

Comparing U.S. Healthcare Price Transparency Platforms: A Structured Narrative Review

Raveesh Seth¹, Mehar Seth¹, Akshaj Gupta²

Received September 11, 2026

Accepted October 13, 2026

Electronic access October 31, 2026

Background: Per the Centers for Medicare & Medicaid Services (CMS), national health spending has reached \$5.3 trillion dollars or 18.0% of GDP in 2024. Since 2021, hospitals are required to share pricing, but the results obtained vary significantly.

Objective: The aim of this research is to explain eight platforms designed for price transparency, give a brief overview of the results concerning the hospital pricing discrepancies, and discover the gaps that can be filled with the future AI-powered means.

Methods: The authors have used the method of narrative review in combination with the document review on platforms and research on scientific articles, government reports, audits. The analysis involved 10 criteria and definitions of “free”, “public”, “independent from insurance”, and “hospital-verified”.

Results: The consumer-oriented pricing means were easy to access but not comprehensive. The enterprise pricing products were vast but necessary subscription and technology skills were needed. The examination of eight platforms revealed that two tools satisfy or partially satisfy all four definitions: Turquoise Health’s consumer (beta) tool and the hospital files that meet CMS regulations. The price difference is high: a lower-limb MRI at the 90th-percentile hospital costs 2.9 times as much as at the 10th-percentile hospital. The full compliance score increased from 21.1% to 49.4%.

Conclusion: No existing tool met all four definitions (free, public, independent from insurance, and hospital-verified) with national coverage. The proposed approach has been only a theory so far and needs more evidence to make it practical.

Keywords: healthcare price transparency; hospital pricing; machine-readable files; health informatics; consumer decision-making; artificial intelligence

Introduction

Background and Context

The expenditure on health in the United States showed growth of 7.2 percent in 2024 and reached \$5.3 trillion meaning that \$15,474 was spent on medical care by each resident of the country, while health spending accounted for 18 percent of GDP¹. Since the introduction of the Hospital Price Transparency Rule by the Centers for Medicare & Medicaid Services (CMS) on January 1, 2021, hospitals are required to publish a Machine Readable File (MRF) of pricing information along with a simplified display of at least 300 available services for consumers². Regulatory changes that will be brought in 2026 contain new requirements for reporting allowed amount percentiles and include the requirement for an attestation. The measures will be enforced from April 1, 2026³. The regulations which are in effect require health insurance providers to make information about their negotiated rates available as well⁴.

¹ Marvin Ridge High School, Waxhaw, North Carolina, USA (Grades 10 & 9)

² Vasant Valley School, New Delhi, India (Grade 12)

Problem Statement and Rationale

In practice, hospital pricing should provide a set of comparable data on prices after all the regulations. However, the actual implementation of this concept proves to be quite difficult⁵. The U.S. Government Accountability Office has concluded that the CMS cannot prove that the pricing data from hospitals is accurate and complete. Among the shortcomings, there are instances when data is missing, with cases of empty fields, “n/a” designation, absent rates for certain insurers as well as some prices that seem extraordinary, such as pricing related to knee injuries exceeding \$1 million⁶. The following aspects prove how and why this information can be understood as complicated. Firstly, the hospitals usually present their negotiated prices in the form of percentages or as a variety of formulas rather than in the figures. 18% among 2000 hospitals provided price data that explicitly stated the prices in dollars and cents as of September 2026⁷. Secondly, in five of the biggest cities, hospitals used fixed prices due to using various deal methods in only 48% of deals made with patients⁸. Thirdly, the same medical service may refer to different service names in different hospitals. Thus, a quick search

may return wrong results. Finally, there can also be problems with various hospitals naming the same insurance differently, which complicates inter-hospital comparisons of rates regardless of their similarities.

Significance

This review commenced with the following question: If even the researchers had to dig through several websites in order to understand the hospital prices, how any ordinary patient could interpret the prices without being knowledgeable in this subject? Each of those platforms provides answers to some parts of that question, but there is no universal method of getting the specific prices of hospitals recognized for each patient, adapted for their insurance. The search described in the results signifies this concerning one of the widely used services. Showing what the current platforms can offer and where they lack is the first and a necessary step in developing and verifying such service.

Objectives

In this review, three main questions are asked: (1) What capabilities are documented by eight U.S. price transparency platforms and databases and how do they differ in terms of access, scope, type of data, and integration with insurance? (2) What does independent evidence indicate about variability in hospital price and compliance with Hospital Price Transparency Law? (3) What capabilities' gaps can be identified that need to be overcome by future navigation tools, including those powered by artificial intelligence? This review does not present the effectiveness of the platforms in helping consumers but rather utilizes the results of previous studies when referring to consumer behavior.

Scope

This review covers eight platforms and databases operating in the U.S. that were assessed as of September 26, 2026, and four types of evidence available until that date, such as (a) peer-reviewed empirical investigations into price variability, the effect of price transparency tools, and compliance; (b) laws and governmental audit reports; (c) compliance checks from third parties, both non-governmental organizations and commercial organizations; and (d) various documents (grey literature) provided by the platforms.

Prior Literature

Early Warnings About Transparency Design

Prior to the implementation of the federal mandate, health economists cautioned against the assumption that publication

of price information alone would lead to a functional market. According to Cutler and Dafny, it is essential to create programs for enhancing transparency that take into account patients' habits when searching for and comparing services⁹. In another article published in the same journal, Sinaiko and Rosenthal explored potential challenges for price transparency, such as uncoordinated pricing information and lack of consideration of patients' insurance plans¹⁰. Issues with data usability that have been discovered since 2021 confirm the validity of these concerns.

Do Price Tools Change Behavior?

The effectiveness of these programs is still unclear. For example, the introduction of a price transparency program among public employees and retirees in California showed that too few people utilized the system making it impossible to reduce expenses¹¹. In a study where an employer sponsored a platform, it found that patients who searched for prices before treatment pay less money for laboratory services (around 14%). While patients saved money on advanced imaging as well (up to 13%), office visit costs were hardly affected (only around 1%). In addition, there is a possibility of selection bias among those who opted in for comparison¹². Price transparency used in conjunction with reference pricing has provided even bigger results than price transparency alone¹³. Moreover, making prices public on the web in New Hampshire has directed some people to cheaper organizations and helped reduce rates of prices¹⁴.

Many aspects explain these results. In a survey, most Americans have expressed their willingness to search for cheaper rates; however, only a few have actually done that before seeing a doctor¹⁵. The causes for limited use encompass the lack of patients' health literacy and the misunderstanding of insurance definitions, the efforts needed for searching, distrust in the price stated on the website, the application of deductibles and co-payments, the preference for trusted care providers, and the fact that patients often have to seek urgent care^{5,10,15}.

Why Prices Vary

Price transparency is an economic prerequisite for price competition, although according to Reinhardt health care markets depart from textbook cases in ways that limit the effectiveness of transparency¹⁶. Porter expressed the policy goal in terms of value, which means the results produced for every dollar spent¹⁷. Berwick and Hackbarth identified the lack of transparent pricing as one of the main kinds of waste in U.S. health care spending¹⁸. Regarding price variations, Bai and Anderson explored hospitals with charges many times more than their costs¹⁹. The charges created through billing methods differ from the negotiated amount that is paid by the insur-

ers. The review of Frakt identified that hospitals are shifting some costs to private pay patients, but not as much as it is often said²⁰. Christensen et al. found that state charge transparency legislation resulted in hospitals reducing list charges and that the final amounts paid by patients or insurers did not differ significantly²¹. As this shows, it is important to differentiate charges from charged prices to understand transparency statistics. Dafny and Lee characterized the lack of competition as the reason for the high prices in the U.S. health care industry²².

Artificial Intelligence in Health Care: Potential and Risks

The literature describes artificial intelligence systems used for clinical decision-making^{23,24} and deep-learning techniques applied to images, clinical text, and health records²⁵. The mapping of descriptions of the hospital services, which sometimes give conflicting information about one and the same service, into the standard codes is a task belonging to text classification that these methods tackle. A recent study explored the combination of natural-language-processing with clustering to achieve standardization in descriptions of procedures and linkage of the corresponding codes used in the machine-readable files of five hospitals across the country in relation to five elective procedures²⁶. But whether these methods work at a national level and in relation to patients remains a question to be answered empirically. Predictive systems' efficacy is highly reliant on the source data quality²⁷. Models may work undesirably at the facility types dissimilar to those they were created for, which is called dataset shift²⁸. A proprietary sepsis prediction model that is widely used is known to show worsened performance during independent validation compared to how well it performed in the original location²⁹. Algorithms have a risk of enactment of biases, e.g. in the case of a population health algorithm that was often applied, it undervalued the needs of Black patients by using the previous expenditures related to such patients³⁰. Language generation models that create explanations may generate accurate sounding but inaccurate text often called hallucinations³¹. In terms of a price tool intended for patients, these issues may bring about the problem of incorrect code matching, cost estimates, and explanation of costs encouraging users to trust the model unconditionally. One may conclude that any AI-based navigation system needs human oversight and external validation prior to being put into operation.

Methods

Design

This structured narrative review involves the evaluation of platforms through document-centric analysis. It is not a sys-

tematic review in nature. The two key processes included in this review are (a) assessing selected platforms based on existing criteria and (b) a focused analysis of the available evidence around pricing variability, compliance, and consumer's accessibility of pricing information.

Literature Identification

Peer-reviewed studies were identified via an organized search of the PubMed database and supplemented by Google Scholar exploration, back citation searches of the accessed papers, and searching the CMS/GAO Websites as well as organizations that audit compliance. The search on the PubMed was conducted on September 26, 2026, using the search strategy illustrated as follows: ("price transparency"[tiab] OR "price shopping"[tiab] OR "shoppable services"[tiab] OR "machine-readable file"[tiab] OR "machine-readable files"[tiab] OR "hospital prices"[tiab] OR "negotiated prices"[tiab] OR "negotiated rates"[tiab]) AND (hospital*[tiab] OR "health care"[tiab] OR healthcare[tiab]) AND ("2010/01/01"[dp] : "2026/09/26"[dp]). [tiab] is for Title/Abstract and [dp] is for publication date.

The initial search yielded 525 entries, out of which one was duplicate. The titles and abstracts of the rest 524 entries were screened against the inclusion criteria for eligibility; among the papers without abstracts, the title was used to determine the eligibility. An entry becomes eligible if it provides original data from the U.S., such as (a) information on prices/pricing variability for healthcare services, (b) data on compliance with price transparency regulations, and (c) information on consumer usage of price data as well as consumers' reaction. There were 215 exclusions in total: 127 entries did not provide original data offering only commentaries, reviews, or news articles, 52 entries did not cover data from the U.S., and 36 entries did not address healthcare prices and compliance. 309 entries remained at the end: 189 entries were relevant to pricing or pricing variability, 91 entries were relevant to compliance or usability of the price data, and 29 entries were relevant for usage of price data by consumers. All entries are depicted in Supplementary Table S2 with their decision and explanation.

Since this is a narrative review, not all eligible research were discussed but only those that provided national or multi-market data or answered one of the three research questions. Much research that elucidated pricing variability and reporting in specific specializations or procedures are listed in Supplementary Table S2 and were not reviewed at different levels. The studies taking place in economics or policy journals were found through Google Scholar database and citation searches, and therefore articles appearing in the Introduction and Prior Literature were not subject to selection criteria. The screening was supported with the help of artificial intelligence (Claude).

Platform Identification and Selection

Identification of its platforms started with three popular tools among them (GoodRx, MDsave, and Turquoise Health); and then expanded via online searches using generic web search engines, simulating the actions of a patient seeking for relevant information related to prices of medical services, and also using mentioned platforms in open access literature and media news. Search terms were composed of search phrases similar to “compare hospital prices” or “healthcare price transparency tool”. A platform or a source of data was included if it could ensure accomplishment of all four points at the cutoff date: 1. it has data on hospital medical prices in the United States; 2. it exists in several states; 3. its documentation is publicly accessible and informative; and 4. it represents a separate business model of cash-pay marketplace, employer-funded routing, claims-based estimating, crowdsourcing, enterprise data aggregation, raw statutory data, or comparison shopping for drugs; the fact confirms that the selection covers all basic approaches in the market. Excluding from the assessment were platforms that operate in one market only, work with one insurer, or have no sufficient public documentation. Details on the excluded platforms can be found in Supplementary Table S3. The eight platforms under consideration are MDsave, Turquoise Health, Healthcare Bluebook (now included in Valenz Health), FAIR Health Consumer, CMS-mandated hospital prices, ClearHealthCosts, Sesame, and GoodRx. Since companies may have different models of products, each product has been considered separately (except for Turquoise). The enterprise platform of Turquoise Health and the consumer one are regarded as one platform (the two Turquoise products get separate rows but one platform). The tools are limited and new; the regulations related to hospitals and insurers transparency were introduced only since 2021 and 2022 respectively; hence, there were very few platforms providing access to their documentation publicly at the cutoff date. Thus, eight platforms under consideration present the main publicly available platforms echoed in literature.

Key Terms

Because price data varies in nature, the definitions in Table 1 are used consistently. The following terms are defined in this section, and the specialized terms used in the Discussion section are also defined here.

Evaluation Criteria

The ten criteria were arranged into five categories (access, data, insurance, technology, and experience), each having an operational definition and an evidence source (Supplementary Table S4). “Usability” and “user-friendliness” were treated

as a single criterion since neither could be measured without using tests with users.

Data Extraction

Extraction was conducted using one standard extraction form that recorded the ten criteria in Supplementary Table S4 for each product, the business model, the target users, and limitations, with the source page and the access date presented for every record. The product web pages were accessed on September 26, 2026, being the only cutoff date for the results. The limitations were categorized by source: limitations indicated in documentation, and limitations that had been identified by the authors based on the documents (like limitations concerning eligibility). The difference in both limitations is shown in Table 3. The data extraction was performed by two authors independently, and disagreements were resolved. Table 3 demonstrates all the information collected using the form for different products. The literature data included the type of price, the level of comparisons, the source of the data, and the indication of the main result of research.

Comparison Rule

Products were not evaluated using scores/ranks as there is no standard tool for scoring; therefore, all evidence is literature-based. The evidence is summarized in the evidence matrix (Table 3) and all comparisons made in the Results section are limited only to the differences in evidence that can be seen in the matrix. The products were evaluated in terms of four definitions (Table 4): 1) free means that no charges are required for an individual, and no purchase by a sponsor is required; 2) public means that it should be available for searching without an account, membership, or enrollment; 3) independent from insurance means that the product should be available for both uninsured and covered people and should provide estimates based on the network or plan of an insured person; and 4) hospital-verified means that the prices are known to be for particular hospitals/medical facilities. National coverage was noted as the fifth variable.

Evidence Quality and Conflicting Evidence

Each piece of evidence was categorized into one of four sources of evidence (Supplementary Table S5). The AACODS checklist (authority, accuracy, coverage, objectivity, date, significance) was used to evaluate grey literature sources³². Three rules guided the synthesis process. Firstly, estimates of the effect sizes (price, compliance, savings) were derived from Tier 1 or Tier 2 sources wherever possible. Secondly, vendor-reported data (Tier 4) were only used to explain a product’s features and tagged as “vendor-reported data”. This means

Table 1 Glossary of price types and technical terms.

Term	Definition used in this review
Billed (gross) charge	Price of hospital services taken from the chargemaster of a hospital before any discounts, which may diverge from the actual prices paid.
Negotiated rate	Price that a hospital has agreed to get from a specific insurer or plan.
Allowed amount	The total cost of services paid through a plan consisting of actual payment and patient cost-sharing.
Discounted cash price	Price charged to a patient who pays with cash.
Out-of-pocket (OOP) cost	Amount that the patient pays, which depends on the price and the plan's deductibles, copay, coin-insurance, and maximum out-of-pocket limit.
Machine-readable file (MRF)	The file that must be published by the hospital in a standardized format.
CPT / HCPCS	A code system used for procedures and services (stands for Current Procedural Terminology; Healthcare Common Procedure Coding System). CPT is maintained and licensed by the American Medical Association.
ETL (extract, transform, load)	Program performing data processing by collecting files in a standardized manner.
Normalization	Changing differently encoded records of data into a comparable format.
API	Application programming interface, which is a standardized way to request for data.
HL7 FHIR	A standard for exchanging health data between different systems.
Level of comparison	Whether the variations in prices are analyzed across regions, across hospitals in one region, or within one hospital among payers.

that they were not considered credible evidence in describing the effectiveness of the product. Thirdly, in cases of conflicting data between sources (e.g., CMS and compliance estimates by advocacy organizations), both instances were cited along with their definitions and datasets, with no averaging or decision-making.

Results

Regulatory Compliance, 2021–2026

Different sources provide varying compliance estimates depending on the definitions and sample sizes used to produce them (shown in table 2). According to CMS as cited by GAO, the compliance rate by hospitals was at 27% in February 2021 and increased to 70% by November 2022. CMS conducted a review of 1,746 hospitals and took enforcement measures against 1,287 from 2021–2023⁶. As of April 2023, CMS was able to issue more than 730 warning letters and also requested corrective action plans from 269 hospitals and imposed penalties only on four hospitals; further, it announced a new plan of measures to enhance the process and ensure compliance fast (from 30–40 reviews a month to more than 200, shortening the window for correcting non-compliance)³³. According to reports, it was announced that there were 28 hospitals fined as opposed to 15 by November 2024⁷. Third-party studies also produced compliance results below 20%: in one independent study from a pool of 64 hospitals, the compliance rate calculated was 19% in November 2021³⁴. Research indicates that, according to data for March 2024 on 11,792 hospitals in

the United States, 56% of hospitals that offered at least one shoppable procedure with a price disclosure obligation failed to report any information, while just 6% provided appropriate prices³⁵. According to analysis based on the database of 2,464 American hospitals received by CMS under the Inpatient Prospective Payment System by the end of the 2022–2023 period, hospitals that serve higher-risk populations are less compliant and do not demonstrate continuous improvements in their adherence³⁶. The PatientRightsAdvocate.org (PRA) organization has reviewed 2,000 hospitals in its reports for February 2024, November 2024, and September 2026. It assesses that the level of full compliance among hospitals in July 2023 stood at 36% followed by 34.5% in February 2024 and 21.1% in November 2024, whereas the compliance rate saw a sharp increase to 49.4% in September 2026^{7,37–39}. According to PRA's definition, compliance totally improved considerably from the month of November 2024 and the month of September 2026, a timeframe when more hospitals were fined by CMS and the rule of 2026 was implemented. However, this evidence does not prove that an enforcement effect existed.

When a penalty notice by CMS is published, one can see what the negligence by hospitals looks like. On the 6th of June in the year of 2023, CMS analyzed the website of Betsy Johnson Hospital located in Dunn, North Carolina. The agency identified four major violations committed by the healthcare institution, including a machine-readable file which did not display the time of the last update, file naming which did not satisfy the requirements of CMS, absence of all payer-specific negotiated rates, and absence of a consumer-friendly list of services. After the hospital failed to comply with the require-

ments of the corrective action plan and the violations remained after being reanalyzed on the 26th of July, 2023 the penalty of \$99540 was imposed by CMS on the 23rd of August, 2023⁴⁰. The case illustrates two important considerations relevant to the present review. The violations appear to be the very gaps limiting usability of the files for patients and platforms alike (missing negotiated rates and no consumer display), and the penalty is accrued on a per-bed basis every single day, making it larger as long as non-compliance lasts and hospital is larger. Compliance in terms of being fully functional (“full compliance”) and compliance regarding price data functionality are different matters. While PRA indicated that 49.4% of hospitals were fully compliant back in September 2026, only 18% were able to provide dollar-and-cent prices for at least half of their items and services⁷. While technical compliance has improved, usability of prices remains very low. There is a significant degree of inconsistency in the estimates. Healthcare Financial Management Association described one report prepared by PRA as an “irresponsible mixture of misleading, incomplete and incorrect” information and tried to prove that criteria PRA uses differs from those utilized by CMS⁴¹. Wisconsin Hospital Association stated that it spotted “multiple mistakes” in the PRA report of September 2026⁴². As for CMS figures, they do not come from independent observers, but rather from the agency itself that makes sure that regulations are not violated; moreover, GAO indicated that CMS does not verify whether data published are not only complete but accurate as well⁶. Due to the differences in definitions, it is not possible to compare all three series of estimates, and hence the paper does not provide one final answer regarding the “true rate”. What all sources seem to agree upon is that compliance is incomplete and that files vary enough in quality that measuring compliance is itself contested.

Platform Landscape

Table 3 contains a summary of what each of the eight platforms (Turquoise Health – enterprise and consumer are being counted as one) has to offer as of September 26, 2026. Three major patterns emerge. First, free consumer tools work each in their own part of the market. MDsave reports bundled cash prices at participating providers (vendor-reported number is in excess of 2,240 hospitals and 9,600 providers across all 50 states)⁴³; Sesame covers cash prices for visits, mostly telehealth⁴⁴; GoodRx provides a comparison of discounted prescription drugs at approximately 70,000 pharmacies (vendor-reported)⁴⁵; ClearHealthCosts gathers crowd-sourced and compiled prices in partnership with newsrooms in certain metropolitan areas⁴⁶; and FAIR Health Consumer provides national estimates from claims not linked to any facility⁴⁷. Second, the largest data sources have underlying costs or certain technical knowledge requirements: on the

other hand, while Turquoise Health’s enterprise platform collects price files for hospitals and payers⁴⁸, files designated by CMS are free but are provided by specific hospital with no single central search tool at CMS². Third, Healthcare Bluebook, which belongs to Valenz Health, gives members of the employers and plans of the provider the opportunity to search costs and quality but is not available to the public^{49,50}. Turquoise Health also offers a free consumer tool which is still on the beta stage and does not require any sign-up process and provides data on provider prices, as well as the option of inputting plan details in order to receive the out-of-pocket cost estimates, whereby each price is marked as “fully verified” or “partially verified” depending on the information source⁵¹. Turquoise also releases consumer pricing API documentation⁵². None of the eight offer AI-informed explanations for consumers; however, this does not mean such feature is non-existent.

Assessment Against Operational Definitions

Table 4 applies the four definitions. Free and public access was common among consumer tools, but these tools either did not show hospital-specific negotiated prices or did not give insurance-specific estimates. Enterprise and employer products met the data or insurance definitions but not the access definitions. Two products met or partly met all four definitions. The Turquoise Health consumer search did so with partial coverage, because it is a beta with providers and plans still being added. The CMS-mandated hospital files did so only as raw data: they are free, public, and hospital-posted, but they must be downloaded hospital by hospital, give no out-of-pocket estimate, and vary in completeness. No product fully met all four definitions with national coverage at the cutoff date.

Illustrative Example: One Patient Search

To show what a patient encounters, one of the authors searched MDsave for “MRI without Contrast” near a ZIP code in North Carolina on September 23, 2026⁴³. Four observations illustrate the problems described above. First, the service definition was ambiguous: the page labeled the service “MRI without Contrast,” listed it as “also known as MRI Brain w/o,” and described it as covering any one of more than ten body parts, from the brain and spine to the extremities and pelvis. Second, cash prices for this bundle varied widely within one region. MDsave reported a regional average of \$958, and 13 providers were listed within 100 miles. On the first results page (10 providers), prices ranged from \$380 at Catawba Valley Medical Center and \$381 at Frye Regional Medical Center, both in Hickory, North Carolina, to \$1,326 at two Novant Health imaging centers in the Charlotte area, a 3.5-fold dif-

Table 2 Hospital price transparency compliance estimates, 2021–2026, by source and definition. Estimates from different sources use different definitions and are not directly comparable.

Assessment date	Source (tier)	Sample	Definition	Fully compliant	Price usability
Feb 2021	CMS, reported by GAO ⁶ (2)	GAO report	CMS: MRF + shoppable services	27%	—
Nov 2021	Loccoch et al. ³⁴ (1)	64 (random)	CMS checklist	19%	Content 58%; accessibility 27%
Nov 2022	CMS, reported by GAO ⁶ (2)	GAO report	CMS: MRF + shoppable services	70%	—
Jul 2023	PRA ³⁸ (3)	Not stated	PRA criteria	36%	—
Feb 2024	PRA ³⁹ (3)	2,000	PRA criteria	34.5%	—
Mar 2024	Mead and Ibrahim ³⁵ (1)	11,792 non-federal hospitals	Prices reported for 32 shoppable services, matched to services provided	6% fully concordant	56% reported no prices
Nov 2024	PRA ³⁷ (3)	2,000	PRA criteria	21.1%	—
Sep 2026	PRA ⁷ (3)	2,000	PRA criteria	49.4%	18% posted dollar prices for ≥ half of items

Table 3 Evidence matrix of documented platform capabilities, as of September 26, 2026 (source pages listed in Supplementary Table S1). HDHP = high-deductible health plan; OOP = out-of-pocket.

Product	Cost and eligibility	Coverage (as documented)	Price type and source	Insurance integration	Interoperability	Limitations (D = documented by platform; A = authors' assessment)
MDsave ⁴³	Free search; purchase at cash price; employer product available	National; vendor-reported 2,240+ hospitals	Bundled cash price agreed with participating providers	None for negotiated rates; purchase may count toward HDHP deductible	No public API found	Self-pay prices only; participating providers only (A)
Turquoise Health — enterprise ⁴⁸	Paid subscription; payers, employers, other organizations	National aggregation of hospital and payer files	Negotiated rates from hospital MRFs and insurer files	Payer-specific rates	Integration with analytics tools described	Not designed for individual consumers (A)
Turquoise Health — consumer (beta) ^{51,52}	Free; no sign-up	Limited; providers and plans added on rolling basis	Negotiated prices labeled fully or partially verified	Optional plan-specific OOP estimate	Consumer pricing API documented	Beta; incomplete provider and plan coverage (D)
Healthcare Bluebook / Valenz ^{49,50}	Sponsor (employer or plan) purchase required	Members of sponsoring organizations	Cost and quality data; methodology not public on pages reviewed	Through sponsoring plan	Not documented publicly	Not available to the public (A)
FAIR Health Consumer ⁴⁷	Free; no login	All 50 states, DC, PR, USVI	Statistical estimates from claims (allowed amounts; charge percentiles)	Scenarios (in-network, out-of-network, uninsured); not plan-specific	Not assessed	Not facility-specific except provider-specific prices in New York State; updated twice yearly (D)
CMS-mandated hospital files ²	Free; public	All hospitals, posted on each hospital's site	Charges, cash prices, payer-specific negotiated rates; allowed-amount percentiles from 2026	Payer- and plan-specific rates; no OOP estimate	Standard CMS templates (machine-readable)	No central search; completeness varies; requires technical skill (A)
ClearHealthCosts ⁴⁶	Free	Selected metro areas with partner newsrooms	Crowdsourced and compiled provider prices	None	Not documented	Limited geography and services (A)
Sesame ⁴⁴	Free to browse; optional paid membership	National; mainly telehealth	Cash visit prices	Mainly self-pay	Not documented	Not hospital prices (A)
GoodRx ⁴⁵	Free	National; vendor-reported ≈70,000 pharmacies	Discount coupon prices for prescription drugs	Coupons used instead of insurance, not with it	Not assessed	Prescription drugs only (A)

ference. Third, distance and price did not align: results were sorted by distance, and the nearest provider (16 miles) was among the most expensive, while the two lowest prices were about 76 miles away. Finally, the platform did not connect the price to the user's insurance; it advised users to contact their insurer to find out whether the purchase would count toward their deductible. This example shows cash prices from one platform on one date in one market. It is not a systematic sample, and the prices are not the negotiated rates an insured patient's plan would pay; but it illustrates the terminology, variation, and insurance-integration problems that a patient must resolve without assistance.

Documented Price Variation

The studies in Supplementary Table S6 measure different price types at different levels, so their multiples should not be compared with one another. Cooper and colleagues, us-

ing 2007–2011 commercial insurance claims covering 27.6% of people with employer-sponsored insurance, found that the transaction price of a lower-limb MRI at the 90th-percentile hospital nationally was 2.93 times that at the 10th-percentile hospital, and that about a fifth of case-level price variation for this service occurred within hospitals⁵³. Jiang and colleagues, using hospital-posted commercial negotiated prices compiled by Turquoise Health in June 2022, found that the median within-hospital price gap for the same CT or MRI service across payers was 4.4- to 5.2-fold⁵⁴. Bai and Anderson documented hospitals whose billed charges were many times their costs¹⁹; billed charges are rarely paid by insured patients.

What Price Variation Means for Patients

Large differences in negotiated prices do not translate directly into patient savings. What a patient saves by choosing a lower-priced provider depends on the benefit design. An uninsured

Table 3 (continued). Remaining extraction fields for each product, as of September 26, 2026. “None documented” means no such feature was described on the pages reviewed.

Product	Business model	Primary users	Eligibility and login	Standardization	AI or automated interpretation	Documented consumer features
MDsave ⁴³	Cash-pay marketplace; employer product	Self-pay patients; employers	No membership fees; purchase through the platform	Services grouped into named bundles; bundle definitions can be broad (see Illustrative Example)	None documented	Price list sorted by distance; regional average price; online purchase
Turquoise Health — enterprise ⁴⁸	Paid data and analytics subscription	Payers, employers, life sciences organizations	Paid account	Not documented on page reviewed	AI tools for contract analysis (enterprise users)	Not applicable (enterprise product)
Turquoise Health — consumer (beta) ^{51,52}	Free consumer search (beta)	Patients	No sign-up	Prices shown per named service with verification labels	Pricing API described as intended for AI-powered applications; no AI explanations in search	Provider comparison; optional out-of-pocket estimate; verification labels
Healthcare Bluebook / Valenz ^{49,50}	Sold to employers and health plans	Members of sponsoring organizations	Through sponsoring employer or plan	Not documented publicly	None documented	Cost and quality comparisons and rewards for members
FAIR Health Consumer ⁴⁷	Nonprofit; free consumer website	Consumers	No login	Plain-language service search; procedure codes underlie estimates	None documented	Estimates for in-network, out-of-network, and uninsured scenarios; body-part procedure locator
CMS-mandated hospital files ²	Regulatory mandate	Researchers, developers, technically skilled users	Public; no login	CMS templates include standard codes where applicable, but service descriptions and payer names vary	None	Separate hospital consumer display of 300 shoppable services or a price estimator tool
ClearHealthCosts ⁴⁶	Price transparency project with partner newsrooms	Consumers	No login	Not documented	None documented	Price search by distance; user-submitted prices; billing guides
Sesame ⁴⁴	Cash-pay visits; optional SesamePlus membership	Self-pay patients	Browse free; sign-up offered for booking	Not documented	None documented	Same-day online booking, mainly telehealth
GoodRx ⁴⁵	Free discount-coupon service	People buying prescription drugs	Free coupons; not insurance	Not documented	None documented	Pharmacy price comparison; discount coupons

Table 4 Products rated against operational definitions of free, public, independent from insurance, and hospital-verified search (definitions in Methods), as of September 26, 2026.

Product	Free	Public	Independent from insurance	Hospital-verified	National coverage
MDsave	Yes	Yes	No (cash only)	Partial (provider-agreed cash prices)	Partial
Turquoise Health — enterprise	No	No	Yes	Yes	Yes
Turquoise Health — consumer (beta)	Yes	Yes	Partial (optional; plans added over time)	Yes (labeled by verification level)	Partial
Healthcare Bluebook / Valenz	No	No	Partial (sponsor plans)	Not documented	Partial (members only)
FAIR Health Consumer	Yes	Yes	Partial (network scenarios, not plan-specific)	No (statistical estimates)	Yes
CMS hospital files	Yes	Yes	Partial (plan rates, no OOP)	Yes (hospital-posted; completeness varies)	Yes, but no central search
ClearHealthCosts	Yes	Yes	No	Partial (crowdsourced or compiled)	No
Sesame	Yes	Yes	No	No (not hospital prices)	Partial
GoodRx	Yes	Yes	No	Not applicable (drugs)	Yes (drugs only)

patient, or an insured patient with a high-deductible plan who has not met the deductible, pays most or all of the negotiated or cash price, and so captures most of the difference. A patient with a flat copayment, or one who has already reached the out-of-pocket maximum, pays the same amount wherever care is received, and the saving goes to the insurer or employer. Patients with coinsurance capture a share. Price comparison is also only relevant for services that can be scheduled in advance. The practical value of comparing prices therefore depends on the negotiated rate, the patient’s coverage, and the resulting out-of-pocket cost, which is why tools that report only charges or statistical averages are of limited use to in-

sured patients.

Vendor-Reported Savings and Their Generalizability

Evidence that navigation tools reduce spending comes mainly from vendors. In a trade-press interview, a Healthcare Bluebook executive reported that the Florida Department of Management Services, covering more than 350,000 people, saved more than \$6 million in one year using Bluebook’s navigation program⁵⁵. These figures are vendor-reported and were not independently verified. Even if accurate, \$6 million across 350,000 covered people is about \$17 per person per year,

small relative to U.S. health spending of \$15,474 per person in 2024¹. The result may also not generalize: it comes from one large, self-insured public employer in Florida that paired the tool with employee incentives, and savings depend on the share of care that is shoppable, benefit design, employee engagement, and local price variation. Peer-reviewed evidence suggests that price information alone produces modest effects, and that effects are larger when combined with financial incentives such as reference pricing^{11–13}.

Discussion

Principal Findings

Out of eight platforms reviewed, the relationship between access and coverage was inversely proportional. Products, which were free and easy to access, appeared to be limited in scope. Products with a wide range of negotiated prices required a subscription, employer affiliation, or knowledge of raw files use. All of the products did not cover all four operational definitions (free, public, independent from insurance, and hospital-verified) at the designated moment. Turquoise Health's consumer search (in a beta version), and hospital files regulated by CMS met or partly met all four of the stated definitions. The beta version is currently adding providers and plans. The latest studies find a lot of variations in prices, though the importance of these variations depends on the type of prices researched. The example in Results demonstrates the combination of gaps faced by a patient searching for information about services: the patient had to define an unclear labeling of services, deal with cash prices (which were different by 3.5 times in a single region), and contact an insurer to find out their coverage.

Remaining Gaps

The analysis of the evidence matrix reveals four significant gaps. The first gap pertains to the fact that facility-specific negotiated rates have become widely accessible for enterprise clients but only partially accessible for the public. The second gap relates to the inability of cash-pay marketplaces to reach out to the majority of insured individuals for whom their costs depend on negotiated agreements and benefits design. The third gap centers on the fact that employer-sponsored navigation is unavailable to individuals whose employers and plans have not bought it. The final gap is that while raw regulatory documents are public, they vary across hospitals and require technical expertise on the part of individuals.

A Conceptual Framework for Future Navigation Tools

The framework discussed here is only conceptual in nature. It has not been constructed, prototyped, or assessed for usability,

pricing accuracy or cost prediction accuracy, nor does it make any claim to effectiveness. The purpose of the framework is to neatly catalogue the requirements for future empirical work. It consists of five parts: the automated collection of MRF information from hospitals and health insurers; an ETL pipeline that standardizes the codes used to describe the services and payers (CPT/HCPCS) and flags any that have not mapped or classified correctly; a public database that allows searching for specifics of prices at hospitals; an interpretation layer whereby the user is assisted in figuring out what their out-of-pocket costs would be (based on the details of their plans) and a consumer interface which would allow price comparisons. Whether AI can accurately match the hospital's terms with standard codes is yet to be established and should be tested against the standard set manually coded before applying it on patients²⁵. The literature on behavior suggests that interpretation support could help reduce some of the barriers to use^{11,15} but remains a speculation that ought to be tested.

Practical Requirements for Implementation

To extend the use of such a system to hospitals on a wide scale, ongoing resources need to be provided. The data should be kept up to date according to a schedule: the hospitals' information is updated at least once a year and maybe even more often, and the rates that insurers set are updated every month and take a considerable amount of space; therefore, the costs of storage and computing are large. The codes need to be kept updated as well; additionally, using CPT codes requires acquiring a license from the American Medical Association. The governance should indicate the owners of the data and the procedure of error detection and correction as well as the party responsible for a faulty price estimate. Collecting the details of plans for individual estimates imposes privacy and safety requirements. Data engineers and user support specialists must be employed; as for funding, the example of Turquoise Health brings the idea of the possible way to finance the infrastructure.

Data Quality, Uncertainty, and Safeguards

Given that the quality of hospital data is lacking and inconsistent^{5,6}, and suppliers report very different results for datasets they have, the usefulness of any future AI-assisted service would depend on the quality of the original data²⁷. Any such system must include: continuous monitoring of the quality of data (missing fields checking, non-dollar price checking, checking for unrealistic values); user reporting of uncertainty (price intervals, date of data, verification marks like the ones used in Turquoise Health consumer search⁵¹); detection of potential AI errors (adding estimates next to claims or explanation of benefits data, and human confirmation of mappings

with a low confidence level); testing and monitoring of the performance of a certain hospital, region, or patient group^{28,30}; and research of external issues before and after implementation²⁹.

Connection to Objectives

For its first goal, the review describes how the capabilities of eight platforms are different as per the documentation available; however, it does not show how well one product benefits consumers since doing that would require conducting user studies. For the second goal, independent evidence establishes there is considerable price variance, but the measurement is inconsistent, and if one definition of compliance is followed by a third party, full compliance has improved and the price usability is still low. For the third goal, remaining issues relate to public access to price data for specific facilities and insurers as there are studies showing that trust, interpretation and per one's benefits play their role as well^{11,12,15}, and the proposed examples reveal these issues in practice.

Future Research

Included among the things to do are: (1) controlled usability tests of price tools to understand their use by target population such as users and determine ease of use and understanding, trust and choices of such users; (2) prototypes of normalization part with measurement of data accuracy by comparing it to manually done coding; (3) validation and comparison of the estimates of out-of-pocket costs for patients with the real data based on explanation of benefits; (4) evaluation of how CMS requirements for 2026 will help to achieve full filing system and filing system that can be used at its maximum³; (5) independent compliance monitoring based on existing definitions in order to make CMS and third-party estimates accurate; (6) studies devoted to understanding what effect the tools for ensuring price transparency brings if any and whether it influences prices and amounts spent on healthcare services^{14,21}.

Limitations

This review has important limitations: it did not include usability testing or data from consumers, so it cannot say how well any platform helps people make decisions. It did not independently verify any platform's methods for pricing or the data it contained, with certain figures being vendor-reported (for example, provider counts and savings). The assessment of the platforms provides just a snapshot as of September 26, 2026, in a rapidly changing environment. The eight platforms included in this review were purposely selected to represent various models; insurer member tools and state price websites were excluded. Unfortunately, although only PubMed searches were executed with a documented query, one could

not follow every eligible study, thus possibly having missed relevant studies. Although two authors extracted the data, the platforms did not check or confirm the extracted information. Evidence of compliance derives in part from reports given by organizations with policy interests. Lastly, the AI-enhanced framework is conceptual and has not been tested; there is nothing in this review to demonstrate its working.

Conclusion

The regulations regarding price transparency led to the public availability of the price data from hospitals, yet patients can hardly benefit from it as access is limited. Within this study, the products analyzed show that the access level and the extent were in inverse proportion to each other. No product allows access to prices at a national level that is independent of insurance companies even if one of the products being tested is close to being able to provide information. In order to tackle the issue, it is necessary to have better initial data or tools that have thoroughly been tested with patients and used for interpretations with the help of artificial intelligence, but the effectiveness of this suggests the need to get empirical proof.

Acknowledgments

The authors thank their independent advisor, Harsh Jaiswal, for his guidance throughout this project.

Conflicts of Interest

The authors declare no conflicts of interest.

AI tools

The tools (Claude) were used to research and screen literature, and for citation and reference formatting. The entire writing is by the authors.

All web sources were accessed on September 26, 2026.

References

- 1 Centers for Medicare & Medicaid Services, NHE fact sheet. CMS.gov. 2025., <https://www.cms.gov/data-research/statistics-trends-and-reports/national-health-expenditure-data/nhe-fact-sheet>.
- 2 Centers for Medicare & Medicaid Services, Hospital price transparency. CMS.gov. 2026., <https://www.cms.gov/priorities/key-initiatives/hospital-price-transparency>.
- 3 Centers for Medicare & Medicaid Services, CY 2026 OPps/ASC final rule: hospital price transparency policy changes (fact sheet). CMS.gov. 2025., <https://www.cms.gov/newsroom/fact-sheets/cy-2026-ops-ambulatory-surgical-center-final-rule-hospital-price-transparency-policy-changes>.

- 4 U.S. Department of the Treasury, U.S. Department of Labor, U.S. Department of Health and Human Services, Transparency in coverage: final rule. Federal Register. Vol. 85, pg. 72158–72310, 2020.
- 5 N. Maleki, B. Padmanabhan, K. Dutta, Usability of health care price transparency data in the United States: mixed methods study. Journal of Medical Internet Research. Vol. 26, pg. e50629, 2024., <https://doi.org/10.2196/50629>.
- 6 U.S. Government Accountability Office, Health care transparency: CMS needs more information on hospital pricing data completeness and accuracy (GAO-25-106995). GAO.gov. 2024., <https://www.gao.gov/assets/gao-25-106995.pdf>.
- 7 PatientRightsAdvocate.org, Eighth annual hospital price transparency compliance report. PatientRightsAdvocate.org. 2026., <https://www.patientrightsadvocate.org/eighth-annual-hospital-price-transparency-compliance-report-september-2026>.
- 8 D. V. Wehrly, M. J. Pany, M. E. Chernew, The opacity of price transparency. Health Affairs. Vol. 45, pg. 614–621, 2026., <https://doi.org/10.1377/hlthaff.2025.01530>.
- 9 D. M. Cutler, L. S. Dafny, Designing transparency systems for medical care prices. New England Journal of Medicine. Vol. 364, pg. 894–895, 2011., <https://doi.org/10.1056/NEJMp1100540>.
- 10 A. D. Sinaiko, M. B. Rosenthal, Increased price transparency in health care: challenges and potential effects. New England Journal of Medicine. Vol. 364, pg. 891–894, 2011., <https://doi.org/10.1056/NEJMp1100041>.
- 11 S. Desai, L. A. Hatfield, A. L. Hicks, A. D. Sinaiko, M. E. Chernew, D. Cowling, S. Gautam, S. J. Wu, A. Mehrotra, Offering a price transparency tool did not reduce overall spending among California public employees and retirees. Health Affairs. Vol. 36, pg. 1401–1407, 2017., <https://doi.org/10.1377/hlthaff.2016.1636>.
- 12 C. Whaley, J. Schneider Chafen, S. Pinkard, G. Kellerman, D. Bravata, R. Kocher, N. Sood, Association between availability of health service prices and payments for these services. JAMA. Vol. 312, pg. 1670–1676, 2014., <https://doi.org/10.1001/jama.2014.13373>.
- 13 C. M. Whaley, T. Brown, J. C. Robinson, Consumer responses to price transparency alone versus price transparency combined with reference pricing. American Journal of Health Economics. Vol. 5, pg. 227–249, 2019., https://doi.org/10.1162/ajhe_a_00118.
- 14 Z. Y. Brown, Equilibrium effects of health care price information. Review of Economics and Statistics. Vol. 101, pg. 699–712, 2019., https://doi.org/10.1162/rest_a_00765.
- 15 A. Mehrotra, K. M. Dean, A. D. Sinaiko, N. Sood, Americans support price shopping for health care, but few actually seek out price information. Health Affairs. Vol. 36, pg. 1392–1400, 2017., <https://doi.org/10.1377/hlthaff.2016.1471>.
- 16 U. E. Reinhardt, Health care price transparency and economic theory. JAMA. Vol. 312, pg. 1642–1643, 2014., <https://doi.org/10.1001/jama.2014.14276>.
- 17 M. E. Porter, What is value in health care? New England Journal of Medicine. Vol. 363, pg. 2477–2481, 2010., <https://doi.org/10.1056/NEJMp1011024>.
- 18 D. M. Berwick, A. D. Hackbarth, Eliminating waste in US health care. JAMA. Vol. 307, pg. 1513–1516, 2012., <https://doi.org/10.1001/jama.2012.362>.
- 19 G. Bai, G. F. Anderson, Extreme markup: the fifty US hospitals with the highest charge-to-cost ratios. Health Affairs. Vol. 34, pg. 922–928, 2015., <https://doi.org/10.1377/hlthaff.2014.1414>.
- 20 A. B. Frakt, How much do hospitals cost shift? A review of the evidence. Milbank Quarterly. Vol. 89, pg. 90–130, 2011., <https://doi.org/10.1111/j.1468-0009.2011.00621.x>.
- 21 H. B. Christensen, E. Floyd, M. Maffett, The only prescription is transparency: the effect of charge-price-transparency regulation on healthcare prices. Management Science. Vol. 66, pg. 2861–2882, 2020., <https://doi.org/10.1287/mnsc.2019.3330>.
- 22 L. S. Dafny, T. H. Lee, Health care needs real competition. Harvard Business Review. Vol. 94, pg. 76–87, 2016.
- 23 E. J. Topol, High-performance medicine: the convergence of human and artificial intelligence. Nature Medicine. Vol. 25, pg. 44–56, 2019., <https://doi.org/10.1038/s41591-018-0300-7>.
- 24 F. Jiang, Y. Jiang, H. Zhi, Y. Dong, H. Li, S. Ma, Y. Wang, Q. Dong, H. Shen, Y. Wang, Artificial intelligence in healthcare: past, present and future. Stroke and Vascular Neurology. Vol. 2, pg. 230–243, 2017., <https://doi.org/10.1136/svn-2017-000101>.
- 25 A. Esteva, A. Robicquet, B. Ramsundar, V. Kuleshov, M. DePristo, K. Chou, C. Cui, G. Corrado, S. Thrun, J. Dean, A guide to deep learning in healthcare. Nature Medicine. Vol. 25, pg. 24–29, 2019., <https://doi.org/10.1038/s41591-018-0316-z>.
- 26 T. Wiese, Semantic interoperability and price analytics in hospital transparency data: a multi-stage pipeline with NLP and machine learning. Informatics for Health and Social Care. Vol. 51, pg. 185–201, 2026., <https://doi.org/10.1080/17538157.2026.2650681>.
- 27 Z. Obermeyer, E. J. Emanuel, Predicting the future: big data, machine learning, and clinical medicine. New England Journal of Medicine. Vol. 375, pg. 1216–1219, 2016., <https://doi.org/10.1056/NEJMp1606181>.
- 28 A. Rajkomar, J. Dean, I. Kohane, Machine learning in medicine. New England Journal of Medicine. Vol. 380, pg. 1347–1358, 2019., <https://doi.org/10.1056/NEJMr1814259>.
- 29 A. Wong, E. Otles, J. P. Donnelly, A. Krumm, J. McCullough, O. DeTroyer-Cooley, J. Pestrue, M. Phillips, J. Konye, C. Penzoza, M. Ghous, K. Singh, External validation of a widely implemented proprietary sepsis prediction model in hospitalized patients. JAMA Internal Medicine. Vol. 181, pg. 1065–1070, 2021., <https://doi.org/10.1001/jamainternmed.2021.2626>.
- 30 Z. Obermeyer, B. Powers, C. Vogeli, S. Mullainathan, Dissecting racial bias in an algorithm used to manage the health of populations. Science. Vol. 366, pg. 447–453, 2019., <https://doi.org/10.1126/science.aax2342>.
- 31 Z. Ji, N. Lee, R. Frieske, T. Yu, D. Su, Y. Xu, E. Ishii, Y. J. Bang, A. Madotto, P. Fung, Survey of hallucination in natural language generation. ACM Computing Surveys. Vol. 55, pg. 1–38, 2023., <https://doi.org/10.1145/3571730>.
- 32 J. Tyndall, AACODS checklist. Flinders University. 2010., <https://fac.flinders.edu.au/dspace/api/core/bitstreams/e94a96eb-0334-4300-8880-c836d4d9a676/content>.
- 33 Centers for Medicare & Medicaid Services, Hospital price transparency enforcement updates (fact sheet). CMS.gov. 2023., <https://www.cms.gov/newsroom/fact-sheets/hospital-price-transparency-enforcement-updates>.
- 34 E. C. Loccoh, R. Khera, J. van Meijgaard, T. Marsh, H. J. Warraich, Hospital adherence to the federal price transparency mandate: results from a nationally representative sample. Journal of General Internal Medicine. Vol. 38, pg. 2424–2427, 2023., <https://doi.org/10.1007/s11606-023-08039-0>.
- 35 M. Mead, A. M. Ibrahim, Over- and underreporting of prices: most hospitals are not compliant with the Hospital Price Transparency Rule. Health Affairs Scholar. Vol. 2, pg. qxae099, 2024., <https://doi.org/10.1093/haschl/qxae099>.
- 36 D. Hao, V. K. Rath, J. S. Ross, R. K. V. Sethi, R. Xiao, Price transparency compliance among hospitals caring for disadvantaged populations. JAMA Network Open. Vol. 9, pg. e266312, 2026., <https://doi.org/10.1001/jamanetworkopen.2026.6312>.
- 37 PatientRightsAdvocate.org, Seventh semi-annual hospital price transparency compliance report. PatientRightsAdvocate.org. 2024., <https://www.patientrightsadvocate.org/seventh-semi-annual-hospital-price-transparency-report-november-2024>.

- 38 PatientRightsAdvocate.org, Fifth semi-annual hospital price transparency compliance report. PatientRightsAdvocate.org. 2023., <https://www.patientrightsadvocate.org/july-semi-annual-compliance-report-2023>.
- 39 PatientRightsAdvocate.org, Sixth semi-annual hospital price transparency compliance report. PatientRightsAdvocate.org. 2024., <https://www.patientrightsadvocate.org/semi-annual-report-feb-2024>.
- 40 Centers for Medicare & Medicaid Services, Hospital price transparency notice of imposition of a civil monetary penalty: Betsy Johnson Hospital (UCN 2023HPT006). CMS.gov. 2023., <https://www.cms.gov/files/document/notice-imposition-cmp-betsy-johnson-hospital-redacted.pdf>.
- 41 Healthcare Financial Management Association, Healthcare Financial Management Association calls Patient Rights Advocate's latest price transparency compliance report 'irresponsible'. HFMA.org. 2024., <https://www.hfma.org/press-releases/healthcare-financial-management-association-calls-patient-rights-advocates-latest-price-transparency-compliance-report-irresponsible/>.
- 42 WisBusiness, WHA denouncing 'flawed' hospital price transparency report. WisBusiness.com. 2026., <https://www.wisbusiness.com/2026/wha-denouncing-flawed-hospital-price-transparency-report/>.
- 43 MDsave, Homepage and employer solutions pages. MDsave.com. 2026., <https://www.mdsave.com>.
- 44 Sesame, Homepage. SesameCare.com. 2026., <https://sesamecare.com>.
- 45 GoodRx, How GoodRx works. GoodRx.com. 2026., <https://www.goodrx.com/how-goodrx-works>.
- 46 ClearHealthCosts, Homepage and PriceCheck project. ClearHealthCosts.com. 2026., <https://clearhealthcosts.com>.
- 47 FAIR Health, FAIR Health Consumer cost lookup. FAIRHealthConsumer.org. 2026., <https://www.fairhealthconsumer.org>.
- 48 Turquoise Health, Network and pricing intelligence for payers. Turquoise.health. 2026., https://turquoise.health/for_payers.
- 49 Valenz Health, Member experience solutions (Valenz Bluebook). ValenzHealth.com. 2026., <https://www.valenzhealth.com/solutions/member-experience/>.
- 50 Valenz Health, Valenz Health completes acquisition of Healthcare Bluebook (press release). ValenzHealth.com. 2024., <https://www.valenzhealth.com/news/valenz-health-completes-acquisition-of-healthcare-bluebooktm/>.
- 51 Turquoise Health, Compare healthcare prices near you. Turquoise.health. 2026., <https://turquoise.health/patients>.
- 52 Turquoise Health, Consumer pricing API documentation. Turquoise.health. 2026., <https://turquoise.health/api/docs/>.
- 53 Z. Cooper, S. V. Craig, M. Gaynor, J. Van Reenen, The price ain't right? Hospital prices and health spending on the privately insured. Quarterly Journal of Economics. Vol. 134, pg. 51–107, 2019., <https://doi.org/10.1093/qje/qjy020>.
- 54 J. X. Jiang, H. P. Forman, S. Gupta, G. Bai, Price variability for common radiology services within U.S. hospitals. Radiology. Vol. 306, pg. e221815, 2023., <https://doi.org/10.1148/radiol.221815>.
- 55 T. Worth, Healthcare data transparency gets boost from acquisition: Q&A with Bill Kampine, co-founder and chief innovation officer, Healthcare Bluebook. Leader's Edge. 2022., <https://www.leadersedge.com/?p=41906>.

Supplementary Information

The online version contains supplementary material available at <https://nhsjs.com/?p=61221>