



Breaking Down Barriers to Compliance and Consumerization

How price transparency rules offer opportunities for more actionable insights

Since January 2021 for U.S. healthcare providers¹ and January 2022 for payers,² price transparency rules have been in effect. To comply with these rules, providers and payers must make prices for their services publicly available online in two different formats: machine-readable files (MRFs) and a more consumer-friendly format.

Price disclosures were designed to help consumers compare prices across different healthcare and insurance options, which can provide valuable insights into pricing trends and help consumers make more informed purchasing decisions. This can also help identify price disparities or market inefficiencies that can be leveraged for competitive advantage or that would ultimately lower healthcare costs.

But, two years later, health systems and plans still struggle to fully (or even partially) comply with these rules, known as the Hospital Price Transparency Rule and the Transparency in Coverage Rule. Despite 18 months' worth of pandemic-related extensions, many consumers remain in the

dark about what some hospitals charge for services – and what insurers will pay for those services.

Experts from CitiusTech, which provides consulting and digital technologies to healthcare and life science companies, believe that this remaining hesitancy to comply fully stems from the complexity of the rules. In addition, compliance requires significant changes to health systems and payers' operating procedures. However, as the new rules gain traction, healthcare organizations will find opportunities to improve their operations by analyzing the data yielded by these procedural changes.

"From a technical aspect, making almost all of this information available on their website means hospitals must change how they've always done things," said Swanand Prabhutendolkar, Senior VP and Proficiency Business Lead for Provider Data Management at CitiusTech. "A fair amount of IT experience is required for health systems, given that all the diverse data must be consolidated from different systems,



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entered into the MRF structure as mandated by CMS and then posted on their websites. Once that’s done, those price lists need to be updated monthly. This is a lot if your IT staff is already stretched thin.”

Publishing costs and finding potential cost savings

In November 2019, the U.S. Department of Health and Human Services (HHS) first announced these two price transparency rules.³ The rules would require that health systems and insurers make their prices publicly available so consumers could compare prices for the same or similar services – something healthcare organizations had never before been forced to reveal.

The rules instruct all covered entities to post publicly and update monthly a large machine-readable file (MRF) that includes standard items and services, in-network negotiated provider rates, out-of-network coverage rates and in-network drug pricing. Both the MRFs are accessible files listing estimated costs for hundreds of specific inpatient and outpatient services that must also be made available on the hospital’s and insurer’s websites. And by January 2024, those cost calculators must cover *all* items and services, not just the 300 to 500 standard charges that are currently required.

“It’s a big, big change,” said Rahul Ajmera, VP & Client Partner, Provider and Health Services at CitiusTech. “I don’t think patients understand what is happening right now, but at the end of the day, they (and health

plan members) should be able to use this data to understand their individual out-of-pocket costs. Organizations need to better understand how this data is being applied to improve their own patient experiences.”

There are additional potential benefits from applying this data, such as elevating consumer health literacy, improving health equity and lowering healthcare costs. “This is not just about payers and providers publishing required information,” Ajmera explained. “There is an opportunity to better educate patients and members so they can make more informed decisions about the care they receive. This can then produce better health outcomes and improve patient satisfaction.”

It may ease the administrative burden faced by staff at impacted organizations if patients can directly access pricing data online. This introduces the possibility that hospitals could win new patients – and health plans, new members – with favorable pricing, or even just by making their prices available while others continue to resist.

Coming into compliance

Despite the long lead time for the rules to take effect, healthcare organizations were slow to disclose required data until recently. As mentioned earlier, the pandemic delayed many organizations’ implementation plans. Others continue to face resource constraints or to stall out of a belief that inaction protects their competitive interests.



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A *Lancet* report published in May 2022 found that, of 100 high-revenue hospitals surveyed, 83 had failed to comply with at least one major CMS requirement.⁴ Several months later, a report by price transparency platform Turquoise Health noted that 76% of 6,000-plus U.S. hospitals had placed compiled MRFs online.⁵ That same October 2022 report said that 80 carriers had publicly posted their rates.

Hospitals found to be in violation of the Price Transparency Rule face fines of \$300 to \$5,500 per day, depending on the size of the hospital.⁶ Payers face penalties of up to \$100 per violation and affected individual.⁷ So far, though, CMS has only publicized two enforcement actions against two Georgia hospitals.⁸

Meanwhile, major research hospitals like Cleveland Clinic and Mayo Clinic, as well as Kaiser Permanente, are complying. Watchdog groups speculate that some large health systems with deep pockets may be willing to face fines rather than reveal their fees to competitors.⁹ Others, particularly smaller rural hospitals, may lag behind in compliance due to a shortage of IT talent or resources.

Eventually, if CMS or Congress doesn't force these hospitals' and payers' hands, consumers will. They'll take their business where they know what to expect.

"For a lot of healthcare organizations, it's taken longer than expected to get a lay of the land and figure out how to collect data that was all over the place," Prabhutendolkar said. "Then there's the potential size of an MRF, which can be in terabytes, and the question of how to display it."

One way to deal with huge data sets is to use a secure cloud environment so data can be processed and protected, yet also available from anywhere in the country. This eliminates expensive computing and storage within on-premises datacenters and provides a necessary level of flexibility and agility. Amazon Web Services (AWS) offers reliable, scalable, and secure storage of data, as well as secure and resizable compute capacity. Vendors prefer [Amazon Simple Storage Service](#) (Amazon S3) for storage and [Amazon EMR](#) as the big data platform for SPARK based data manipulation which can then be analyzed by using [Amazon QuickSight](#) or [Amazon SageMaker](#) depending upon the specific analytical use cases.

Using what is known as a SaaS – software as a service – model also allows healthcare IT teams to scale easily as MRFs and other data files grow both in size and complexity. In the long term, healthcare organizations can apply comprehensive data analytics to improve operational efficiencies.

"It's important to focus on data quality to avoid the 'junk in, junk out' problem that is common when creating data analytics programs," said Ajmera, whose company offers data analytics starter kits for payers and providers that lack enough internal resources to gain actionable insights from available pricing data.

Among the common challenges that are faced by IT teams in generating a complete machine-readable file are siloed pricing information in legacy core administration systems, data quality issues, and performing data extractions from various sources.

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But there are ways to break down those barriers, such as incorporating standardization tools like FHIR (Fast Healthcare Interoperability Resources) to create greater interoperability between the systems that hold the data and outsourcing some of the heavy lifting.

In choosing a trusted data analytics partner, it's important to find vendors who are experienced with healthcare and life sciences, “because price transparency has a cascading impact,” Ajmera said.

That also includes cloud platform providers. A well-established cloud service provider like Amazon Web Services (AWS) can be cost effective for payers and healthcare organizations who are starting on this journey, especially considering its industry track record. “AWS gives users data slicing and dicing tools like [Amazon Athena](#) and [Amazon QuickSight](#) that are very scalable. You want a provider where you can scale well,” he noted.

Specifically, healthcare IT teams can batch data using serverless [AWS Lambda](#) and store it via a Python program and FHIR in an AWS S3 bucket. From there, live data can be ingested, transformed and converted to MRFs, then maintained by a managed service provider so the data can continue to be updated in near real-time.

Expanding use cases tied to analyzing pricing data

As healthcare organizations adapt to growing consumerism, price transparency rules offer an opportunity to consider potential cost savings along the value chain, according to both Prabhutendolkar and Ajmera.

Organizations who layer in data analytics can identify overpaid services and/or providers through industry benchmarking and comparing prices within metropolitan statistical areas. Payers, in turn, will have more leverage to negotiate reimbursement rates, and employers, to negotiate with health plans.

Other specific use cases from applying an analytical approach to pricing data include identifying consumers in need of financial assistance and using search data to refine outreach efforts for specific patient populations. Both providers and payers can examine data for outlier charges that far exceed market rates. Other use cases involve comparing claims over years to remove redundancies and tracking procedure costs and rate changes in value-based contracts.

In some ways, the sky is the limit on how pricing data can be used to both gain market share and make healthcare more affordable. “As of now, healthcare leaders are more focused on the repercussions of disclosing their prices, but over time, I think these leaders across various organizations will optimize their pricing strategies based on the data insights, and in turn, improve their competitiveness,” Ajmera said.

Learn more at www.citiustech.com/markets/health-plans/price-transparency-analytics.

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