

# THE DYNAMIC NATURE OF HEALTHCARE PROVIDER DATA:

## Why ongoing assessments are key to data quality

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## EXECUTIVE SUMMARY

The discussion of data quality would be relatively meaningless without first tipping one's hat to the emerging practice of Master Data Management (MDM). The analyst firm, Forrester, describes MDM as the business capability charged with delivering that elusive single trusted view of critical enterprise data. Elusive is the key word here. Just why is a trusted view of one's customer data so elusive? It's not just a technology or ownership issue. There are many reasons data quality erodes quickly, but over the last decade what we have found is for the most part, it's simply this: data about people changes constantly. They move, they change jobs, they change their qualifications, they marry, they divorce, they break the law (sometimes by mistake, sometimes on purpose), they retire, they die. Think about the number of healthcare practitioners and healthcare organizations across the United States. There are millions of them. Then consider the complexity of affiliations across those individuals and institutions. And the facts about those institutions – including their capacity – that's a lot of data to manage! Then, if you're not exhausted, think about how much your business depends on getting those facts right across a variety of channels. That means you need to keep track of the changes that occur day-to-day, across all of those entities. And if MDM is still an emerging practice at early stages of implementation like the analysts tell us, then chances are you've got a serious data quality management challenge.

This white paper discusses the challenges mentioned above in the area of customer data; how those challenges manifest in organizations across the healthcare continuum; and why organizations need to make data quality a priority in the age of survival of the fittest, healthcare reform, and the increased demand for transparency. We start with the importance of understanding where your data quality stands today and understanding new options for ongoing data management.

## TO EVERYTHING CHURN, CHURN, CHURN

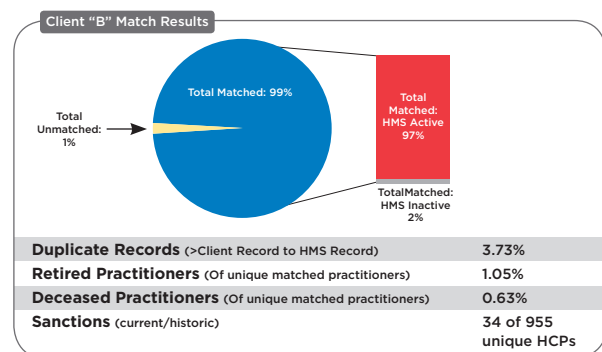
According to our own research, 29,000 prescribers change their primary address each month. This means 135 prescribers change their primary practice address each hour (based on 22 working days per month and a 10 hour work day). Does this mean the prescriber is now spending more time at a different location than he/she did the previous month? Or did the prescriber actually move?

The dynamic nature of data is evidenced by taking a snapshot of your provider data and matching it against an authoritative source. Typically we see:

- >85% of provider records match to an authoritative record, which means that no matches are found for <15% of existing provider records
- 15% of records are for inactive providers who have retired or contain outdated credentials associated with provider moves
- 1% of the records are for deceased providers
- 1% of records are for providers who our clients presumed were vetted, but who had, in fact, been sanctioned

Many organizations continue to assume that they have the customer data quality necessary to conduct their business, but how is the business measuring quality, and quantifying that impact? Is a 25% return rate on a billing cycle acceptable? Were 5% of the doctors receiving your drug samples sanctioned? Did an error in your data validation process give the wrong physician access to patient health information? Did you just submit a claim for a controlled prescription from a physician without a DEA number? Whether the goal is operational excellence or regulatory compliance – the mission is the same – keeping data accurate despite intense churn.

Many of our client engagements begin with a data assessment. We compare that data across the healthcare continuum, across segments. When data is benchmarked against an authoritative source, the results are often surprising to the client. For example, the results at right look fairly benign, but a closer analysis reveals something very different.



The number of OIG Exclusions, while in whole numbers looks small (34 of 955), the percentage is very high relative to the universe size, which, according to the Office of Inspector General (OIG), is 6,500.

In the context of the OIG's universe size, the percent of sanctioned universe is 3.5% versus 0.45% of the complete universe of more than 1.5 million practitioners. There could be a myriad of reasons for the high number – in pharmaceuticals this could mean a sampling problem. In an HIE, the risk is sanctioned doctors getting access to patient health information. Either way, if not rectified, it could result in enormous fines or systemic business problems.

A data quality assessment isn't a one time exercise. Ideally it's done routinely to ensure gaps are identified that could be harmful down the road. Data is ever evolving, so what wasn't a gap last year might now appear as a problem.

## DATA, DATA EVERYWHERE

It's no wonder that systemic business problems can occur – customer data is everywhere across an organization. Business strategies and decisions rest on the quality of their customer data. It's imperative the data is monitored on a regular basis with safeguards against erosion. The practice of systematically managing actionable data based on millions of healthcare practitioners, their related organizations and affiliations, is an enormously complex commitment that requires constant oversight and investment in order to recognize value. The following are the reasons why an organization's data quality may be suffering:

### ***De-centralization***

“...data is an asset only if it is a shared asset, across the silos, across the corporate culture, and that, in order to be successful with data governance, organizations must replace the mantra ‘my private knowledge is my power’ with ‘our shared knowledge empowers us all.’<sup>1</sup>

In many organizations, different departments (e.g. sales, marketing, and finance) use different or siloed databases. The organization has no centralized database that houses all interactions with healthcare providers and no easy way to bring all that data together in one place. As a result, one department may think the physician is at one address, while another has a different location for that physician. There could be a legitimate reason for this, but transparency is the key.

Many organizations take a unilateral approach to managing this growing business challenge with significant investments made in technology platforms, software, data, and systems integration. But they often find that the enormity and complexity of managing a customer database and multiple vendors requires significant effort and cost, which detracts from the true nature of their business.

### ***Latency***

Organizations gathering their own data about providers often have considerable latency, or delay in their data accuracy:

- **Address latency** – When providers move, they are required to update NPPES within 30 days of the change. NPPES, the federal government's agent for maintaining the NPI registry, releases a file once a month with all newly issued NPI numbers.
- Thus, in the best case scenario, there can be 30 to 60 days worth of latency in address change information. In the worst case scenario, practitioners may delay reporting address changes to credentialing organizations – it's not unusual for credentialing and 3<sup>rd</sup> party sources to report old addresses for more than six months.
- **Provider name change latency** – Latency can exist in picking up name changes due to marriage or divorce.
- **Credential change latency** – Many credentialing sources have latency in reporting changes. For example, PECOS releases the file containing the list of providers participating in Medicare once per calendar month – they state that there is up to 60 days latency in reporting new practitioners.
- Monitoring these provider data changes is time-consuming and labor-intensive. Many organizations don't have the resources to keep data up-to-date without assistance. Nor do these organizations have automatic flow through, which means they must go back periodically and rematch data in the database. Because they might perform this step in a batch process on a set schedule, their data can be even more out of date than it would have been otherwise.

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<sup>1</sup>Jim Harris, August 29, 2011 Blog, Information Management Blogs, <http://bit.ly/o1Jz3b>

### ***Difficult validation***

It can be difficult to ensure that data is accurate. It's often a moving target that only full-time attention can hope to hit. It's not easy to place residents, hospitalists and mid-levels in their place of practice because they may use their home address when registering their credentials. It can be challenging to differentiate between a new address and a typo as submitted by a sales rep, entered by a pharmacist; or submitted on a claim. Practitioners may have multiple addresses, which makes it hard to differentiate between home, practice (where a provider sees patients) and administrative (billing) addresses. If different addresses are listed for a physician, how does one determine whether that's the same doctor or a different doctor with the same name? Difficulties arise in differentiating providers that share similar names, such as father-sons (Jr., III) or providers with common names, such as Jones, Williams, or Smith. 32,000 of these scenarios occur among prescribers across credentialing sources. That is 615 per week! This problem results in many missed matches or duplicates and/or bad matches which require knowledgeable people, sophisticated technology, and efficient processes to remedy.

### ***Incompleteness***

Often, organizations find that their employees do not enter complete information. As a result, their data might not contain all necessary identifiers, such as the state license number for compliance reporting. For example, in those transactions where time is money, point of sale pressure or lack of business rules can compel staff to enter "555" for the physician's license number simply to get them into the system. When attempting to match this spend to the correct physician using a phony state license number, guess what happens? The spend is attached to the incorrect physician, your report is incorrect, and therefore you are out of compliance.

Organizations can also find it difficult to obtain information about certain types of practitioners. For example, not all states require residents to have state license numbers. It's also difficult to keep track of hospitalists or nurse practitioners. Hospitals are protective of that information and these professionals can change jobs, which makes them hard to track. Because practitioners may register for multiple license types, e.g. a nurse may be a RN and an advanced practice nurse, limited information may make it difficult to link all of the applicable credentials to the practitioner. In addition, each state board sets their policy for releasing provider information. Boards may limit the information they provide to web look-ups, or they might restrict their release of license numbers and/or provider's business address.

### ***High cost of ownership***

There are many short and long term costs related to initiating an MDM program. One must consider ongoing maintenance and operational support. Briefly, organizations initiating fully loaded MDM programs require investments in software, data, infrastructure and implementation services that can reach an initial investment into the millions of dollars. Typically a mix of internal and vendor resources are required to implement an MDM program and in some cases, a subset of those resources remain engaged to provide the critical stewardship necessary to maintain a highly accurate, low latency (up-to-date) universe. Ongoing governance of master data is an enormous undertaking in and of itself, but again, it's the key to persistent data quality. Internal structure, processes and business rules need to be institutionalized, with ownership defined at multiple organizational levels. Further, continued investments are required for software, upgrades, data, and other operational support costs. In general, MDM requires an ongoing investment in time, money, and personnel. The latter can make or break your investment in MDM. There just aren't a lot of people specializing in MDM, particularly as required in healthcare. Hiring and retaining these experts can be an expensive and time-consuming challenge. This is especially the case when MDM is not part of your core competency. Your choices are to build the system by educating in-house resources, or bringing in expensive consultants and defending value and ROI. Working with a vendor who specializes in the master data management of healthcare providers is far more cost-effective and expedient given your business counts on the accuracy of this data.

While the costs for MDM are high, the payoffs are also high. Payoffs may present themselves in terms of increased revenue from more accurate targeting, improved contract management processes, or from cost reduction due to efficiencies and potential decreased risk in compliance penalties. As technology and solution delivery models evolve, high quality data no longer needs to cost a fortune in time, money and personnel to achieve a high ROI. The alternatives to costly on-premise solutions can show savings of 25% - 40% compared to initial investments required for on-premise platforms, yet still yield the same tangible business benefits of increased revenue and reduced cost.

## MORE INCENTIVES FOR ACCURACY

So, we've established that data accuracy is an imperative in the healthcare industry; and that MDM is no longer a nice to have – it's a must-have. Besides the obvious operational efficiencies, there is a highly charged regulatory and competitive environment.

### **Compliance**

Complying with a wide range of regulations is a complex and time-consuming process – one fraught with considerable opportunity for error. Life sciences organizations, pharmacies, payers, and providers benefit from the ability to rapidly flag sanctioned or deceased providers, instantly obtain comprehensive information about provider licensure and credentialing, gain robust support for internal and external audits, and achieve an optimal foundation for compliance reporting and operating more efficiently and effectively.

As part of the government's Center for Medicare and Medicaid Service's (CMS's) effort to control rising costs, Fraud, Waste, and Abuse regulations are being rolled out to establish guidelines for whether or not a healthcare provider can see a patient, write a prescription, or submit a claim. For pharmacies, compliance implies the need to confirm that the prescriber/provider has privileges to write the prescription before filling it. The provider must be actively licensed, have an unexpired DEA number if the prescription is for a controlled substance, have an active NPI number, and have no sanctions or exclusions that would forbid them from seeing patients, writing prescriptions or participating in government-funded programs. 130,000 actively practicing physicians have an expired DEA number. 100,000 of them also have an expired license. Just one can wreak havoc on your business. Violating these regulations can result in substantial penalties or the loss of privileges to operate in a particular state and/or participate in federally funded programs.

The federal Patient Protection and Affordable Health Care Act will require life sciences companies operating in the United States to start reporting specified payments and gifts of more than \$10 to providers by March of 2013. Failure to make a disclosure can result in individual penalties of up to \$100,000 with total penalties of up to \$1 million.

Many states are also increasingly enforcing their own reporting requirements that go above and beyond federal requirements. As a result, while many smaller organizations have been spared the need to report their marketing payments in the past, most will be required to track this information in the future.

### **Competition**

Having a data quality advantage over your competition is essential when prescribers and healthcare organizations drive revenues and market share for your business. Furthermore, packaging data in a way that drives optimal decision making can make areas like sales segmentation and planning more precise. Rich master data on HCPs and HCOs can help in understanding where purchasing power resides in a convoluted Integrated Delivery Network, or what prescriber is influencing the flow of patients in a particular indication. Forward-thinking organizations are not only concerned with data quality, but integrating and enriching their customer data in ways to ensure sustained competitive advantage.

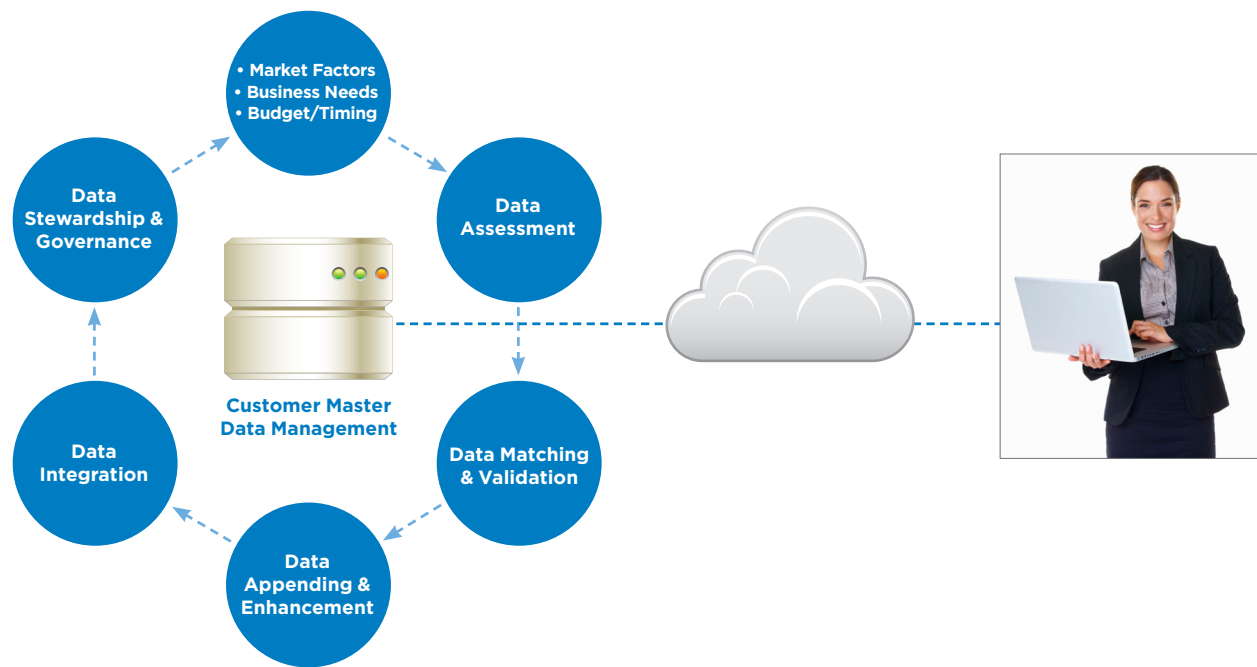
## TAKE A PRAGMATIC APPROACH TO DATA QUALITY

To sum up, healthy provider data is the key to operational excellence, understanding market opportunity and addressing compliance. Though especially challenging, data accuracy can be achieved with a pragmatic approach.

Start by asking yourself some basic, if not obvious, questions:

- Where does my data quality stand today?
- Can I readily determine its existing quality by matching it against an authoritative source?
- Consider the environment of your organization – is there high risk of being fined based on poor data? Missing data? Required data?
- What happens when I find a bad record in my data? How does my team handle that recurring issue, as well as the downstream ramifications of changing that record? Furthermore, if the error is found in a source system, what happens when the system gets refreshed?
- Is there an audit trail in your system to readily inform you on when data changes occurred and where those changes came from?

- What is the density of your organization and how is customer data shared and used across those functional areas? Are there bottlenecks to be opened by sharing better customer data?
- What is my timing? Is there pending legislation where poor data quality puts me at risk?
- Do I have the time, resources, and budget to undertake true master data management in the area of healthcare providers?
- Can I keep up with the changes in the provider universe and not deplete my resources?
- What are my realistic options?



*Some companies may elect to purchase a list or a multitude of lists to supplement their database, but given all the dynamic forces discussed in this paper – this is a temporary solution to a more complex and perpetual challenge. Others would benefit from a thorough cleansing done by a reputable provider data company. Ultimately, we believe organizations would benefit from outsourcing the creation and ongoing management of a provider database from solution providers like Health Market Science whose primary focus is building and maintaining a rich and highly accurate database of U.S. healthcare providers. Outsourcing customer master management in a cloud-based solution is a proven business practice that can save your organization time and resources, improve the quality of your master data, and thereby better support your business objectives and compliance efforts.*

## CONCLUSION

Understanding the nature of your provider data will help direct your organization on the path to improved business performance and risk mitigation.

### ACCURACY

- Data is regarded as authoritative source
- Is timely & reflects real life

### CONSISTENCY

- Standardization of data attributes
- Single version of the truth

### COMPLETENESS

- Robust view of the customer
- Data attributes support business & compliance needs

### GOVERNANCE

- Standard, ongoing maintenance processes
- Auditing

Best practices warrant:

- Clarity of your customer data accuracy
- The ability to gauge your ability to meet regulatory demands such as the Physician Payment Sunshine Act or provider enrollment into government-funded programs
- Monitoring and interpreting the impact of any changes to federal, state, and industry regulations
- Setting objectives and quality standards and methods for measuring and managing data quality
- Benchmarking against an authoritative source
- Determining sourcing strategies for obtaining required information and budget to acquire needed sources
- Developing a data integration platform with sophisticated ETL (extract, transform, load), matching and consolidation algorithms for integrating the sources and assigning the correct attributes
- Developing an IT infrastructure that mirrors business needs in order to manage ongoing operations
- Assigning data governance and data stewards to ensure that quality standards are met, assess and resolve potential variances, and to sample, measure quality and make recommendations for required enhancements

For more information on Health Market Science and our Data Quality solutions please visit [www.healthmarketscience.com](http://www.healthmarketscience.com) or email [info@healthmarketscience.com](mailto:info@healthmarketscience.com).