Research and Planning Consultants, LP

DETERMINING USUAL, CUSTOMARY, AND REASONABLE CHARGES FOR HEALTHCARE SERVICES

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EXECUTIVE SUMMARY

Research & Planning Consultants, LP (RPC) determines the maximum reasonable charges for most medical services based on the industry-standard definition of usual, customary, and reasonable (UCR) charges. This is the definition adopted by many states and major commercial insurers to define maximum reasonable charges for out-of-network care. Medicare used the term "prevailing charge" for the same approach before it adopted the Resource Based Relative Value Unit model in 1993.

The UCR method calculates the maximum reasonable charge for a specific service in a medical market by comparing what all providers in the medical market charge for the service. All UCR charge analysis is performed on undiscounted billed charges. The determination whether a charge is reasonable is not based on what payors pay or on any government fee guideline. The UCR charge is based entirely on charges set unilaterally by providers without any adjustments.

A threshold percentile determines the maximum reasonable charge for that service in that medical market. Charges less than or equal to the threshold percentile value are reasonable; charges more than the threshold value are not reasonable. The 80th and 75th percentiles are threshold percentiles most commonly used in state and federal laws and by major health plans. This means the charge for a service of 80% or 75% by providers in a medical market was less than or equal to this threshold value.

RPC determines the UCR charge based on the 80th percentile when possible as this is the most frequently used threshold. Some publications do not publish an 80th percentile threshold charge, but they do publish a 75th percentile threshold charge. When an 80th percentile threshold is not available, RPC determines the UCR charge based on a 75th percentile threshold.

RPC uses several data sources to calculate UCR charge thresholds depending on the type of provider that delivers the service. All data sources RPC uses to determine UCR charges are publicly available and were primarily created for uses other than litigation. The data sources include public use data files from the federal Center for Medicare and Medicaid Services (CMS) and the Texas Department of State Health Services. These public use databases allow RPC to

directly calculate the 80th percentile threshold value for many services. For other services by physicians and other practitioners, RPC calculates an 80th percentile charge nationally and adjusts this charge by a charge-based geographic adjustment factor specific to location and the category of the code in question. When RPC cannot directly calculate threshold values due to data limitations, RPC relies on a published benchmark generally relied on by providers to set their charges.

RPC identifies specific services based on industry standard medical coding. RPC assumes the codes assigned by the provider in the billing and medical records accurately describe the services. When there are missing codes, RPC works with medical coders and coding software to assign the appropriate codes. When the provider did not assign codes and did not provide records sufficient to assign codes, RPC sets the reasonable charge as zero dollars until the provider supplies additional information.

RPC applies industry standard coding edits before determining whether the provider's charges are reasonable. These edits are applied by consulting medical coders and by using standard industry software, such as Optum 360's EncoderPro software. Not all types of edits apply to all bills. The types of edits include:

a. Multiple Procedure Rule
b. Bilateral Procedure Rule
c. Unbundling of services or of supplies included in the CPT code
d. Mutually inconsistent codes
e. Percentage of surgeon charges for assistant surgeons, co-surgeons, and assistants at surgery
f. Pre- and post-surgery services included in the global surgery charge
g. Medically Unlikely Edits

INTRODUCTION

The question of whether a provider's charges are reasonable arises when there is no contract between a provider and a payor setting a negotiated rate for a service (i.e., out-of-

network providers), or when there is no fee schedule set by a statute or rule (e.g., Medicaid, Medicare, and workers' compensation). This paper documents ongoing research by RPC on methods of determining the reasonableness of healthcare providers' charges. RPC based the opinions expressed in this paper on information available at the time of writing. Should additional information become available, we may modify the opinions expressed.[1]

This paper identifies and discusses industry standards for what charge percentile threshold state laws and private health plans consider reasonable to determine allowable amounts for payment. The term "allowable amount" refers to the total amount a regulation or private health plan determines a provider should be paid. It is the sum of the payment responsibilities of the plan and the patient.

The industry standard for the reasonable range of percentiles at which to determine the allowed amount when paying using the UCR method is from the 75th to the 80th percentile. RPC found many state governments and private health plans adopt the 75th or 80th charge percentile as the threshold for the maximum reasonable charge in a medical market. RPC uses the 80th percentile as the threshold when data are available to that percentile value and the 75th percentile when we must rely on publications that do not publish the 80th percentile value. As further documented below, the 80th and 75th percentile thresholds are the thresholds most often used in state laws and by commercial insurers.

For some services, the data do not permit looking up or calculating reasonable percentile values. For these services RPC uses other data and other methods to determine reasonable charges as exceptions to our usual procedure.

RPC determines UCR charges based only on the billed charges, unadjusted for any regulatory or negotiated discount. RPC's determination of maximum reasonable charges using the UCR method is not based on Medicare payment rates or the payment rates of commercial insurers.

[1] This is the seventh version of this report and replaces all other versions. The changes in the most recent version reflect additional research into the benchmarks used by state and private payors and additional justification for the use to databases maintained by CMS to calculate UCR charges.

DEFINITIONS

Although some organizations and publications use the terms "usual and customary" (UC) and "usual, customary, and reasonable" (UCR) interchangeably, these two terms have distinct meanings as used herein.

Usual and Customary (UC) Charges

"Usual and customary charges" are the charges on a provider's chargemaster. A chargemaster is a comprehensive list of charges unilaterally established by a provider that apply to all patients, without regard to the expected source of payment. While a provider can change its chargemaster at any time, on any day the provider charges all patients receiving service the same amount.[2] Usual and customary charges are usually more than the amounts providers accept as payment in full from the patient and other payors.[3] Put briefly, UC charges are a provider's standard charges for given services, which together make up the provider's chargemaster.

Billed Charges

"Billed Charges" are the charges determined by a provider and submitted to the patient or payor for payment. Billed charges are assumed to be UC charges. These charges are not the result of negotiation, discounting, or adjustment by private health plans or by government regulation. Providers unilaterally set these charges. Patients rarely know what billed charges will be when receiving the service, and the submission of a bill by a provider does not by itself reflect any agreement that the patient or payor will pay full billed charges. Generally, most providers accept as payment-in-full less than full billed charges for most patients.

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[2] See: *Holland v. Trinity Health Care Corp.*791 NW 2d 724 (2010), 287 Mich. App. 524, and Uwe Reinhardt, "How Do Hospitals Get Paid? A Primer," Economix, *The New York Times* (2009), http://economix.blogs.nytimes.com/2009/01/23/how-do-hospitals-get-paid-a-primer/?_r=0&module=ArrowsNav&contentCollection=Business%20Day&action=keypress&region=FixedLeft&pgtype=Blogs, accessed July 3, 2023.

[3] See *Midwest Neurosurgery, PC v. State Farm Ins. Cos.*, 268 Neb. 642, 686 N.W.2d 572 (2004), as cited in *Holland v. Trinity Health Care Corp*, op cit.

Usual, Customary, and Reasonable Charges

A "usual, customary, and reasonable" charge is a provider's charge for a service less than or equal to a charge percentile threshold for that service in the medical market where the service was delivered. The threshold may be set by state law. In the absence of state law, a private health plan may set a threshold, which may or may not be accepted by providers.

The term "UCR" is sometimes used imprecisely in the healthcare industry. The *Physicians' Fee Reference* software program explains that each private health plan has its own policies on payment limits, and they often refer to these limits as usual, customary and reasonable, or UCR.[4] However, this does not mean those limits were established using the UCR charge method explained in this paper. Similarly, FAIR Health explains on its FAQ page that while their UCR data may be used by insurers to determine UCR rates or out-of-network reimbursement rates, FAIR Health's UCR data is not the same thing as an insurer's internal determination of UCR based on their policies.[5] HealthCare.gov defines the term as "the amount paid for a medical service in a geographic area based on what providers in the area usually charge for the same or similar medical service." The UCR amount sometimes is used to determine the allowed amount.[6] In this paper RPC uses the term "UCR charge" only to mean a charge less than or equal to a charge percentile threshold.

The acronym "UCR" sometimes stands for "usual and customary rate." The term "rate" refers to the allowed amount paid under a provider contract, a health plan's policies and procedures, or government regulation. In this paper RPC uses "UCR" only to stand for a usual, customary, and reasonable charge.

Allowable Amount

"Allowable amount" is the total amount a public or private health plan determines a provider should be paid for a service. It is the sum of the amount the health plan will pay plus the

[4] "Introduction," in *Physicians' Fee Reference* (Milwaukee, WI: Wasserman Publishing, 2021), p. 2.
[5] "Consumer FAQs," FAIR Health, https://www.fairhealthconsumer.org/#faq.
[6] "UCR (usual, customary, and reasonable)," HealthCare.gov Glossary, https://www.healthcare.gov/glossary/UCR-usual-customary-and-reasonable, accessed July 3, 2023.

patient's responsibility under the plan. Subject to any state regulation, each private health plan sets its own allowable amount for a particular area. A private health plan may determine the allowable amount as a percentage of billed charges, as a percentage of the Medicare payment amount, or as a mathematical function of its negotiated rates. Those methods of determining allowable amounts are not determining UCR charges.

RPC's UCR Charges

RPC determined the percentile thresholds for UCR charges based on a broad review of state laws and private health plans. The industry standard for the reasonable range of percentiles at which to determine the allowed amount when paying using the UCR method is from the 75th to the 80th percentile, The threshold percentile for the upper bound of the UCR charge for a service may be found in state or federal regulations, in an ERISA plan description, in the internal policies of a health plan, or through a dispute resolution process. The 80th percentile of billed charges is most frequently used as the UCR percentile threshold, as described below.

Definitions of Various Medical Code Sets Used in Calculating

Common Procedural Terminology Codes

Common Procedural Terminology (CPT) codes are licensed and maintained by the American Medical Association (AMA).[7] CPT codes are five-digit codes assigned to medical services and procedures. Each code has a narrative description. The AMA updates codes annually to reflect new technology and changes in physician practices.

Health Care Procedure Coding System

Health Care Procedure Coding System (HCPCS) codes are five-character alphanumeric codes maintained by CMS. CPT codes are a subset of HCPCS codes, called Level I codes. Each code has a narrative description. HCPCS also has Level II codes, which cover supplies, services,

[7] "CPT Overview and Code Approval," American Medical Association, https://www.ama-assn.org/practice-management/cpt/cpt-overview-and-code-approval, accessed July 3, 2023.

materials, and injections (e.g., DMEPOS codes) not included in the Level I CPT codes. Level II codes are available on the CMS website.[8]

Diagnosis-Related Groups

Diagnosis-related group (DRG) codes are used to classify inpatient hospital admissions. Admissions with the same DRG are for similar diagnoses, include similar procedures, and generally have the same costs to hospitals. The most commonly used DRG code set is the Medicare Severity Diagnosis-Related Group (MS-DRG). MS-DRGs are updated annually by CMS and are available on the CMS website.[9] RPC relies on a certified coder to assign DRGs if an inpatient hospital claim does not have one assigned.

International Classification of Diseases Diagnosis and Procedure Codes

International Classification of Diseases and Health Related Problems Version 10, or ICD 10 Codes, are three- to seven-digit code sets used to identify highly detailed diagnoses and medical procedures. These codes are used in assigning inpatient DRGs, and ICD 10 procedure codes can be used to identify the primary surgical procedure in an outpatient setting. ICD is a code system maintained by the World Health Organization. CMS, in conjunction with the National Center for Health Statistics, created a modified system called ICD-10 Clinical Modification, which is used in the United States. When RPC methodology uses ICD-10 codes, this refers to the ICD-10 Clinical Modification set. ICD-10 codes are available, free, from the CMS website.[10]

Definition of Percentiles and How They are Determined

Percentiles of charges are calculated based on provider charges with no discounts or adjustments. The sources referenced in this paper define the UCR charge for a service as the charge amount that falls at a certain percentile rank in a geographic area. A percentile rank is a number between zero and one hundred that indicates the percent of the observations in a group

[8] "HCPCS Quarterly Update," CMS, https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/HCPCS-Quarterly-Update, accessed July 3, 2023.
[9] "MS-DRG Classifications and Software," CMS, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/MS-DRG-Classifications-and-Software, accessed July 3, 2023.
[10] "2023 ICD-10-CM," CMS, https://www.cms.gov/medicare/icd-10/2023-icd-10-cm, accessed July 3, 2023.

below it, excluding any observation exactly at the percentile rank. To determine the percentile distribution of a set of numbers, we sort the observations from the lowest number to the highest number. We then review the resulting distribution of numbers to determine the percentile rank of each number. If there are 13 numbers, the number ranked 7th highest is the 50th percentile value, as half of the other 12 numbers are less than the 7th number and half are greater than the 7th number, as shown in the example below.[11] For the number representing the 25th percentile value, 25% of the other numbers should be less than it and 75% should be greater than it. In the example below, this occurs at the 4th number in the ranking.

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[11] Example and explanation adapted from text of PMIC Digital Book Series, *Medical Fees 2015* (Los Angeles: Practice Management Information Corporation, 2015).

Number Ranking and Percentile Example

Number	Rank (from Lowest to Highest Charge)	Percentile Rank
97	13	100th
83	12	91.6th
81	11	83.3rd
79	10	75th
77	9	66.6th
75	8	58.3rd
73	7	50th
71	6	41.6th
69	5	33.3rd
67	4	25th
65	3	16.6th
63	2	8.3rd
61	1	0th

We constructed the example above to ensure that a specific number represented the 50th percentile and that another specific number represented the 25th percentile. However, this does not always occur. Where is the 80th percentile of these numbers? It makes sense that the 80th percentile must lie between 79, which is the 75th percentile, and 81, which is the 83.3rd percentile. However, there is no observation between these two. In cases such as this, we estimate the percentile value by interpolation. Interpolation means estimating new data points between existing data points. The 80th percentile should be between the 75th percentile and the 83.3rd percentile, so we interpolate a value between 79 and 81. Where exactly in this range should the 80th percentile estimate be? As the 80th percentile rank is 60% of the way between the 75th percentile rank and the 83.3rd percentile rank, the 80th percentile value is the value that falls 60% of the way between 79 and 81. This value is 80.20.

There are publications and data services that compile charge data and publish percentile values for various provider services. Providers may look to these publications when they establish their chargemasters. Payors may look to these publications in establishing allowable amounts. For

other services there are no publications that calculate percentiles, but there are reliable public data sources with which to calculate charge percentiles.

A health plan can specify other methods in the benefit description or insurance policy to define an allowable amount for services by out-of-network providers that do not involve the UCR concept. One is to pay a percentage of a provider's billed charges. Because of the similarities among "percentile," "percentile rank," and "percentage" these methods may be confused.

A percentile value differs from a percentile rank, and neither are the same as a percentage. A percentile rank represents a "location" within a set of ordered values (as shown in the chart above). A percentile value is the observation (actual or interpolated) which is at this location. A percentage is not a comparison of a set of data points, but is a fraction of one particular value. This difference is illustrated in the figure below, which provides charges for a service at various hospitals, arranged in ascending order by amount. The chart shows the 75th percentile of those charges in light green—75% of all hospitals in the example have charges equal to or less than that amount. Here, 75 is the percentile rank and $1,173.98 is the 75th percentile value. The light blue bar shows the value of 75% of the charges at the Subject Hospital.

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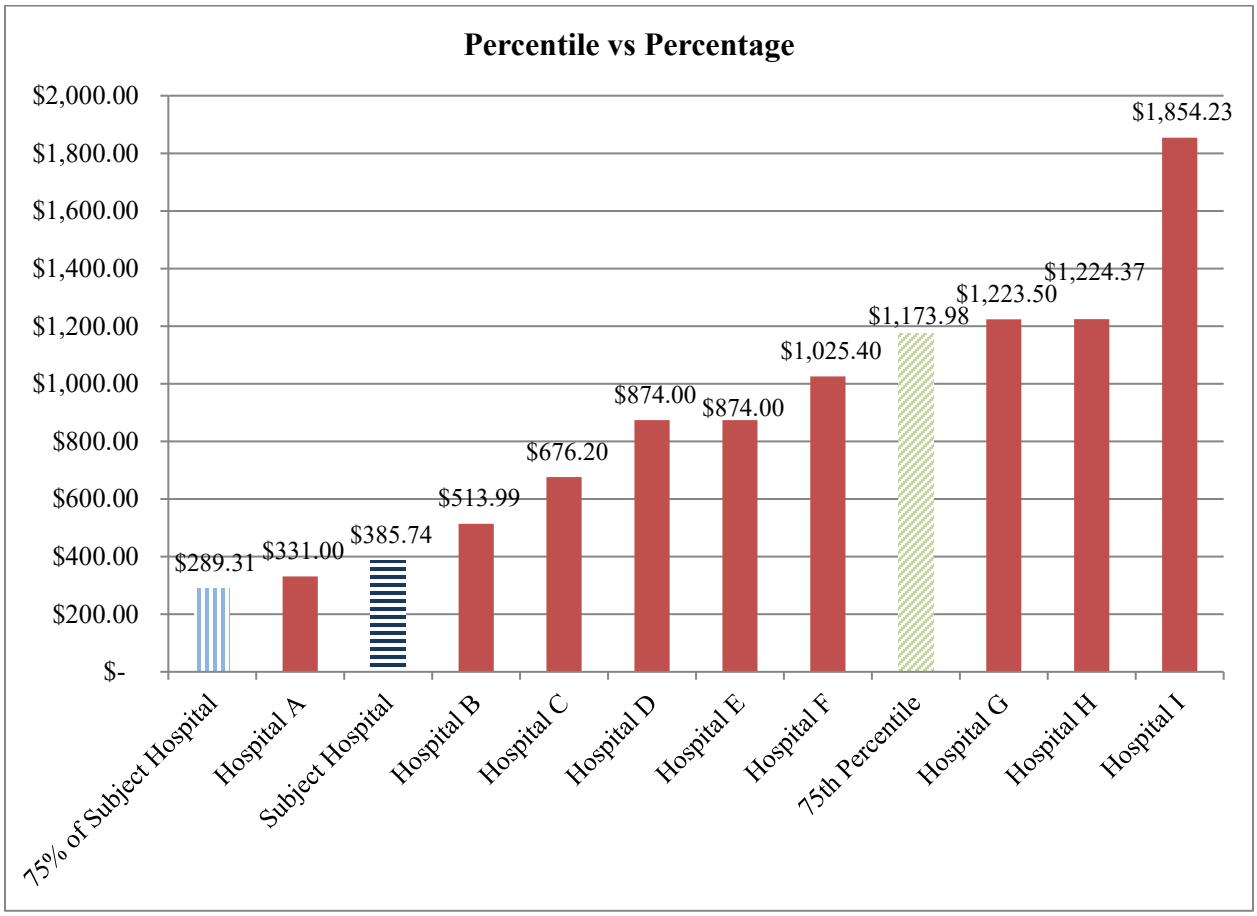

States and private health plans that use the UCR charge method to set the allowable amount normally pay the lower of a provider's actual charge or the UCR percentile value. If a provider's charge is less than or equal to the UCR charge the allowable amount will be 100% of the provider's charge. If the provider's charge is higher than the UCR charge the allowable amount will be a percentage of the billed charge less than 100%. Payors that set the allowable amount based on a percentage of the provider's billed charge will pay providers in the same market that set higher charges more than those that set lower charges. At any point in time payors using the UCR method to set the allowable amount will treat all providers in a market equally rather than reward providers that charge the most.

DATA SOURCES FOR UCR CHARGES

There are many regularly used data sources for determining UCR percentile thresholds for maximum reasonable charges. The data sources RPC uses to determine UCR percentile

thresholds are discussed below. Other commonly used data sources are FAIR Health Benchmarks and Context4Healthcare's UCR Fee Data. Each data source uses different claims data and adjustments to calculate percentile values, different geographic areas.

Whenever possible, RPC uses public use data files so we can define the medical market and directly calculate the 80th percentile charges. When the public use data file does not have sufficient data to calculate an 80th percentile charge for a service in a medical market, RPC relies on published UCR charge thresholds. If RPC has no data source for an appropriate UCR benchmark, RPC assumes the billed charge is reasonable.

RPC calculates 80th percentile charges for physicians, radiologists, anesthesiologists, therapists, labs, and other providers and for inpatient and outpatient hospitals outside of Texas using databases maintained by CMS of claims by participating and non-participating providers to Medicare. RPC uses the data on ***charges*** from the CMS Carrier Standard Analytical File (CMS Carrier SAF) and not the data on the amount Medicare pays. The amounts billed by these providers for Medicare patients are the same as the amounts billed to all other patients. One possible critique of these databases is that they do not include bills from providers who have opted out of Medicare entirely, so 80th percentile charges calculated from these databases may not reflect all the charges in a medical market. However, according to research by the Kaiser Family Foundation,[12] only 1% of physicians nationwide have opted out of Medicare. Psychiatrists/Neuropsychiatrists, the specialty with the highest percentage of opt-outs, have an opt-out rate of only 7.2%. In Texas, only 1.3% of providers have opted out. Analysis of Medicare's Provider of Services File[13] shows that 94.3% of the nation's 6,642 short-term acute care hospitals, children's hospitals, and critical access hospitals are participating providers. Therefore, RPC determined that Medicare databases provide an excellent representation of the population of medical providers and their charges.

[12] Nancy Ochieng, Karen Schwartz, and Tricia Neuman, "How Many Physicians Have Opted-Out of the Medicare Program?" Kaiser Family Foundation, October 22, 2020.
[13] "Provider of Services Current Files," CMS, https://data.cms.gov/provider-characteristics/hospitals-and-other-facilities/provider-of-services-file-hospital-non-hospital-facilities, accessed July 3, 2023.

Medical Market Definitions

Each publication which lists UCR thresholds has its own definition of medical markets. These definitions may be based on Medicare Geographic Practice Cost Indices, zip codes, or geo-zips (three-digit zip codes).

Dartmouth Atlas of Healthcare

RPC uses the hospital referral regions (HRRs) defined by the Dartmouth Atlas of Health Care to define medical markets for practitioner services.[14] The atlas is a generally accepted source for medical market definitions used by researchers and government agencies. RPC defines the medical market as the HRR in which a service was delivered. Sometimes RPC may combine HRRs, when a procedure is rarely performed or when a county is split between two HRRs.

Each HRR is a collection of zip codes. The United States is divided into 306 HRRs. The complete list of zip codes and HRRs for all other states can be found on the Dartmouth Atlas website. HRRs represent regional health care markets that include a major referral center and community hospitals. The regions were defined by determining where patients were referred for major cardiovascular surgical procedures and for neurosurgery. Each HRR has at least one city where both major cardiovascular surgical procedures and neurosurgery are performed.[15] Dartmouth Atlas HRR definitions are available to download, free, from their website.[16]

Inpatient and Outpatient Hospital Services and Ambulatory Surgery Centers

THCIC Public Use Data Files

For Texas facility charges, RPC uses the Texas Department of State Health Services public use data files for inpatient and outpatient services. The State publishes these files quarterly. The inpatient file has visit-level records for inpatient discharges since 1999. The

[14] The Dartmouth Atlas of Health Care, The Dartmouth Institute for Health Policy and Clinical Practice, http://www. dartmouthatlas.org/, accessed July 3, 2023.
[15] Dartmouth also defines 3,436 Hospital Service Areas (HSAs). Most of the HSAs contain only one hospital and some contain no hospital. Thus, many of the HSAs contain too few physicians in many specialties to provide enough observations to determine UCR charges.
[16] "Crosswalks," https://data.dartmouthatlas.org/supplemental/#crosswalks, The Dartmouth Atlas of Health Care, The Dartmouth Institute for Health Policy and Clinical Practice, accessed July 3, 2023.

outpatient file has visit-level records for outpatient and emergency room visits at Texas hospitals, freestanding emergency rooms, and ASCs since 2009. The file has data for all payors and self-pay and uninsured patients. The files contain many of the data elements found on a UB-04/ CMS1450 facility billing form and identify the facility, patient origin, diagnoses and procedures, units, charges, dates of service, and other variables. These files include information on almost every outpatient surgery, diagnostic radiology procedure, and emergency room visit in Texas. The outpatient files also include visits to ASCs. This is RPC's primary data source for facility charges in Texas. The database is available for purchase from the Department of State Health Services.[17]

CMS Inpatient and Outpatient Public Use Data Files

The Center for Medicare and Medicaid Services (CMS) publishes public use data files annually with records of inpatient and outpatient hospital claims submitted to Medicare. The files contain most of the data elements found on a UB-04/CMS 1450 hospital billing form. The Medicare allowed amount for each claim is also shown. While these claims are for Medicare beneficiaries, the billed charges apply to all patients treated at the facilities regardless of payor. RPC determines maximum UCR charges based on the charges, not on the Medicare payment rates or allowable amounts. RPC uses these files to calculate maximum UCR charges for facilities outside Texas. These files are available to those with a data use agreement with CMS for limited data set files.

Physician and Other Provider Services

CMS Carrier SAF 5% Sample (Database)

CMS publishes the Carrier Standard Analytical File (CMS Carrier SAF) annually. It is a publicly available database, not a proprietary database. The file includes all claims for fee-for-service Medicare beneficiaries billed by physicians, radiologists, anesthesiologists, therapists, labs, free-standing ambulatory surgical centers, and other practitioners for a semi-random sample of 5% of beneficiaries. The files contain most of the data elements found on a CMS 1500 billing

[17] "Texas Outpatient Public Use Data File (PUDF)," Texas Health and Human Services, https://www.dshs.state.tx.us/thcic/OutpatientFacilities/OutpatientPUDF.shtm, accessed July 3, 2023.

form. The Medicare allowed amount for each claim is also shown. While these claims are for Medicare beneficiaries, the billed charges apply to all patients treated at the facilities regardless of payor. RPC determines maximum UCR charges based on the charges, not on the Medicare payment rates or allowable amounts. These files are available to those with a data use agreement with CMS for limited data set files.

RPC uses a rolling three-year window of claims from the CMS Carrier SAF to create a UCR database for practitioner charges. This database includes directly calculated 80th percentile charges for CPT codes with at least five providers in an HRR. For most CPT codes with fewer than five providers in an HRR, RPC calculates a national 80th percentile threshold value and applies a geographic adjustment factor specific to the HRR and the CPT category. For codes with fewer than five reported providers in an HRR and fewer than 5 codes in a code family, RPC does not include percentile values in its database. Instead, we rely on the 75th percentile charge published in *Medical Fees in the United States*.

Medical Fees in the United States

Medical Fees in the United States, or the *Medical Fee Book* (MFB), is a generally accepted publication that compiles information on the range of physician charges for a wide variety of services. It includes a table used to adjust its percentile threshold values for different regions, based on Medicare Geographic Practice Cost Indices. It publishes values for the 75th percentile threshold for individual CPT codes. It does not publish values for the 80th percentile. The publication is a collaboration by PMIC and by Context4Healthcare and uses the claims data compiled by Context4Healthcare.[18] The book is publicly available and is marketed primarily to physicians to assist them in setting their charges.[19]

RPC uses the MFB as a secondary source because its method is to calculate national percentile values and apply a relative cost factor from Medicare. While this is an accepted

[18] PMIC, "Medical Fees 2022," p. *v*.
[19] Price Management Information Corporation, Medical Fees Directory E-Book, https://www.pmiconline.com/product-page/medical-fees-directory-2023-e-book, accessed July 3, 2023.

method, it does not calculate percentile values for individual medical markets as precisely as using only claims data from the medical market for a specific claim.

Charge Adjustments for Inflation using the Consumer Price Index

When the most recent available data is for a year before the dates of service for the charge being reviewed, RPC calculates the UCR charge using the most recent data available and adjusts the threshold for inflation to the year of service, using the appropriate subcategory inflation rate from the Consumer Price Index (CPI), published by the Bureau of Labor Statistics (BLS). The subcategory indices are publicly available for free from the BLS website.[20] The chart below shows the medical care categories defined by the BLS.

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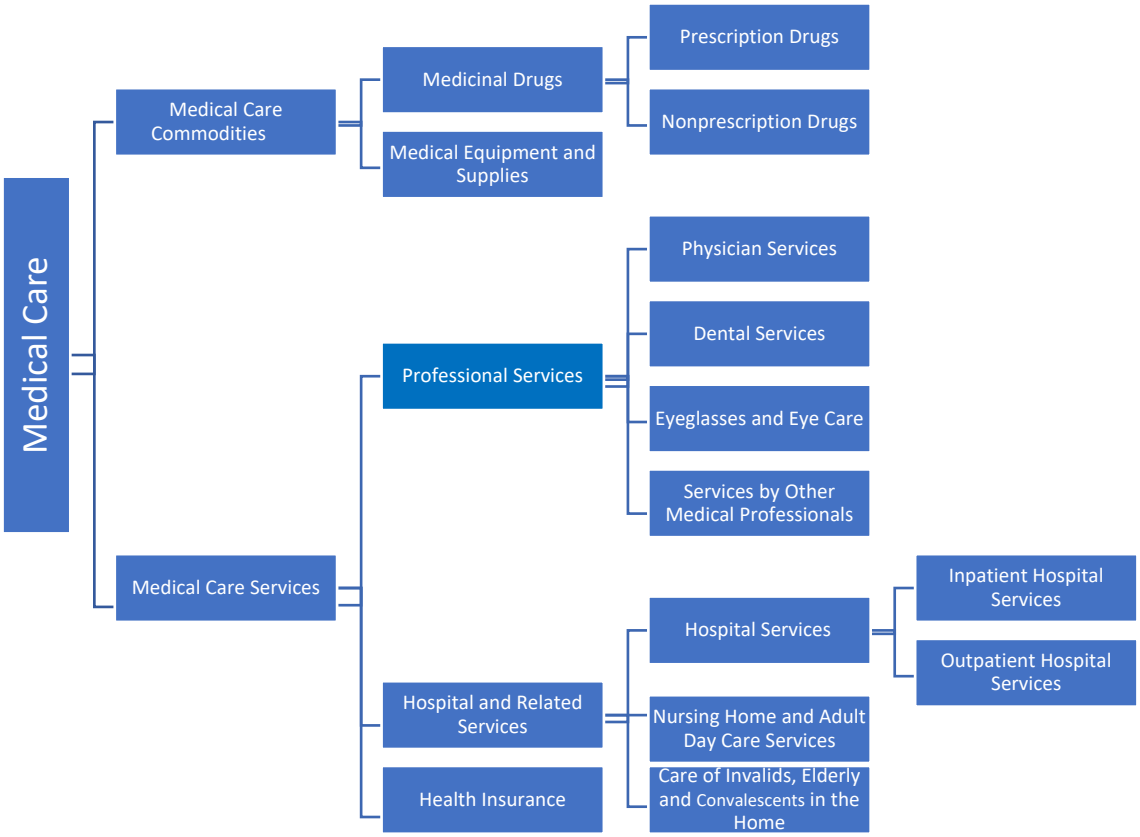
[20] "Consumer Price Index," BLS, https://www.bls.gov/cpi/, accessed July 3, 2023.



STANDARD PERCENTILES FOR DETERMINING UCR CHARGES

RPC researched state laws and the past and current practices of public and private health plans, including Medicare, major commercial health plans, and property-casualty insurance companies to learn what percentiles different payors use for the maximum UCR charge for a service. We also reviewed expert monographs and medical charge reference publications and software.

It is not always possible to compare the charges of different providers in a geographic area to determine a reasonable charge. There must be enough providers in the area to allow for meaningful comparisons. If there are too few providers, prices may not be set independently. This method may not be reasonable for emergency services because charges may not be subject to market forces. For example, UCR is not a reasonable method for air ambulance or emergency physician groups.

State Laws

States have adopted laws governing payment for medical services covering workers' compensation, automobile insurance and commercial health plans. When the laws use the UCR charge method to set payment rates, they indicate the threshold percentile. The paragraphs below describe these laws and show most are in the 75th percentile to the 80th percentile range.

Texas

In 2019, Texas passed legislation protecting consumers from surprise medical bills. The law establishes an arbitration process, and requires the arbitrator to consider the 80th percentile of billed charges and the 50th percentile of payments in the market in determining appropriate allowable amounts for certain out-of-network care.[21]

Alaska

Alaska adopted the 80th percentile of physician charges for emergency services as the minimum payment standard for out-of-network insurance coverage.[22]

Connecticut

Connecticut designated FAIR Health's 80th percentile charge benchmarks for health care services as the "usual, customary, ***and reasonable rate***" to be used in determining insurance reimbursements for health care providers (emphasis added).[23]

Connecticut establishes its Workers' Compensation Practitioner Fee Schedule as the 74th percentile level of the data base of statewide charges, with non-physician practitioners paid at 70% of the physician fee schedule.[24]

[21] Texas Insurance Code §1467.083.
[22] See Alaska Admin. Code tit. 3, § 26.110.
[23] See Conn. Public Act No. 15-146.
[24] CT Administrative Regulation §31-280-3.

Idaho

The Idaho workers' compensation rules define a "reasonable charge" as "a charge that does not exceed the Provider's 'usual' charge and does not exceed the 'customary' charge, as defined in this rule," and the rules define a "customary charge" as, "a charge which shall have an upper limit no higher than the 90th percentile, as determined by the Commission, of usual charges made by Idaho Providers for a given medical service."[25]

Illinois

Illinois's Workers' Compensation Act sets the maximum allowable payment under its fee schedule as 90% of the 80th percentile of charge as determined by the Commission using databases with specific requirements.[26]

New Mexico

New Mexico's workers' compensation statute gives the director leeway in establishing a fee schedule, but requires that the rates fall between the 60th and the 80th percentile of current rates for health care provider charges.[27]

New Jersey

New Jersey adopted the 75th percentile for medical expenses in personal injury protection auto insurance cases.[28]

New York

3. New York State Budget Bill S6914, which became effective April 1, 2015, includes provisions aimed at providing increased transparency of insurers' out-of-network coverage and provisions addressing payments for emergency care and "surprise bills" by out-of-network

[25] IDAPA 17.0201.010.07.
[26] 820 ILCS 305.
[27] NM Laws §52-4-5.
[28] See N.J. Rev. Stat. 39:6A-4.6 (2004).

physicians.[29] Under the Bill, insurers must describe their reimbursement methodologies "and make available at least one alternative option" for out-of-network coverage "using UCR after the imposition of 20% coinsurance."[30] The Bill defines usual and customary cost as meaning:

> *The eightieth percentile of all charges for the particular health care service performed by a provider in the same or similar specialty and provided in the same geographical area as reported in a benchmarking database maintained by a nonprofit organization…*[31]

Guidance issued by the New York Department of Financial Services clarified that FAIR Health can "be used as the independent source to determine UCR" in satisfaction with the Bill.[32]

Pennsylvania

Pennsylvania states that persons or institutions treating a person injured in a motor vehicle accident "shall not require, request or accept payment … in excess of 110% of the prevailing charge at the 75th percentile."[33] "Prevailing charge" and "UCR charge" are synonymous.

In its Workers' Compensation Act, Pennsylvania states providers "shall not require, request or accept payment for the treatment, accommodations, products or services in excess of one hundred thirteen per centum of the prevailing charge at the seventy-fifth percentile, one hundred thirteen per centum of the applicable fee schedule, the recommended fee or the inflation index charge … or one hundred thirteen per centum of any other Medicare reimbursement mechanism."[34]

[29] Medical Society of the State of New York. State Advocacy-Out of Network. Final Budget Includes Out-of-Network Transparency and Coverage Reform Provisions Sought by MSSNY, Medical Specialty Societies and Physician Leaders.
[30] "Out-of-Network Law (OON) Guidance," New York Department of Financial Services, https://www.dfs.ny.gov/apps_and_licensing/health_insurers/nyoon_law_guidance_questions_federal_ns_act, accessed July 3, 2023.
[31] This definition occurs several times throughout the bill. For example, see S. 6914 161 A.9205.
[32] "Out-of-Network Law (OON) Guidance," New York Department of Financial Services, https://www.dfs.ny.gov/apps_and_licensing/health_insurers/nyoon_law_guidance_questions_federal_ns_act.
[33] PA Title 75. §1797(a), accessed July 3, 2023.
[34] "1915 Act 338," Pennsylvania General Assembly, https://www.legis.state.pa.us/cfdocs/Legis/LI/uconsCheck.cfm?txtType=HTM&yr=1915&sessInd=0&smthLwInd=0&act=0338, accessed July 3, 2023.

Rhode Island

Rhode Island established its workers' compensation fee schedule to limit charges to the 90th percentile of the usual and customary charges of providers in the state.[35]

Utah

Utah defines the reasonable value of medical expenses in personal injury protection automobile insurance to be the 75th percentile per unit charge multiplied by the relative unit value of a service, as calculated from a biannual study by the state.[36]

Medicare

Before moving to a fee guideline based on Relative Value Units (RVUs), Medicare paid approved amounts for services, which were defined as "the lesser of a physician's bill, his or her customary (median) charge in the preceding year, or the fee that prevailed among like-specialty physicians (the 75th percentile of the local distribution of customary charges for that procedure, subject to limits imposed by the Medicare Economic Index)."[37] This was often called the customary or prevailing rate method of determining payment. The 75th percentile remains a standard reporting threshold and payors often use it to determine a UCR charge in a medical market.

Veteran's Administration

Section 17.101 of Title 38 of the Code of Federal Regulations defines "reasonable charges for medical care or services," excluding prescription drugs. The methodologies used to establish reasonable charges under §17.101 are, "designed to replicate, insofar as possible, the 80th percentile of community charges, adjusted to the market areas in which the VA facilities are located."[38]

[35] Rhode Island Statutes §28-33-7.
[36] Utah Code, 31A-22-307.
[37] David A. Juba, "Medicare Physician Fee Schedules: Issues and Evidence from South Carolina," *Health Care Financing Review* 8, no. 3 (1987).
[38] 68 FR 22966.

Commercial Health Plans and Property-Casualty Insurance Companies

Commercial health plans negotiate provider contracts with physicians, hospitals, and other healthcare providers. The providers with contracts are called "in-network providers." These contracts set negotiated allowable amounts the provider agrees to accept as full payment, and the provider agrees not to collect from the patient the difference between the allowed amount and the provider's billed charge. An out-of-network provider is one with which a health plan has no provider contract and no agreement for an amount the provider will accept as full payment for a service. There is a contractual relationship between a health plan and the patient and the health plan or insurance policy determines how much the plan must pay the out-of-network provider on behalf of the patient. Commercial health plans need payment policies to establish an allowable amount for services.[39] For a given payor, the allowable amount and the method by which it is determined can be different for different health plans administered by that payor and may depend on whether a plan is an insured plan or a self-insured plan under ERISA.

Texas Department of Insurance

The Texas Department of Insurance (TDI) appointed a technical Advisory Committee on Health Network Adequacy ("the Committee") that included representatives from health benefit plan, physician and hospital sectors. The Committee was charged with evaluating healthcare network adequacy and balance billing. As part of its work, the Committee surveyed insurance companies regulated by TDI to collect "detailed information on claims for services provided by both in-network and out-of-network health care providers."[40] The survey asked health plans about the methodologies used "to determine reimbursement rates for non-network physician" providers.[41] The responding health plans represented 95% of the enrollment in state-regulated health plans in Texas. In 2009, the Committee published the results in a report, and reported that the 75th percentile was "the most commonly cited percentile level" used in

[39] Please note that the allowable amount is not always the amount the health plan will pay the provider. Under some plans, only a portion of the allowable amount will be paid by the insurer, and the patient may be responsible for additional amounts the provider bills.
[40] Texas Department of Insurance, Report of the Health Network Adequacy Advisory Committee: Health Benefit Plan Provider Contracting Survey Results (2009).
[41] *Ibid*., p. 16.

calculating allowable amounts.[42] The 2009 TDI survey included detailed counts of responses by plans.

TDI updated this survey in 2017,[43] but the 2017 update did not give the same detailed results as the 2009 survey. It did not ask or report which percentile was most frequently used by state-regulated health plans that use the UCR charge method. It only states that, "Typical percentiles used by insurers are the 80th and the 50th percentile."[44] The report does not say how many plans use the 50th percentile, or if more than one plan uses this percentile. TDI has declined to make public the responses of each plan to any question in the survey. RPC believes that the 2009 survey is more relevant and reliable than the 2017 update on questions of industry standards.

United Healthcare

United Healthcare's website explains "Some health care benefit plans administered or insured by affiliates of UnitedHealth Group Incorporated … provide out-of-network benefits for United's members." The website lists the following "reimbursement databases, benchmarks, or methodologies to establish the reimbursement amount for out-of-network claims." The website lists FAIR Health as one of the "reimbursement databases, benchmarks, or methodologies to establish the reimbursement amount for out-of-network claims." An example is given based on the 70th percentile as a benchmark.[45] UnitedHealthcare of California's Combined Evidence of Coverage and Disclosure Form (HMO) Effective January 1, 2021 states "Usual and Customary Charges are determined by referencing the 80th percentile of the most current survey published by Medical Data Research (MDR) for such services or supplies. The MDR survey is a product of Ingenix, Inc., formerly known as Medicode."[46]

[42] *Ibid*., p. 4.
[43] Texas Department of Insurance, Usual and Customary Survey, revised January 2017.
[44] *Ibid*., p. 11.
[45] "Out-of-Network Benefits," United Healthcare, https://www.uhc.com/legal/information-on-payment-of-out-of-network-benefits, accessed July 3, 2023.
[46] "UnitedHealthcare of California, Combined Evidence of Coverage and Disclosure Form (HMO), Effective January 1, 2021," https://eims.uhc.com/content/dam/eni/cola/pdf/hmo-eoc.pdf, accessed July 6, 2023

Aetna

Aetna uses several methods for paying for out-of-network services, and the exact calculation depends on the specific Aetna plan. However, under plans that pay for out-of-network services, many use the "reasonable," "usual and customary," and "prevailing charge" methodology.[47] Under that system, Aetna uses information from FAIR Health to determine how much providers in any geographic area charge for particular services. For some health plans, Aetna uses the 80th percentile to calculate how much to pay for out-of-network services.[48] Aetna then uses the specific details of each health plan to determine how much of that charge it will pay, and how much the patient pays. Aetna notes this methodology does not apply to every case. Some Aetna plans may set the prevailing charge at a different percentile while others do not use UCR data at all.[49]

Blue Cross Blue Shield

Some plans issued by Blue Cross Blue Shield insurers set allowed amounts for out of network services at percentiles applied to FAIR Health databases. For example, Horizon Blue Cross Blue Shield of New Jersey lets employers choose plans with out of network allowed amounts at the 70th, 80th, or 90th percentile of FAIR Health data.[50]

Cigna

Cigna offers many plans that allow plan sponsors to choose out-of-network reimbursement rates at a percentile applied to FAIR Health data. The typical percentiles are the 70th or the 80th.[51]

[47] "Network and Out-of-Network Care," Aetna, https://www.aetna.com/individuals-families/using-your-aetna-benefits/network-out-of-network-care.html, accessed July 3, 2023.
[48] "Preferred Provider Organization (PPO) Medical Plan Booklet-Certificate," Aetna, http://www.aetna.com/individuals-families-health-insurance/document-library/sg-ppo.pdf, accessed July 3, 2023.
[49] "Network and Out-of-Network Care," Aetna, https://www.aetna.com/individuals-families/using-your-aetna-benefits/network-out-of-network-care.html, accessed July 3, 2023.
[50] "Out-of-Network Payments," Horizon Blue Cross Blue Shield of New Jersey, https://www.horizonblue.com/members/education-center/understanding-your-coverage/out-network-costs-ii/out-network-payments, accessed June 30, 2022, accessed July 3, 2023.
[51] "Product Disclosures, Reimbursement for Out-of-Network Services," Cigna, https://www.cigna.com/legal/compliance/disclosures, accessed July 3, 2023.

Liberty Mutual

Liberty Mutual Insurance is a property-casualty insurer that does not offer commercial health plans. It sets the allowed amount at the 80th percentile charge from the FAIR Health database for out-of-network PIP claims in many states, including Texas.[52]

Medical Charge Publications and Databases

FAIR Health

FAIR Health provides a medical cost lookup tool for consumers that includes an estimated medical cost for medical and dental procedures, based on the procedure code and the geographic area of service. The tool provides separate cost estimates for insured and uninsured individuals. The results for both insured and uninsured patients provide estimated charges at FAIR Health's 80th percentile. Although the default on the consumer search site is the 80th percentile, FAIR Health's data resource for allowed medical benchmarking provides data on charges for given codes at the 50th, 60th, 70th, 75th, 80th, 85th, 90th, and 95th percentiles.[53]

FAIR Health also sells data services to major health plans such as UnitedHealth and Aetna. It also provides data to third party claims administrators and to medical bill review services. RPC's conversations with FAIR Health staff reveal that although the 80th percentile was the default on the consumer website for benchmarking and comparison purposes, it is not FAIR Health's position that the 80th percentile of charges is the usual and customary rate or the industry standard. FAIR Health staff reported that many of the health plans that use their data choose the 80th percentile for UCR charges, but that each health plan determines which percentile to use and that FAIR Health has no role in determining a health plan's UCR charges.[54]

[52] "Notice About PIP and MedPay Payments," Liberty Mutual Insurance, https://www.libertymutual.com/claims-center/auto-insurance-claims/other-auto-claims/pip-medpay-payment-claims-notice, accessed July 3, 2023.
[53] "Benchmark Data Products," FAIR Health (2021), https://www.fairhealth.org/benchmark-data-products/fh-online, accessed July 3, 2023.
[54] Darcy Lewis, telephone call with Andrez at FAIR Health on March 18, 2015. Supplemented with consumer information on FAIR Health's FAQ webpage.

Context4Healthcare

Context4Healthcare, which identifies itself as a software and data company providing billing, claims, and charge solutions in the healthcare industry, reports charge amounts for every fifth percentile from the 25th through the 95th percentiles in its UCR Fee Data. The dataset provides benchmarking data to determine reimbursement and billing rates.[55] Context4Healthcare says it produces the data annually by analyzing billions of charges across the United States. Its database includes charges for millions of procedure combinations. Providing charges for a wide range of percentiles allows payors to adjudicate claims by creating their own rules on what payment amount they find most appropriate for given services.

Medical Fees in the United States

Medical Fees in the United States provides "a listing of medical procedure codes, descriptions, UCR fees at the 50th, 75th, and 90th percentiles" and "Medicare fees and Medicare relative value units." The UCR charges "are derived from an analysis of over 600 million actual charges" and are designed as a resource "for reviewing, adjusting and setting fees." [56] As the editor explains in the introduction, "there is no 'secret' list of fees that health insurance plan and third-party payers use to determine the appropriateness" of a provider's charges. Instead, some payors use data purchased from databases and set payment levels at different levels. The editor contends that while some insurers may pay claims at the 90th, 80th or 75th percentile, "HMOs and other managed care groups typically negotiate fees that are closer to the 50th percentile for a given area."[57] The editor provides no precise reason for including the 75th percentile in the book (rather than another potential percentile such as the 70th or 80th), but the introduction states that "the 50th, 75th and 90th percentile fees provided in this text are based on national averages and are generally reflective of payer allowables."[58] The MFB is now published in conjunction with Context4Healthcare using their data.

[55] "UCR Fee Data," Context4Healthcare, brochure available for download at https://www.context4healthcare.com/solutions/reference-based-pricing/ucr-fee-data, accessed July 3, 2023.
[56] James B. Davis, ed., "Foreword," in *Medical Fees 2022*, p. *iii*.
[57] *Ibid*., pp. 2–3.
[58] *Ibid*.

Physicians' Fee Reference

The Physicians' Fee Reference software (PFR) displays charge information at the 50th, 75th, and 90th percentiles. According to the PFR's introduction, it derived the charges from the most recent CMS Standard Analytical File. PFR does not explain why it included the 75th percentile instead of another percentile. It does discuss, however, how physician practice managers can use the percentiles in the book.

PFR's introduction has a section on designing and reviewing a charge schedule and notes that setting charges is "a question of the practice's or medical group's pricing philosophy, financial budgeting or 'revenue target' for the period rather than an objective industry 'norm' or standard."[59] Some practice management consultants advise physicians to "always charge the maximum allowable charge" to minimize the potential for any lost income. However, the PFR Introduction cautions that doing so may make other area providers more attractive to patients and may not provide "the pricing flexibility" needed to negotiate managed care contracts. The PFR Introduction notes that other practice consultants recommend setting charges between the 50th and maximum allowable amount, and that setting the charge at the midpoint between the 50th and 75th percentile would allow physicians to be comfortable that their charges are not in the bottom half but are still below the maximum. The PFR Introduction states, "Most practice consultants advise against a too aggressive pricing strategy especially for pricing common office visit services."[60] RPC interprets this to mean that while PFR publishes the 90th percentile for their "too aggressive" customers, the 75th percentile is the highest they see as reasonable.

Summary of Standard Percentiles

Usually, provider charges are considered reasonable charges if they are at or below the 75th to 80th percentile for charges for a service in a medical market. Major payors and some state governments recognize charges at these percentiles as reasonable charges for out-of-network providers. The chart below summarizes the percentiles used in state laws and by major payors in determining usual, customary, and reasonable charges.

[59] "Introduction," in *Physicians' Fee Reference* (Milwaukee, WI: Wasserman Publishing, 2014), p. 6.
[60] "Introduction," in *Physicians' Fee Reference* (Milwaukee, WI: Wasserman Publishing, 2014), p. 7.

Regulation or Payor	60th	70th	75th	80th	90th
Texas SB 1264 (one of several benchmarks)				■	
Veterans' Administration				■	
Alaska Law on Emergency Services				■	
Connecticut UCR Definition				■	
Connecticut Workers' Comp[1]			■		
Idaho Workers' Comp					■
Illinois Workers' Comp[2]			■		
New Jersey PIP Law			■		
New Mexico Workers' Comp	■	■	■	■	
New York Out-of-Network Law				■	
Pennsylvania PIP Law[3]				■	
Pennsylvania Workers' Comp[4]				■	
Rhode Island Workers' Comp					■
Utah PIP Law			■		
Prior Medicare Rates			■		
United Healthcare (some plans)				■	
Aetna (some plans)				■	
Blue Cross Blue Shield (some plans)		■		■	■
Cigna (some plans)		■		■	
Liberty Mutual Auto Insurance				■	

[1] For this chart RPC treats the actual benchmark of the 74th percentile as roughly equivalent to the 75th percentile.

[2] For this chart RPC treats the actual benchmark of 0.9 x 80th percentile as roughly equivalent to the 75th percentile.

[3] For this chart RPC treats the actual benchmark of 1.1 x 75th percentile as roughly equivalent to the 80th percentile.

[4] For this chart RPC treats the actual benchmark of 1.13 x 75th percentile as roughly equivalent to the 80th percentile.

STANDARD CODING AND BILLING EDITS

When determining UCR charges, RPC makes standard coding and billing edits. The appropriate edits can be determined by entering the information on a bill into grouper software for outpatient facilities or into Optum 360's EncoderPro software for providers. The software objectively applies standard edits. RPC also adjusts UCR charges for co-surgeons or assistants at

surgery based on industry standards. The following are example edits RPC makes. Not all types of edits apply to each bill.

Mutually Inconsistent Codes

National Correct Coding Initiative edits include code pairs which are mutually exclusive based on anatomic, temporal, or gender considerations. These procedure-to-procedure edits are maintained by CMS and are available free from the CMS website.[61]

Multiple Procedure Rule

According to the AAPC, "Most medical and surgical procedures include pre-procedure, intra-procedure, and post-procedure work. When multiple procedures are performed at the same patient encounter, there is often overlap of the pre-procedure and post-procedure work. Payment methodologies for surgical procedure account for the overlap of the pre-procedure and post-procedure work."[62] Generally, the primary procedure is paid at its full rate, and subsequent procedures are paid at 50% of their full rate. The EncoderPro software identifies codes eligible for the multiple procedure rule adjustments.

Bilateral Procedure Rules

Bilateral procedures are performed on both sides of the body during the same operative session or on the same day. The Medicare Physician Fee Schedule includes indicators of which codes are eligible for a bilateral procedure payment adjustment. Medicare and most other payors pay for eligible bilateral procedures at 150% of the rate paid for a single procedure.

Unbundling of Services or of Supplies Included in the CPT Code

Some procedure codes cannot be billed together because performing one higher-level procedure requires performing a lower-level procedure. Payors assume the performance of the lower-level procedure in determining payment for the higher-level procedure. These procedures are described as being "bundled" and billing for them separately is called "unbundling." CMS

[61] "National Correct Coding Initiative Edits," CMS, https://www.cms.gov/Medicare/Coding/NCCI-Coding-Edits, accessed July 3, 2023.
[62] "Understanding the Multiple Procedure Rule," AAPC, https://www.aapc.com/blog/27973-understanding-the-multiple-procedure-rule, accessed July 3, 2023.

developed the National Correct Coding Initiative (NCCI) program to prevent inappropriate payment of services that should not be reported together. The EncoderPro software identifies which code pairs are not separately billable due to unbundling.

Some supplies (e.g., gloves, surgical trays, dressings, and needles) are commonly used or even integral to the performance of certain medical and surgical procedures. Using these supplies is assumed, and allowed amounts account for their use. Payors do not pay separately for these supplies.

Payments for Assistant Surgeons, Co-Surgeons, and Assistants at Surgery

When a surgery requires more than one surgeon, or when a surgery requires a qualified non-physician assistant-at-surgery, payors increase payment. However, payors do not pay double the single surgeon rate for surgeries requiring an assistant surgeon, co-surgeon, or assistant-at-surgery. Most payors set additional payment for these assistants between 10% and 25% of the fee for the primary surgeon. Medicare pays for assistant surgeons and co-surgeons at 16% of the fee for the primary surgeon.[63] RPC assumes the reasonable charge for these assistants is 25% of the reasonable charge for the primary surgeon.

Global Surgical Fee

The CPT codes for most surgeries includes pre-surgical consultation and post-surgical care of the patient by the surgeon. The time period for post-surgical care differs by CPT code. Office visits related to the surgery should not be billed by the surgeon in addition to the surgery, and payors do not pay separately for visits covered by the global surgery fee. The EncoderPro software identifies the applicable global period following each surgical procedure code.

[63] Medicare Claims Processing Manual, Chapter 12, section 20.4.3.

Medically Unlikely Edits

Medically Unlikely Edits (MUEs) are a subset of NCCI edits. MUEs create a maximum number of units of a good or service a provider would report under most circumstances for a single patient on a single day.[64] Not all HCPCS/CPT codes have an MUE.

METHODOLOGY

For Hospital Inpatient and Outpatient Services

RPC calculates the maximum UCR charge for an inpatient hospital stay based on the Diagnosis Related Group (DRG) assigned to the patient, or sometimes, both the DRG and principal surgical procedure. RPC calculates the maximum UCR charge for an outpatient hospital visit based on either the principal procedure code or at the line-item level. When we have the UB04 or similar form used to bill for the hospital's services, we rely on the DRG or principal procedure directly assigned by the provider.

RPC uses the DRG on inpatient records and the line-item data or principal procedure on outpatient records to calculate the maximum UCR charge for a hospital bill from either the calendar year matching the discharge date or the most recent 4 quarters of data for planned procedures. RPC requires at least 5 facilities to calculate a maximum UCR charge. A provider's charge is usually compared only to facilities in the same HRR. However, if the HRR has a limited number of providers that performed the service, the comparison may include facilities in an adjacent HRR.

For an outpatient facility bill with HCPCS or CPT codes assigned to most or all lines on the bill and with most or all the HCPCS or CPT codes separately payable, RPC may calculate the average charges for those codes at other hospitals in the HRR or HRRs and then determine the maximum UCR charge for each code. We compare claims from services at an ambulatory surgery

[64] "Medically Unlikely Edits," CMS, https://www.cms.gov/Medicare/Coding/NationalCorrectCodInitEd/MUE, accessed July 3, 2023.

center (ASC) to charges at other ASCs when data permits. We compare claims from a hospital outpatient department to charges at other hospitals.

4. We calculate the maximum UCR charge by calculating the average total charge by DRG, principal procedure code, or HCPCS/CPT code at each facility, and then calculating the 80th percentile charge. Because the maximum UCR charge for a claim is calculated based on facilities in the same medical market, no geographic adjustment is needed. The steps in calculating the 80th percentile charge are:

a. Determine the date of service.
b. For uncoded bills, consult a certified coder to determine the DRG.
c. Determine the zip code for the hospital providing the service.
d. Determine the HRR for the zip code.
e. Identify all THCIC Inpatient PUDF records in the date-of-service year with the same DRG code for all zip codes in that county or HRR.
f. Make an inflation adjustment to charges if the most recent year of the THCIC Inpatient PUDF is before the year of service.
g. Arrange the records from highest average charge to lowest average charge.
h. Use the Excel PERCENTILE function to compute percentile values for each charge.
i. Compare the billed charge to a reasonableness benchmark (e.g., 80th percentile) to determine whether the charge is reasonable.

For Physicians and Other Suppliers

5. The steps to determine the maximum UCR charge by a physician or other supplier for a CPT code are:

a. Determine the dates of service.
b. Determine the practice zip code for the practitioner providing the service.
c. Determine the HRR for the practice zip code.
d. Identify all zip codes in the HRR.

e. Identify the UCR charge for the CPT code in the HRR from RPC's UCR Database.[65]

f. Indicate whether the UCR charge was calculated directly (Method 1 in the database) or calculated as an adjusted national charge (Method 2 in the database)

g. Use BLS data as necessary to adjust the maximum UCR charges for the dates of service

h. A provider charge less than or equal to the maximum UCR charge is reasonable. A provider charge higher than the maximum UCR charge is unreasonable.

i. If RPC's UCR Database does not include a UCR charge for a specific code in the HRR, RPC relies on the published 75th percentile charge from the MFB.

j. If neither RPC's UCR Database nor the MFB have a UCR charge for a specific code, the provider charge is considered reasonable.

The Appendix to this white paper includes an example table showing all the providers in the RPC UCR Database for code 99213 in the Austin HRR.

6. The steps to determine the maximum UCR charge by a physician or other supplier for a HCPCS code are:

a. Determine the date of service.

b. Determine the practice zip code for the physician providing the service.

c. Determine the HRR for the practice zip code.

d. Identify all CMS Carrier SAF records in the date-of-service year for that CPT code for all practice zip codes in that county or HRR.

e. Make an inflation adjustment to charges if the most recent year of the CMS Carrier SAF is before the year of service.

f. Arrange the records from highest average charge to lowest average charge.

g. Use the Excel PERCENTILE function to compute percentile values for each charge.

[65] RPC's methodology used to create the UCR database is found in the white paper "RPC's Usual, Customary, and Reasonable Charge Database for Practitioner Charges."

h. Compare the billed charge to a percentile threshold (e.g., 80th percentile) to determine whether the practitioner's charge is reasonable.

For Anesthesia Services

7. Calculation of maximum UCR charges for an anesthesia service differs from the calculation for other physicians because anesthesiologists calculate charges differently. Anesthesiologists bill using American Society of Anesthesiologist (ASA) codes, which are a subset of CPT/HCPCS codes that begin with "0." Each ASA code corresponds to a surgical or other procedure code for which an anesthesiologist provides anesthesia. Charges for anesthesiology codes are calculated with a base unit for each procedure code and a time unit measured in quarter hours. The base and time units are summed and multiplied by the anesthesiologist's unit rate to determine the charge for the procedure code. The steps to calculate the maximum UCR80 charge for an anesthesiologist's claim are:

a. Identify the CPT code for the procedure requiring anesthesia.
b. Determine the dates of service.
c. Determine the practice zip code for the practitioner providing the service.
d. Determine the HRR for the practice zip code.
e. Identify all zip codes in the HRR.
f. Identify all records in the CMS Carrier SAF records in the date-of-service year for ASA codes for all practice zip codes in that HRR.
g. Calculate the average unit charge by the anesthesia provider.
h. Calculate an 80th percentile of the average charges in step (g).
i. Use BLS data as necessary to adjust the maximum UCR charges for the dates of service.
j. Multiply the 80th percentile charge by the total units. If units are unknown, determine the average units billed for the procedure CPT code by providers in the HRR.
k. A provider charge less than or equal to the maximum UCR charge is reasonable. A provider charge higher than the maximum UCR charge is unreasonable.

l. If RPC cannot calculate a maximum UCR charge, the provider charge is considered reasonable.

RPC's Calculation of UCR Charge

When a Texas claim has been paid by a public or private health plan, RPC considers the maximum reasonable charge to be the amount paid or incurred by the patient and the health plan. We do so based on decisions from the Supreme Court of Texas.[66] For in-network providers, the allowable amount would be determined by the provider contract. For out-of-network providers, the allowable amount would initially be determined by the health plan's payment policies. If the provider disputes the allowed amount set by the health plan, the dispute would be resolved under the process established by SB 1264[67] or under the federal No Surprises Act.[68,69] The patient would have no additional payment responsibility, regardless of the outcome of the process.

The maximum reasonable charge is determined as the amount paid or incurred by the plaintiff when a claim has been processed by a health plan, or the lesser of the billed charge and the UCR80 charge when a claim has not been processed by a health plan, after accounting for NCCI edits and other industry-standard payment policies.

[66] *Haygood v. De Escabedo*, 356 S.W.3d 390 (Tex. 2011).
[67] SB1264, https://capitol.texas.gov/tlodocs/86R/billtext/html/SB01264F.htm, accessed July 3, 2023.
[68] "Balance Billing: Independent Dispute Resolution," Texas Department of Insurance, https://www.tdi.texas.gov/medical-billing/index.html, accessed July 3, 2023.
[69] "Overview of Rules & Fact Sheets," CMS, https://www.cms.gov/nosurprises/Policies-and-Resources/Overview-of-rules-fact-sheets, accessed July 3, 2023.