decision or time of need. This need occurs when consumers decide to enroll in a plan or choose a care provider. Search is the highest-velocity healthcare transaction consumers make at a health plan or third-party site. Bad searches seed consumer discontent and dissatisfaction with the health plan first, and then it trickles down to the provider. Getting provider data accuracy right can lead to other advantages for health plans, but getting it right for search engines in the age of consumerism and specialized networks is a requirement and a strong competitive differentiator. Getting provider data wrong will put health plans on trial across social media platforms, in which public relations victories are never won when it comes to someone's bad experience.

This Aite Group Impact Note outlines the market trends impacting the provider data management space across health plans, providers, consumers, and vendors. Next, it looks at the challenges and needs for health plans as they consider tackling this high-visibility issue. Finally, it looks at drivers of digital transformation.

METHODOLOGY

The report is based on 22 interviews from November 2017 through Q2 2018 with executives from U.S. solution providers and health plans with provider data responsibilities.

Respondents were asked a series of qualitative questions, including the following:

- How does your organization define and approach provider data management?
- What are key vendor value propositions and points of differentiation?
- Where are vendors the strongest in their solutions?
- Where do vendors need improvements?
- What can health plans do to up their game?
- What can vendors do to up their game?
- What are the top two impediments to growth in this space?

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

- What are the top regulatory changes impacting this space?
- What are the top technology trends impacting this space?
- What are the top health plan challenges in this space?
- How do you anticipate the competitive environment evolving over the next two years?

The results herein can be considered a directional indicator of the current state and future path of provider data management trends in the U.S. market.

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

THE MARKET

Provider data management represents a workflow that relies on human interaction and technology to be successful. The stakeholders of provider data management are health plans, providers, members or consumers, and vendors. Success is measured by accuracy of the data, and accuracy is measured in two ways: health plans measuring their own internal database's quality of provider data and consumer output of provider searches, which is harder to pinpoint unless a complaint is registered.

The Centers for Medicare and Medicaid Services (CMS) directly inserted itself into the space in 2015 when enrollees of the federal government's marketplace, healthcare.gov., complained of inaccuracies in health plan information on providers within the federal marketplace. Data inaccuracies resulted in members choosing the wrong plan or seeing a doctor that was out of their plan network based on search results after enrollment. CMS created a compliance template predicated on health plans shouldering the burden, yet the requirements resulted in providers being inundated with requests for information without any tangible skin in the game to respond. The tide is changing as state governments inch their way toward penalizing providers for lack of responsiveness, but that does not alter the fact that data verification is low on a provider's overall list of clinical and business priorities. In parallel, vendors have opened their playbooks to address the need to deliver both a service and a technical infrastructure. But through it all, the end consumer continues to suffer as data accuracy remains low, per CMS' external studies, sending a strong signal to all stakeholders that provider data management is ripe for digital transformation.

Four market trends across these stakeholders can be found in Table A.

Table A: The Market

Market trends	Market implications
Regulation is forcing health plans' hands.	CMS and state governments laid out a pathway to data accuracy compliance with accompanying penalties that created more urgency around a long-standing problem, and with that urgency came an understanding that the problem may be too big to tackle by health systems internally or by a single vendor.
Provider fatigue is real.	Health plans are on the financial hook for CMS compliance, and providers are feeling it, as they are tapped by their contracted payer partners to attest information. Payers are asking for much of the same information and are bringing to bear a use case for an industry-wide solution and/or blockchain in healthcare.

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

Market trends	Market implications
The market is creating a path for best-in-breed solutions.	Solution providers need to merge service and technology to improve data accuracy—service to the provider and the health plan coupled with a data platform that is connected to a plan's claims system. More vendors are working with each other to develop best-in-breed solutions. They aim to move plans off their ambitions to solve this problem using in-house resources and toward looking to those vendors with proven core competencies in these areas to help solve the issue.
Data accuracy remains an issue.	Current approaches are taking longer to improve accuracy for the end consumer, suggesting payers need to revisit their current approaches to improve data accuracy and bringing about an imperative for health plans to measure and baseline internal database quality levels.

Source: Aite Group

REGULATION FORCING HEALTH PLANS' HANDS

CMS enacted a new level of scrutiny on data quality toward insurers on April 6, 2015. CMS targeted payers selling Medicare Advantage Plans, Qualified Health Plans (QHPs), and dental plans on the exchange marketplace. The genesis of CMS' involvement arose from consumers in those designs making cost and access-to-care decisions based on inaccurate data. The sources of inaccurate data were provider search tools or provider registries that presented information on a provider. Provider directories once were a static compilation of data delivered via a book, but its primary medium is now online, a channel more reflective of the dynamic pace of digital changes occurring in the industry.

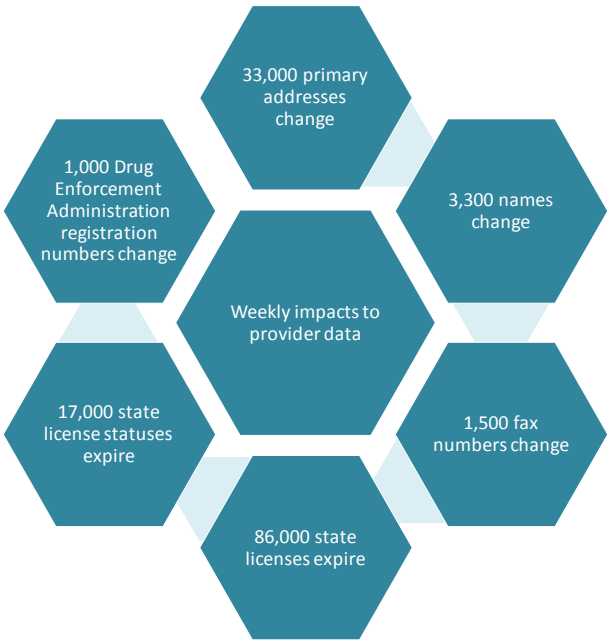
Health insurers are bound by financial penalties for lack of compliance that can accrue daily for inaccurate data. The fines are a maximum of US$100 per day per individual adversely affected by a noncompliant QHP or dental plan and up to US$25,000 per day per Medicare Advantage individual.

State governments are pushing the digital provider data narrative further toward a national level as most states have crafted their own legislation. Three states—California, New Hampshire, and Texas—even expanded the burden of providing accurate data to the providers themselves. These states' legislations apply pressure to providers to respond to health plan attempts for attestation and incorporate accountability for providers to communicate changes. If providers fail to do so, they could incur financial penalties, including delays in reimbursement from contracted payers, or provide grounds for provider groups to terminate the contracts of individual physicians.

These legislative provisions chart a challenging course, yet states are charting a collaborative model that is required to succeed in a highly dynamic data environment in which changes to addresses, names, and licenses are a frequent occurrence (Figure 1).

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

Figure 1: Weekly Snapshot of Changes to Provider Data



Source: LexisNexis Risk Solutions Health Care

The frequency of changes to provider data is one piece of the problem; health plans need to request this information quarterly. The other piece is the level of information in health plans, and providers need to be compliant. The data elements are a combination of publicly available information and plan-specific information. Provider data elements can be categorized as business demographics, plan specifics, and business attributes; these are outlined in Table B.

Table B: Data Elements Providers Must Attest To

Business demographics	Business attributes	Plan specific
Provider business name	Days and hours of operation	Acceptance status at each location for given plan types
Physician name	Non-English languages supported	Acceptance status for new patients for given plan types
Address	Physical disabilities access	Network affiliations
Phone number	National plan identifier	
Specialty practiced	Certifications and licenses	
Email address	Group affiliations	

Source: Aite Group

The possibility of fines is enough to force the hands of health insurers to prioritize cleaning up provider data. The business realities of accurate data and their ties to enterprise-wide initiatives are raising the priority across U.S. health plans, and these include the following:

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

- Health plans drive members to in-network provider locations—a plus, as payers place increasing emphasis on provider engagement, and a must to increase network utilization in a highly competitive market for providers to join specialized networks.
- Health plans drive member satisfaction and even new member acquisition, as provider search is an important element to enroll new members and then increase engagement of members once enrolled.
- Provider data plays a role in core and strategic initiatives, including claims processing, reimbursements, fraud, value-based care networks, and population health management

PROVIDER FATIGUE IS REAL

U.S. healthcare providers hold multiple contractual relationships with a single health plan. Providers also enter into different arrangements with provider or network groups that hold their own contractual relationships with health plans. The contractual complexity between providers and payers continues, as a provider with multiple locations may not unilaterally treat or accept new patients at each location.

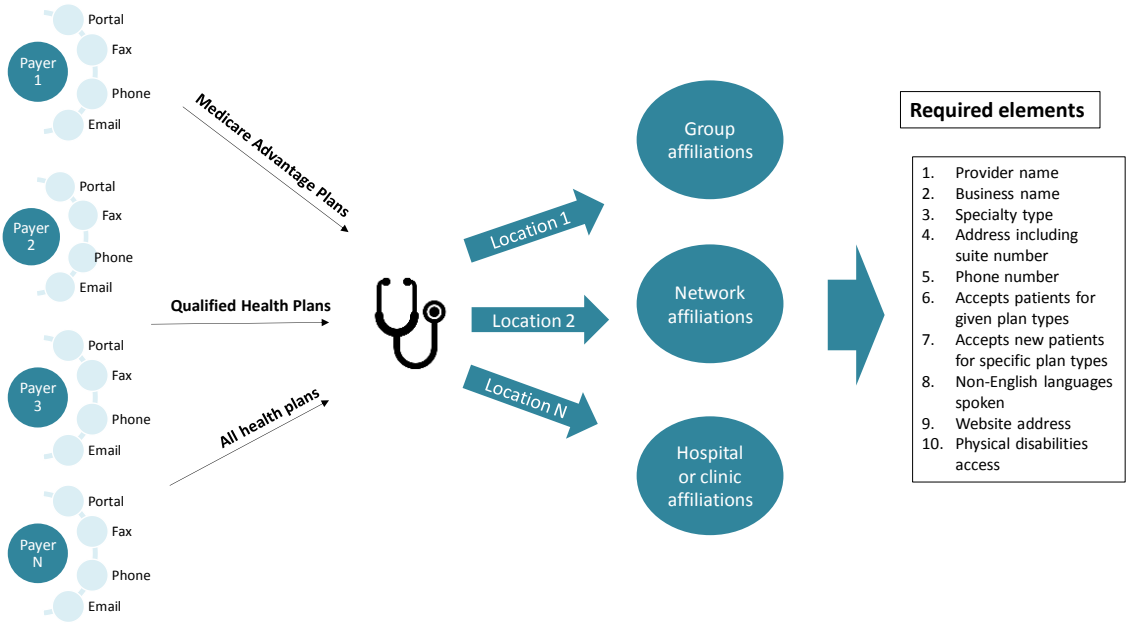
This matrixed combination of reimbursement relationships with larger providers and health plans sheds light on the many different reasons a health plan reaches out to a provider for verification. Considering providers have multiple payer relationships, it is easy to see how fatigue sets in, especially because providers' top business priorities are providing care, maximizing office utilization, and getting paid. Provider data management plays into these priorities, but updating information is a non-value-added task that pales in priority across a limited number of resources, particularly in smaller businesses.

An online channel that allows a provider to update and attest to information is less costly for health plans to manage than mail, fax, and outbound call campaigns, and it is more efficient for a provider. A web portal can lead to an easier provider experience, faster data transmissions, and the potential for greater accuracy, especially if the portal is communicating with data platforms and core systems in a way that maintains the integrity of the data being passed. For example, a web-based portal system that connects with a legacy system may have to truncate information due to the constraints of the message or file layouts of the legacy system.

Provider fatigue is based on the matrix of payer relationships, outreach modalities, number of locations, provider affiliations, and the data element required for providers to update, change, and attest to (Figure 2).

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

Figure 2: Provider Fatigue to Attest to Information



Source: Aite Group

The variety of payer relationships, the level of information, and the regularity of attestation required of providers without financial skin in the game is a challenge for payers. In addition, outreach efforts often fail to locate the right contact person in the office. This combination of events could prove to be a financial disaster for health insurers in the absence of more states applying pressure for an increase in provider accountability for lack of responsiveness.

The use of web portals can be optimized if providers assign individual(s) within their receivables or practice management teams to take on the scope of provider data management. Web portals can limit access for this task within the portal, but health plans should not overlook the need to receive an attestation over the need to implement secure identity verification through their portal vendors. The ramifications of a tight authentication and verification process could enhance data accuracy workflows and temper potential fraudulent ambitions. Portal vendors and health plans should consider outsourcing dynamic knowledge-based authentication (KBA) to leading vendors as a competitive advantage, leveraging the domain expertise and the latest technology to combat fraud trends (Table C).

Table C: U.S. KBA Vendors

Vendors		
Acxiom	Equifax	Experian
FIS	ID Analytics	IDology
LexisNexis Risk Solutions	RSA Security	TransUnion

Source: Aite Group

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

Provider fatigue could lead health insurers to band together in creating or leveraging multi-payer solutions to capture business demographics and attributes, or characteristics that are common knowledge, to lessen fatigue. This type of multiparty solution enables a provider to make a single update or attestation that can be filtered via a portal to the various payers participating. The Council for Affordable Quality Healthcare (CAQH) and Availity are two companies that have developed this multi-payer front-end portal.

BLOCKCHAIN

Blockchain can provide an underlying, scalable data management framework for moving provider information, including provider credentialing between entities. Blockchain could prove to be a silver bullet, because it moves information in a trusted, transparent manner, and the data management requires interactions of multiple stakeholders and unique data. This pain point presents a unique suitability for blockchain's multiparty transaction set, which has trust issues as it pertains to plan-specific information and trust of the attester of that provider information. Given the proliferation of provider portals and the fact that business demographics are largely publicly available, provider data management represents a viable blockchain use case.

Humana, MultiPlan, Quest Diagnostics, UnitedHealth Group's Optum, and UnitedHealthcare announced their intention to launch a blockchain pilot program. The aim of the pilot is to underscore the potential to both to improve data quality and reduce the associated costs for health plans. The pilot will examine how sharing data across healthcare organizations on blockchain technology can improve data accuracy, streamline administration, and improve access to care. The pilot will also test the premise that administrative costs and data quality can be improved by sharing provider data inputs and changes made by different parties across a blockchain, potentially reducing operational costs while improving data quality.

Hashed Health is a blockchain provider that is also looking to square the circle of provider data quality using blockchain technology. Hashed Health and blockchain companies develop methods for health plan systems to communicate with the blockchain, which is a shared ledger in a programmatic, standardized way. For example, a provider fills out a licensure application with a health plan, and that information posts to a common method for use across plans. Blockchain vendors can then write specific workflows for payer-specific information, protecting information from other parties. Blockchain could be a viable industry-wide solution or could be used for national payers that are seeking to develop in-house solutions as a way to distribute information across internal systems.

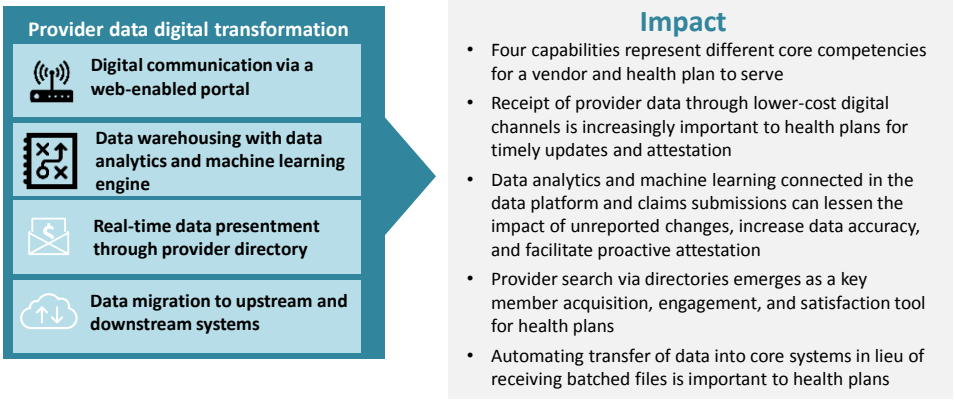
MARKET CREATING A PATH FOR BEST-IN-BREED SOLUTIONS

The digital transformation centers on the following capabilities that encompass different core competencies and the reality that most health plan implementations will be customized and based on internal system requirements versus off-the-shelf offerings (Figure 3):

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

- A service or consulting arm to outline key in-house and vendor system connectivity needs across credentialing, contracting, claims, and search tools as well as data model requirements, application program interface (API) requirements, and file layouts prior to implementation to scope the full extent of automating the end-to-end process
- A digital platform enabling providers to share and communicate information with health plans
- A data platform that takes in information from providers and health plan systems underpinned by a breadth of APIs and data layers that brings in and sends data to core systems, merges data with other internal and third-party data resources, applies analytics (firing off business rules and through machine learning), and manages data
- Connectivity to pass data to a health plan's core systems, such as claims
- A provider directory that executes the consumer-facing provider search engine receiving information from the system of record for updated provider data

Figure 3: High-Level Data Management Capabilities



Source: Aite Group

PROVIDER PORTALS

A portal, along with the outreach done through it, is a critical part of the solution for health plans. A provider may also go to the portal to manage claims and other operational tasks, which may include provider data, and Zipari is an organization that provides provider portals and provider search among a breadth of functionality within its Customer Experience platform. The platform spans and connects digital experiences for health plans' marketing efforts, brokers, members, employers, and providers.

Provider data management vendors could think outside the payer point of view and explore partnerships on the provider side. For example, claims clearinghouses like Change Healthcare represent a viable outreach portal and channel for data platforms given their massive reach processing claims for providers. Another example of a vendor that operates on the provider side

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

is NextGate. NextGate developed a provider registry that brings data in from multiple sources, including customer relationship management, health information systems, credentialing, CMS' National Plan and Provider Enumeration System (NPPES), and home-grown applications that create a master record and configurable rules to look at other data. This infrastructure can be leveraged to address use cases that create complexity for managing provider data. Use cases include addressing data inaccuracies, correcting out-of-date information, and managing organizational hierarchies and Accountable Care Organization (ACO) memberships.

Solution providers are realizing that partnering to offer best-in-breed approaches to digital and data platforms is the wave of the future. The rationale is straightforward, as most solution providers have a core competency in one or the other. As the market moves toward the requirement for all health plans to comply with provider data standards—leveraging core competencies and scale between solution providers—positioning the combined companies to appeal health plans to look outside their businesses for a solution rather than trying to create one in-house. For example, Availity, with its digital and data solutions, partnered with Gaine Solutions and its data platform to win the California State Exchange business. CAQH is an example of a company that has a proven, scalable digital platform reaching many providers, and it would make a strong partnership with a company that possesses a strong analytical core competency.

LexisNexis Risk Solutions has taken a slightly different, yet innovative, approach to provider outreach. The company—with respect to its digital and data platforms—partners with the American Medical Association to reach its 1.1 million physician members. This approach, whether through specialty associations or hospital associations, is another avenue for solution providers to consider, because at the end of the day, the solution with the most provider visits stands to be a lucrative solution for a given health plan and as a potential multi-payer industry-wide solution.

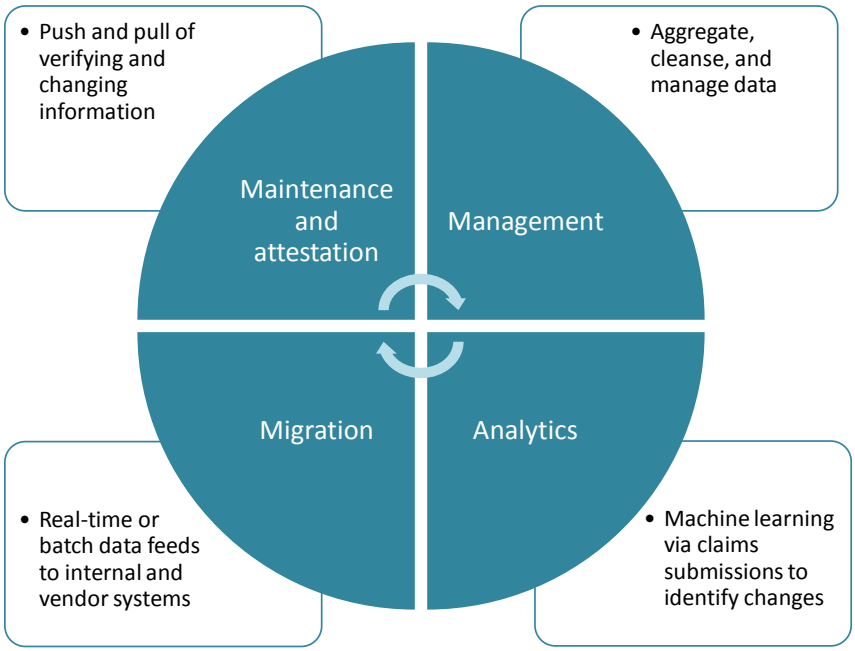
DATA PLATFORMS

The data platform is where the magic happens for digital transformation. These platforms receive, aggregate, cleanse, and analyze data, and migrate data to other systems. Key health plan requirements for data platforms include the following (Figure 4):

- Maintain and log provider attestation that considers the different group, network, and hospital relationships of each unique business location
- Use data models that consider the unique relationships and can store information at each of the contracted networks
- Connect to third-party data sources and internal core systems to apply machine learning and refine business rules for accurate location and other data
- Connect to other health plan in-house systems, such as billing and claims and external vendor systems that automate correct information rather than providing information via a batch file

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

Figure 4: Data Platform Key Capabilities



Source: Aite Group

DATA ACCURACY REMAINS AN ISSUE

Even while health plans prioritize strategies, providers battle fatigue, vendors adopt best-in-breed or holistic approaches, the state of the end consumer remains in critical condition. This finding was brought to bear by CMS as it conducted a second round of Medicare Advantage's online provider directory reviews between September 2016 and August 2017. The reviews noted that 52% of provider directories reviewed contain at least one inaccuracy across a select group of specialties. The leading quality issues were fundamental business demographics listed in error, including incorrect address, as the provider was not at the location listed and gave an incorrect phone number. In addition, CMS' requirement to present whether a provider was accepting new patients was askew. The study yielded results that showed the provider was not accepting new patients when the directory indicated it was.[1]

The percentage of inaccurate data has increased from the first review period, conducted between February and August 2016. The first review indicated the inaccuracy rate was 45%. The sample size was larger in the second review. The results point to a problem for health plans, and to the realization that plans need to adopt a quality-focused approach to identify the root causes of each defect associated with inaccurate data and identify solutions to address each problem.

1. "Online Provider Directory Review Report," CMS, accessed June 10, 2018, https://www.cms.gov/Medicare/Health-Plans/ManagedCareMarketing/Downloads/Provider_Directory_Review_Industry_Report_Year2_Final_1-19-18.pdf.

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

Health plans reticent to engage vendors should review that thinking, as vendors' core data competencies could augment or even replace in-house capabilities.

Bad address root causes could include system-generated issues, such as different legacy systems housing the same data differently due to different data requirements causing truncations as the data is passed from system to system. Other root causes are changes in locations from the time a provider is credentialed and contracted, which are not updated, and the reliance on user-generated input from mailed and faxed inquiries.

- Solutions automating business rules tied to the data entry process can identify errors, prevent errors, and trigger an outreach for missing or old data.
- Solutions that incorporate drop-down lists for provider-facing portals and a health plan's customer service operations in lieu of free-form entry can also prevent user-generated errors and highlight the usage of digital means over mail and fax for outreach methods.

Whatever the cause, a near-term opportunity for health plans is seeking the expertise of vendors with a core competency in fixing bad addresses. These vendors perfected the use of combining external data and in-house claims data to determine variances and use variances as a proactive way to gain updates from the provider. LexisNexis Risk Solutions and Pitney Bowes are two such organizations that could support this address and even phone number endeavor.

- Lexis-Nexis Risk Solutions brings name and address standardization within its broader Master Referential Provider Data Suite, providing a capability-rich data management, analytic, and storage platform powered by a configurable set of business rules coupled with its claims monitoring solution that can detect new addresses.
- Pitney Bowes' core business is data quality. Its solution encompass profiling data to identify the changes, obtaining proper addresses and enabling a single view by bringing in data from disparate sources into single source, and collecting data through its customer engagement suite (including a self-service portal) as well as outbound capabilities such as interactive video tools that health plans can use to create a video and ask questions within the video to collect data.

While CMS highlights the Medicare issues, health plans need to be cognizant that their brand is on the line when searches are done outside their website. Consumers have access to multiple channels that provide all or part of the required CMS data elements. Connectivity to these sources is another way to ensure the consumer, or the health plan member, is making decisions based on information that is accurate across the industry continuum.

Solution providers may be wise to explore connections with these parties in their attempts to support their health plan clients, because these channels capture the member at key decision points and could act as another source of reference data. These points of decision occur when a consumer is enrolling in a benefit through when or she is seeking care (Figure 5).

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

Figure 5: Online Provider Directories for Consumers to Search

Source: Aite Group

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

DRIVERS OF DIGITAL TRANSFORMATION

Considering the shifts in how consumers use technology to select a plan and to pay for healthcare services based on the plan's coverage, both vendors and health plans are in many instances undertaking a more radical transformation of their provider data capabilities. The strategic drivers of provider data capabilities' digital transformation are all interrelated in that they rely on the growing use of data. They also all signify a growing level of interconnectedness between provider data, claims data, and broader technology platforms. The speed of this transformation undoubtedly varies by organization and even by size of health plan, driven in many instances by broader regulatory concerns, cultural fear of change, and a changing competitive landscape for acquiring new individual members.

These strategic drivers of provider data transformation will continue to gain traction, however, and will have an impact at all levels of the market, regardless of whether health plans are ready to invest in their own provider data capabilities (Table D).

Table D: Strategic Drivers of Provider Data Transformation

Strategic trends	Implications
Consumers are in the driver's seat and are increasingly mobile	Consumers are in the driver's seat, and behaviors are clearly shifting toward digital. Consumers also desire information to make decisions, and by encouraging consumers to migrate to digital channels to interact with their insurance plan, health plans will benefit from increased engagement and customer satisfaction as well as the likelihood of extending tenure in a fickle individual market.
Aggregating data workflows and inflow channels	Health plans need a solution that is connected to all the data inflow channels and deposits, and that stores information as the source of truth, given that in the current environment, information, channels, and sources of truth for provider data are fragmented.
Outsourcing address verification	Data accuracy remains an issue, and certain vendors possess a more robust approach to this area than health plans given it is their core competency, making it an ideal service for plans to outsource while increasing compliance chances.
Data and integration are competitive game changers.	APIs for passing data out of data platforms into health plans' internal and vendor systems is a must, given the pace of change in provider data, the importance of members searching for data, and the need for real-time data.

Source: Aite Group

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

CONSUMERS ARE IN THE DRIVER'S SEAT

Health plans are feeling the pinch of a consumer-driven marketplace in which greater financial responsibility and specialized networks place emphasis on consumers making educated care decisions. Consumer expectations are shifting as consumers increasingly demand accessibility, choice, and control over the services they consume. The financial differences in seeking care from an in-network provider versus an out-of-network provider, coupled with consumer preferences to seek care from a trusted provider, can be daunting. The stakes are high for health plans as the outcomes of a provider search impact both the initial decision for a consumer to select a medical plan and their resulting decision to renew. Perhaps most importantly, this new normal of consumerism has transformed the payer-to-member experience toward digital platforms, and the provider search acts as a key transaction to increase the engagement between payers and their members.

For health plans and vendors, it is incumbent to provide the underlying infrastructure to manage and present the data that becomes available during a search. Consumers inherently assume their search results will be returned immediately and the data presented is accurate and possesses a high degree of integrity in conveying available choices. This increasingly customer- and mobile-centric approach also provides the potential for health plans to significantly reduce overhead costs, particularly for customer support staff both on-site and in call centers.

The variety of factors affecting consumer expectations continues to evolve, and these factors will continue to change in the near term. Health plans and vendors need to focus on an adaptive technology strategy for a provider search that meets these needs head on and that reacts to future shifts (Figure 6).

Figure 6: Consumers in the Driver's Seat and Increasingly Digital-Centric

- Provider search is a go-to plan management tool
- Digital is the go-to transactional channel
- Need for information is top-of-mind
- Location accuracy is critical
- Data integrity is expected
- Financial ramifications are mitigated through choice
- Immediacy of information is expected

Source: Aite Group

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

AGGREGATING DATA WORKFLOWS AND OUTREACH CHANNELS

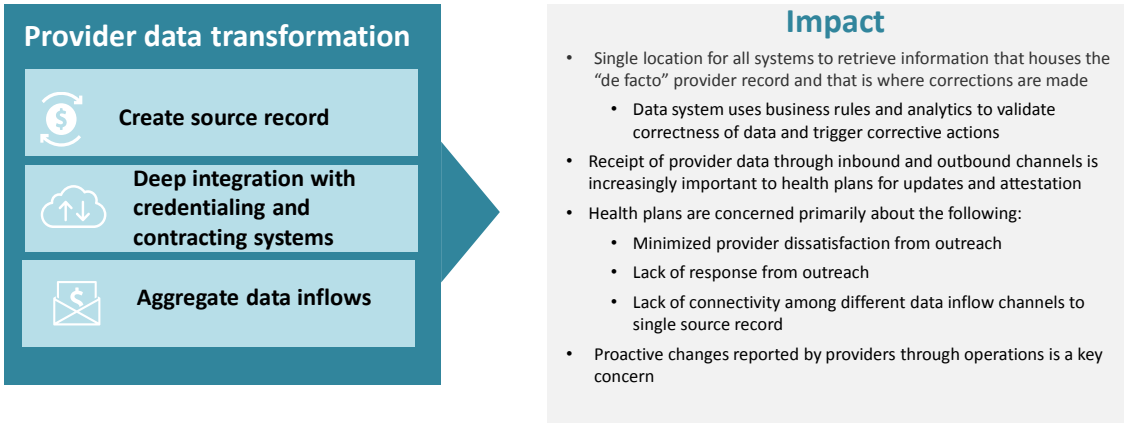
As the need for data to comply with state and federal regulations grows, the need for aggregating information flows across provider touch points grows in parallel. In short, health plans have a manageability issue in connecting with providers and ensuring data collected across all channels is centralized into a single system as the de facto source of record These issues can be linked to a variety of factors, including the following:

- Expanding provider outreach touch points with the digital channels at the center of the strategy
- Connectivity with credentialing, contracting, and inbound customer service systems that collect data with core data-management platforms
- Deep integration with claims systems that can analyze claims data with data housed in the system to identify anomalies
- Real-time data processing and analysis necessary to provide timely insights to improve decision-making and deliver a great customer experience through a provider search

Optum is positioned in this area as providing an end-to-end solution that contains data analytics, provider directory, master data management via its National Provider Database, provider search applications, provider outreach campaigns, and custom applications for services such as provider matching.

While the volume and channels to collect data grow, vendors and health plans are working to better aggregate, analyze, and deploy the data they already hold. These use cases include not only an improved data management environment but also deeper integration into enterprise systems that need the data (Figure 7).

Figure 7: Data and Integration as Competitive Game Changers



Source: Aite Group

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

ADOPTING AN INDUSTRY-WIDE SOLUTION

Provider fatigue is a barrier to outbound programs designed to gain data verification. Many health plans are relying on digital properties such as a provider portal to control this process. This pushing of information through a portal has largely complimented more traditional methods of calling and faxing, although the former still proves to be a valuable tool in this area. Companies such as Availity, CAQH, and LexisNexis Risk Solutions offer a different approach to combat fatigue through a multi-payer approach. In effect, these companies offer portals that can present information across plans to a single provider and act as an information gateway given its back-end connectivity into each of the payers' systems. This process offers providers a channel to verify and attest to information that is common across any payer, including names, addresses, and phone numbers. This approach can be leveraged further upstream at the time data is created as well as when a provider is credentialed. However, providers will need to manage unique data elements at the plan level based on their group, network affiliations, and contracts, but this does relieve the burden of inputting common information for each contracted plan.

OUTSOURCING ADDRESS VERIFICATION

The ultimate regulatory goal is the availability of information for consumers to access care. This aim coupled with CMS' finding that basic business demographic information is inaccurate suggests health plans need to employ the expertise of vendors to both verify and augment this detail.

Health plans align networks for members to access providers, and this has been done through adding requirements such as routing features and drive time. From a provider perspective, Medicare Advantage members must have reasonable access to care based on the location. Both parties need accurate information for members to calculate. This requirement requires a level of location accuracy and precision. Address verification and geolocation data are more art than science. The science is getting to the right address; the art is connecting to a variety of public data sources and the health plan claims system to dynamically map stored information with real-time information via a claim to compare, map, and correct information. Vendors such as Pitney Bowes and LexisNexis Risk Solutions have developed this as a horizontal core competency across banking and other industries that could be adopted in healthcare.

Health plans can take advantage of these modular technologies to increase data integrity and lower their overhead while satisfying shifting regulatory demands.

DATA AND INTEGRATION ARE A GAME CHANGER

APIs are a buzzy topic these days, and with good reason. An API strategy is viewed as table stakes for future success. The idea of APIs is not new within the healthcare industry. APIs have been used to connect with vendors for some time, and in many instances, they are a key tool for internal infrastructure orchestration between disparate platforms and services.

Health plans are looking for new ways to leverage increasingly standardized APIs to deliver and share information more directly within their own organizations, with partners, and with members. Drivers for health plans to create an API strategy include the ability to build once and

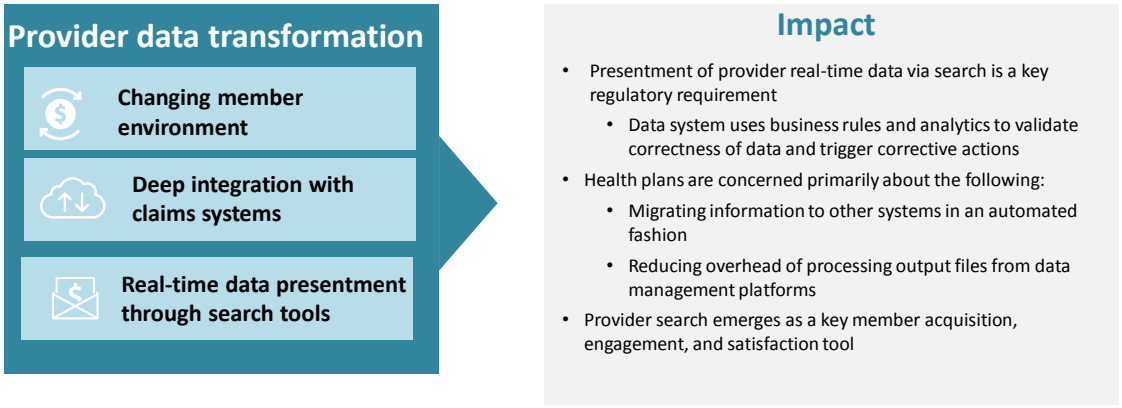
101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

use many times as well as the belief that it will lead to greater operational efficiency across the organization (i.e., common taxonomy, common infrastructure, common security, and reusability).

Although many U.S. health plans remain ambivalent to the idea of sharing their customer information with third parties through APIs, the growing demand for more complex and data-driven services at both a consumer and regulator level means that APIs will have a critical role to play in the long-term development of provider data management capabilities.

Health plans believe that APIs provide a better user experience for their consumers for provider search through the real-time availability of information. The technology enables them to more easily deliver information. Many health plans should envision having a central location that members and developers can easily access and that houses all their APIs. For those that do not yet have a centralized data lake for API-driven services, responding to market demands will force their hands (Figure 8).

Figure 8: Data and Integration as Competitive Game Changers



Source: Aite Group

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

KEY LEARNINGS FROM HEALTH PLANS AND SOLUTION PROVIDERS

Aite Group asked both health plan and vendor executives about their provider data management capabilities, pain points, and strategic roadmaps. These interviews highlight a number of key learnings that are summarized, with example quotes from the interviewed health plan and vendor executives, in Table E and Table F, respectively.

Table E: Health Plan Interview Learnings

Key learnings	Interview quotes from health plan respondents
Provider and contractual relationships are adding a level of data complexity to vendor data models.	"We struggle with vendor data demographic sources, as they are not indicative of contractual relationships. Payers hold arrangements at individual, group, managed care organization, and ACO levels. Vendor data models are challenged to associate each location for each group level."
Health plans are hesitant to outsource data capabilities.	"We underwent a thorough search for an off-the-shelf product but determined with our complexity and size, no solution could provide us the flexibility to handle our volume and contractual complexities. We put together an integrated solution, including national MPI registry and standard address verification, and we designed our core data model."
Health plans seek collaboration and partnership with vendors, particularly for a single clearinghouse.	"Vendors can serve themselves well developing new solutions with the payers at the table at the beginning with the objective of creating a collaborative solution. Availity does this well. For example, if a vendor is building a front-end solution to act as a centralized input source, bring the payers to the table, collaborate, and agree what it looks like on the other end. This approach will lead to payers using it, help with adoption, and offer providers, and enable us to centrally manage credentialing and basic demographic information."
Health plans are investing in better provider relationships, and data management is part of the process.	"Most health plans are structurally different than five years ago, and many are focused on provider relationships as a top priority. We are moving away from managing the provider to partnering with [a] provider that first started with the launch of ACOs and spills over to other things, like [high-deductible health plans], as we bring the provider to the table to work on new ideas."

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

Key learnings	Interview quotes from health plan respondents
Health plans are ratcheting up the importance of increasing provider data quality.	"It has a high level of importance, as it impacts our organization directly, but that data impacts outside users at the member level. Data quality is paramount to the member experience and for our provider engagement initiative, and quality data ensures our ability to communicate smoothly."

Source: Aite Group

Table F: Vendor Interview Learnings

Key learnings	Interview quotes from vendor respondents
Taking a holistic view of external and internal data systems that take data input changes the need for connectivity.	"Maintaining information on providers is driving low data quality given practices [to] change office hours [and] locations, and [to accept] new patients regularly, and a variety of vendors operate call centers and other channels [that are] slowly depreciating [in] quality, with providers calling and payers reaching out."
Provider data could be a good use case for blockchain.	"Provider data [includes] provider credentialing. Provider ID management requires interactions of multiple stakeholders and unique data. There is both a pain point and unique suitability for blockchain's multiparty transaction set where there are trust issues in verifying attestation from the original sources, and it is, in fact, the original source."
Downstream integration is top-of-mind but is a work in progress as vendors push to automate downstream data migration to payer systems rather than producing data files that payers must manually feed to internal and outsourced systems.	"Traditionally health plans' challenge was 'how do we get the data,' but now more solutions are available that receive provider data from a variety of channels, and now it is 'how does this data flow accurately and reliably for downstream purposes (directory, credentialing).' "
Awareness of prioritizing provider data within health plans is real, but the needs and decision-making process are spread across various lines of business—making returns on investment (ROIs) complex and making enterprise coordination a must for health plans to leverage the benefits.	"Anything compliance-driven creates a confusing situation to clearly articulate an ROI, but more so here given the wide applications of provider data across a payer's business, giving credence to payers to look at this initiative as enterprise-wide in thinking through how to leverage the data beyond directory."

Source: Aite Group

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

CONCLUSION

Health plans:

- **Battle provider fatigue and organize multiparty solutions.** Enable providers to make a single update or attestation of business demographic information that can be filtered via a portal to the various payers.
- **Do not overlook account security for the sake of attestation.** Outsource KBA to leading vendors as a competitive advantage for portals that providers use and to increase trust in the attestation; leverage their domain expertise and the latest technology to mitigate potential fraud.
- **Rethink solving the short-term issue—outsource address verification**. Names, addresses, and phone numbers are a quality issue, so look to vendors with this core competency to help solve your problem.
- **Explore a longer-term solution using blockchain**. Blockchain can provide an underlying data management framework that scales, is multiparty, and can be used for external outreach or internal purposes in which provider data management acts as a great use case.

Vendors:

- **Partner with health plans to build the right data models.** Health plans are skeptical that data models are indicative of the complexity of relationships that exist in the marketplace today, and solving this with the payers will go a long way in helping them move from an in-house mentality to an outsourced one.
- **Service is extremely important**. Health plans do not want batch files of data, and building in additional due diligence to map system connectivity of internal and vendor systems is critical to automate and enable a digital transformation in plans.
- **Partner for a best-in-breed solution that provides a full data gateway service.** The core market need is to take in data across different channels and formats and transmit it to various endpoints. Partnering with other providers to create a highly scaled best-in-breed solution will create a competitive advantage.

Providers:

- **Demand a portal over paper and faxes.** This presents the optimal experience for your business to attest or make changes efficiently, which can also result in fewer errors.
- **Take ownership of your information and assign a point person.** The accuracy of your data will only benefit your business, and assigning an individual to take the lead on responding to inquiries and proactively making changes only stands to benefit your business.

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

RELATED AITE GROUP RESEARCH

The Meaning of Digital in Insurance: A Total Transformation Strategy, May 2018.

Patient Portals: Patient ID Verification Trends in Healthcare, August 2017.

Blockchain in Insurance: A Vendor Overview, April 2017.

Health Insurer Fraud and Payment Integrity Solutions, October 2016.

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com

ABOUT AITE GROUP

Aite Group is a global research and advisory firm delivering comprehensive, actionable advice on business, technology, and regulatory issues and their impact on the financial services industry. With expertise in banking, payments, insurance, wealth management, and the capital markets, we guide financial institutions, technology providers, and consulting firms worldwide. We partner with our clients, revealing their blind spots and delivering insights to make their businesses smarter and stronger. Visit us on the web and connect with us on Twitter and LinkedIn.

CONTACT

For more information on research and consulting services, please contact:

Aite Group Sales
+1.617.338.6050
sales@aitegroup.com

For all press and conference inquiries, please contact:

Aite Group PR
+1.617.398.5048
pr@aitegroup.com

For all other inquiries, please contact:

info@aitegroup.com

101 Arch Street, Suite 501, Boston, MA 02110 • Tel +1.617.338.6050 • Fax +1.617.338.6078 • info@aitegroup.com • www.aitegroup.com