

Availability of Prices for Shoppable Services on Hospital Internet Sites

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On January 1, 2021, CMS implemented Federal Rule 65524, which requires that all US hospitals publicly display prices for 300 circumscribed shoppable services (70 services required of all hospitals, 230 to be selected by each hospital), as well as a downloadable and machine-readable data set containing all services provided.¹ Shoppable services are defined as medical tests or treatments that are typically preplanned and thus amenable to comparison shopping.² The legislation stipulates that for each service, hospitals (but not other facilities) must post 4 separate prices including their discounted cash price and minimum negotiated charge. For the 300 shoppable services, hospitals are encouraged, but not mandated, to include relevant ancillary services delivered by nonhospital providers (eg, imaging tests, physician fees) in the displayed price. Although editorials, blog posts, and trade publications have debated whether the new hospital price transparency initiative is transformative or merely a modest and flawed incremental improvement on existing legislation, data are limited.³

The objective of our study was to evaluate whether the 20 high-profile US hospitals listed in the 2020-2021 *US News & World Report* honor roll⁴ have displayed their prices for 5 common shoppable services on their public websites and to describe the variation in prices displayed.

METHODS

First, we selected 2 imaging tests (brain MRI and abdominal ultrasound) and 3 clinical services (cardiac valve surgery, total joint replacement, and vaginal childbirth) from the 70 shoppable services required by CMS. We identified each service using the Current Procedural Terminology code or diagnosis-related group (DRG) that CMS provided. Of note, the DRGs for cardiac valve surgery and total joint replacement do not specify a particular valve or joint. Therefore, we decided a priori to use aortic valve and hip replacement if required by hospital websites.

Second, we determined whether the hospital displayed prices for at least some shoppable services on their public websites. We searched each hospital's website, as well as related sites from the associated health system when applicable. We then collected information for

ABSTRACT

OBJECTIVES: A regulation from CMS required that, starting January 1, 2021, all US hospitals publicly display the cash price and minimum and maximum negotiated charge for 300 "shoppable services." We evaluated compliance with CMS requirements among highly respected US hospitals.

STUDY DESIGN: We conducted a cross-sectional study of hospital websites.

METHODS: We evaluated the public websites of the 20 hospitals listed in the 2020-2021 *US News & World Report* honor roll between February 1 and February 14, 2021. We selected 2 imaging studies (brain MRI and abdominal ultrasound) and 3 hospital services (cardiac valve surgery, total joint replacement, and vaginal childbirth). For each service and hospital, we determined whether the discounted cash price and minimum negotiated charge were displayed and, if displayed, what the prices were.

RESULTS: Among our 20 hospitals, 13 (65%) displayed the cash prices for the MRI and ultrasound, 8 (40%) for valve surgery, 10 (50%) for joint replacement, and 10 (50%) for childbirth. Only 1 (5%) displayed the minimum negotiated price for the 2 imaging studies and none for any of the hospital services. The mean (range) cash price for MRI was \$3793 (\$464-\$6215) and for ultrasound was \$767 (\$136-\$1391). The mean (range) cash price for cardiac surgery was \$236,125 (\$72,250-\$349,782); for joint replacement, \$46,008 (\$22,170-\$71,985); and for childbirth, \$19,568 (\$7314-\$29,068).

CONCLUSIONS: In an early assessment, a significant percentage of US hospitals were not in compliance with new price transparency legislation. Moreover, there is wide variation in prices among hospitals for identical services. These price differences suggest the potential for significant cost savings for patients.

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each hospital and service with respect to whether (1) a discounted cash price was available and, if so, what that price was; (2) the minimum negotiated charge was available and, if so, what that price was; and (3) physician fees were included in each price. We recorded the amount of time it took to find price information for each hospital; if we were unable to find a price within 7 minutes, we concluded that the price information was not available in a manner that is accessible by the average patient. We pilot tested our process with 6 randomly selected hospitals and modified our abstraction worksheet accordingly.

Data collection occurred between February 1, 2021, and February 14, 2021. Results were summarized using univariate methods (percentages, means, median, and range). This study used publicly available data and thus did not require ethics review.

RESULTS

Among the 20 honor roll hospitals, 13 (65%) displayed prices for 1 or more shoppable services, whereas 7 (35%) displayed no prices (Table). The mean time to find price information for the 13 hospitals with prices was 1.4 minutes; for the remaining 7 hospitals, we were unable to identify prices despite a thorough search through all available pages, menus, and submenus during 7 minutes of sustained investigation.

In analyses focusing on imaging services (MRI and ultrasound), 65% of hospitals provided a discounted cash price but only 30% included physician fees and only 1 hospital (5%) provided the minimum negotiated charge. The mean (range) cash price for MRI was \$3793 (\$464-\$6215); viewed from a different lens, the cash price for the highest-priced hospital was 1339% higher than that for the lowest-priced hospital. Only 1 hospital provided its minimum negotiated charge for MRI (\$3029), which was lower than its discounted cash price (\$6058). Similarly, 65% of hospitals provided their discounted cash price for abdominal ultrasound with a mean (range) of \$767 (\$136-\$1391; 1022% higher at the highest-priced hospital compared with the lowest-priced hospital).

In analyses focusing on clinical services, 40% of hospitals provided a cash price for cardiac valve surgery; 50%, for joint replacement; and 53%, for childbirth, but no hospital provided its minimum negotiated charge for any of the services. Physician prices were included in 20%, 25%, and 32% of the cash prices for valve surgery, joint replacement, and childbirth, respectively. Compared with the hospital with the lowest price, the hospital with the highest price had a cash price that was 484% higher for valve surgery, 324% higher for joint replacement, and 397% higher for childbirth.

TAKEAWAY POINTS

- ▶ Among 20 prominent US hospitals, what proportion are following a new federal requirement that hospitals publicly display their prices, and how much do prices for 5 “tracer services” differ among hospitals?
- ▶ Approximately 60% of hospitals had displayed their cash prices, but only 5% displayed their minimum negotiated charges. Prices differed between 300% and 1000% among hospitals for the same service.
- ▶ A significant proportion of hospitals were not in compliance with a new legislative requirement, and variation in prices among hospitals was extremely large.

TABLE. Availability of and Prices for Selected Shoppable Services From the 20 Hospitals Listed on the 2020-2021 *US News & World Report* Honor Roll

	Brain MRI (n = 20)	Abdominal ultrasound (n = 20)	Cardiac valve surgery (aortic) (n = 20)	Joint replacement (hip) (n = 20)	Childbirth (vaginal) (n = 19) ^a
Cash price available, n (%)	13 (65)	13 (65)	8 (40)	10 (50)	10 (53)
Physician price included, n (%)	6 (30)	6 (30)	4 (20)	5 (25)	6 (32)
Cash price in \$, mean	3793	767	236,125	46,008	19,568
Cash price in \$, range	464-6215	136-1391	72,250-349,782	22,170-71,985	7314-29,068
Minimum negotiated charge available, n (%)	1 (5)	1 (5)	0 (0)	0 (0)	0 (0)
Physician price included, n (%)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Price in \$, mean	3029	364	N/A	N/A	N/A

N/A, not applicable.

^aOne of the *US News & World Report* hospitals did not offer childbirth services and was therefore ineligible for inclusion.

DISCUSSION

In an early analysis of the new federal regulation, we found modest compliance by 20 prestigious US hospitals with a new CMS requirement that hospitals publicly display their prices for shoppable services. Moreover, prices varied by more than 1000% among hospitals for imaging tests and 400% for clinical services. Our results highlight the slow and prolonged journey toward true price transparency.

It is important to consider our results in the context of ongoing price transparency efforts. In 2015, under the auspices of the Affordable Care Act, CMS implemented a requirement that hospitals publicly post their chargemaster, which lists charges for tens of thousands of itemized clinical services.^{5,6} Recognizing the limited value of chargemaster data to both providers and patients,⁷ HHS proposed the Hospital Price Transparency Rule in 2019,¹ but implementation was delayed because of numerous legal challenges.⁸ Effective January 1, 2021, hospitals must display 4 different prices (discounted cash price, payer-specific negotiated charges, and minimum and maximum negotiated prices) for 300 shoppable services plus provide a downloadable file with prices for all services offered. The new legislation has garnered significant attention from researchers

TRENDS FROM THE FIELD

and journalists but little peer-reviewed research. Several recently published commentaries in high-impact journals have described the potential benefits of and barriers to price transparency having a significant short-term impact on prices.⁹⁻¹¹ Blog posts and newspaper investigations have reported limited compliance by hospitals with the new regulation, including active steps that hospitals seem to be taking to hide posted price information from commonly used web search engines.^{12,13} In this context, our research demonstrating that only 60% of hospitals posted their cash prices for imaging tests and 50% for clinical services is noteworthy.

Specifically, our study confirms a wide variation in hospital prices that we identified and expands on the findings of prior studies that have consistently revealed 2- to 5-fold differences in prices using “secret shopper” methodology¹⁴⁻¹⁶; we found 4- to 10-fold differences in the actual prices publicly posted by hospitals to their corporate websites. There are several potential explanations for the range in prices we observed. A simple but unlikely explanation is that the price differences are real; a savvy patient without insurance could mirror our findings and pay \$464 for a brain MRI at the University of Pennsylvania or \$6215 at Mayo Clinic. Another explanation is that the difference in prices reflects a lack of specificity in the legislation that allows hospitals too much leeway in calculating their bundled price for a given service; for example, hospitals have significant discretion over whether to include physician fees in their prices. Alternatively, price differences may reflect fundamental confusion within hospitals over how to ascertain the true “cost” of delivering a service and convert costs into prices for patients.¹⁷

Finally, it is important to comment on the accessibility and usability of the hospital websites. CMS requires that price information be publicly available and prominently displayed.¹⁸ Although we were able to find prices quickly on many sites, price information was seldom displayed prominently on the hospital “home” page. The typical patient is likely to have substantial difficulty locating price information based on our experience.

Limitations

Our study has several limitations. First, our study is limited to 20 hospitals and 5 shoppable services; a larger-scale analysis is certainly warranted. Second, our study was conducted within 6 weeks of the hospital price transparency regulation taking effect; availability of price data may improve over time. Third, our analysis was limited to the assessment of price availability on hospital websites as mandated in the new federal regulations; we did not evaluate whether prices might be available through telephone inquiry or written request.

CONCLUSIONS

A significant percentage of highly respected US hospitals are not in compliance with new price transparency legislation, and there is wide variation among hospitals in the prices for identical services. ■

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