

Facts About Hospital-Insurer Contracting

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Starting January 1, 2021, federal regulation has required hospitals to publicly post machine-readable files of their standard charges.¹ These data files must include information on the gross charge, cash discounted price, and payer-specific negotiated prices for all items and services provided by the hospital. To date, most of the research based on these new price transparency data files has focused on either compliance with the regulation²⁻⁶ or correlates of price variability for certain services.^{7,8} However, to our knowledge, there has been no research on an often overlooked but critical element of the market for hospital services: hospital-insurer contract structure.

Hospital-insurer contracts determine the prices that insurers pay to hospitals for covered services. Moreover, not only do they determine the amount of payment, but they also allocate financial risk between each party.⁹ This allocation of financial risk may, in turn, incentivize certain outcomes. For example, contracts based on a percentage of billed charges may, in principle, incentivize excessive utilization, whereas contracts based on fixed fees for episodes of care may incentivize cost containment. Yet, until now, details of contracts between hospitals and private health plans have been largely unavailable, and researchers have tended to impute contract structure based on claims data sets.^{10,11} This study aims to begin filling that gap by using newly available hospital price transparency data to establish basic empirical facts about hospital-payer contracts at a large hospital chain in the US.

METHODS AND DATA

For this case study, we used September 2022 price transparency data from 10 hospitals in the HCA Healthcare system. HCA Healthcare is a large, for-profit hospital chain and, as of the time of writing, the largest hospital chain in the US, with 180 locations as of 2020.^{12,13} Moreover, the structure of HCA's standard charge data files provides substantial detail on contracting structure. To assess whether hospital-insurer contracts varied by hospital characteristics, we intentionally selected hospitals for this study that varied in bed size and geography.

ABSTRACT

OBJECTIVES: To use publicly available price transparency data files to establish empirical regularities about hospital-insurer contracting.

STUDY DESIGN: Retrospective analysis of 10 price transparency data files from HCA Healthcare.

METHODS: Cross-sectional qualitative analysis of 524 hospital-insurer contracts across 10 hospitals.

RESULTS: We ascertain 4 empirical regularities in these files. First, hospitals contract with many payers, ranging from 35 to 82 across the hospitals in the sample. Second, contract structure varies significantly within and across hospitals: Of the 524 contracts in our sample, the median contract contained 9 contract elements, whereas the mean contract contained 1285 contract elements. Third, most of the contracts in our sample contained multiple contracting methodologies (eg, both fixed fee and percentage of charges). Fourth, these contracts indicated substantial variation for the same service within and across hospitals, validating findings from analyses based on claims data and hospital price transparency files.

CONCLUSIONS: Hospital-insurer contracts dictate the flow and structure of a significant portion of total health care expenditure in the US. Increased attention by both researchers and policy makers would lead to a greater understanding of this vital—yet understudied—element of the market for hospital services.

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TAKEAWAY POINTS

- ▶ Hospital-insurer contracts determine the prices that insurers pay to hospitals for covered services and allocate financial risk between each party. Because this allocation of risk creates incentives that may affect utilization or other outcomes, hospital-insurer contracts are an important element of the health system.
- ▶ These contracts are largely unavailable due to confidentiality; however, a large hospital chain has included contracting details in its price transparency data files.
- ▶ Each of the 10 hospitals included in this study contracts with dozens of plans. Within each hospital, contract structure varies significantly across plans. The majority of contracts included in this study use multiple payment methodologies, and the price of a common obstetrics service varies significantly both within and across hospitals.

segment, and reimbursement methodology, see the [eAppendix](#) (available at [ajmc.com](#)).

RESULTS

Our analytical sample consisted of 10 hospitals, which ranged in size from 24 beds to 815 beds and spanned 9 individual states ([Table 1](#)¹³). In total, these hospitals contracted with 191 unique payers (eg, Aetna) and negotiated 524 different contracts. Across all contracts, 64.5% were classified as commercial, 6.9% as Medicaid, 18.1% as Medicare, and 10.5% as other.

Hospitals Negotiate Many Different Contracts With Many Different Payers

The first—and most basic—fact about contracting is that hospitals have many contracts with many different payers. Hospitals in our sample negotiated a mean of 52 different contracts. This ranged from a low of 35 at TriStar Greenview Regional Hospital (Kentucky) to a high of 82 at HCA Houston Healthcare Southeast (Texas). Hospitals in our sample contracted with a mean of 33 payers, ranging from a low of 21 at Wesley Medical Center (Kansas) to a high of 59 at HCA Houston Healthcare Southeast. See [Table 1](#) for results.

Contract Structures Vary Significantly Across and Within Hospitals

Contracts differed significantly in their level of contracting detail. Across the 524 contracts in our analytic sample, the median contract contained 9 service description–code observations, whereas the mean contract contained 1285 service description–code observations. This is due to the tremendous variation in contracting detail: For the contract between Wesley Medical Center and WPPA Wichita Prime, there are 63,054 distinct observations (eg, in service package “laboratory,” for *Current Procedural Terminology [CPT]/Healthcare Common Procedure Coding System* code 80048, the contracted rate is \$8.12). However, for the contract between HCA Houston Healthcare Southeast and Galaxy Health Network, there are only 3 observations: “ER” (emergency room), “other inpatient,” and “other outpatient,” all at 90% of billed charges.

Additionally, contract complexity varies significantly within hospitals. For example, for the 42 contracts for Belton Regional Medical Center (Missouri), the most complex contracts have 285 observations (3 contracting entities: United Options, United Non Options, and United National), whereas the simplest contracts have only 2 observations (4 contracting entities: Focus Healthcare, Blue Cross and Blue Shield of Kansas City Medicare, CorVel, and Premier WorkComp). Across all 10 hospitals in this sample, the

TABLE 1. Study Hospitals’ Descriptive Statistics^{13,a}

Hospital name	State	Bed count	No. of contracts	No. of payers
North Suburban Medical Center	CO	157	50	43
Eastern Idaho Regional Medical Center	ID	321	40	31
Wesley Medical Center	KS	760	49	21
TriStar Greenview Regional Hospital	KY	211	35	28
Lakeview Regional Medical Center	LA	178	59	27
Belton Regional Medical Center	MO	71	42	28
Highlands-Cashiers Hospital	NC	24	55	26
Mission Hospital	NC	815	64	31
Parkridge East Hospital	TN	128	48	34
HCA Houston Healthcare Southeast	TX	341	82	59

^aThese hospitals were selected from the list of all HCA Healthcare hospitals as of 2020.¹³

The contracts in our sample are structured identically: For each hospital, contracting details are listed separately by contracting entity and vary by service description (eg, obstetrics) and coding details (eg, MS-DRG 765, 766). For a given service description–coding cell, there is a reimbursement methodology (eg, 27.4% of billable gross charges). For this study, we define a contract as a grouping of a hospital and contracting entity—for example, Belton Regional Medical Center (hospital) and Aetna Better Health Kansas (contracting entity). A contracting entity can be either a payer (eg, Cigna), a payer-plan combination (eg, Blue Cross Blue Shield of Louisiana Preferred Provider Organization), or a payer–market segment combination (eg, United Medicare).

We parsed these contracts to categorize them by payer, market segment, and reimbursement methodology. We extracted payer name from each contract and conducted web searches for each contracting entity to classify contracts by market segment: commercial, Medicaid, Medicare, or other. We then used descriptive statistics to examine the distribution of payers and contracts within and across hospitals and assessed differences in reimbursement methodologies between contracts. Finally, we focused on a common obstetrics service—Medicare Severity Diagnosis Related Group (MS-DRG) 768—to assess variation in pricing between contracts within and across hospitals. For details of coding logic for payer, market

minimum number of service description–code observations for a given contract is either 1 or 2, and the maximum number ranges from 263 (Parkridge East Hospital [Tennessee], with 48 contracts) to 63,054 (Wesley Medical Center, with 49 contracts).

Most Contracts Contain Multiple Reimbursement Methodologies

Across the 524 contracts in our sample, we identified 6 distinct reimbursement methodologies used to determine negotiated prices for items and services. More than half of the contracts (59.4%) contained more than 1 reimbursement methodology, with a median of 2 reimbursement methodologies per contract.

The first reimbursement methodology we observed was a fixed-fee methodology, in which a contracting entity pays a fixed amount for a specific service or procedure. For example, at Mission Hospital (North Carolina), Aetna negotiated a price of \$10.72 for CPT code 87451 for a Medicare Advantage plan.

The second methodology sets a negotiated price as a percentage of the chargemaster (or gross) price for that item or service. For example, at Wesley Medical Center, MultiPlan negotiated a price equivalent to 34.65% of the chargemaster price for CPT code 10036 for a worker’s compensation plan.

The third methodology sets a negotiated price as a percentage of the Medicare price for that item or service. For example, at the Eastern Idaho Regional Medical Center, Sterling Medicare Health Maintenance Organization pays 107% of the Medicare rate for “other inpatient” services.

The fourth methodology sets a negotiated price as a percentage of the Medicaid price for that item or service. For example, WellMed pays 105% of the Medicaid rate for “inpatient DRGs” at HCA Houston Healthcare Southeast.

The fifth methodology sets a negotiated price as a percentage of an unspecified fee schedule. For example, BlueCross BlueShield of Tennessee pays 218% of “fee schedule” for physical therapy services to Parkridge East Hospital.

The sixth methodology sets a negotiated price as a percentage of the TRICARE price for that item or service. For example, Humana’s TRICARE plan pays 97% of the TRICARE rate for inpatient services at TriStar Greenview Regional Hospital.

Prices for the Same Service Vary Significantly Within and Across Hospitals

Given the complexity of contract structure, direct comparisons of negotiated prices across plans and hospitals are challenging. Here, we focus on a common service line that occurs across our 524 contracts: obstetrics services.

Even within this service line, contracts differ in structure across plan and hospital. Across all contracts, there are 111 unique groupings

TABLE 2. Commercial Pricing for MS-DRG 768*

Hospital name	State	No. of contracts	Median	Minimum	Maximum
North Suburban Medical Center	CO	8	\$6584	\$400	\$16,540
Eastern Idaho Regional Medical Center	ID	6	\$8679	\$5353	\$18,441
Wesley Medical Center	KS	24	\$5351	\$2504	\$12,803
TriStar Greenview Regional Hospital	KY	3	\$14,458	\$10,796	\$18,793
Lakeview Regional Medical Center	LA	17	\$7346	\$2604	\$24,180
Belton Regional Medical Center	MO	9	\$7763	\$3831	\$10,554
Highlands-Cashiers Hospital	NC	4	\$8880	\$2506	\$9098
Mission Hospital	NC	19	\$8634	\$2616	\$17,029
Parkridge East Hospital	TN	6	\$10,613	\$12	\$13,199
HCA Houston Healthcare Southeast	TX	16	\$5116	\$3120	\$12,598

MS-DRG, Medicare Severity Diagnosis Related Group.

*Data are from contracting cells for MS-DRG 768. For additional detail on the definition of the commercial market segment, see the eAppendix.

of MS-DRGs that are attributed to the obstetrics service line, and many contracts include multiple codes or code ranges. For this study, we retain all contract details for commercial payers for MS-DRG 768, which corresponds to “vaginal delivery with [operating room] procedures.” This yields 112 observations across all 10 hospitals in the sample. We estimate the minimum, maximum, and median rates by hospital, and we present results in **Table 2**.

We found substantial variation in the price for this service, both within and across hospitals. Across hospitals, the median price ranges from \$5116 (HCA Houston Healthcare Southeast) to \$14,458 (TriStar Greenview Regional Hospital). Prices also vary substantially within hospital, with the maximum price often many multiples of the minimum negotiated price. Although coding error may result in Medicare or Medicaid plans erroneously classified as commercial plans, the ratio of median to maximum prices should be relatively robust to such misclassification. The ratio of median to maximum prices also indicates significant price dispersion for the same service within the same hospital across commercial payers. These contract data provide another perspective on the significant variation in hospital pricing that has been documented using other data sources.¹⁴⁻¹⁷

DISCUSSION

This study uses newly available hospital price transparency data to analyze contract structure for 10 hospitals in the HCA Healthcare chain. We find that hospitals, regardless of size, tend to contract with many different payers and offer many contracts. The contacts tend to be complex, with the majority using more than one type of reimbursement methodology, and contract structure varies significantly both within and across hospitals. Finally, the price of a common obstetric service varies significantly both across payers at the same hospital and for the same payer at different hospitals. For example, the price of MS-DRG 768 for Cigna at North Suburban Medical Center (Colorado) is \$3111, whereas the price for Cigna at TriStar Greenview Regional Hospital is \$10,796.

Limitations

This study has several limitations. First, this study uses only a small convenience sample of hospitals. This was intentional. This study is intended to demonstrate the utility of using newly available standard charge data to better understand hospital-insurer contracts and does not seek to establish generalizable results. However, given that prior research could only deduce contract structure using claims databases,^{10,11} this data source represents a significant increase in the amount of information on hospital-insurer contracts than was previously available.

Second, although the hospital price transparency data files represent a potentially transformative new data source, some observers have questioned their utility.^{18,19} Compliance has been low, and as of the time of writing, CMS has penalized only 2 noncompliant hospitals.²⁰ Although we are unable to ascertain the underlying accuracy of the data, we are reassured that our analysis of commercial prices for MS-DRG 768 displays considerable variation, in line with previous research. However, future research into contract structure using this new data source will likely be hampered by low compliance with the price transparency regulations.

Third, due to the limited information content of plan names in the standard charge files, it is challenging to accurately classify plans into market segment. We used web searches to do so for this study but acknowledge that our classification may contain a degree of error. More broadly, until plan name is standardized in hospital standard charge data files, it will be challenging to accurately compare negotiated prices across hospitals.

CONCLUSIONS

Despite their limitations, standard charge files are a potentially rich data source for future research on the area of hospital-insurer contracting, and we believe that focusing on contracting structure represents a potentially viable path forward in terms of both research and policy making. As noted earlier, contracts are crucial for determining the allocation of financial risk between insurers and hospitals; in addition to a focus on understanding prices, we recommend that researchers focus on better understanding how market dynamics shape contract structure. In particular, researchers could examine the degree to which contracting structure differs by hospital characteristic or by inpatient or outpatient setting; how contract structure differs by market segment; or, within commercial contracts, how contract type differs for fully insured and self-funded plans.

Moreover, given the magnitude of hospital spending by private insurers—\$434 billion in 2019, exceeding the 2021 gross domestic product of Denmark^{21,22}—and the role of contracts in shaping that expenditure, policy makers should be aware of the extent to which hospital-insurer contracts vary within and across hospitals. ■

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eAppendix

Coding Logic for Classifying Payers, Market Segments, and Reimbursement Methodologies

Payers

We relied on both text-based logic to infer payer based on the name of the contracting entity.

eAppendix Table 1: Logic for Classifying Contracting Entities into Payers

Imputed Payer	If (upper-case) Contract Entity Contains:
United	UNITED, UHC MO MCD
Wellcare	WELLCARE
Sterling Health Plan	STERLING HEALTH PLAN
Rocky Mountain Health	ROCKY MOUNTAIN HEALTH
Prime Health	PRIME HEALTH
Multiplan	MULTIPLAN
Magellan	MAGELLAN
Humana	HUMANA
Cigna	CIGNA
First Health	FIRST HEALTH
Coventry	COVENTRY
Centene	CENTENE
Beech Street	BEECH STREET
Anthem	ANTHEM
Amerigroup	AMERIGROUP
Aetna	AETNA
Vantage Health	VANTAGE HEALTH
WPPA WICHITA	WPPA WICHITA
Vaya	VAYA
VALUE OPTIONS	VALUE OPTIONS
UNIVERSAL HEALTHCARE	UNIVERSAL HEALTHCARE
TX WORKFORCE COMMISSION	TX WORKFORCE COMMISSION
TRIWEST	TRIWEST
TRICARE	TRICARE
SUPERIOR HP	SUPERIOR HP
RICHARD & ASSOCIATES	RICHARD & ASSOCIATES
PRUITT HEALTH	PRUITTHEALTH, PRUITT HEALTH
PEACH STATE	PEACH STATE
Optum	OPTUM
MOLINA	MOLINA
MEDCOST	MEDCOST
LIFE SYNCH	LIFESYNCH, LIFE SYNCH
Kaiser	KAISER
JOHN DEERE	JOHN DEERE
FRIDAY HEALTH	FRIDAY HEALTH

EMPLOYERS HEALTH NETWORK	EMPLOYERS HEALTH NETWORK
CRESCENT HEALTH SOLUTIONS	CRESCENT HEALTH SOLUTIONS
CORVEL	CORVEL
CORRECT CARE SOLUTIONS	CORRECT CARE SOLUTIONS
COMP BH CARE	COMP BH CARE
COMMUNITY HEALTH CHOICE	COMMUNITY HEALTH CHOICE
CELTIC	CELTIC
CARESOURCE	CARESOURCE, CARE SOURCE
BRIGHT HEALTH	BRIGHT HEALTH
BCBS	BCBS, BLUE CROSS, BC ID, REGENCE BLUE SHIELD, REGENCE BS ID MCR,
AMERIHEALTH	AMERIHEALTH
AMBETTER	AMBETTER
AMERICAN HEALTH	AMERICAN HEALTH
UNICARE	UNICARE
VA CCN	VA CCN
REGENCE	REGENCE

For all other contracting entities not identified by the logic above, payer was imputed as the name of the contracting entity.

Market Segment

We relied on both web searches and text-based logic to infer market segment. Additional details available upon request.

eAppendix Table 2: Logic for Classifying Contracting Entities into Market Segment

Imputed Market Segment	Logic
Medicare	Contracting entity name contains “MEDICARE”, “MCR”, “ADVANTAGE”, “ADV”, “CLEAR SPRING”, “INNOVAGE”, “BLUE SECURE”, “HUMANA CHOICE”, “HUMANA COMMUNITY”, “HUMANA GOLD PLUS”, “HUMANA HONOR”, “HUMANA VALUE PLUS”, “SIMPLY BLUE”, “WELLCARE ASSIST”, “WELLCARE COMMUNITY ASSIST”, “WELLCARE GIVEBACK”, “WELLCARE NO PREMIUM”, “WELLCARE LOW PREMIUM”, “WELLCARE PATRIOT GIVEBACK”, “WELLCARE PREMIUM HYBRID OPEN”, “AMERIHEALTH CARITAS NC”, “CAROLINA COMPLETE HEALTH”, “UNITED HEALTHCARE COMMUNITY PLAN”, “WELLCARE OF NC”, “AARP”, “APEX HEALTH”, “FIRSTCAROLINACARE”, “DEVOTED HEALTH”, “HERITAGE PHYSICIANS NETWORK”,

	<p>“IMPERIAL INSURANCE CO”, “KINDRED HOSPITAL BARE AREA”, “KS PLAN ADMINISTRATORS”, “LIBERTY COUNTY INDIGENT HEALTH CARE PROGRAM”, “PHYSICIANS HEALTH CHOICE OF TEXAS”, “TEXAS INDEPENDENT HEALTH PLAN”, “PYRAMID LIFE”, “UNIVERSAL HEALTHCARE”, “WELLMED”, “CIGNA HEALTHSPRING”</p> <p>“WELLCARE” and state is Texas.</p>
Medicaid	<p>Contracting entity name contains “MEDICAID”, “MCD”, “COLORADO ACCESS”, “AETNA BETTER HEALTH”, “HEALTHYBLUE MO”, “MISSOURI CARE”, “MISSOURICARE”, “HOME STATE HEALTH PLAN MO”, “SUNFLOWER STATE HEALTH PLAN KS”, “UNITEDHEALTH COMMUNITY PLAN KS”, “UNITEDHEALTH COMMUNITY PLAN MO”, “TEXAS HEALTH NETWORK”, “TENNCARE”, “PEACH STATE”, “COVENTRY CARES KY”, “HUMANA CARESOURCE”</p>
Other	<p>Contacting entity name contains “CHIP”, “VA “, “TRICARE”, “TRIBAL”, “HUMANA MILITARY CHAMPUS TRICR”, “HUMANA MILITARY BH”, “HUMANA MILITARY”, “VETERAN'S ADMIN”, “HEALTHNET”, “HEALTH NET “, “SNP”, “DUAL”, “OPTUM HEALTH”, “AMERIGROUP”, “CHRISTUS”, “CHILDREN”, “FIDELIS SECURECARE OF TX”, “MAGELLAN”, “COMP BH CARE COMM”, “INTEGRATED MENTAL HEALTH SYSTEM”, “VALUE OPTIONS”, “CHC HARRIS HEALTH INDIGENT”, “TRIWEST HEALTHCARE ALLIANCE”, “CENTENE LA HEALTHCARE”</p>

Reimbursement Methodology

We relied on text-based logic to infer reimbursement methodology based on the information contained in the “rate” column of the contracts.

eAppendix Table 3: Logic for Classifying Reimbursement Methodologies

Imputed Reimbursement Methodology	Logic
Fixed Fee	Contracted rate is a number.
Percent of billed charge	Contracted rate contains “% of BC “ or “% of Billable Gross Charges”
Percent of Medicare	Contracted rate contains “% of MCR”
Percent of Medicaid	Contracted rate contains “% of MCD”
Percent of Fee Schedule	Contracted rate contains “% of FS”
Percent of Tricare	Contracted rate contains “% of TRCR”
Other	All else not otherwise specified.