
Research and Planning Consultants, LP

# ANALYSIS OF CHARGES FOR MEDICAL CARE FOR JANE PLAINTIFF

March 31, 2022

Prepared By:

RPC Economist

This is a sample report showing how RPC calculates maximum reasonable charges and maximum reasonable value for past medical expenses in personal injury litigation. The claims analyzed are actual claims. The names of the plaintiff and the providers have been changed. For questions about this report, email rbourne@rpcconsulting.com or call 512.371.8026.

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## Attachments

## INTRODUCTION

Research & Planning Consultants, LP (RPC), was asked by Jim Smith, an attorney with the Smith law firm, to calculate the usual, customary, and reasonable (UCR) charges for medical care provided to Jane Plaintiff. RPC was also asked to determine the range of reasonable value of the services. This report is that analysis. RPC is not opining on the medical necessity or relatedness of the medical care. This report is not intended to address all categories of damages Ms. Plaintiff alleges.

2. This report was prepared by RPC Economist, assisted by other RPC consultants working under his direction and supervision. His *curriculum vitae* and testimony list are Attachment 1. RPC is paid for its services based on its hourly rate of $345 for RPC Economist. Hourly rates for other RPC staff range from $100 to $450. Payment for RPC's services is not contingent on the outcome of this litigation. Neither RPC nor its consultants have any financial interest in the outcome of this litigation.

3. 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 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, based on the information RPC had on the date of this report, and may change if we receive new information.

### Charges Reviewed

4. RPC analyzed claims from the providers in the table below. Copies of the claims reviewed are in Attachment 3.

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

| Provider | Provider Type | Billed Charges |
|---|---|---|
| Pain Solutions | Practitioner | $26,274.00 |
| Flex Spine, LLC | Practitioner | $2,525.00 |
| Coastal Chiropractic | Practitioner | $14,000.00 |
| Centers for Neuroscience, PLLC | Practitioner | $1,850.00 |
| Dr. Jackson | Practitioner | $1,048.00 |
| Martin MRI | Practitioner | $13,780.00 |
| Owen Davis, MD | Practitioner | $10,937.70 |
| Dr. Peterson | Practitioner | $3,832.00 |
| Prime Physical Therapy | Practitioner | $7,825.00 |
| Med Equip | DME Supplier | $2,500.00 |
| DME Works | DME Supplier | $3,530.00 |
| Medical Services, LLC | Anesthesia | $4,250.00 |
| Austin Medical Center | IP Facility | $230,000.00 |
| Union Medical Center | OP Facility | $144,647.18 |
| **Total** | | **$466,998.88** |

## DETERMINING MAXIMUM REASONABLE CHARGES FOR MEDICAL CARE

5. See Attachment 5 for a full description of RPC's assumptions, sources, and methods for calculating UCR charges. The UCR charge method calculates the maximum reasonable charge for a service in a medical market by comparing 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). RPC determines the maximum reasonable charge for most medical services as the lesser of the billed charge or the UCR charge at the 80th percentile value (UCR80).[1] 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.

6. 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.

7. 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 percentile threshold.

8. 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 nine practitioners, two durable medical equipment (DME) suppliers, one anesthesia provider, and one hospital outpatient department (HOPD).

[1] 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."

9. 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).[2] 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,[3] only 1% of physicians nationwide have opted out of Medicare. Therefore, the CMS Carrier SAF is representative of physician charges.

10. 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.[4,5,6] The State deidentifies the claims as to patients and physician identifiers and makes the claims data available as public use data files.

11. To determine the UCR80 maximum reasonable 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.

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

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.[7] 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 Houston or Beaumont HRRs.

12. 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.[8] 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[9] or under the federal No Surprises Act.[10,11] Ms. Plaintiff would have no additional payment responsibility, regardless of the outcome of the process.

**Data Sources for the UCR Method**

CMS Carrier Standard Analytical File

13. For practitioner charges, RPC uses the CMS Carrier SAF. It is published annually by the federal government and is available for purchase.[12] It is a publicly available database, not a

[7] Dartmouth Atlas of Health Care, Dartmouth Institute for Health Policy and Clinical Practice, http://www.dartmouthatlas.org/, accessed December 20, 2021.
[8] *Haygood v. De Escabedo*, 356 S.W.3d 390 (Tex. 2011), viewed March 23, 2022.
[9] SB1264, https://capitol.texas.gov/tlodocs/86R/billtext/html/SB01264F.htm, accessed February 28, 2022.
[10] "Balance Billing: Independent Dispute Resolution," Texas Department of Insurance, https://www.tdi.texas.gov/medical-billing/index.html, accessed February 28, 2022.
[11] "Overview of Rules & Fact Sheets," CMS, https://www.cms.gov/nosurprises/Policies-and-Resources/Overview-of-rules-fact-sheets, accessed February 28, 2022.
[12] "Standard Analytical Files," CMS, https://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/LimitedDataSets/StandardAnalyticalFiles, accessed March 30, 2022.

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.

CMS DMEPOS Public Use File

14. For durable medical equipment (DME) charges, RPC uses the CMS DMEPOS public use file. It is published annually by the federal government and is available for download.[13] The file has all claims for durable medical equipment, prosthetics, orthotics, and supplies billed to Medicare.

THCIC Public Use Data Files

15. 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 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

[13] "Durable Medical Equipment (Fee-For-Service)," ResDAC, https://resdac.org/cms-data/files/dme-ffs, accessed March 30, 2022.

charges in Texas. The database is available for purchase from the Department of State Health Services.[14]

Dartmouth Atlas of Healthcare

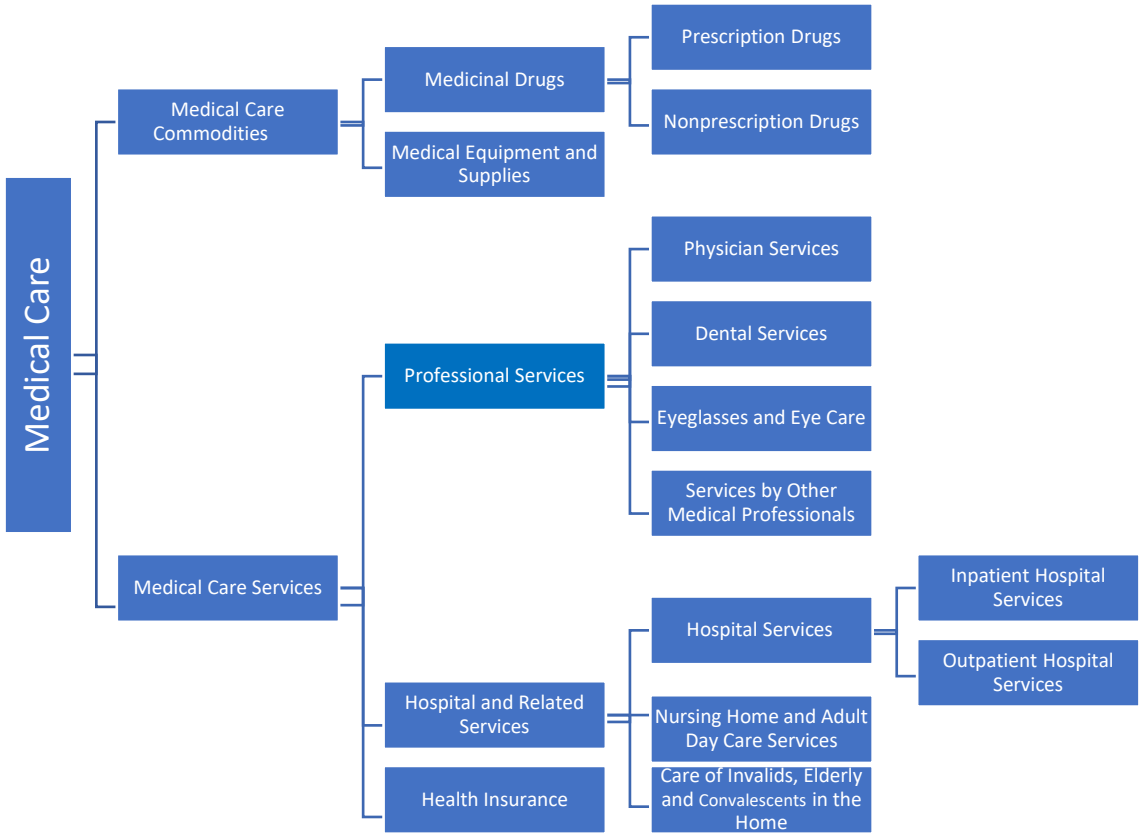
16. RPC uses the HRRs defined by the Dartmouth Atlas of Health Care to define medical markets for practitioner services.[15] The atlas is a generally accepted source for medical market definitions used by researchers and government agencies. RPC defines the medical market as the HRR in which a service was delivered. Sometimes RPC may combine HRRs, when a procedure is rarely performed or when a county is split between two HRRs.

Consumer Price Index

17. 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.[16] The chart below shows the medical care categories defined by the BLS.

*[This space intentionally left blank.]*

[14] "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.
[15] Dartmouth Atlas of Health Care, Dartmouth Institute for Health Policy and Clinical Practice, http://www.dartmouthatlas.org/, accessed December 20, 2021.
[16] "Consumer Price Index," BLS, https://www.bls.gov/cpi/, accessed December 20, 2021.




Medical Fees in the United States

18. *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 HCPCS and 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.[17] The book is publicly available and is marketed primarily to physicians to assist them in setting their charges.[18]

[17] PMIC, *Medical Fees 2022*, p. *v*.
[18] Price Management Information Corporation, Medical Fees Directory e-Book, https://www.pmiconline.com/product-page/medical-fees-directory-2023-e-book, accessed February 28, 2022.

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 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.

**Definitions of Medical Code Sets**

20. 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.[19] 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

21. Common Procedural Terminology (CPT) codes are licensed and maintained by the American Medical Association (AMA).[20] 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

22. 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

[19] 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.
[20] "CPT Overview and Code Approval," American Medical Association, https://www.ama-assn.org/practice-management/cpt/cpt-overview-and-code-approval, accessed December 20, 2021.

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.[21]

Ambulatory Payment Classifications

23. 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.[22] 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.[23]

International Classification of Diseases Diagnosis and Procedure Codes

24. 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,

[21] "HCPCS Quarterly Update," CMS, https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/HCPCS-Quarterly-Update, accessed December 20, 2021.
[22] "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.
[23] Encoder-Plus Software, http://microdynmed.com/Products/Category/encd, accessed March 30, 2022.

this refers to the ICD-10 Clinical Modification set. ICD-10 codes are available, free, from the CMS website.[24]

Diagnosis-Related Groups

25. 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.[25] RPC relies on a certified coder to assign DRGs if an inpatient hospital claim does not have one assigned.

**Methods**

26. RPC determines maximum UCR 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 HOPD claims where a surgical procedure was performed, we determine the maximum reasonable charge at the claim level based on the principal CPT procedure code. For emergency department and other 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 80$^{th}$ percentile charge for that code in the same HRR, according to our databases.

[24] "2022 ICD-10-CM," CMS, https://www.cms.gov/medicare/icd-10/2022-icd-10-cm, accessed March 30, 2022.
[25] "MS-DRG Classifications and Software," CMS, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/MS-DRG-Classifications-and-Software, accessed December 20, 2021.

Correct Coding of Goods and Services

27. 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.[26] The software objectively applies standard edits. These edits are based on the National Correct Coding Initiative (NCCI)[27] and other Medicare payment policies.[28] 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**

28. 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.

Coding Edits on Ms. Plaintiff's Claims

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

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

- On August 20, 2020, Pain Solutions incorrectly billed Ms. Plaintiff for CPT code 99211 ("office or other outpatient visit") while also billing CPT code 62323 ("injection, of diagnostic or therapeutic substance"). Per NCCI edits,[29] code 99211 is not separately billable with code 62323. Therefore, the reasonable charge and reasonable value for code 99211 is $0.
- On January 7, 2021, Pain Solutions incorrectly billed Ms. Plaintiff for CPT codes 77003 ("fluoroscopic guidance and localization of needle or catheter tip for spine or paraspinous diagnostic or therapeutic injection procedures") and 99211 while also billing CPT code 64493 ("injection, diagnostic or therapeutic agent, paravertebral facet joint with image guidance"). Per NCCI edits,[30] codes 77003 and 99211 are not separately billable with code 64493. Therefore, the reasonable charge and reasonable value for these codes is $0.
- On several dates of service, Pain Solutions incorrectly billed Ms. Plaintiff for HCPCS code A4550 ("surgical trays"). Per Medicare payment guidelines,[31] code A4550 is always considered bundled, and payment is included in payment for other services performed. The reasonable charge and reasonable value for CPT code A4550 is $0.
- On several dates of service, Coastal Chiropractic and Dr. Peterson incorrectly billed Ms. Plaintiff for CPT code 97010 ("hot or cold packs"). Per Medicare payment guidelines,[32] code 97010 is always considered bundled, and payment is included in payment for other services performed. The reasonable charge and reasonable value for CPT code 97010 are $0.
- All line items billed by Dr. Peterson were for services performed by an assistant at surgery. Different payors pay for various types of surgical assistants and co- or team surgeons at different percentages. Medicare pays an additional 16% for co-surgeons and team surgeons. RPC assumes the maximum reasonable charge for a surgical assistant or additional surgeon is 25% of the maximum reasonable charge for the primary surgeon. This is the most generous payment rate RPC has ever seen by any payor.[33]

[29] EncoderPro, https://www.encoderpro.com/epro/multiCciHandler.do, accessed February 10, 2022.
[30] EncoderPro, https://www.encoderpro.com/epro/multiCciHandler.do, accessed February 10, 2022.
[31] EncoderPro, https://www.encoderpro.com/epro/, accessed February 10, 2022.
[32] EncoderPro, https://www.encoderpro.com/epro/, accessed February 10, 2022.
[33] Medicare Claims Processing Manual, Chapter 12: Physicians/Nonphysician Practitioners, revised July 25, 2019, https://www.cms.gov/files/document/medicare-claims-processing-manual-chapter-12, accessed March 30, 2022.

- The bill provided by DME Works did not contain proper medical coding. RPC consulted a certified coder, who assigned HCPCS codes to the DME provided.

Calculation of Percentile Values

*Practitioner CPT Codes*

30. To determine the maximum UCR 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*

31. 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*

32. 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 $80^{th}$ 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 $80^{th}$ 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 Principal Procedure Comparison*

33. 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., $80^{th}$ percentile) to determine whether the charge is reasonable.

*Inpatient Hospital DRG Comparison*

34. 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., 80$^{th}$ percentile) to determine whether the charge is reasonable.

*[This space intentionally left blank.]*

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

**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.*

35. RPC considers the lesser of the billed charge or the 80th percentile value to be the maximum reasonable charge for each service billed. When the billed charge is less than the UCR80 charge, RPC considers the billed charge to be reasonable. 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. The table above summarizes the benchmarks we found.

Maximum Reasonable Charges for Ms. Plaintiff's Claims

36. The table below summarizes the maximum reasonable charges for the services provided to Ms. Plaintiff, based on the UCR80 charge values. 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. Attachment 4 presents the detailed billed charges and UCR80 charge values for each provider's bill. The total billed charges were $466,998.88. The total maximum reasonable charge is $263,591.43.

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**Maximum Reasonable Charges for Medical Services to Ms. Plaintiff**

| Provider | Provider Type | Billed Charges | Maximum Reasonable Charges |
|---|---|---|---|
| Pain Solutions | Practitioner | $26,274.00 | $16,001.98 |
| Flex Spine, LLC | Practitioner | $2,525.00 | $746.45 |
| Coastal Chiropractic | Practitioner | $14,000.00 | $12,218.03 |
| Centers for Neuroscience, PLLC | Practitioner | $1,850.00 | $348.53 |
| Dr. Jackson | Practitioner | $1,048.00 | $848.37 |
| Martin MRI | Practitioner | $13,780.00 | $13,780.00 |
| Owen Davis, MD | Practitioner | $10,937.70 | $10,373.93 |
| Dr. Peterson | Practitioner | $3,832.00 | $2,956.53 |
| Prime Physical Therapy* | Practitioner | $7,825.00 | $2,000.00 |
| Med Equip | DME Supplier | $2,500.00 | $1,238.00 |
| DME Works | DME Supplier | $3,530.00 | $3,516.38 |
| Medical Services, LLC | Anesthesia | $4,250.00 | $4,250.00 |
| Austin Medical Center | IP Hospital | $230,000.00 | $95,000.00 |
| Union Medical Center | HOPD | $144,647.18 | $100,313.23 |
| **Total** | | **$466,998.88** | **$263,591.43** |

**Paid by insurance.*

## DETERMINING REASONABLE VALUE OF MEDICAL SERVICES

37. RPC was also asked to determine the reasonable value of the past medical care for Ms. Plaintiff and express the reasonable value as a percentage of Medicare allowable amounts. The allowable amount is the total payment to the provider, including the plan responsibility and patient responsibility amounts. More often than not, most 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, not a single value.

38. As discussed above, when a claim has been paid by a public or private health plan, RPC considers the reasonable value 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. For in-network providers, the reasonable value would be determined by the provider contract. For out-of-network providers, the reasonable value would initially be determined by the health plan's payment policies. If the provider thinks the reasonable value is greater than the allowed amount set by the health plan, the dispute would be resolved under the process established by SB 1264 or under the federal No Surprises Act.[34] Ms. Plaintiff would have no additional payment responsibility, regardless of the outcome of the process. One of Ms. Plaintiff's claims was paid by her health plan, and RPC has no information the provider disputed the payment.

39. A series of decisions by the Supreme Court of Texas has held:[35]

- A plaintiff in a personal injury case is only entitled to recover as damages for past medical expenses the reasonable value of those services.[36]
- 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'

[34] For a discussion of the federal and state legislation and rules, see the balance billing page of the Texas Department of Insurance website. The page has links to additional information and to the rules and statutes. See "Balance Billing: Independent Dispute Resolution," https://www.tdi.texas.gov/medical-billing/index.html, accessed March 24, 2022.
[35] *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). Viewed March 23, 2022.
[36] *In Re Allstate Indemnity Company* 622 S.W. 3d 870 (2021); *In Re K&L Auto Crushers, LLC*, 627 S.W. 3d 239 (2021). Viewed March 23, 2022.

compensation, Medicare, an employer-sponsored health plan, or other coverage.

- 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.

40. For Ms. Plaintiff, RPC has not yet received information on her health plans or her providers' negotiated rates through discovery, so RPC has not considered those rates. If we receive additional information on those negotiated rates, we may supplement this report.

41. 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 use published information 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.[37]

42. 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.[38] The most recent report to Congress by the Medicare Payment Advisory Commission found the average commercial allowed amount for

[37] See, for example, New York State Health Foundation, "Why Are Hospital Prices Different? An Examination of New York Hospital Reimbursement," December 2016, https://nyshealthfoundation.org/wp-content/uploads/2017/11/an-examination-of-new-york-hospital-reimbursement-dec-2016.pdf, accessed March 30, 2022; and National Academy of Social Insurance, "Press Release: Experts Announce Strategies to Make Health Care Markets More Competitive, Regulate Prices," April 17, 2015, https://www.nasi.org/pressrelease/press-release-experts-announce-strategies-to-make-health-care-markets-more-competitive-regulate-prices/, accessed March 30, 2022.
[38] 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.

practitioners was 136% of Medicare.[39] 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.[40] Because some commercial insurers determine maximum allowable amounts for out-of-network providers based on UCR80 charge values, the upper end of the range of reasonable value for past medical care is the maximum reasonable charge. RPC calculated the reasonable value range of the services for Ms. Plaintiff as between 100% of Medicare and the UCR value at the 80$^{th}$ percentile. 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.

43. 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 DMEPOS providers. The CMS Anesthesia Fee Schedule applies to Medical Services, LLC. 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.

Physician Fee Schedule

44. 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,

[39] Medicare Payment Advisory Commission, "Report to the Congress: Medicare Payment Policy," March 2021.
[40] 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.

and preoperative and postoperative care other than lab work. RPC used Medicare's Physician Fee Schedule Look-up Tool[41] to determine the allowed amount for services to Ms. Plaintiff.

DMEPOS Fee Schedule

45. 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. The DMEPOS fee schedule adjusts national allowable amounts for Ms. Plaintiff's services for nonrural areas in Texas.[42]

Anesthesia Fee Schedule

46. 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.[43] Ms. Plaintiff received care in the Houston locality. The conversion factor for anesthesia in Houston is 22.61.

ASC Payment System

47. Medicare determines payment for ASCs based on APCs, as it does for outpatient hospitals. However, ASCs are paid using different payment factors than hospitals. 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

[41] "Physician Fee Schedule Look-Up Tool," CMS, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PFSlookup/index, accessed March 30, 2022.
[42] "Durable Medical Equipment, Prosthetics/Orthotics & Supplies Fee Schedule," CMS, https://www.cms.gov/medicare/medicare-fee-for-service-payment/dmeposfeesched, accessed March 30, 2022.
[43] "Anesthesiologists Center," CMS, https://www.cms.gov/Center/Provider-Type/Anesthesiologists-Center, accessed March 30, 2022.

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.[44]

Outpatient Prospective Payment System

48. Medicare determines payment for outpatient hospital services based on APCs.[45] 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 payment amount and calculates a geographically adjusted APC allowable amount for any Medicare-participating hospital in the US.[46]

Inpatient Hospital Prospective Payment System

49. Medicare determines payment for inpatient hospital services based on DRGs.[47] RPC used the CMS PC Pricer software to calculate the Medicare allowable amount for inpatient hospital services.[48]

**Reasonable Value of Services to Ms. Plaintiff**

50. 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 one provider were already 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

[44] Encoder-Plus Software, http://microdynmed.com/Products/Category/encd, accessed March 30, 2022.
[45] "Medicare CY 2022 Outpatient Prospective Payment System (OPPS) Proposed Rule Claims Accounting," CMS, https://www.cms.gov/files/document/2022-nprm-opps-claims-accounting.pdf, accessed March 30, 2022.
[46] Encoder-Plus Software, http://microdynmed.com/Products/Category/encd, accessed March 30, 2022.
[47] "Acute Inpatient PPS," CMS, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/Acute InpatientPPS, accessed March 30, 2022.
[48] "PC Pricer," CMS, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PCPricer, accessed March 30, 202.

charge or the maximum reasonable charge for each claim. The range of the total reasonable value for the bills reviewed is between $49,460.37 and $263,591.43.

51. 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 following table 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 $84,552.43.

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**Reasonable Value of Medical Services to Ms. Plaintiff**

| | | | Range of Reasonable Value | | |
|---|---|---|---|---|---|
| **Provider** | **Provider Type** | **Billed Charges** | **100% of Medicare** | **Expected Reasonable Value** | **Maximum Reasonable Charge** |
| Pain Solutions | Practitioner | $26,274.00 | $857.10 | $1,714.20 | $16,001.98 |
| Flex Spine, LLC | Practitioner | $2,525.00 | $351.36 | $702.72 | $746.45 |
| Coastal Chiropractic | Practitioner | $14,000.00 | $10,041.07 | $12,218.03 | $12,218.03 |
| Centers for Neuroscience | Practitioner | $1,850.00 | $169.52 | $339.04 | $348.53 |
| Dr. Jackson | Practitioner | $1,048.00 | $388.06 | $776.12 | $848.37 |
| Martin MRI | Practitioner | $13,780.00 | $1,404.31 | $2,808.62 | $13,780.00 |
| Owen Davis, MD | Practitioner | $10,937.70 | $2,553.21 | $5,106.43 | $10,373.93 |
| Dr. Peterson | Practitioner | $3,832.00 | $1,810.25 | $2,956.53 | $2,956.53 |
| Prime Physical Therapy* | Practitioner | $7,825.00 | $2,000.00 | $2,000.00 | $2,000.00 |
| Med Equip | DME Supplier | $2,500.00 | $1,033.95 | $1,238.00 | $1,238.00 |
| DME Works | DME Supplier | $3,530.00 | $3,263.36 | $3,516.38 | $3,516.38 |
| Medical Services LLC | Anesthesia | $4,250.00 | $384.37 | $768.74 | $4,250.00 |
| Austin East Medical Center | IP Hospital | $230,000.00 | $2,000.00 | $4,000.00 | $95,000.00 |
| Union Medical Center | HOPD | $144,647.18 | $23,203.81 | $46,407.62 | $100,313.23 |
| **Total** | | **$466,998.88** | **$49,460.37** | **$84,552.43** | **$263,591.43** |

**Paid by insurance.*

For the Firm,

RPC Economist