Research and Planning Consultants, LP

REASONABLE CHARGES & REASONABLE VALUE FOR MEDICAL CARE FOR JANE PLAINTIFF

August 30, 2022

SAMPLE REPORT

This sample report is intended to show some of the methods and sources RPC uses to determine reasonable charges and reasonable value for medical expenses in a Texas case. The methods and sources used in reports for specific cases may be different than in this sample report, depending on the available information and the jurisdiction for that case. For additional information on RPC's services, contact Roy Bourne at rbourne@rpcconsulting.com or 512-371-8026.

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Note on Attachments

To reduce the size of the PDF file, RPC does not send the attachments with the sample report. We will send the attachments separately upon request. Two of the attachments are RPC Whitepapers that can be downloaded from our website.

Introduction

Jane Plaintiff was injured in an automobile accident on March 5, 2019.[1] Research & Planning Consultants, LP (RPC), was asked to determine the maximum reasonable charges and the range of reasonable values for her past medical bills related to that accident. This report assumes the services covered by the medical bills were actually provided and were medically necessary due to the accident. RPC expresses no opinion on the validity of those assumptions. This report is not intended to address all categories of damages Ms. Plaintiff alleges.

2. Attachment 1 is the *curriculum vitae* and testimony list of the economist who prepared this report. Attachment 2 lists the documents RPC reviewed in preparing this report. Attachment 3 contains the claims for the medical services RPC reviewed. Attachment 4 contains the detailed data used to calculate the usual, customary, and reasonable (UCR) and reasonable value amounts. Attachment 5 further describes the sources and methods RPC used to determine the UCR charge for each service. Attachment 6 describes the methods and assumptions used to create RPC's database of UCR provider charges. Attachment 7 is a map of the hospital referral regions (HRRs) in Texas. All opinions are expressed with reasonable certainty and may change in response to new information.

3. RPC uses the term ***paid and incurred amount*** to refer to the allowed amount for a bill submitted to and processed by a third-party payor.[2] For this report, we assumed a paid and incurred amount under this definition represents both the reasonable charge and the reasonable value of a medical service.

4. RPC defines the ***maximum reasonable charge*** for a service as the paid and incurred amount for a bill submitted to and processed by a third-party payor, or the lesser of the billed charge or the 80th percentile charge for that service in the medical market where the service was delivered in the year it was delivered. The latter is commonly referred to as the "usual, customary, and

[1] Plaintiff's Original Petition.

[2] RPC understands this term may have a broader definition in other contexts.

reasonable charge at the 80th percentile," or UCR80 amount.[3] For some bills there is no paid or incurred amount.

5. RPC defines a ***range of reasonable value*** for a service based on what commercial health plans and providers have accepted as reasonable payment for a service. The lower end of the range is the Medicare allowed amount. The allowed amount is the total amount the provider receives from the patient and the health plan. The upper end of the range is the maximum reasonable charge. As RPC documents in Attachment 5, some health plans and some state governments use UCR80 to set allowed amounts for services by out-of-network providers.

6. RPC defines the ***expected reasonable value*** of a service as the point estimate of reasonable value, calculated as the paid and incurred amount for a bill submitted to and processed by a third-party payor, or the lesser of the billed charge or 200% of the Medicare allowed amount. The 200% multiple of the Medicare allowed amount is based on academic research on expected payments from commercial insurers and on data on provider contracts compiled by the Congressional Budget Office.

Charges Reviewed

7. RPC analyzed claims for Ms. Plaintiff from the providers in Figure 1 below. Copies of these claims are in Attachment 3. Providers file some claims without the standard medical codes necessary to calculate the UCR80 value or the Medicare allowed amount for a service. When this occurs, RPC has a certified coder assign the missing codes using the claim form and available medical records.

[3] 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 report, RPC uses UCR only to stand for a "usual, customary, and reasonable charge."

Figure 1

Claims for Ms. Plaintiff's Medical Services Reviewed by RPC

Provider	Provider Type	Billed Charges
Jamie Martin, PhD	Practitioner	$6,387.50
Timothy Davis, MD	Practitioner	$1,827.00
American Imaging - MediPlus Billing	Practitioner	$6,820.00
Dr. Harris's Chiropractic & Wellness, PA	Practitioner	$8,680.00
A-One Assistance, PLLC	Practitioner	$51,167.60
The Neurodiagnostic Institute	Practitioner	$38,319.50
Austin Pain Associates	Practitioner	$10,100.00
City RX	Pharmacy	$398.00
Texas Pharmacy	Pharmacy	$166.18
Medical Associates	DME Supplier	$2,995.00
The ENT Institute, PA	Practitioner	$5,948.27
Southern Radiology Imaging Centers	Practitioner	$1,490.00
Jason Martinez, MD, PA	Practitioner	$1,454.00
Alan Burman, MD	Practitioner	$63,878.86
Clinical Solutions	Practitioner	$382.85
Anesthesia Services, PLLC	Anesthesia	$5,208.00
Bill Teague, MD	Practitioner	$14,197.41
Morningstar Anesthesia, PA	Anesthesia	$4,512.00
City Emergency Center	HOPD	$6,702.00
Austin Spine & Surgical Center	IP and OP Hospital	$84,852.59
Perfection Physical Therapy	Practitioner	$26,217.00
Anne Mallory, PhD	Practitioner	$14,300.00
Total		**$356,003.76**

DETERMINING MAXIMUM REASONABLE CHARGES FOR MEDICAL CARE

8. To determine the maximum reasonable charge in the absence of a paid or incurred amount, it is necessary to calculate the UCR80 charge and compare it to the billed charge for services. This section of the report describes how to calculate the UCR80 charge. Attachment 5 is an even more detailed description of RPC's assumptions, sources, and methods for calculating UCR charges.

9. The UCR charge compares one provider's charge to the charges of other providers in the same medical market for the same service. RPC compares the charges on the claims to the charges of other providers in the same place of service (i.e., in a facility or in a practitioner office). See Attachment 5 (pages 7–10) for a definition of percentiles, how they are calculated, and how a percentile differs from a percentage of charges. This approach is an industry standard and a regulatory standard for defining maximum reasonable charges. As further documented below, the 80th and 75th percentile thresholds are the thresholds most often used in state laws and by commercial insurers.

10. 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.

11. The UCR method requires enough providers in an area to allow for meaningful comparisons, and providers are subject to market competition based on the prices they charge. When possible, RPC defines the maximum UCR charge as less than or equal to the 80th percentile charge. This means 80% of practitioners in a medical market charge an amount at or below this threshold. When we do not have the data to independently calculate an 80th percentile value, RPC determines the maximum UCR charge from a published source that reports a 75th or 80th percentile threshold.

12. Most healthcare providers are classified as facilities (e.g., hospitals, nursing homes, ambulatory surgery centers) or practitioners (e.g., physicians, therapists, imaging centers). RPC uses different data sources for facilities and for practitioners. The bills RPC reviewed for services to

Ms. Plaintiff are from fifteen practitioners, two pharmacies, one durable medical equipment (DME) supplier, two anesthesia providers, and two inpatient and outpatient hospitals.

13. RPC's primary data source for practitioner, anesthesiology, and ambulance charges is a UCR database for practitioners RPC developed using the Carrier Standard Analytical File (CMS Carrier SAF), published by the federal Center for Medicare and Medicaid Services (CMS).[4] Attachment 6 documents the sources, methods, and assumptions used to create the UCR database. RPC uses the data on ***charges*** from the CMS Carrier SAF and not the data on the amount Medicare pays. Practitioners must charge all patients the same charge for the same service on the same date of service, regardless of the expected payment. Therefore, the charges to Medicare patients are the same as to all other patients. According to research by the Kaiser Family Foundation,[5] only 1% of physicians nationwide have opted out of Medicare. Therefore, the CMS Carrier SAF is representative of physician charges.

14. RPC's primary data sources for inpatient and outpatient facility charges in Texas are the Texas Health Care Information Collection Public Use Data Files (THCIC PUDFs). Texas requires essentially all licensed hospitals, ambulatory surgery centers (ASCs), and freestanding emergency departments to file copies of all claims with the Department of State Health Services.[6,7,8] The State deidentifies the claims as to patients and physician identifiers and makes the claims data available as public use data files.

15. Charges for prescription medications are not available from public state or federal databases. RPC obtains data on pharmacy charges using a telephone price survey method of retail pharmacies near the plaintiff's home. RPC considers the highest reasonable charge for prescription

[4] "Standard Analytical Files," CMS, https://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/LimitedDataSets/StandardAnalyticalFiles, accessed March 30, 2022.
[5] Nancy Ochieng, Karen Schwartz, and Tricia Neuman, "How Many Physicians Have Opted-Out of the Medicare Program?" Kaiser Family Foundation, October 22, 2020.
[6] "Inpatient Data Reporting Requirements," Texas Department of State Health Services, https://www.dshs.texas.gov/thcic/hospitals/HospitalReportingRequirements.shtm, accessed February 28, 2022.
[7] "Outpatient Data Reporting Requirements," Texas Department of State Health Services, https://www.dshs.texas.gov/thcic/OutpatientFacilities/OutpatientReportingRequirements.shtm, accessed February 28, 2022.
[8] "Emergency Department Data Reporting Requirements," Texas Department of State Health Services, https://www.dshs.texas.gov/thcic/Emergency-Department/Emergency-Department-Data-Reporting-Requirements/, accessed February 28, 2022.

medication to be the highest of the prices for the same medications at three pharmacies in the area where the plaintiff is located.

16. To determine the UCR80 charges, RPC compared the billed charges on claims from Ms. Plaintiff's providers to the billed charges of other practitioners or facilities in the same medical market. Definitions of medical markets come from the Dartmouth Atlas of Healthcare's hospital referral regions (HRRs). HRRs are defined as a group of zip codes. The United States is divided into 306 HRRs. The complete list of zip codes and HRRs for all other states is on the Dartmouth Atlas website.[9] 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. Attachment 7 is a map of HRRs in Texas. All Ms. Plaintiff's providers are in the San Antonio HRR.

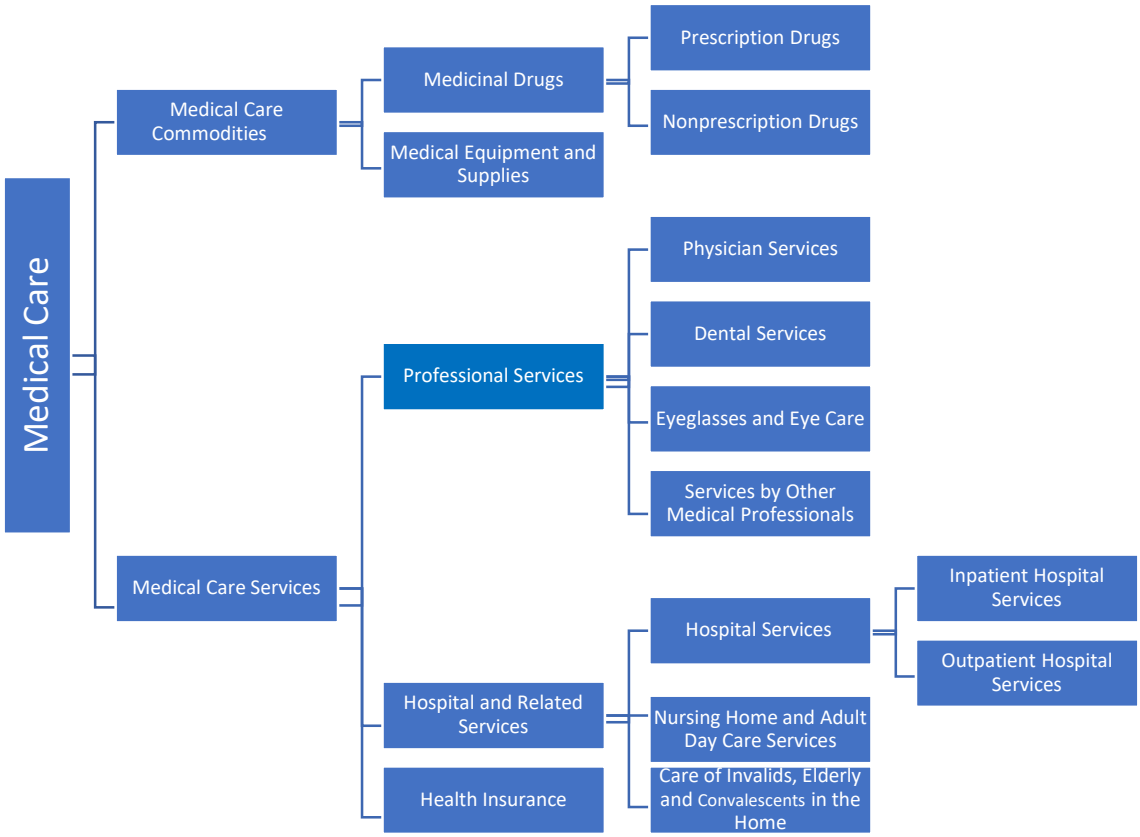
17. When a claim has been paid by a public or private health plan, RPC considers the maximum reasonable charge to be the amount paid or incurred by Ms. Plaintiff and the health plan. We do so based on decisions from the Supreme Court of Texas.[10] For in-network providers, the allowable amount would 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 could be resolved under the process established by SB 1264[11] or under the federal No Surprises Act.[12,13] Ms. Plaintiff would have no additional payment responsibility, regardless of the outcome of the process.

[9] Dartmouth Atlas of Health Care webpage, https://www.dartmouthatlas.org/, accessed March 30, 2022.
[10] *Haygood v. De Escabedo*, 356 S.W.3d 390 (Tex. 2011).
[11] SB1264, https://capitol.texas.gov/tlodocs/86R/billtext/html/SB01264F.htm, accessed February 28, 2022.
[12] "Balance Billing: Independent Dispute Resolution," Texas Department of Insurance, https://www.tdi.texas.gov/medical-billing/index.html, accessed February 28, 2022.
[13] "Overview of Rules & Fact Sheets," CMS, https://www.cms.gov/nosurprises/Policies-and-Resources/Overview-of-rules-fact-sheets, accessed February 28, 2022.

Data Sources

Consumer Price Index

18. 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.[14] The chart below shows the medical care categories defined by the BLS.



[14] "Consumer Price Index," BLS, https://www.bls.gov/cpi/, accessed March 30, 2022.

Dartmouth Atlas of Healthcare

19. RPC uses the HRRs defined by the Dartmouth Atlas of Health Care to define medical markets for practitioner services. 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.

CMS Carrier Standard Analytical File

20. For practitioner charges, RPC uses the CMS Carrier SAF. It is published annually by the federal government and is available for purchase.[15] 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, and other practitioners for a semi-random sample of 5% of beneficiaries. The files contain many of the data elements found on a standard claim form (CMS Form 1500). Since practitioners must charge all patients the same amount for a specific service on a specific date of service, regardless of a patient's source of payment, the charges are the same as those providers charge patients in personal injury litigation.

THCIC Public Use Data Files

21. 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 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 they 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

[15] "Standard Analytical Files," CMS, https://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/LimitedDataSets/StandardAnalyticalFiles, accessed March 30, 2022.

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.[16]

Definitions of Various Medical Code Sets

22. Most of the standard code sets discussed below are required on all claims filed with the federal government and are accepted or required by most third-party payors. Texas law requires providers to use CPT and other standard codes on all claims filed with Medicaid and with state-regulated health plans.[17] Therefore, any practitioner or facility that files claims with private or public health plans has billing software or uses a billing service that can put the proper codes on a claim form. When RPC receives a claim without standard codes, we consult a certified coder to assign the codes based on the information available.

Common Procedural Terminology Codes

23. Common Procedural Terminology (CPT) codes are licensed and maintained by the American Medical Association (AMA).[18] 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

24. 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, materials, and injections (e.g., DMEPOS codes) not included in the Level I CPT codes. Level II codes are available on the CMS website.[19]

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[16] "Texas Outpatient Public Use Data File (PUDF)," Texas Health and Human Services, https://www.dshs.state.tx.us/thcic/OutpatientFacilities/OutpatientPUDF.shtm, accessed February 28, 2022.
[17] TAC §21.2803, https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=28&pt=1&ch=21&rl=2803, accessed February 28, 2022.
[18] "CPT Overview and Code Approval," American Medical Association, https://www.ama-assn.org/practice-management/cpt/cpt-overview-and-code-approval, accessed March 30, 2022.
[19] "HCPCS Quarterly Update," CMS, https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/HCPCS-Quarterly-Update, accessed March 30, 2022.

Ambulatory Payment Classifications

25. Medicare and many commercial payors pay for outpatient facility services at hospitals and ASCs using ambulatory payment classifications (APCs). Each APC includes services similar in clinical intensity, resource utilization, and cost.[20] Facility charges are mapped into one or more APCs based on Level I and Level II HCPCS codes. One APC may include several HCPCS codes. Most outpatient encounters have only a single APC, but it is possible for an encounter to have multiple APCs. RPC uses APCs to determine the Medicare allowed amount on hospital outpatient claims, but not for determination of UCR charges. RPC uses Encoder-Plus software to assign APCs to a claim.[21]

Diagnosis-Related Groups

26. 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.[22] RPC relies on a certified coder to assign DRGs if an inpatient hospital claim does not have one assigned.

Methods

27. RPC determines UCR80 charges at the line-item level on practitioner, laboratory, DME, and some outpatient facility bills by comparing the charges of other providers in the medical market for the same or similar services. We determine the maximum reasonable charge for inpatient hospital claims at the claim level based on the DRG. For ASC and hospital outpatient department (HOPD) claims where a surgical procedure was performed, we determine the UCR80 charge at the claim level based on the principal CPT procedure code. For emergency department and other

[20] "APC (Ambulatory Payment Classifications) FAQ," American College of Emergency Physicians, https://www.acep.org/administration/reimbursement/reimbursement-faqs/apc-ambulatory-payment-classifications-faq/, accessed March 30, 2022.
[21] Encoder-Plus Software, http://microdynmed.com/Products/Category/encd, accessed March 30, 2022.
[22] "MS-DRG Classifications and Software," CMS, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/MS-DRG-Classifications-and-Software, accessed March 30, 2022.

HOPD claims, we determine the maximum reasonable charge at the line-item level. These are the same methods some major health plans use to set allowable amounts for out-of-network practitioners. RPC determines the maximum UCR charge for a CPT or HCPCS code as the lesser of the billed charge or the 80th percentile charge for that code in the same HRR, according to our databases.

Correct Coding of Goods and Services

28. Before determining UCR charges, RPC applies industry-standard coding and billing edits. We make the appropriate edits for practitioner claims by entering information from the claims into Optum 360's EncoderPro software.[23] The software objectively applies standard edits. These edits are based on the National Correct Coding Initiative (NCCI)[24] and other Medicare payment policies.[25] Not all types of edits apply to each claim. Below are examples of the edits made.

- Multiple Procedure Rule
- Bilateral Procedure Rule
- Unbundling of services or of supplies included in the CPT code
- Mutually inconsistent codes
- Percentage of surgeon charges for assistant surgeons, co-surgeons, and assistants at surgery
- Medically unlikely edits
- Pre- and post-surgery services included in the global surgery charge

Maximum Reasonable Charges for Ms. Plaintiff's Claims

29. The next section of this report determines the maximum reasonable charges for the claims RPC received for Ms. Plaintiff, using the sources and methods described above. Twelve of Ms. Plaintiff's claims were paid or partially paid by her health plan, and RPC has no information that

[23] EncoderPro webpage, https://www.encoderpro.com/epro/, accessed March 30, 2022.
[24] "National Correct Coding Initiative Edits," CMS, https://www.cms.gov/Medicare/Coding/NationalCorrectCodInitEd, accessed March 30, 2022.
[25] "Medicare Claims Processing Manual," CMS, https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs-Items/CMS018912, accessed March 30, 2022.

the provider disputed the payment. For these claims, the maximum reasonable charge for each service is the paid or incurred amount. For the remainder, the maximum reasonable charge for each service is the lesser of the billed charge or the UCR80 charge.

Coding Edits on Ms. Plaintiff's Claims

30. The correct coding part of the analysis applies to both the reasonable charge and the later reasonable value analysis. We made these coding edits:

- On February 26, 2019, The Neurodiagnostic Institute incorrectly billed Ms. Plaintiff for CPT code 95870 ("Needle electromyography; limited study of muscles in 1 extremity or non-limb muscles, other than thoracic paraspinal, cranial nerve supplied muscles, or sphincters"), while also billing CPT code 95865 ("needle electromyography; larynx"). Per NCCI edits,[26] code 95870 is not separately billable with code 95865. Therefore, the reasonable charge and reasonable value for CPT code 95870 is $0.
- On February 26, 2019, A-One Assistance, PLLC, incorrectly billed Ms. Plaintiff for CPT code 20930 ("allograft, morselized"). Per Medicare payment guidelines,[27] code 20930 is always considered bundled, and payment is included in payment for other services performed. The reasonable charge and reasonable value for CPT code 20930 is $0.
- All line items billed by A-One Assistance, PLLC, were for services performed by an assistant-at-surgery. The maximum reasonable charge and reasonable value for these services is 25% of the maximum reasonable charge or reasonable value by the primary surgeon.
- Anne Mallory, PhD, incorrectly billed Ms. Plaintiff for CPT code 99373, a code deleted in 2008. This code has been replaced with 99442, "telephone evaluation and management service by a physician or other qualified health care professional."

[26] EncoderPro, https://www.encoderpro.com/epro/multiCciHandler.do.
[27] EncoderPro, https://www.encoderpro.com/epro/cptHandler.do?_k=101*20930&_a=viewDetail.

Calculation of Percentile Values

Practitioner CPT Codes

31. To determine the UCR80 charge for a claim with a CPT code, RPC uses the 80th percentile charge value for the appropriate HRR in the RPC UCR database. We consider a provider charge reasonable if it is less than or equal to the UCR80 percentile value.

Practitioner Non-CPT HCPCS Codes

32. RPC uses these steps to determine the percentile threshold values for a service with a Level II (non-CPT) HCPCS code:

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

Anesthesia Charges

33. 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.

ASC/Outpatient Hospital Line-Item Comparison

34. UCR charges for ASC and outpatient hospital bills can be calculated based on a comparison of each line item or a comparison for total charges based on the principal procedure. RPC compares at the line-item level when most or all charges are for line items with data for comparison, and which would be separately payable to the facility.

35. The method RPC uses to determine the percentile values for an outpatient hospital or ASC bill at the CPT code level includes these steps:

a. Determine the date of service.

b. Determine the zip code for the ASC providing the service.

c. Determine the HRR for the zip code.

d. Identify all THCIC Outpatient PUDF records in the date-of-service year for that CPT code for all zip codes in that county or HRR at the appropriate type of facility (ASC or outpatient hospital).

e. Make an inflation adjustment to charges if the most recent year of the THCIC Outpatient PUDF 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.

h. Compare the billed charge to a reasonableness benchmark (e.g., 80^{th} percentile) to determine whether the charge is reasonable.

ASC/Outpatient Hospital Principal Procedure Comparison

36. RPC uses these steps to determine the percentile values for an outpatient hospital or ASC claim with a surgical procedure:

a. Determine the date of service.

b. Determine the principal procedure CPT code by determining the code with the highest charge or consulting with a certified coder.

c. Determine the zip code for the ASC providing the service.

d. Determine the HRR for the zip code.

e. Identify all THCIC Outpatient PUDF records in the date-of-service year with the same principal procedure 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 Outpatient 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.

Inpatient Hospital DRG Comparison

37. RPC uses these steps to determine the percentile values for an inpatient hospital claim:

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.

38. RPC considers the paid or incurred amount or the lesser of the billed charge or the UCR80 value to be the maximum reasonable charge for each service billed. For bills without a paid or incurred amount, RPC considers the billed charge to be reasonable if the billed charge is less than the UCR80 charge. RPC selected the threshold percentiles for the maximum UCR charge based on a review of state laws and of the past and current practices of Medicare, commercial health plans, and property-casualty insurance companies. RPC also reviewed expert monographs and medical charge reference publications and software. Attachment 5 (pages 16–26) shows RPC's source documents for each regulation or payor. Figure 2 (below) summarizes the benchmarks we found.

Basis for Using 75th and 80th Percentiles to Determine Maximum Reasonable Charge

Figure 2
Percentiles Used to Determine Maximum Reasonable Charges

State Regulation or Payor[1]	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[2]			■		
Idaho Workers' Comp					■
Indiana Workers' Comp				■	
Illinois Workers' Comp[3]			■		
New Jersey PIP Law			■		
New Mexico Workers' Comp	■	■	■	■	
New York Out-of-Network Law				■	
Pennsylvania PIP Law[4]				■	
Pennsylvania Workers' Comp[5]				■	
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] Sources for each regulation or payor are shown on pages 15–23 of Attachment 5.
[2] For this chart, RPC treats the actual benchmark of the 74th percentile as roughly equivalent to the 75th percentile.
[3] For this chart, RPC treats the actual benchmark of 0.9 x 80th percentile as roughly equivalent to the 75th percentile.
[4] For this chart, RPC treats the actual benchmark of 1.1 x 75th percentile as roughly equivalent to the 80th percentile.
[5] For this chart, RPC treats the actual benchmark of 1.13 x 75th percentile as roughly equivalent to the 80th percentile.

Maximum Reasonable Charges for Ms. Plaintiff's Claims

39. Figure 3 (below) summarizes the maximum reasonable charges for the services provided to Ms. Plaintiff, based on the paid or incurred amounts, billed charges, and UCR80 charge values, and accounting for industry standard coding and billing edits. Attachment 4 presents the billed charges and UCR80 charge values for each provider's bill. The total billed charges were $356,003.76. The total maximum reasonable charge is $109,122.59.

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Figure 3

Maximum Reasonable Charges for Medical Services to Ms. Plaintiff

Provider	Provider Type	Billed Charges	Maximum Reasonable Charge
Jamie Martin, PhD	Practitioner	$6,387.50	$4,403.50
Timothy Davis, MD	Practitioner	$1,827.00	$1,827.00
American Imaging - MediPlus Billing	Practitioner	$6,820.00	$6,510.00
Dr. Harris's Chiropractic & Wellness PA	Practitioner	$8,680.00	$7,771.88
A-One Assistance, PLLC	Practitioner	$51,167.60	$3,999.58
The Neurodiagnostic Institute	Practitioner	$38,319.50	$10,463.96
Austin Pain Associates	Practitioner	$10,100.00	$5,870.58
City RX	Pharmacy	$398.00	$55.98
Texas Pharmacy	Pharmacy	$166.18	$166.18
Medical Associates	DME Supplier	$2,995.00	$297.95
The ENT Institute, PA*	Practitioner	$5,948.27	$3,946.38
Southern Radiology Imaging Centers*	Practitioner	$1,490.00	$811.26
Jason Martinez, MD, PA*	Practitioner	$1,454.00	$880.85
Alan Burman, MD*	Practitioner	$63,878.86	$6,805.33
Clinical Solutions*	Practitioner	$382.85	$43.12
Anesthesia Services, PLLC*	Anesthesia	$5,208.00	$3,574.19
Bill Teague, MD*	Practitioner	$14,197.41	$3,473.43
Morningstar Anesthesia, PA*	Anesthesia	$4,512.00	$1,877.23
City Emergency Center*	HOPD	$6,702.00	$2,800.00
Austin Spine & Surgical Center*	IP and OP Hospital	$84,852.59	$27,916.31
Perfection Physical Therapy*	Practitioner	$26,217.00	$5,967.34
Anne Mallory, PhD*	Practitioner	$14,300.00	$9,660.53
Total		**$356,003.76**	**$109,122.59**

** One or more bills paid and incurred by insurance.*

DETERMINING REASONABLE VALUE OF MEDICAL SERVICES

40. RPC determined the range of reasonable values of the past medical care for Ms. Plaintiff and the expected reasonable value expressed as a percentage of Medicare allowable amounts. Provider charges are not a reliable indicator of the value of medical services. More often than not, medical providers accept amounts less than their billed charges as payment in full. The amounts accepted vary based on government fee schedules, negotiations with health plans, health plan policies on allowed amounts for out-of-network providers, and discounts offered to uninsured and low-income patients. Therefore, RPC identifies a range of reasonable values for services and an expected reasonable value.

Range of Reasonable Value

41. RPC calculated the range of reasonable values of the services for Ms. Plaintiff as between 100% of Medicare allowed amounts and the maximum reasonable charge calculated above.

42. Medicare has different fee schedules for different categories of goods and services. The Physician Fee Schedule applies to Ms. Plaintiff's practitioner providers. The DMEPOS Fee Schedule applies to the durable medical equipment. The CMS Ambulance Fee Schedule applies to ambulance providers. The CMS Anesthesia Fee Schedule applies to anesthesia providers. The ASC Payment System applies to the ASCs, and the Hospital Outpatient Prospective Payment System applies to the outpatient hospital claims. The Inpatient Prospective Payment system applies to the inpatient hospital claims. There are other fee schedules for other types of facilities not discussed in this report.

43. Medicare's Physician Fee Schedule covers services by physicians and other medical providers. The Physician Fee Schedule shows allowed amounts for services identified by CPT codes. The Physician Fee Schedule applies to surgeon fees, evaluation and management, and

preoperative and postoperative care other than lab work. RPC used Medicare's Physician Fee Schedule Look-up Tool[28] to determine the allowed amount for services to Ms. Plaintiff.

44. Durable medical equipment, prosthetics, orthotics, and supplies are covered under the DMEPOS Fee Schedule. The DMEPOS Fee Schedule shows allowed amounts for services identified by HCPCS codes.

45. Outpatient clinical laboratory services are covered under the Clinical Laboratory Fee Schedule. The Clinical Laboratory Fee Schedule shows allowed amounts for services identified by CPT codes. The Clinical Laboratory Fee Schedule is based on a national limit.[29]

46. Medicare's Ambulance Fee Schedule covers services by ground and air ambulance transportation services. The Ambulance Fee Schedule calculates payment using a base charge and a mileage charge.[30]

47. Medicare's Anesthesia Fee Schedule covers anesthesia services identified by a subset of CPT codes called ASA codes. Anesthesia services are billed by units. The total units for a procedure are base units determined by the ASA code, time units (1 unit per 15 minutes of anesthesia), and other units. The allowable amount for anesthesia is calculated as the number of anesthesia units multiplied by an anesthesia conversion factor specific to that locality.[31]

48. Medicare determines payment for outpatient hospital services based on APCs.[32] RPC used Encoder-Plus software to calculate the Medicare reimbursement for outpatient hospital services. Encoder-Plus determines outpatient Medicare reimbursement for each line item using the same pricing factors and formulas Medicare uses. Encoder-Plus includes a national provider

[28] "Physician Fee Schedule Look-Up Tool," CMS, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PFSlookup/index, accessed March 30, 2022.
[29] "Clinical Laboratory Fee Schedule," CMS, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ClinicalLabFeeSched.
[30] "Ambulance Fee Schedule Public Use Files," CMS, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AmbulanceFeeSchedule/afspuf.
[31] "Anesthesiologists Center," CMS, https://www.cms.gov/Center/Provider-Type/Anesthesiologists-Center, accessed March 30, 2022.
[32] "Medicare CY 2022 OPPS Proposed Rule," CMS, https://www.cms.gov/files/document/2022-nprm-opps-claims-accounting.pdf, accessed March 30, 2022.

payment amount and calculates a geographically adjusted APC allowable amount for any Medicare-participating hospital in the US.[33]

49. Medicare determines payment for ASCs based on APCs, as it does for outpatient hospitals. ASCs are paid using different payment factors than hospitals, however. RPC used Encoder-Plus software to calculate the Medicare reimbursement for ASCs. Encoder-Plus determines Medicare reimbursement for each line item using the same pricing factors and formulas Medicare uses. Encoder-Plus includes a national provider payment amount and calculates a geographically adjusted APC allowable amount based on the ASC's zip code.[34]

50. The Inpatient Prospective Payment system applies to the inpatient hospital claims. Medicare determines payment for inpatient hospital services based on DRGs.[35] RPC used the CMS PC Pricer software to calculate the Medicare allowable amount for inpatient hospital services.[36]

Expected Reasonable Value

51. A series of decisions by the Supreme Court of Texas has held:[37]

- A plaintiff in a personal injury case is only entitled to recover as damages for past medical expenses the reasonable value of those services.[38]
- Providers' billed charges are not a reliable measure of the reasonable value of services.
- If the plaintiff has insurance coverage for the medical expenses, the negotiated rates available to the plaintiff are a relevant measure of the reasonable value of services to the plaintiff, and the defendant has the right to discover the insurance coverage and the negotiated rates. The coverage may be workers' compensation, Medicare, an employer-sponsored health plan, or other coverage.

[33] Encoder-Plus Software, http://microdynmed.com/Products/Category/encd, accessed March 30, 2022.
[34] Encoder-Plus Software, http://microdynmed.com/Products/Category/encd, accessed March 30, 2022.
[35] "Acute Inpatient PPS," CMS, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/Acute InpatientPPS, accessed March 30, 2022.
[36] "PC Pricer," CMS, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PCPricer, accessed March 30, 2022.
[37] *Haygood v. De Escabedo*, 356 S.W. 3d 390 (2011), *In Re North Cypress Medical Center Operating Co. LTD*, 559 S.W. 3d 128 (2018) *In Re Allstate Indemnity Company* 622 S.W. 3d 870 (2021), *In Re K&L Auto Crushers, LLC*, 627 S.W. 3d 239 (2021), *In re ExxonMobil Corporation* No. 20-0849, 2021 WL 5406052 (2021).
[38] *In Re Allstate Indemnity Company* 622 S.W. 3d 870 (2021), *In Re K&L Auto Crushers, LLC*, 627 S.W. 3d 239 (2021).

- The rates each provider has negotiated with health plans are a relevant measure of the reasonable value of the services, and the defendant has the right to reasonable discovery from the plaintiff's medical providers of their negotiated rates, regardless of whether the plaintiff is covered by those health plans.

52. When a claim has been paid by a public or private health plan, RPC considers the amount paid or incurred by Ms. Plaintiff and the health plan in determining the point estimate of expected reasonable value. Twelve of Ms. Plaintiff's claims were paid or partially paid by her health plan, and RPC has no information that the provider disputed the payment. If Ms. Plaintiff has coverage by a public or private health plan but chooses not to take advantage of that coverage, the regulated or negotiated rates are still a factor in determining maximum reasonable value when we can obtain the necessary information.

53. When RPC does not have information on negotiated rates available to a plaintiff through insurance coverage or information on rates a provider has negotiated, we base the point estimate on average negotiated rates expressed as percentages of the Medicare allowed amounts. The allowed amounts set and paid by commercial insurers are benchmarks of reasonable value. These are rates negotiated between providers and health plans as willing buyers and sellers of services and are the closest thing to a market price that exists for many health services. The negotiated rates for a specific service in the same market can vary greatly based on the relative market power of the provider or the health plan.[39]

54. According to research by the Congressional Budget Office, most average allowable amounts for commercial insurers (both in and out of network) are from 100% to 200% of the Medicare Fee for Service allowable amounts.[40] The most recent report to Congress by the Medicare Payment Advisory Commission found the average commercial allowed amount for practitioners was

[39] See, for example, https://nyshealthfoundation.org/wp-content/uploads/2017/11/an-examination-of-new-york-hospital-reimbursement-dec-2016.pdf, accessed March 30, 2022; https://www.nasi.org/pressrelease/press-release-experts-announce-strategies-to-make-health-care-markets-more-competitive-regulate-prices/, accessed March 30, 2022.

[40] Daria Pelech, "An Analysis of Private-Sector Prices for Physician Services," presented at the Academy Annual Research Meeting, June 26, 2017; and Jared L. Maeda and Lyle Nelson, "An Analysis of Hospital Prices for Commercial and Medicare Advantage Plans," presented at the Academy Annual Research Meeting, June 26, 2017.

136% of Medicare.[41] A 2020 study by economists at RAND found hospitals in Texas had average commercial allowed amounts for facility services of approximately 260% of Medicare rates and average commercial allowed amounts for professional services of approximately 160% of Medicare.[42] RPC used 200% of Medicare allowable amounts as the point estimate of reasonable value used by commercial insurers. This amount is the closest approximation of a market price for healthcare.

55. For pharmacy bills, RPC assumes the expected reasonable value is equal to the maximum reasonable charge from RPC's price survey.

Reasonable Value of Services to Ms. Plaintiff

56. The table below summarizes RPC's analysis of the services to Ms. Plaintiff. Attachment 4 presents the detailed data for each provider's bill. Claims for twelve providers were already paid or partially paid by Ms. Plaintiff's health plan. For other claims, RPC did not have information on negotiated rates available to Ms. Plaintiff or rates negotiated by her providers. Therefore, we based the range of reasonable value on Medicare allowed amounts and the lesser of the billed charge or the maximum reasonable charge for each claim. The range of the total reasonable value for the bills reviewed is between $73,858.36 and $109,122.59.

57. The expected reasonable value for each service to Ms. Plaintiff is equal to the amount paid or incurred by the plaintiff when a claim has been processed by a health plan. When a claim has not been processed by a health plan, the range of reasonable value is from 100% of Medicare to the maximum reasonable charges. The expected reasonable value is the lesser of the billed charge, UCR80 charge, or 200% of the Medicare allowed amount when a claim has not been processed by a health plan. The table below shows the range of reasonable values and the expected reasonable value for each claim. The expected reasonable value for the services to Ms. Plaintiff is $88,319.96.

[41] Medicare Payment Advisory Commission, "Report to the Congress: Medicare Payment Policy," March 2021.
[42] Christopher Whaley et al., "Nationwide Evaluation of Health Care Prices Paid by Private Health Plans," RAND Corporation research report, 2020, https://www.rand.org/pubs/research_reports/RR4394.html, accessed March 30, 2022.

Figure 4

Range and Point Estimate of Reasonable Value of Services for Jane Plaintiff

			Range of Reasonable Value		
Provider	**Provider Type**	**Billed Charges**	**Medicare Allowed Amount**	**Expected Reasonable Value**	**Maximum Reasonable Charge**
Jamie Martin, PhD	Practitioner	$6,387.50	$1,850.02	$3,695.46	$4,403.50
Timothy Davis, MD	Practitioner	$1,827.00	$851.14	$1,609.48	$1,827.00
American Imaging - MediPlus Billing	Practitioner	$6,820.00	$658.16	$1,316.32	$6,510.00
Dr. Harris's Chiropractic & Wellness, PA	Practitioner	$8,680.00	$4,006.12	$7,277.28	$7,771.88
A-One Assistance, PLLC	Practitioner	$51,167.60	$504.60	$1,009.21	$3,999.58
The Neurodiagnostic Institute	Practitioner	$38,319.50	$570.38	$3,435.45	$10,463.96
Austin Pain Associates	Practitioner	$10,100.00	$941.69	$1,883.38	$5,870.58
City RX	Pharmacy	$398.00	$55.98	$55.98	$55.98
Texas Pharmacy	Pharmacy	$166.18	$166.18	$166.18	$166.18
Medical Associates	DME Supplier	$2,995.00	$297.95	$297.95	$297.95
The ENT Institute, PA*	Practitioner	$5,948.27	$3,946.38	$3,946.38	$3,946.38
Southern Radiology Imaging Centers*	Practitioner	$1,490.00	$811.26	$811.26	$811.26
Jason Martinez, MD, PA*	Practitioner	$1,454.00	$880.85	$880.85	$880.85
Alan Burman, MD*	Practitioner	$63,878.86	$6,805.33	$6,805.33	$6,805.33
Clinical Solutions*	Practitioner	$382.85	$43.12	$43.12	$43.12
Anesthesia Services, PLLC *	Anesthesia	$5,208.00	$3,574.19	$3,574.19	$3,574.19
Bill Teague, MD*	Practitioner	$14,197.41	$3,473.43	$3,473.43	$3,473.43
Morningstar Anesthesia, PA*	Anesthesia	$4,512.00	$1,877.23	$1,877.23	$1,877.23
City Emergency Center*	HOPD	$6,702.00	$2,800.00	$2,800.00	$2,800.00
Austin Spine & Surgical Center*	IP and OP Hospital	$84,852.59	$27,916.31	$27,916.31	$27,916.31
Perfection Physical Therapy*	Practitioner	$26,217.00	$5,317.52	$5,784.64	$5,967.34
Anne Mallory, PhD*	Practitioner	$14,300.00	$6,510.52	$9,660.53	$9,660.53
Total		**$356,003.76**	**$73,858.36**	**$88,319.96**	**$109,122.59**

** One or more bill paid and incurred by insurance.*