Attachment 1

[Attachment 1 contains the CV and testimony list of the report author.
It has been left blank for the purposes of this sample report.]

Attachment 2

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Texas State Board of Examiners of Psychologists. License Verification.
https://vo.licensing.hpc.texas.gov/.
……. Mallory, Anne, PhD. Accessed August 17, 2022.

Attachment 3

[Attachment 3 contains the claims reviewed.
For the purposes of this sample report, it has been left blank.]

Attachment 4

Provider	Date	HCPCS Code	Modifier	Units	Charges	Short Description	CMS Carrier SAF Database 80th Percentile	Database Method Used	Providers in HRR	Reasonable Charge	Medicare Allowed Amount	Expected Reasonable Value
Jamie Martin	8/30/2019	96132		1	$350.00	Neuropsych testing 1st hr	$266.50	1	21	$266.50	$130.67	$261.34
Jamie Martin	8/30/2019	96133		7	$2,450.00	Neuropsych testing addtl	$1,750.00	1	12	$1,750.00	$697.83	$1,395.66
Jamie Martin	8/31/2019	96136		1	$87.50	Psych or neuropsych test	$125.00	1	23	$87.50	$46.04	$87.50
Jamie Martin	8/31/2019	96137		2	$700.00	Psych or neuropsych test addtl	$250.00	1	13	$250.00	$85.02	$170.04
Jamie Martin	10/12/2019	96132		1	$350.00	Neuropsych testing 1st hr	$266.50	1	21	$266.50	$130.67	$261.34
Jamie Martin	10/12/2019	96133		1	$350.00	Neuropsych testing addtl	$250.00	1	12	$250.00	$99.69	$199.38
Jamie Martin	10/13/2019	96132		1	$350.00	Neuropsych testing 1st hr	$266.50	1	21	$266.50	$130.67	$261.34
Jamie Martin	10/13/2019	96133		4	$1,400.00	Neuropsych testing addtl	$1,000.00	1	12	$1,000.00	$398.76	$797.52
Jamie Martin	11/4/2019	96132		1	$350.00	Neuropsych testing 1st hr	$266.50	1	21	$266.50	$130.67	$261.34
Jamie Martin	**Total**				**$6,387.50**					**$4,403.50**	**$1,850.02**	**$3,695.46**

Provider	Date	HCPCS Code	Modifier	Units	Charges	Short Description	CMS Carrier SAF Database 80th Percentile	Database Method Used	Providers in HRR	Reasonable Charge	Medicare Allowed Amount	Expected Reasonable Value
American Imaging - MediPlus Billing	7/27/2018	72148		1	$2,370.00	Mri lumbar spine w/o dye	$2,170.00	1	27	$2,170.00	$217.36	$434.72
American Imaging - MediPlus Billing	7/27/2018	72141		1	$2,225.00	Mri neck spine w/o dye	$2,170.00	1	17	$2,170.00	$217.36	$434.72
American Imaging - MediPlus Billing	8/7/2018	70551		1	$2,225.00	Mri brain stem w/o dye	$2,170.00	1	17	$2,170.00	$223.44	$446.88
American Imaging - MediPlus Billing	**Total**				**$6,820.00**					**$6,510.00**	**$658.16**	**$1,316.32**
Provider	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Short Description**	**CMS Carrier SAF Database 80th Percentile**	**Database Method Used**	**Providers in HRR**	**Reasonable Charge**	**Medicare Allowed Amount**	**Expected Reasonable Value**
Dr. Harris's Chiropractic & Wellness PA	8/16/2018	99203		1	$250.00	Office/outpatient visit new	$250.00	1	783	$250.00	$104.88	$209.76
Dr. Harris's Chiropractic & Wellness PA	8/16/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	8/16/2018	72050		1	$300.00	X-ray exam neck spine 4/5vws	$277.00	1	28	$277.00	$43.65	$87.30
Dr. Harris's Chiropractic & Wellness PA	8/20/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	8/20/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	8/20/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	8/21/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	8/21/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	8/21/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	8/22/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	8/22/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	8/22/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	8/23/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	8/23/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	8/23/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	8/28/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	8/28/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	8/28/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	8/29/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	8/29/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	8/29/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	8/30/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	8/30/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	8/30/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	9/4/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	9/4/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	9/4/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	9/5/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	9/5/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	9/5/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	9/6/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	9/6/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	9/6/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	9/11/2018	99214		1	$200.00	Office/outpatient visit est	$229.00	1	1077	$200.00	$104.95	$200.00
Dr. Harris's Chiropractic & Wellness PA	9/11/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	9/11/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	9/13/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	9/13/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	9/13/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	9/17/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	9/17/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	9/17/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	9/20/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	9/20/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	9/20/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	9/20/2018	E0230		1	$15.00	Ice cap or collar	Not in Database			$15.00	Not covered	$15.00

Provider	Date	HCPCS Code	Modifier	Units	Charges	Short Description	CMS Carrier SAF Database 80th Percentile	Database Method Used	Providers in HRR	Reasonable Charge	Medicare Allowed Amount	Expected Reasonable Value
Dr. Harris's Chiropractic & Wellness PA	9/25/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	9/25/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	9/25/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	9/27/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	9/27/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	9/27/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	10/2/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	10/2/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	10/2/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	10/9/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	10/9/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	10/9/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	10/11/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	10/11/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	10/11/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	10/16/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	10/16/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	10/16/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	10/18/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	10/18/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	10/18/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	10/24/2018	99214		1	$200.00	Office/outpatient visit est	$229.00	1	1077	$200.00	$104.95	$200.00
Dr. Harris's Chiropractic & Wellness PA	10/24/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	10/24/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	10/29/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	10/29/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	10/29/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	11/1/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	11/1/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	11/1/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	11/5/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	11/5/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	11/5/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	11/15/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	11/15/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	11/15/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	11/20/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	11/20/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	11/20/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	11/28/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	11/28/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	11/28/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	12/5/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	12/5/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	12/5/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	12/17/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	12/17/2018	97110		1	$75.00	Therapeutic exercises	$65.00	1	132	$65.00	$30.12	$60.24
Dr. Harris's Chiropractic & Wellness PA	12/17/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	12/26/2018	98941		1	$70.00	Chiropract manj 3-4 regions	$60.00	1	110	$60.00	$40.40	$60.00
Dr. Harris's Chiropractic & Wellness PA	12/26/2018	97110		2	$150.00	Therapeutic exercises	$130.00	1	132	$130.00	$60.24	$120.48
Dr. Harris's Chiropractic & Wellness PA	12/26/2018	97014		1	$30.00	Electric stimulation therapy	$35.00	1	17	$30.00	$15.21	$30.00
Dr. Harris's Chiropractic & Wellness PA	1/3/2019	98941		1	$70.00	Chiropract manj 3-4 regions	$62.46	1	110	$62.46	$40.70	$62.46
Dr. Harris's Chiropractic & Wellness PA	1/3/2019	97110		1	$75.00	Therapeutic exercises	$65.00	1	135	$65.00	$30.31	$60.62

Provider	Date	HCPCS Code	Modifier	Units	Charges	Short Description	CMS Carrier SAF Database 80th Percentile	Database Method Used	Providers in HRR	Reasonable Charge	Medicare Allowed Amount	Expected Reasonable Value
Dr. Harris's Chiropractic & Wellness PA	1/3/2019	97014		1	$30.00	Electric stimulation therapy	$35.69	1	15	$30.00	$14.55	$29.10
Dr. Harris's Chiropractic & Wellness PA	1/10/2019	98941		1	$70.00	Chiropract manj 3-4 regions	$62.46	1	110	$62.46	$40.70	$62.46
Dr. Harris's Chiropractic & Wellness PA	1/10/2019	97110		2	$150.00	Therapeutic exercises	$130.00	1	135	$130.00	$60.62	$121.24
Dr. Harris's Chiropractic & Wellness PA	1/10/2019	97014		1	$30.00	Electric stimulation therapy	$35.69	1	15	$30.00	$14.55	$29.10
Dr. Harris's Chiropractic & Wellness PA	1/31/2019	98941		1	$70.00	Chiropract manj 3-4 regions	$62.46	1	110	$62.46	$40.70	$62.46
Dr. Harris's Chiropractic & Wellness PA	1/31/2019	97110		1	$75.00	Therapeutic exercises	$65.00	1	135	$65.00	$30.31	$60.62
Dr. Harris's Chiropractic & Wellness PA	1/31/2019	97014		1	$30.00	Electric stimulation therapy	$35.69	1	15	$30.00	$14.55	$29.10
Dr. Harris's Chiropractic & Wellness PA	2/8/2019	98941		1	$70.00	Chiropract manj 3-4 regions	$62.46	1	110	$62.46	$40.70	$62.46
Dr. Harris's Chiropractic & Wellness PA	2/8/2019	97110		1	$75.00	Therapeutic exercises	$65.00	1	135	$65.00	$30.31	$60.62
Dr. Harris's Chiropractic & Wellness PA	2/8/2019	97014		1	$30.00	Electric stimulation therapy	$35.69	1	15	$30.00	$14.55	$29.10
Dr. Harris's Chiropractic & Wellness PA	2/14/2019	98941		1	$70.00	Chiropract manj 3-4 regions	$62.46	1	110	$62.46	$40.70	$62.46
Dr. Harris's Chiropractic & Wellness PA	2/14/2019	97110		1	$75.00	Therapeutic exercises	$65.00	1	135	$65.00	$30.31	$60.62
Dr. Harris's Chiropractic & Wellness PA	2/14/2019	97014		1	$30.00	Electric stimulation therapy	$35.69	1	15	$30.00	$14.55	$29.10
Dr. Harris's Chiropractic & Wellness PA	2/22/2019	98941		1	$70.00	Chiropract manj 3-4 regions	$62.46	1	110	$62.46	$40.70	$62.46
Dr. Harris's Chiropractic & Wellness PA	2/22/2019	97110		1	$75.00	Therapeutic exercises	$65.00	1	135	$65.00	$30.31	$60.62
Dr. Harris's Chiropractic & Wellness PA	2/22/2019	97014		1	$30.00	Electric stimulation therapy	$35.69	1	15	$30.00	$14.55	$29.10
Dr. Harris's Chiropractic & Wellness PA	**Total**				**$8,680.00**					**$7,771.88**	**$4,006.12**	**$7,277.28**

Provider	Date	HCPCS Code	Modifier	Units	Charges	Short Description	CMS Carrier SAF Database 80th Percentile	Database Method Used	Providers in HRR	Reasonable Charge	Medicare Allowed Amount	Expected Reasonable Value
A-One Assistance, PLLC	2/26/2019	22551	AS	0.25	$33,702.60	Neck spine fuse&remov bel c2	$2,874.58	1	20	$2,874.58	$423.38	$846.76
A-One Assistance, PLLC	2/26/2019	22853	AS	0.25	$10,665.00	Insj biomechanical device	$750.00	1	21	$750.00	$64.56	$129.11
A-One Assistance, PLLC	2/26/2019	20939	AS	0.25	$3,800.00	Bone marrow aspir bone grfg	$375.00	1	7	$375.00	$16.67	$33.34
A-One Assistance, PLLC	2/26/2019	20930	AS	0.25	$3,000.00	Sp bone algrft morsel add-on	Bundled item			$0.00	$0.00	$0.00
A-One Assistance, PLLC	**Total**				**$51,167.60**					**$3,999.58**	**$504.60**	**$1,009.21**

Provider	Date	HCPCS Code	Modifier	Units	Charges	Short Description	CMS Carrier SAF Database 80th Percentile	Database Method Used	Providers in HRR	Reasonable Charge	Medicare Allowed Amount	Expected Reasonable Value
The Neurodiagnostic Institute	2/26/2019	95938	26	1	$4,200.00	Somatosensory testing	$1,268.26	2	0	$1,268.26	$46.29	$92.58
The Neurodiagnostic Institute	2/26/2019	95939	26	1	$1,500.00	C motor evoked upr&lwr limbs	$2,567.80	2	0	$1,500.00	$120.03	$240.06
The Neurodiagnostic Institute	2/26/2019	95999		1	$750.00	Neurological procedure	$627.68	2	3	$627.68	Not covered	$627.68
The Neurodiagnostic Institute	2/26/2019	95955	26	1	$2,500.00	Eeg during surgery	$820.51	2	0	$820.51	$54.35	$108.70
The Neurodiagnostic Institute	2/26/2019	95865	26	1	$1,989.50	Muscle test larynx	$817.89	2	1	$817.89	$83.55	$167.10
The Neurodiagnostic Institute	2/26/2019	95870	26	1	$3,978.00	Muscle test nonparaspinal	Not billable with 95865			$0.00	$0.00	$0.00
The Neurodiagnostic Institute	2/26/2019	95861	26	1	$3,226.00	Muscle test 2 limbs	$836.91	2	1	$836.91	$82.76	$165.52
The Neurodiagnostic Institute	2/26/2019	95941		1	$10,000.00	Ionm remote/>1 pt or per hr	$1,417.01	2	0	$1,417.01	Not covered	$1,417.01
The Neurodiagnostic Institute	7/25/2019	95938	26	1	$4,200.00	Somatosensory testing	$1,268.26	2	0	$1,268.26	$46.29	$92.58
The Neurodiagnostic Institute	7/25/2019	95955	26	1	$2,500.00	Eeg during surgery	$820.51	2	0	$820.51	$54.35	$108.70
The Neurodiagnostic Institute	7/25/2019	95861	26	1	$3,226.00	Muscle test 2 limbs	$836.91	2	1	$836.91	$82.76	$165.52
The Neurodiagnostic Institute	7/25/2019	95999		1	$250.00	Neurological procedure	$627.68	2	3	$250.00	Not covered	$250.00
The Neurodiagnostic Institute	**Total**				**$38,319.50**					**$10,463.96**	**$570.38**	**$3,435.45**

Provider	Date	HCPCS Code	Modifier	Units	Charges	Short Description	CMS Carrier SAF Database 80th Percentile	Database Method Used	Providers in HRR	Reasonable Charge	Medicare Allowed Amount	Expected Reasonable Value
Austin Pain Associates	7/23/2018	99204		1	$600.00	Office/outpatient visit new	$379.55	1	750	$379.55	$160.44	$320.88
Austin Pain Associates	8/10/2018	99214		1	$500.00	Office/outpatient visit est	$229.00	1	1077	$229.00	$104.95	$209.90
Austin Pain Associates	8/15/2018	62323		1	$3,400.00	Njx interlaminar lmbr/sac	$1,340.63	1	52	$1,340.63	$237.57	$475.14
Austin Pain Associates	8/31/2018	99214		1	$500.00	Office/outpatient visit est	$229.00	1	1077	$229.00	$104.95	$209.90
Austin Pain Associates	9/12/2018	64479		1	$4,600.00	Inj foramen epidural c/t	$3,463.41	1	14	$3,463.41	$228.83	$457.66
Austin Pain Associates	9/28/2018	99214		1	$500.00	Office/outpatient visit est	$229.00	1	1077	$229.00	$104.95	$209.90
Austin Pain Associates	**Total**				**$10,100.00**					**$5,870.58**	**$941.69**	**$1,883.38**

Provider	Date	HCPCS Code	Modifier	Units	Charges	Short Description	CMS Carrier SAF Database 80th Percentile	Database Method Used	Providers in HRR	Reasonable Charge	Medicare Allowed Amount	Expected Reasonable Value
Perfection Physical Therapy	6/16/2020	97110		1	$363.00	Therapeutic exercises	$66.24	1	135	$66.24	$30.41	$60.82
Perfection Physical Therapy	6/16/2020	97140		1	$110.00	Manual therapy 1/> regions	$73.38	1	121	$73.38	$27.98	$55.96
Perfection Physical Therapy	6/12/2020	97110		1	$363.00	Therapeutic exercises	$66.24	1	135	$66.24	$30.41	$60.82
Perfection Physical Therapy	6/12/2020	97140		1	$110.00	Manual therapy 1/> regions	$73.38	1	121	$73.38	$27.98	$55.96
Perfection Physical Therapy	6/9/2020	97110		1	$363.00	Therapeutic exercises	$66.24	1	135	$66.24	$30.41	$60.82
Perfection Physical Therapy	6/9/2020	97140		1	$110.00	Manual therapy 1/> regions	$73.38	1	121	$73.38	$27.98	$55.96
Perfection Physical Therapy	5/22/2020	97110		1	$363.00	Therapeutic exercises	$66.24	1	135	$66.24	$30.41	$60.82
Perfection Physical Therapy	5/22/2020	97140		1	$110.00	Manual therapy 1/> regions	$73.38	1	121	$73.38	$27.98	$55.96
Perfection Physical Therapy	5/15/2020	97110		1	$363.00	Therapeutic exercises	$66.24	1	135	$66.24	$30.41	$60.82
Perfection Physical Therapy	5/15/2020	97140		1	$110.00	Manual therapy 1/> regions	$73.38	1	121	$73.38	$27.98	$55.96
Perfection Physical Therapy	5/13/2020	97110		1	$363.00	Therapeutic exercises	$66.24	1	135	$66.24	$30.41	$60.82
Perfection Physical Therapy	5/13/2020	97140		1	$110.00	Manual therapy 1/> regions	$73.38	1	121	$73.38	$27.98	$55.96
Perfection Physical Therapy	5/8/2020	97110		1	$363.00	Therapeutic exercises	$66.24	1	135	$66.24	$30.41	$60.82
Perfection Physical Therapy	5/8/2020	97140		1	$110.00	Manual therapy 1/> regions	$73.38	1	121	$73.38	$27.98	$55.96
Perfection Physical Therapy	5/5/2020	97110		1	$363.00	Therapeutic exercises	$66.24	1	135	$66.24	$30.41	$60.82
Perfection Physical Therapy	5/5/2020	97140		1	$110.00	Manual therapy 1/> regions	$73.38	1	121	$73.38	$27.98	$55.96
Perfection Physical Therapy	**Total**				**$3,784.00**					**$1,116.94**	**$467.12**	**$934.24**

Provider	Date	HCPCS Code	Modifier	Units	Charges	Short Description	CMS Carrier SAF Database 80th Percentile	Database Method Used	Providers in HRR	Reasonable Charge	Medicare Allowed Amount	Expected Reasonable Value
Anne Mallory, PhD	9/24/2019	90834		1	$200.00	Psytx w pt 45 minutes	$150.00	1	79	$150.00	$89.64	$150.00
Anne Mallory, PhD	11/13/2019	90899		1	$50.00	Psychiatric service/therapy	$179.60	2	0	$50.00	Not covered	$50.00
Anne Mallory, PhD	4/24/2020	90899		1	$50.00	Psychiatric service/therapy	$183.03	2	0	$50.00	Not covered	$50.00
Anne Mallory, PhD	4/23/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	5/7/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	5/14/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	5/21/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	5/28/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	6/4/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	6/11/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	6/18/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	7/2/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	7/9/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	7/16/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	7/23/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	7/30/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	8/6/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	8/27/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	9/3/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	9/10/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	9/24/2020	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$161.67	1	124	$161.67	$89.26	$161.67
Anne Mallory, PhD	10/1/2020	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$161.67	1	124	$161.67	$89.26	$161.67
Anne Mallory, PhD	10/8/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	10/15/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	10/29/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	11/12/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	11/19/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	12/3/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	12/10/2020	90834		1	$200.00	Psytx w pt 45 minutes	$152.87	1	79	$152.87	$92.63	$152.87
Anne Mallory, PhD	1/7/2021	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$166.68	1	124	$166.68	$89.26	$166.68
Anne Mallory, PhD	1/21/2021	90834		1	$200.00	Psytx w pt 45 minutes	$157.60	1	79	$157.60	$100.99	$157.60
Anne Mallory, PhD	1/28/2021	90834		1	$200.00	Psytx w pt 45 minutes	$157.60	1	79	$157.60	$100.99	$157.60
Anne Mallory, PhD	2/4/2021	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$166.68	1	124	$166.68	$89.26	$166.68
Anne Mallory, PhD	3/4/2021	90834		1	$200.00	Psytx w pt 45 minutes	$157.60	1	79	$157.60	$100.99	$157.60
Anne Mallory, PhD	3/25/2021	90834		1	$200.00	Psytx w pt 45 minutes	$157.60	1	79	$157.60	$100.99	$157.60
Anne Mallory, PhD	4/1/2021	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$166.68	1	124	$166.68	$89.26	$166.68
Anne Mallory, PhD	4/8/2021	90834		1	$200.00	Psytx w pt 45 minutes	$157.60	1	79	$157.60	$100.99	$157.60
Anne Mallory, PhD	4/22/2021	90834		1	$200.00	Psytx w pt 45 minutes	$157.60	1	79	$157.60	$100.99	$157.60
Anne Mallory, PhD	5/6/2021	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$166.68	1	124	$166.68	$89.26	$166.68
Anne Mallory, PhD	5/13/2021	90834		1	$200.00	Psytx w pt 45 minutes	$157.60	1	79	$157.60	$100.99	$157.60
Anne Mallory, PhD	5/20/2022	90834		1	$200.00	Psytx w pt 45 minutes	$159.35	1	79	$159.35	$100.49	$159.35
Anne Mallory, PhD	5/27/2021	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$166.68	1	124	$166.68	$89.26	$166.68
Anne Mallory, PhD	6/3/2021	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$166.68	1	124	$166.68	$89.26	$166.68
Anne Mallory, PhD	6/10/2021	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$166.68	1	124	$166.68	$89.26	$166.68
Anne Mallory, PhD	6/24/2021	90834		1	$200.00	Psytx w pt 45 minutes	$157.60	1	79	$157.60	$100.99	$157.60
Anne Mallory, PhD	7/8/2021	90834		1	$200.00	Psytx w pt 45 minutes	$157.60	1	79	$157.60	$100.99	$157.60
Anne Mallory, PhD	7/22/2021	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$166.68	1	124	$166.68	$89.26	$166.68
Anne Mallory, PhD	7/29/2021	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$166.68	1	124	$166.68	$89.26	$166.68
Anne Mallory, PhD	8/10/2021	90834		1	$200.00	Psytx w pt 45 minutes	$157.60	1	79	$157.60	$100.99	$157.60
Anne Mallory, PhD	8/29/2021	99442		1	$200.00	Phone e/m phys/qhp 11-20 min	$166.68	1	124	$166.68	$89.26	$166.68
Anne Mallory, PhD	**Total**				**$9,700.00**					**$7,644.28**	**$4,494.27**	**$7,644.28**

Pharmacy	Date	HCPCS Code	Modifier	Units	Charges	Short Description	HEB	Walgreens	Walmart	Reasonable Charge
City RX	8/10/2018			60	$199.00	Ibuprofen 800 MG	$8.00	$27.99	$10.94	$27.99
City RX	9/19/2018			60	$199.00	Ibuprofen 800 MG	$8.00	$27.99	$10.94	$27.99
City RX	**Total**				**$398.00**					**$55.98**
Pharmacy	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Short Description**	**HEB**	**Walgreens**	**Walmart**	**Reasonable Charge**
Texas Pharmacy	11/6/2018			30	$8.59	Lido/Prilocn Cre 2.5-2.5%	$101.46	$54.99	$45.67	$8.59
Texas Pharmacy	11/6/2018			60	$149.94	Lidocaine pad 5%	$80.00	$500.00	$367.00	$149.94
Texas Pharmacy	11/6/2018			90	$7.65	Gabapentin Cap 300 mg	$60.00	$86.99	$79.90	$7.65
Texas Pharmacy	**Total**				**$166.18**					**$166.18**
DME	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Short Description**	**Welcan**	**Source Ortho**	**MFI Medical**	**Reasonable Charge**
Medical Associates	2/26/2019	E0676		1	$2,995.00	Interm limb comp device	$175.00	$297.95	$175.00	$297.95

Provider	Date	HCPCS Code	Modifier	Units	Charges	Insurance Payment	Insurance Adjustment	Patient Payment	Owed	P&I
The ENT Institute, PA	11/20/2019-3/5/2020				$5,948.27	$1,091.38	$2,001.89	$2,645.00	$210.00	$3,946.38
The ENT Institute, PA	**Total**				**$5,948.27**	**$1,091.38**	**$2,001.89**	**$2,645.00**	**$210.00**	**$3,946.38**
Provider	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Insurance Payment**	**Insurance Adjustment**	**Patient Payment**	**Owed**	**P&I**
Southern Radiology Imaging Centers	1/16/2019-9/10/2019				$1,490.00	$811.26	$678.74		$0.00	$811.26
Southern Radiology Imaging Centers	**Total**				**$1,490.00**	**$811.26**	**$678.74**	**$0.00**	**$0.00**	**$811.26**
Provider	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Insurance Payment**	**Insurance Adjustment**	**Patient Payment**	**Owed**	**P&I**
Jason Martinez, MD PA					$1,454.00	$819.85	$573.15	$61.00		$880.85
Provider	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Insurance Payment**	**Insurance Adjustment**	**Patient Payment**	**Owed**	**P&I**
Alan Burman, MD					$63,878.86	$6,595.33	$57,073.53	$210.00	$0.00	$6,805.33
Provider	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Insurance Payment**	**Insurance Adjustment**	**Patient Payment**	**Owed**	**P&I**
Clinical Solutions				1	$382.85	$43.12	$339.73		$0.00	$43.12
Provider	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Insurance Payment**	**Insurance Adjustment**	**Patient Payment**	**Owed**	**P&I**
Anesthesia Services, PLLC				1	$5,208.00	$3,332.00	$1,633.81		$242.19	$3,574.19
Provider	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Insurance Payment**	**Insurance Adjustment**	**Patient Payment**	**Owed**	**P&I**
Bill Teague, MD				1	$14,197.41	$1,296.93	$10,723.98	$420.00	$1,756.50	$3,473.43
Provider	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Insurance Payment**	**Insurance Adjustment**	**Patient Payment**	**Owed**	**P&I**
Morningstar Anesthesia, PA				1	$4,512.00	$948.64	$2,634.77		$928.59	$1,877.23
Provider	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Insurance Payment**	**Insurance Adjustment**	**Patient Payment**	**Owed**	**P&I**
City Emergency Center				1	$6,702.00	$2,240.01	$3,902.00		$559.99	$2,800.00
Provider	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Insurance Payment**	**Insurance Adjustment**	**Patient Payment**	**Owed**	**P&I**
Texas Spine & Surgical Center	7/10/2019			1	$440.00	$54.52	$385.48			$54.52
Texas Spine & Surgical Center	7/25/2019			1	$25,404.54	$8,138.23	$17,266.31			$8,138.23
Texas Spine & Surgical Center	2/12/2019			1	$490.00		$431.44		$58.56	$58.56
Texas Spine & Surgical Center	2/26/2019			1	$58,518.05	$17,737.37	$38,853.05	$433.36	$1,494.27	$19,665.00
Texas Spine & Surgical Center	**Total**			**1**	**$84,852.59**	**$25,930.12**	**$56,936.28**	**$433.36**	**$1,552.83**	**$27,916.31**
Provider	**Date**	**HCPCS Code**	**Modifier**	**Units**	**Charges**	**Insurance Payment**	**Insurance Adjustment**	**Patient Payment**	**Owed**	**P&I**
Perfection Physical Therapy	7/10/2019			1	$22,433.00	$2,424.67	$17,582.60		$2,425.73	$4,850.40

Provider	Date	HCPCS Code	Modifier	Units	Charges	Insurance Payment	Insurance Adjustment	Patient Payment	Owed	P&I
Anne Mallory, PhD	9/10/2019			1	$200.00	$120.19	$79.81	$35.00		$155.19
Anne Mallory, PhD	10/10/2019			1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	10/17/2019			1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	10/24/2019			1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	10/30/2019			1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	11/7/2019			1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	8/19/2019	90791		1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	9/24/2019	90834		1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	11/14/2019			1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	11/22/2019			1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	12/11/2019			1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	12/30/2019			1	$200.00	$42.73	$122.27	$35.00		$77.73
Anne Mallory, PhD	1/2/2020			1	$200.00	$42.73	$122.27	$35.00		$77.73
Anne Mallory, PhD	1/9/2020			1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	1/16/2020			1	$200.00	$77.73	$122.27			$77.73
Anne Mallory, PhD	1/23/2020			1	$200.00	$42.73	$122.27	$175.00		$217.73
Anne Mallory, PhD	1/29/2020			1	$200.00	$42.73	$122.27	$35.00		$77.73
Anne Mallory, PhD	2/13/2020			1	$200.00	$42.73	$122.27	$35.00		$77.73
Anne Mallory, PhD	3/3/2020			1	$200.00	$42.73	$122.27	$35.00		$77.73
Anne Mallory, PhD	3/19/2020			1	$200.00	$37.98	$117.02	$35.00		$72.98
Anne Mallory, PhD	3/29/2020			1	$200.00	$47.98	$117.02	$35.00		$82.98
Anne Mallory, PhD	3/30/2020			1	$200.00	$47.98	$117.02	$35.00		$82.98
Anne Mallory, PhD	4/9/2020			1	$200.00	$47.98	$117.02	$35.00		$82.98
Anne Mallory, PhD	**Total**			**1**	**$4,600.00**					**$2,016.25**

Provider	Date	HCPCS Code	Modifier	Units	Charges	Short Description	CMS Carrier SAF Database 80th Percentile	Database Method Used	Providers in HRR	Reasonable Charge	Medicare Allowed Amount	Expected Reasonable Value
Timothy Davis, MD	10/2/2019	99204		1		Office/outpatient visit new	$397.00	1	733		$160.87	$321.74
Timothy Davis, MD	10/2/2019	90838		1		Psytx w pt w e/m 60 min	$145.00	1	7		$116.24	$232.48
Timothy Davis, MD		visit subtotal			$450.00		$542.00			$450.00		$232.48
Timothy Davis, MD	10/21/2019	99214		1	$160.00	Office/outpatient visit est	$239.00	1	1062	$160.00	$106.28	$160.00
Timothy Davis, MD	11/4/2019	S9981		1	$25.00	Med record copy admin	Not in Database			$25.00	Not covered	$25.00
Timothy Davis, MD	11/20/2019	99214		1	$160.00	Office/outpatient visit est	$239.00	1	1062	$160.00	$106.28	$160.00
Timothy Davis, MD	1/15/2020	99214		1	$160.00	Office/outpatient visit est	$243.57	1	1062	$160.00	$106.43	$160.00
Timothy Davis, MD	2/12/2020	99214		1	$160.00	Office/outpatient visit est	$243.57	1	1062	$160.00	$106.43	$160.00
Timothy Davis, MD	2/12/2020	S9981		1	$25.00	Med record copy admin	Not in Database			$25.00	Not covered	$25.00
Timothy Davis, MD	3/25/2020	99214		1	$160.00	Office/outpatient visit est	$243.57	1	1062	$160.00	$106.43	$160.00
Timothy Davis, MD	4/2/2020	S9981		1	$47.00	Med record copy admin	Not in Database			$47.00	Not covered	$47.00
Timothy Davis, MD	5/20/2020	99443		1	$160.00	Phone e/m phys/qhp 21-30 min	$219.11	1	91	$160.00	$106.43	$160.00
Timothy Davis, MD	7/15/2020	99443		1	$160.00	Phone e/m phys/qhp 21-30 min	$219.11	1	91	$160.00	$106.43	$160.00
Timothy Davis, MD	9/9/2020	99443		1	$160.00	Phone e/m phys/qhp 21-30 min	$219.11	1	91	$160.00	$106.43	$160.00
Timothy Davis, MD	**Total**				**$1,827.00**					**$1,827.00**	**$531.85**	**$1,129.48**

Attachment 5

Research and Planning Consultants, LP

DETERMINING USUAL, CUSTOMARY, AND REASONABLE CHARGES FOR HEALTHCARE SERVICES

November 1, 2021

Table of Contents

EXECUTIVE SUMMARY

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

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

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

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

5. RPC uses several data sources to calculate UCR charge thresholds depending on the type of provider that delivers the service. All data sources RPC uses to determine UCR charges are publicly available and were primarily created for uses other than litigation. The data sources include public use data files from the federal Center for Medicare and Medicaid Services, and the Texas Department of State Health Services. These public use data bases allow RPC to directly calculate the 80th percentile threshold value for many services. For other services

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

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

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

a. Multiple Procedure Rule

b. Bilateral Procedure Rule

c. Unbundling of services or of supplies included in the CPT code

d. Mutually inconsistent codes

e. Percentage of surgeon charges for assistant surgeons, co-surgeons, and assistants at surgery

f. Pre- and post-surgery services included in the global surgery charge

g. Medically Unlikely Edits

INTRODUCTION

8. The question of whether a provider's charges are reasonable arises when there is no contract between a provider and a payor setting a negotiated rate for a service (i.e., out-of-network providers), or when there is no fee schedule set by a statute or rule (e.g., Medicaid, Medicare, and workers' compensation). This paper documents ongoing research by RPC on methods of determining the reasonableness of healthcare providers' charges. RPC based the opinions expressed in this paper on information available at the time of writing. Should additional information become available, we may modify the opinions expressed.[1]

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

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

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

12. This paper cites many web pages that document definitions and document payment policies of health plans and regulations of state and federal governments. Web pages

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

can change at any time. The citations were accurate at the time of writing. RPC maintains printed copies of the web pages as they appeared at the time of writing.

DEFINITIONS

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

Usual and Customary ("UC") Charges

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

Billed Charges

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

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

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

Usual, Customary, and Reasonable Charges

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

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

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

Allowable Amount

19. "Allowable amount" is the total amount a public or private health plan determines a provider should be paid for a service. It is the sum of the amount the health plan will pay plus the patient's responsibility under the plan. Subject to any state regulation, each

[4] PFR Introduction. 2020. Physicians' Fee Reference. Page 2. Wasserman Publishing.
[5] FAIR Health. Consumer Cost Lookup. FAQ. Available at: http://fairhealthconsumer.org/faq.php
[6] HealthCare.gov. Glossary. UCR. Available at: https://www.healthcare.gov/glossary/UCR-usual-customary-and-reasonable/

private health plan sets its own allowable amount for a particular area. A private health plan may determine the allowable amount as a percentage of billed charges, as a percentage of the Medicare payment amount, or as a mathematical function of its negotiated rates. Those methods of determining allowable amounts are not determining UCR charges.

RPC's UCR Charges

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

Definitions of Various Medical Code Sets Used in Calculating UCR

Common Procedural Terminology Codes

21. Common Procedural Terminology ("CPT") codes are licensed and maintained by the American Medical Association.[7] CPT codes are five-digit codes assigned to medical services and procedures. Each code has a narrative description. CPT coding is required for all claims filed with the federal government and is accepted or required by all other third-party payors.

Health Care Procedure Coding System Codes

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 contains Level II codes which cover supplies, services, materials, and injections not included in the Level I CPT codes. These codes are available on the CMS web site.[8]

[7] https://www.ama-assn.org/practice-management/cpt/cpt-overview-and-code-approval
[8] https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/HCPCS-Quarterly-Update

Diagnosis Related Group Codes

23. Diagnosis Related Group, or DRG codes, are used to identify 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 maintained by CMS, and are available on the CMS website.[9]

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

Definition of Percentiles and How They are Determined

25. Percentiles of charges are calculated based on provider charges with no discounts or adjustments. The sources referenced in this paper define the UCR charge for a service as the charge amount that falls at a certain percentile rank in a geographic area. A percentile rank is a number between zero and one hundred that indicates the percent of the observations in a group below it, excluding any observation exactly at the percentile rank. To determine the percentile distribution of a set of numbers, we sort the observations from the lowest number to the highest number. We then review the resulting distribution of numbers to determine the percentile rank of each number. If there are 13 numbers, the number ranked 7th highest is the 50th percentile value, as half of the other 12 numbers are less than the 7th number and half are greater than the 7th

[9] https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/MS-DRG-Classifications-and-Software
[10] https://www.cms.gov/Medicare/Coding/ICD10/2020-ICD-10-CM

number, as shown in the example below.[11] For the number representing the 25th percentile value, 25% of the other numbers should be less than it and 75% should be greater than it. In the example below, this occurs at the 4th number in the ranking.

Number Ranking and Percentile Example

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

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

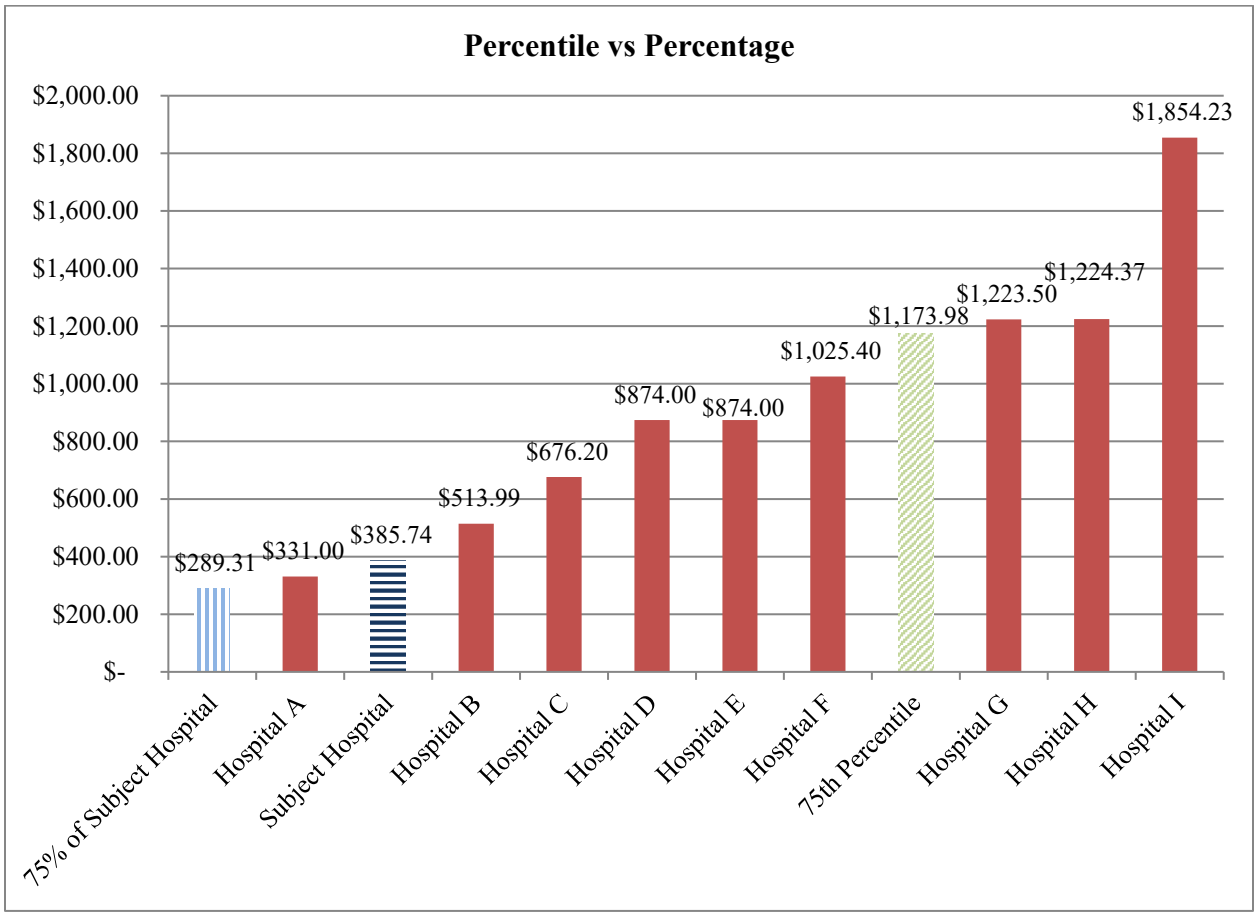
[11] Example and explanation adapted from text of PMIC Digital Book Series. *Medical Fees 2015*. Los Angeles: Practice Management Information Corporation, 2015

75th percentile rank and the 83.3rd percentile rank, the 80th percentile value is the value that falls 60% of the way between 79 and 81. This value is 80.20.

27. There are publications and data services that compile charge data and publish percentile values for various provider services. Providers may look to these publications when they establish their chargemasters. Payors may look to these publications in establishing allowable amounts. For other services there are no publications that calculate percentiles, but there are reliable public data sources with which to calculate charge percentiles.

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

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



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

DATA SOURCES FOR UCR CHARGES

31. There are many regularly used data sources for determining UCR percentile thresholds for maximum reasonable charges. The data sources RPC uses to determine UCR percentile thresholds are discussed below. Other commonly used data sources are FAIR Health

Benchmarks and Context4Healthcare's UCR Fee Data. Each data source uses different claims data and adjustments to calculate percentile values, different geographic areas.

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

33. RPC calculates 80th percentile charges for physicians, radiologists, anesthesiologists, therapists, labs, and other providers and for inpatient and outpatient hospitals outside of Texas using databases maintained by the Center for Medicaid and Medicare Services of claims by participating and non-participating providers to Medicare. RPC analyzes billed charges from these databases, not Medicare allowed amounts. The amounts billed by these providers for Medicare patients are the same as the amounts billed to all other patients.

34. One possible critique of these databases is that they do not include bills from providers who have opted out of Medicare entirely, so 80th percentile charges calculated from these databases may not reflect all the charges in a medical market. However, according to research by the Kaiser Family Foundation,[12] only 1% of physicians nationwide have opted out of Medicare. Psychiatrists/Neuropsychiatrists, the specialty with the highest percentage of opt-outs, has an opt-out rate of only 7.2%. In Texas, only 1.3% of providers have opted out.

35. Analysis of Medicare's Provider of Services File[13] shows that 94.3% of the nation's 6,642 short-term acute care hospitals, children's hospitals, and critical access hospitals are participating providers. Therefore, RPC determined that Medicare databases provide an excellent representation of the population of medical providers and their charges.

[12] Ochieng, Nancy, Karen Schwartz, and Tricia Neuman. "How Many Physicians Have Opted-Out of the Medicare Program?". Kaiser Family Foundation. October 22, 2020.
[13] https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Provider-of-Services

Medical Market Definitions

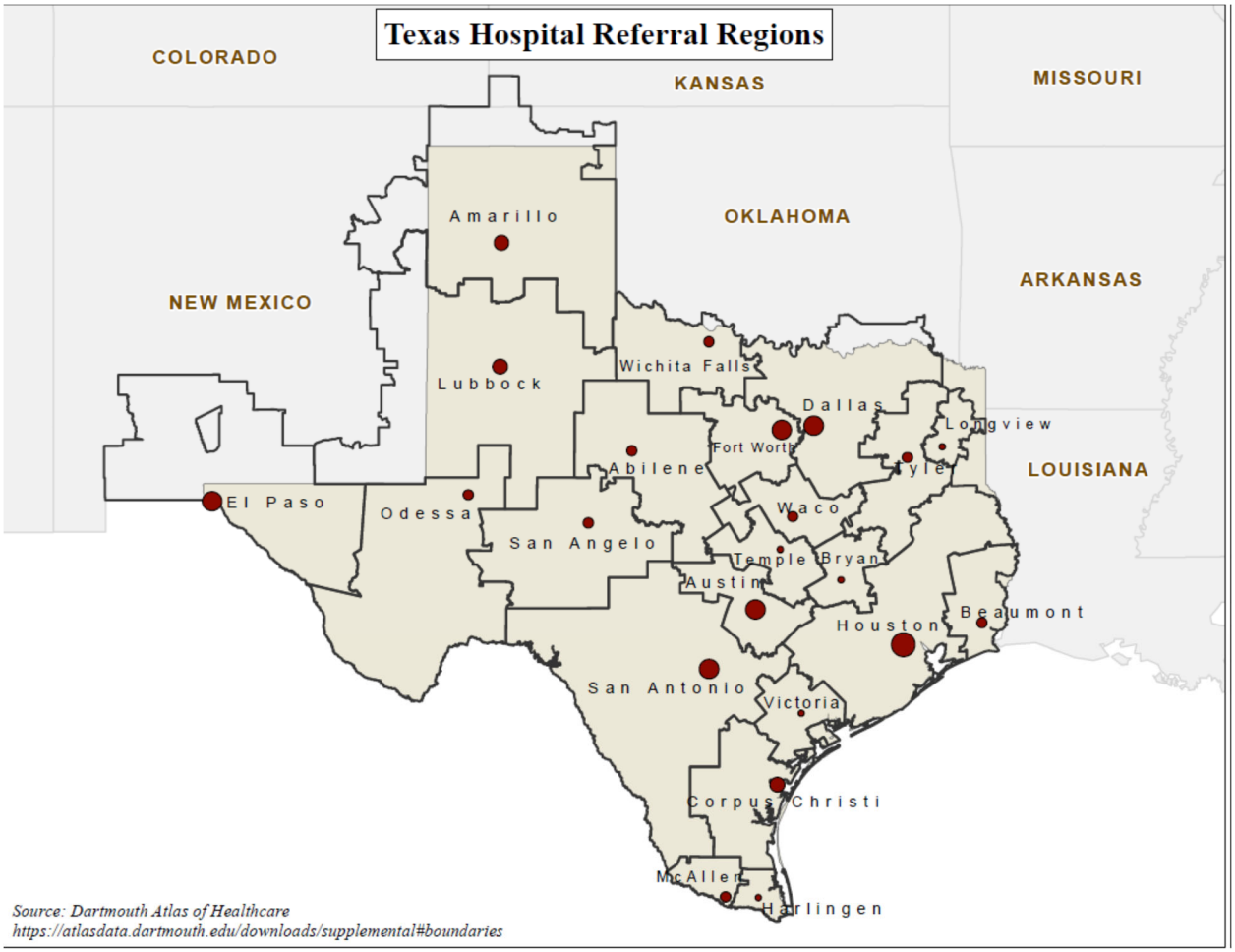
36. Each publication which lists UCR thresholds has its own definition of medical markets. These definitions may be based on Medicare Geographic Practice Cost Indices, zip codes, or geo-zips (three-digit zip codes).

Dartmouth Atlas of Healthcare

37. RPC relies on medical market definitions from the *Dartmouth Atlas of Healthcare*.[14] RPC uses the Hospital Referral Regions (HRRs") defined in the *Dartmouth Atlas of Health Care* to define medical markets. Sometimes where a county is split between two HRRs, we include providers in both HRRs. In an area with few providers of a service, we sometimes combine HRRs to obtain a sufficient number of observations.

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

[14] The Dartmouth Institute for Health Policy and Clinical Practice, The Dartmouth Atlas of Health Care, http://www.dartmouthatlas.org/, viewed October 20, 2021.
[15] Dartmouth also defines 3,436 Hospital Service Areas ("HSAs"). Most of the HSAs contain only one hospital and some contain no hospital. Thus, many of the HSAs contain too few physicians in many specialties to provide enough observations to determine UCR charges.
[16] https://data.dartmouthatlas.org/supplemental/#crosswalks, viewed October 20, 2021.



Inpatient and Outpatient Hospital Services and Ambulatory Surgery Center Services

THCIC Inpatient and Outpatient Public Use Data Files

39. These files are released quarterly by the Texas Department of State Health Services and contains discharge level records from Texas hospitals for inpatient stays and visit level records for outpatient and emergency room visits. These files have data for all insured and uninsured patients. The files contain most of the data elements found on a UB-04/CMS 1450 hospital billing form. The outpatient files also include visits to Ambulatory Surgery Centers ("ASCs"). This is RPC's primary data source for facility charges in Texas. These files are available for purchase from the Department.[17]

[17] https://www.dshs.state.tx.us/thcic/

CMS Inpatient and Outpatient Public Use Data Files

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

Physician and Other Provider Services

CMS Carrier SAF 5% Sample (Database)

41. CMS publishes the Carrier Standard Analytical File ("CMS Carrier SAF") annually. It reflects all billings to Medicare by physicians, radiologists, anesthesiologists, therapists, labs, and other providers for a semi-random sample of 5% of Medicare beneficiaries. The files contain most of the data elements found on a CMS 1500 billing form. The Medicare allowed amount for each claim is also shown. While these claims are for Medicare beneficiaries, the billed charges apply to all patients treated at the facilities regardless of payor. RPC determines maximum UCR charges based on the charges, not on the Medicare payment rates or allowable amounts. These files are available to those with a data use agreement with CMS for limited data set files.

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

Medical Fees in the United States

43. *Medical Fees in the United States*, aka *Medical Fees* or the *Medical Fee Book* ("MFB"), is a generally accepted publication that compiles information on physician charges for a wide variety of services from private insurance claims. It includes a table used to adjust national percentile charge values for different areas based on Medicare Geographic Practice Cost Indices. The book is publicly available and is primarily marketed to physicians to assist them in developing their chargemasters. RPC uses percentile values from the MFB for codes which are not covered by Medicare and for code families with fewer than five codes with at least five providers in an HRR.

Charge Adjustments for Inflation

44. When no THCIC or CMS dataset is available for a year including the dates of service for a provider charge, RPC calculates the maximum UCR charge for the most recent year of data available and adjusts the charge upward based on the appropriate subcategory inflation rate from the Consumer Price Index, published by the federal Bureau of Labor Statistics ("BLS"). Inpatient charge thresholds are inflated using the Inpatient Hospital subcategory index. Outpatient charge thresholds are inflated using the Outpatient Hospital subcategory index. Practitioner charge thresholds are inflated using the Professional Services subcategory index. These indices are available for download free from the Bureau of Labor Statistics website.[18]

STANDARD PERCENTILES FOR DETERMINING UCR CHARGES

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

46. It is not always possible to compare the charges of different providers in a geographic area to determine a reasonable charge. There must be enough providers in the area to allow for meaningful comparisons. If there are too few providers, prices may not be set

[18] https://www.bls.gov/cpi/

independently. This method may not be reasonable for emergency services because charges may not be subject to market forces. For example, UCR is not a reasonable method for air ambulance or emergency physician groups.

State Laws

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

Texas

48. In 2019, Texas passed legislation protecting consumers from surprise medical bills. The law establishes an arbitration process, and requires the arbitrator to consider the 80th percentile of billed charges and the 50th percentile of payments in the market in determining appropriate allowable amounts for certain out-of-network care.[19]

Alaska

49. Alaska adopted the 80th percentile of physician charges for emergency services as the minimum payment standard for out-of-network insurance coverage.[20]

Connecticut

50. Connecticut designated FAIR Health's 80th percentile charge benchmarks for health care services as the "usual, customary ***and reasonable rate***" to be used in determining insurance reimbursements for health care providers.[21] (emphasis added)

[19] Texas Insurance Code §1467.083
[20] See Alaska Admin. Code tit. 3, § 26.110.
[21] See Conn. Public Act No. 15-146.

51. Connecticut establishes its Workers' Compensation Practitioner Fee Schedule as the 74th percentile level of the data base of statewide charges, with non-physician practitioners paid at 70% of the physician fee schedule.[22]

Idaho

52. The Idaho workers' compensation rules define a "reasonable charge" as "a charge that does not exceed the Provider's 'usual' charge and does not exceed the 'customary' charge, as defined in this rule," and the rules define a "customary charge" as, "a charge which shall have an upper limit no higher than the 90th percentile, as determined by the Commission, of usual charges made by Idaho Providers for a given medical service."[23]

Illinois

53. Illinois's Workers' Compensation Act sets the maximum allowable payment under its fee schedule as 90% of the 80th percentile of charge as determined by the Commission using databases with specific requirements.[24]

New Mexico

54. New Mexico's worker's compensation statute gives the director leeway in establishing a fee schedule, but requires that the rates fall between the 60th and the 80th percentile of current rates for health care provider charges.[25]

New Jersey

55. New Jersey adopted the 75th percentile for medical expenses in personal injury protection auto insurance cases.[26]

New York

56. New York State Budget Bill S6914, which became effective April 1, 2015, includes provisions aimed at providing increased transparency of insurers' out-of-network

[22] CT Administrative Regulation §31-280-3
[23] IDAPA 17.01.010.07
[24] 820 ILCS 305
[25] NM Laws §52-4-5
[26] See N.J. Rev. Stat. 39:6A-4.6 (2004).

coverage and provisions addressing payments for emergency care and "surprise bills" by out-of-network physicians.[27] Under the Bill, insurers must describe their reimbursement methodologies "and make available at least one alternative option" for out-of-network coverage "using UCR after the imposition of 20% coinsurance."[28] The Bill defines usual and customary cost as meaning

> The eightieth percentile of all charges for the particular health care service performed by a provider in the same or similar specialty and provided in the same geographical area as reported in a benchmarking database maintained by a nonprofit organization…[29]

Guidance issued by the New York Department of Financial Services clarified that FAIR Health can "be used as the independent source to determine UCR" in satisfaction with the Bill.[30]

Pennsylvania

57. Pennsylvania states that persons or institutions treating a person injured in a motor vehicle accident "shall not require, request or accept payment … in excess of 110% of the prevailing charge at the 75th percentile."[31] "Prevailing charge" and "UCR charge" are synonymous.

58. In its Workers' Compensation Act, Pennsylvania states providers "shall not require, request or accept payment for the treatment, accommodations, products or services in excess of one hundred thirteen per centum of the prevailing charge at the seventy-fifth percentile, one hundred thirteen per centum of the applicable fee schedule, the recommended fee or the inflation index charge … or one hundred thirteen per centum of any other Medicare reimbursement mechanism."[32]

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

Rhode Island

59. Rhode Island established its workers' compensation fee schedule to limit charges to the 90th percentile of the usual and customary charges of providers in the state.[33]

Utah

60. Utah defines the reasonable value of medical expenses in personal injury protection automobile insurance to be the 75th percentile per unit charge multiplied by the relative unit value of a service, as calculated from a biannual study by the state.[34]

Medicare

61. Before moving to a fee guideline based on Relative Value Units ("RVUs"), Medicare paid approved amounts for services, which were defined as "the lesser of a physician's bill, his or her customary (median) charge in the preceding year, or the fee that prevailed among like-specialty physicians (the 75th percentile of the local distribution of customary charges for that procedure, subject to limits imposed by the Medicare Economic Index)."[35] This was often called the customary or prevailing rate method of determining payment. The 75th percentile remains a standard reporting threshold and payors often use it to determine a UCR charge in a medical market.

Veteran's Administration

62. Section 17.101 of Title 38 of the Code of Federal Regulations defines "reasonable charges for medical care or services," excluding prescription drugs. The methodologies used to establish reasonable charges under §17.101 are, "designed to replicate, insofar as possible, the 80th percentile of community charges, adjusted to the market areas in which the VA facilities are located."[36]

[33] Rhode Island Statutes §28-33-7
[34] Utah Code, 31A-22-307
[35] Juba, David A. 1987. Medicare physician fee schedules: Issues and evidence from South Carolina. *Health Care Financing Review,* 8:3.
[36] 38 CFR Part 17

Commercial Health Plans and Property-Casualty Insurance Companies

63. Commercial health plans negotiate provider contracts with physicians, hospitals and other healthcare providers. The providers with contracts are called "in-network providers." These contracts set negotiated allowable amounts the provider agrees to accept as full payment, and the provider agrees not to collect from the patient the difference between the allowed amount and the provider's billed charge. An out-of-network provider is one with which a health plan has no provider contract and no agreement for an amount the provider will accept as full payment for a service. There is a contractual relationship between a health plan and the patient and the health plan or insurance policy determines how much the plan must pay the out-of-network provider on behalf of the patient. Commercial health plans need payment policies to establish an allowable amount for services.[37] For a given payor, the allowable amount and the method by which it is determined can be different for different health plans administered by that payor and may depend on whether a plan is an insured plan or a self-insured plan under ERISA.

Texas Department of Insurance

64. The Texas Department of Insurance ("TDI") appointed a technical Advisory Committee on Health Network Adequacy ("the Committee") that included representatives from health benefit plan, physician and hospital sectors. The Committee was charged with evaluating healthcare network adequacy and balance billing. As part of its work, the Committee surveyed insurance companies regulated by TDI to collect "detailed information on claims for services provided by both in-network and out-of-network health care providers."[38] The survey asked health plans about the methodologies used "to determine reimbursement rates for non-network physician" providers.[39] The responding health plans represented 95% of the enrollment in state-regulated health plans in Texas. In 2009, the Committee published the results in a report, and reported that the 75th percentile was "the most commonly cited percentile level" used in

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

calculating allowable amounts.[40] The 2009 TDI survey included detailed counts of responses by plans.

65. TDI updated this survey in 2017,[41] but the 2017 update did not give the same detailed results as the 2009 survey. It did not ask or report which percentile was most frequently used by state-regulated health plans that use the UCR charge method. It only states that, "Typical percentiles used by insurers are the 80th and the 50th percentile."[42] The report does not say how many plans use the 50th percentile, or if more than one plan uses this percentile. TDI has declined to make public the responses of each plan to any question in the survey. RPC believes that the 2009 survey is more relevant and reliable than the 2017 update on questions of industry standards.

United Healthcare

66. United Healthcare's website explains "Some health care benefit plans administered or insured by affiliates of UnitedHealth Group Incorporated … provide out-of-network benefits for United's members." The website lists the following "reimbursement databases, benchmarks, or methodologies to establish the reimbursement amount for out-of-network claims." The website lists FAIR Health as one of the "reimbursement databases, benchmarks, or methodologies to establish the reimbursement amount for out-of-network claims." An example is given based on the 70th percentile as a benchmark.[43] One UnitedHealth affiliate site, UHOne, states, "Affiliates of UnitedHealth Group frequently use the 80th percentile of the FAIR Health Benchmark Databases to calculate how much to pay for out-of-network services of health care professionals, but plan designers and administrators of particular health care benefit plans may choose different percentiles for use with applicable health care benefit plans."[44]

[40] *Ibid*, p. 4.
[41] Texas Department of Insurance. 2017. Usual and Customary Survey, Revised January 2017.
[42] *Ibid*, p. 11.
[43] https://www.uhc.com/legal/information-on-payment-of-out-of-network-benefits
[44] https://www.uhone.com/about-us/legal/out-of-network-benefits

Aetna

67. Aetna uses several methods for paying for out-of-network services, and the exact calculation depends on the specific Aetna plan. However, under plans that pay for out-of-network services, many use the "reasonable charge" and "prevailing charge" methodology.[45] Under that system, Aetna uses information from FAIR Health to determine how much providers in any geographic area charge for particular services. For some health plans, Aetna uses the 80th percentile to calculate how much to pay for out-of-network services.[46] Aetna then uses the specific details of each health plan to determine how much of that charge it will pay, and how much the patient pays. Aetna notes this methodology does not apply to every case. Some Aetna plans may set the prevailing charge at a different percentile while others do not use UCR data at all.[47]

Blue Cross Blue Shield

68. Some plans issued by Blue Cross Blue Shield insurers set allowed amounts for out of network services at percentiles applied to FAIR Health databases. For example, Horizon Blue Cross Blue Shield of New Jersey lets employers choose plans with out of network allowed amounts at the 70th, 80th, or 90th percentile of FAIR Health data.[48]

Cigna

69. Cigna offers many plans that allow plan sponsors to choose out-of-network reimbursement rates at a percentile applied to FAIR Health data. The typical percentiles are the 70th or the 80th.[49]

[45] "Network and Out-of-Network Care" (2021), Aetna, https://www.aetna.com/individuals-families/using-your-aetna-benefits/network-out-of-network-care.html.
[46] http://www.aetna.com/individuals-families-health-insurance/document-library/sg-ppo.pdf
[47] "Network and Out-of-Network Care" (2021), Aetna, https://www.aetna.com/individuals-families/using-your-aetna-benefits/network-out-of-network-care.html
[48] Horizon Blue Cross Blue Shield of New Jersey. Out-of-Network Payments. Available from Accessed October 26, 2021. Available at: https://www.horizonblue.com/members/education-center/understanding-your-coverage/out-network-costs-ii/out-network-payments
[49] Cigna. Out Of Network. Accessed October 26, 2021. Available from https://static.cigna.com/assets/chcp/resourceLibrary/clinicalReimbursementPayment/medicalClinicalReimburseOutOfNetwork.html

Liberty Mutual

70. Liberty Mutual Insurance is a property-casualty insurer that does not offer commercial health plans. It sets the allowed amount at the 80th percentile charge from the FAIR Health database for out-of-network PIP claims in many states, including Texas.[50]

Medical Charge Publications and Databases

FAIR Health

71. FAIR Health provides a medical cost lookup tool for consumers that includes an estimated medical cost for medical and dental procedures, based on the procedure code and the geographic area of service. The tool provides separate cost estimates for insured and uninsured individuals. The results for both insured and uninsured patients provide estimated charges at FAIR Health's 80th percentile. Although the default on the consumer search site is the 80th percentile, FAIR Health's data resource for allowed medical benchmarking provides data on charges for given codes at the 50th, 60th, 70th, 75th, 80th, 85th, 90th and 95th percentiles.[51]

72. FAIR Health also sells data services to major health plans such as UnitedHealth and Aetna. It also provides data to third party claims administrators and to medical bill review services. RPC's conversations with FAIR Health staff reveal that although the 80th percentile was the default on the consumer website for benchmarking and comparison purposes, it is not FAIR Health's position that the 80th percentile of charges is the usual and customary rate or the industry standard. FAIR Health staff reported that many of the health plans that use their data choose the 80th percentile for UCR charges, but that each health plan determines which percentile to use and that FAIR Health has no role in determining a health plan's UCR charges.[52]

Context4Healthcare

73. Context4Healthcare, which identifies itself as a software and data company providing billing, claims and charge solutions in the healthcare industry, reports charge amounts for every fifth percentile from the 25th through the 95th percentiles in its UCR Fee Data. The

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

dataset provides benchmarking data to determine reimbursement and billing rates.[53] Context4Healthcare says it produces the data annually by analyzing billions of charges across the United States. Its database includes charges for millions of procedure combinations. Providing charges for a wide range of percentiles allows payors to adjudicate claims by creating their own rules on what payment amount they find most appropriate for given services.

Medical Fees in the United States

74. *Medical Fees in the United States* provides "a listing of medical procedure codes, descriptions, UCR fees at the 50th, 75th and 90th percentiles" and "Medicare fees and Medicare relative value units." The UCR charges "are derived from an analysis of over 600 million actual charges" and are designed as a resource "for reviewing, adjusting and setting fees." [54] As the editor explains in the introduction, "there is no 'secret' list of fees that health insurance plan and third-party payers use to determine the appropriateness" of a provider's charges. Instead, some payors use data purchased from databases and set payment levels at different levels. The editor contends that while some insurers may pay claims at the 90th, 80th or 75th percentile, "HMOs and other managed care groups typically negotiate fees that are closer to the 50th percentile for a given area."[55] The editor provides no precise reason for including the 75th percentile in the book (rather than another potential percentile such as the 70th or 80th), but the introduction states that "the 50th, 75th and 90th percentile fees provided in this text are based on national averages and are generally reflective of payer allowables."[56] The MFB is now published in conjunction with Context4Healthcare using their data.

Physicians' Fee Reference

75. The Physicians' Fee Reference software ("PFR") displays charge information at the 50th, 75th and 90th percentiles. According to the PFR's introduction, it derived the charges from the most recent CMS Standard Analytical File. PFR does not explain why it included the

[53] Context4Healthcare. DecisionPoint™ Health Payment System. Medical UCR. Brochure available for download at: https://www.context4healthcare.com/solutions/reference-based-pricing/ucr-fee-data
[54] Davis, James B. Ed. *Medical Fees 2021*. Foreword, page iii.
[55] *Ibid*, pages 2-3.
[56] *Ibid*.

75th percentile instead of another percentile. It does discuss, however, how physician practice managers can use the percentiles in the book.

76. PFR's introduction has a section on designing and reviewing a charge schedule and notes that setting charges is "a question of the practice's or medical group's pricing philosophy, financial budgeting or 'revenue target' for the period rather than an objective industry 'norm' or standard."[57] Some practice management consultants advise physicians to "always charge the maximum allowable charge" to minimize the potential for any lost income. However, the PFR Introduction cautions that doing so may make other area providers more attractive to patients and may not provide "the pricing flexibility" needed to negotiate managed care contracts. The PFR Introduction notes that other practice consultants recommend setting charges between the 50th and maximum allowable amount, and that setting the charge at the midpoint between the 50th and 75th percentile would allow physicians to be comfortable that their charges are not in the bottom half but are still below the maximum. The PFR Introduction states, "Most practice consultants advise against a too aggressive pricing strategy especially for pricing common office visit services."[58] RPC interprets this to mean that while PFR publishes the 90th percentile for their "too aggressive" customers, the 75th percentile is the highest they see as reasonable.

Summary of Standard Percentiles

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

[57] PFR Introduction. 2014. Physicians' Fee Reference. Page 6. Wasserman Publishing.
[58] PFR Introduction. 2014. Physicians' Fee Reference. Page 7. Wasserman Publishing.

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

[1] *For this chart RPC treats the actual benchmark of the 74th percentile as roughly equivalent to the 75th percentile*
[2] *For this chart RPC treats the actual benchmark of 0.9 x 80th percentile as roughly equivalent to the 75th percentile*
[3] *For this chart RPC treats the actual benchmark of 1.1 x 75th percentile as roughly equivalent to the 80th percentile*
[4] *For this chart RPC treats the actual benchmark of 1.13 x 75th percentile as roughly equivalent to the 80th percentile*

STANDARD CODING AND BILLING EDITS

78. When determining UCR charges, RPC makes standard coding and billing edits. The appropriate edits can be determined by entering the information on a bill into grouper software for outpatient facilities or into Optum 360's EncoderPro software for providers. The software objectively applies standard edits. RPC also adjusts UCR charges for co-surgeons or assistants at surgery based on industry standards. The following are example edits RPC makes. Not all types of edits apply to each bill.

Mutually Inconsistent Codes

79. National Correct Coding Initiative edits include code pairs which are mutually exclusive based on anatomic, temporal, or gender considerations. These procedure to procedure edits are maintained by CMS and are available free from the CMS website.[59]

Multiple Procedure Rule

80. According to the AAPC, "Most medical and surgical procedures include pre-procedure, intra-procedure, and post-procedure work. When multiple procedures are performed at the same patient encounter, there is often overlap of the pre-procedure and post-procedure work. Payment methodologies for surgical procedure account for the overlap of the pre-procedure and post-procedure work."[60] Generally, the primary procedure is paid at its full rate, and subsequent procedures are paid at 50% of their full rate. The EncoderPro software identifies codes eligible for the multiple procedure rule adjustments.

Bilateral Procedure Rules

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

Unbundling of Services or of Supplies Included in the CPT Code

82. Some procedure codes cannot be billed together because performing one higher-level procedure requires performing a lower-level procedure. Payors assume the performance of the lower-level procedure in determining payment for the higher-level procedure. These procedures are described as being "bundled" and billing for them separately is called "unbundling." The National Correct Coding Initiative ("NCCI") program was developed by CMS to prevent inappropriate payment of services that should not be reported together. The EncoderPro software identifies which code pairs are not separately billable due to unbundling.

[59] https://www.cms.gov/Medicare/Coding/NationalCorrectCodInitEd/NCCI-Coding-Edits
[60] https://www.aapc.com/blog/27973-understanding-the-multiple-procedure-rule/ Accessed January 30, 2019.

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

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

84. When a surgery requires more than one surgeon, or when a surgery requires a qualified non-physician assistant-at-surgery, payors increase payment. However, payors do not pay double the single surgeon rate for surgeries requiring an assistant surgeon, co-surgeon, or assistant-at-surgery. Most payors set additional payment for these assistants between 10% and 25% of the fee for the primary surgeon. Medicare pays for assistant surgeons and co-surgeons at 16% of the fee for the primary surgeon.[61] RPC assumes the reasonable charge for these assistants is 25% of the reasonable charge for the primary surgeon.

Global Surgical Fee

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

Medically Unlikely Edits

86. Medically Unlikely Edits ("MUEs") are a subset of NCCI edits. MUEs create a maximum number of units of a good or service a provider would report under most circumstances for a single patient on a single day.[62] Not all HCPCS/CPT codes have an MUE.

[61] Medicare Claims Processing Manual. Chapter 12, section 20.4.3.
[62] https://www.cms.gov/Medicare/Coding/NationalCorrectCodInitEd/MUE

METHODOLOGY

For Hospital Inpatient and Outpatient Services

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

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

89. For an outpatient facility bill with HCPCS or CPT codes assigned to most or all lines on the bill and with most or all the HCPCS or CPT codes separately payable, RPC may calculate the average charges for those codes at other hospitals in the HRR or HRRs and then determine the maximum UCR charge for each code. We compare claims from services at an ambulatory surgery center ("ASC") to charges at other ASCs when data permits. We compare claims from a hospital outpatient department to charges at other hospitals.

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

a. Identify the service by DRG, principal procedure code, or HCPCS/CPT code

b. Identify the HRR or HRRs

c. Pull records for the year for patients in that DRG or having that principal procedure or those HCPCS/CPT codes and facilities in the HRR(s) from the database

d. Calculate an average charge for each facility using the records in step c

e. Calculate an 80th percentile of the average charges in step d

f. Use BLS data as necessary to adjust the charges for the dates of service

g. 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.

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

For Physicians and Other Suppliers

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

a. Determine the dates of service.

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

c. Determine the HRR for the practice zip code.

d. Identify all zip codes in the HRR.

e. Identify the UCR charge for the CPT code in the HRR from RPC's UCR Database.[63]

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

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

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

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

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

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

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

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

a. Determine the dates of service.

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

c. Determine the HRR for the practice zip code.

d. Identify all zip codes in the HRR.

e. Identify all records in the CMS Carrier SAF in the date of service year for that HCPCS/CPT code for all practice zip codes in that HRR.

f. Calculate an average charge for each practitioner using the records in step e

g. Calculate an 80^{th} percentile of the average charges in step f

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

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

For Anesthesia Services

94. Calculation of maximum UCR charges for anesthesiologists differs slightly from the procedure 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 surgical 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 surgical code. The steps to calculate the maximum UCR charge for an anesthesiologist's claim are:

a. Identify the CPT code for the procedure requiring anesthesia.

b. Identify the CMS anesthesia RVU conversion factor for the HRR and year.

c. Determine the dates of service.

d. Determine the practice zip code for the practitioner providing the service.

e. Determine the HRR for the practice zip code.

f. Identify all zip codes in the HRR.

g. 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.

h. Divide the average Medicare allowed amount of the records in step g by the anesthesia conversion factor in step b to determine average units by provider.

i. Divide the average charges of the records in step g by the average units in step h to determine average unit charge by provider.

j. Calculate an 80th percentile of the average charges in step i

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

l. 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.

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

95. Sometimes the documents from the anesthesiologist do not show how many units were billed for an anesthesia service, it only shows a total charge. In those instances, in order to calculate the total reasonable charge from the maximum reasonable charge per unit, RPC calculates the average number of units for the specific ASA code using data in the CMS Carrier SAF for anesthesiologists in the HRR. Then, to calculate the maximum UCR charge, multiply the average units for the code by benchmark percentile unit charges. The additional steps in this procedure are:

a. Identify all anesthesiologist records from the CMS Carrier SAF for the specific ASA code.

b. Divide the average Medicare allowed amount of the records by the anesthesia conversion factor to determine the average number of ASA units by provider.

c. Calculate the weighted average of ASA units by anesthesiologist using the count of services as the weight.

d. Multiply the average ASA units calculated by the benchmark anesthesia unit charge.

Attachment 6

Research and Planning Consultants, LP

RPC'S USUAL, CUSTOMARY, AND REASONABLE CHARGE DATABASE FOR PRACTITIONER CHARGES

October 5 , 2020

Table of Contents

Attachments

Introduction

The question of whether a provider's charges are reasonable arises when there is no provider contract or government regulation setting the rate for a service (e.g., out-of-network providers in health plans, personal injury cases, first-person auto claims), and when the third-party payor sets the allowed amount based on the Usual, Customary, and Reasonable ("UCR") charge method. Attachment 1 to this document is a glossary defining terms related to calculation of UCR charges.

2. Medical services by practitioners are identified by Common Procedural Terminology ("CPT") codes, which are five-digit codes maintained and copyrighted by the American Medical Association. [1] A UCR charge for a CPT code is "the amount paid for a medical service in a geographic area based on what providers in the area usually charge for the same or similar medical service."[2] This is the definition adopted by many states and major commercial insurers to define maximum reasonable charges for out-of-network care.

3. CPT codes are a subset of a larger coding system called Healthcare Common Procedure Coding System ("HCPCS"). HCPCS was established in 1978 to provide a standardized coding system for describing specific items and services. Initially, facilities voluntarily used HCPCS codes, but with the implementation of HIPAA in 1996, facilities reported HCPCS for transaction codes. HCPCS has its own coding guidelines and works hand in hand with CPT. HCPCS includes three levels of codes:

   - Level I codes consist of the AMA's CPT codes and is numeric.
   - Level II codes are the HCPCS alphanumeric code set and primarily include non-physician products, supplies, and procedures not included in CPT.
   - Level III codes, also called HCPCS local codes, were developed by state Medicaid agencies, Medicare contractors, and private insurers for specific programs and jurisdictions. These are still in the HCPCS reference coding

[1] https://www.ama-assn.org/practice-management/cpt/cpt-overview-and-code-approval
[2] HealthCare.gov. Glossary definition of UCR.

book. Some payors prefer that coders report the Level III codes in addition to the Level I and Level II code sets. However, these codes are not nationally recognized.

4. RPC's UCR database for practitioners only includes permanent CPT codes. It excludes temporary and trial CPT codes. CPT codes beginning with a "0" are used to describe anesthesia services. RPC maintains a separate database of anesthesia code UCR charges, that are not a part of this database.

5. Facility bills also use CPT codes to describe some of the outpatient goods and services facilities provide. Although they sometimes use the same coding system, facility charges are different from practitioner charges. This database applies only to practitioner charges.

6. A threshold percentile determines the maximum reasonable charge for a service in a medical market. Charges less than or equal to the threshold percentile value are considered reasonable; charges more than the threshold value are considered not reasonable. The industry standard for the threshold percentiles is from the 75th to the 80th percentile. RPC found many state governments and private health plans adopt the 75^{th} or 80^{th} charge percentile as the threshold for the maximum reasonable charge in a medical market. This means 80% or 75% of the providers in a medical market charged an amount less than or equal to this percentile value. RPC uses the 80^{th} percentile as the threshold when we have data at the provider level from which to calculate the UCR charge.

Existing Sources for UCR Charges

7. Several organizations discussed below publish UCR charge values for different threshold percentiles. All have three major weaknesses. First, no major UCR charge database or publication uses a geographic definition based on a reasonable definition of medical markets. They either use three-digit zip codes, or geozips, defined by the U.S. Postal Service to manage mail deliveries or they use areas

defined by Medicare tied to differences in practice costs. Any correspondence to medical markets is coincidental.

8. Second, these publications are not transparent in how they arrive at their percentile values for each CPT code. Each publication uses multiple methods to calculate percentile values for services. From the available documentation a user cannot tell:

    - Which method was used to calculate the value for each CPT code,
    - Whether the service is actually provided in the geozip, and
    - How many different providers' charges went into a calculation.

9. Third, according to their documentation, none of the existing publications require a minimum number of providers to calculate a UCR charge. They instead require a minimum number of claims. In some areas, a single provider may have a large enough market share to individually determine the UCR charge.

FairHealth (FH)

10. FairHealth is a non-profit organization created in a settlement agreement between the New York State Attorney General and United Health Care when Ingenix, a United Health subsidiary, was found to have improperly calculated UCR values to the benefit of payors.[3]

11. FH calculates benchmarks using the full Medicare claims data set and a database of private insurance claims covering over 150 million individuals.[4] Practitioner CPT benchmarks (as opposed to benchmarks for facility claims) are calculated from private claims data only. FH does not disclose why it excludes Medicare

[3] https://www.fairhealthconsumer.org/#about
[4] FH Benchmarks flyer. June 2019.

charge data. FH calculates benchmarks at the geozip level,[5] but some geozips are grouped together.[6] Attachment 2 has a map of FH's Texas geozips.

12. FH uses two methods to calculate percentile values. For code/geozip combinations with a "sufficient" number of charges, FH uses its "actual" method to calculate the percentile value for a CPT code. When FH deems there are not a "sufficient" number of claims, FH uses its "derived" method at the geozip level on a "code-group" after normalizing codes on a Relative Value Unit (RVU) basis. FH provides no definition of a "code group" or listing of what codes are in each group. The resulting code group percentile value for a geozip is multiplied by the RVUs for each code to get a percentile value for each code in the group.[7]

13. FH does not disclose what is a "sufficient" number of charges to use the actual methodology rather than the derived methodology. FH does not publish whether the published percentile value for a CPT code was calculated using the actual or the derived method.

14. FH calculates all percentiles based on number of claims not based on number of providers.[8] This means it is possible for the percentile value to be determined by one provider if that provider has a large market share. For example, if the provider with the highest charges in a market has a market share over 20 percent, that provider's charge will be the 80th percentile charge no matter how many other providers charge less. FH does not disclose if it has procedures to address this situation.

Context4Healthcare (C4H)

15. C4H has published software and data products for healthcare compliance for 29 years. It employs a cloud based "Payment Integrity Platform" which uses a

[5] FH Benchmarks flyer. June 2019.
[6] FairHealth Geozips. Accessed April 26, 2019.
[7] FH Benchmarks flyer. June 2019.
[8] Email correspondence with Tracy Guo, Sales Account Executive. November 20, 2019.

proprietary analytics engine to identify billing and coding errors and a cloud-based UCR database.[9]

16. C4H calculates UCR benchmarks using a database of insurance claims, voluntarily submitted by providers, updated semi-annually.[10] Less than one percent of observations are from payor databases.[11] C4H does not disclose if its practitioner data includes Medicare data.

17. C4H calculates percentile values at the geozip level.[12] Sometimes C4H uses larger areas, called ZIPtiers.[13] They do not define or provide examples of ZIPtiers. C4H does not directly calculate any percentile values. It calculates a national median charge for each code and calculates the percentile value for each geozip or ZIPtier by calculating the ratio of the geozip percentile value for a family of codes to the national percentile value for that family of codes. CH4does not disclose its definition of code families.

18. As an example, C4H calculates the UCR charge for an initial physician office visit with CPT code 99203 as follows. For whatever family of codes includes 99203, C4H calculates the median charge in a geozip or ZIPtier. C4H creates a ratio of the median charge in the geozip or ZIPtier to the national median charge for each code in the group, and then takes an average of these ratios. Finally, C4H multiplies this average ratio by the number of RVUs for 99203 and a constant to determine the UCR charge for 99203.

19. When there are fewer than 500 charges for a code nationally, the benchmark is calculated over the CPT family within the geozip instead, and it is calculated

[9] https://www.context4healthcare.com/about-us
[10] Context4Healthcare. Usual, Customary & Reasonable: Healthcare Fee Data. Accessed April 26, 2019.
[11] Context4Healthcare, Inc. Usual, Customary & Reasonable Fee Database Methodology: A White Paper. January 2010.
[12] Context4Healthcare. Usual, Customary & Reasonable: Healthcare Fee Data. Accessed April 26, 2019.
[13] Context4Healthcare, Inc. "Usual, Customary & Reasonable Fee Database Methodology: A White Paper." January 2010.

relative to Medicare reimbursement rates.[14] CH4 does not disclose the details of this calculation.

20. C4H calculates all percentile values based on number of claims and not on number of providers.[15] This means it is possible for the percentile value to be determined by one provider if that provider has a large market share for a family of codes. For example, if the provider with the highest charges in a market has a market share over 20 percent, that provider's charges determine the 80th percentile charge no matter how many other providers charge less. CH4 does not disclose if it has procedures to address this situation.

Medical Fees in the United States, a.k.a. the Medical Fee Book (MFB)

21. The MFB uses data provided by Context4Healthcare (see above).[16] The MFB states that the C4H database includes data from third-party payers, clearinghouses, practice management system vendors, billing services, universities, medical practices, hospitals, and the Center for Medicare and Medicaid Services (CMS). It is unclear if the CH4 data used to calculate CPT codes includes Medicare data. The difference in descriptions of the C4H data and by C4H and the MFB makes it unclear if their UCR values are based on all or some of the same data.

22. The MFB adjusts charges geographically using Medicare GPCI regions instead of geozips. The MFB calculates a national percentile value for each CPT code and multiplies the national value by a geographic adjustment factor (GAF) for each Medicare GPCI region. Medicare GPCI adjustments are an approximation of differences in the cost of providing a service.[17] They are calculated using

[14] Context4Healthcare, Inc. "Usual, Customary & Reasonable Fee Database Methodology: A White Paper." January 2010.
[15] Telephone conversation between Brian Piper and a representative of C4H in November, 2018, as part of Eagle Air Med vs. Sentinel Air Medical Alliance, in the United States District Court, District of Utah, Central Division.
[16] It is unclear if MFB is now owned by C4H or if they collaborate and share data.
[17] https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/Medicare-PFS-Locality-Configuration-and-Studies

apartment rental rates, wage indices, and malpractice insurance rates. These factors do not correlate directly with what providers charge, which is more influenced by factors such as market concentration. Texas has only eight GPCI regions: Austin, Beaumont, Brazoria, Dallas, Fort Worth, Galveston, Houston, and all other areas are grouped into a single GPCI for "Rest of Texas" Attachment 2 has a map of the Medicare GPCI areas for Texas.

Physician's Fee Reference (PFR)

23. The primary data source for the PFR is the Center for Medicare and Medicaid Services, Limited Data Set, Standard Analytical File ("CMS LDS SAF") for the most recent year available. While these claims are for Medicare beneficiaries, the billed charges apply to all patients treated by the practitioners regardless of payor. The PFR treats each claim as an observation to determine data sufficiency and to calculate percentiles. The PFR calculates a national percentile value for each CPT code for each percentile. PFR calculates percentile values based on the number of claims, not the number of providers.

24. The national value is multiplied by a GAF for each zip code.[18] PFR says "Additional information was extrapolated based on relative value methodologies."[19] PFR does not explain this statement. The digital version of the PFR adjusts costs using a geographic factor specific for each zip code "whenever possible," and for a geozip when there are insufficient observations for a zip code. The print version adjusts only by geozips.[20]

25. The PFR says its GAFs are based in part on Medicare GPCIs, and also on government wage indices and regional economic information.[21] The GAFs are not based on geographic differences in charges. PFR does not disclose further details

[18] Physician's Fee Reference Introduction
[19] PFR Introduction. Page 1.
[20] Email correspondence with Krista Reynolds. November 18, 2019.
[21] Physician's Fee Reference Introduction

on how GAFs are calculated. The PFR does not disclose whether a GAF for a zip code is based on observations for that zip code or for the geozip.

RPC UCR Charge Database

26. Research & Planning Consultants, LP ("RPC") determines the maximum UCR charges for most[22] medical services based on the industry-standard definition of UCR charges. A UCR charge is "[t]he amount paid for a medical service in a geographic area based on what providers in the area usually charge for the same or similar medical service."[23] This is the definition adopted by several states and health plans to define the allowed amount for out-of-network care. Medicare used the term "prevailing charge" for the same approach before it adopted the Resource Based Relative Value Scale model in 1992.[24]

Objectives

27. RPC's objectives in creating this database were:

- Create a UCR charge database based on medical market definitions. Zip codes, geozips, city boundaries, and county boundaries do not necessarily reflect common medical markets.
- Calculate percentiles directly whenever possible. Directly calculated percentiles reflect an area's charges more than a national percentile which has a geographic adjustment.
- Clearly identify what method was used to arrive at each UCR benchmark.
- Clearly identify how many provider's charges were used to calculate percentile values and how many provider's charges were used to create each GAF.
- Calculate GAFs based on differences in charges and not differences in practice costs.

[22] The UCR method requires a database of charges. RPC does not use the UCR method when no such database is available, e.g. prescription drugs, over-the-counter drugs, or supplies which can be purchased from non-medical retail outlets.
[23] HealthCare.gov. Glossary definition of UCR.
[24] Omnibus Budget Reconciliation Act of 1989.

- Disclose details of sources and methods to maximize transparency.

28. RPC's database is, at this time, limited to permanent, non-anesthesia, CPT codes. It does not include temporary CPT codes, other HCPCS codes (injectable drugs, durable medical equipment, transportation services, etc.), facility charges, or prescription drugs.

29. For each CPT code the RPC database displays

    - the 50th, 75th, 80th, and 90th percentile charges,
    - the method used to generate the percentile charges, and
    - the number of providers in the market.

30. RPC uses one of two methods to calculate percentile values. The method used depends on the number of providers of that service in the medical market.

Data Sources

CMS Carrier SAF 5% Sample (Database)

31. RPC uses the CMS Carrier SAF 5% Sample file ("CMS Carrier 5% SAF").[25] This is the same primary data source the PFR uses. CMS publishes the file quarterly and annually. It has data for a semi-random sample of 5% of Medicare beneficiaries of all fee for service billings to Medicare by physicians, radiologists, anesthesiologists, therapists, labs, and other providers. The files contain most of the data elements found on a CMS 1500 billing form. While these claims are for Medicare beneficiaries, the billed charges apply to all patients treated by the practitioners regardless of payor. Because the analysis is performed on Medicare data, any code which is not covered by Medicare is not included in the database. RPC determines percentile values based on the charges, not on the Medicare

[25] https://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/LimitedDataSets/StandardAnalyticalFiles

payment rates or allowable amounts. These files are available to those with a Data Use Agreement with CMS for limited data set (LDS) files.[26]

National Provider Identification (NPI) File

32. The CMS Carrier 5% SAF identifies the provider performing a service by NPI number. Medicare's *National Provider Identification File* is used to link the CMS Carrier 5% SAF to the HRR in which services were performed.[27] The *National Provider Identification File* includes both NPI numbers and practice zip codes. The zip codes are used with the *Dartmouth Atlas of Healthcare* to identify the HRR of service.

Dartmouth Atlas of Healthcare

33. RPC relies on medical market definitions from the *Dartmouth Atlas of Healthcare*.[28] RPC uses the HRRs defined in the *Dartmouth Atlas of Health Care* to define medical markets. Each HRR is a collection of zip codes. 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.[29]

34. The United States is divided into 306 HRRs. The complete list of zip codes and HRRs for all other states can be found on the Dartmouth Atlas website. Dartmouth Atlas HRR definitions are available to download, free, from its

[26] https://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/LimitedDataSets
[27]https://www.resdac.org/articles/overview-nppesnpi-downloadable-file
[28] The Dartmouth Institute for Health Policy and Clinical Practice, The Dartmouth Atlas of Health Care, http://www.dartmouthatlas.org/, viewed May 6, 2017.
[29] Dartmouth also defines 3,436 Hospital Service Areas ("HSAs"). Most of the HSAs contain only one hospital and some contain no hospital. Thus, many of the HSAs contain too few physicians in many specialties to provide enough observations to determine UCR charges.

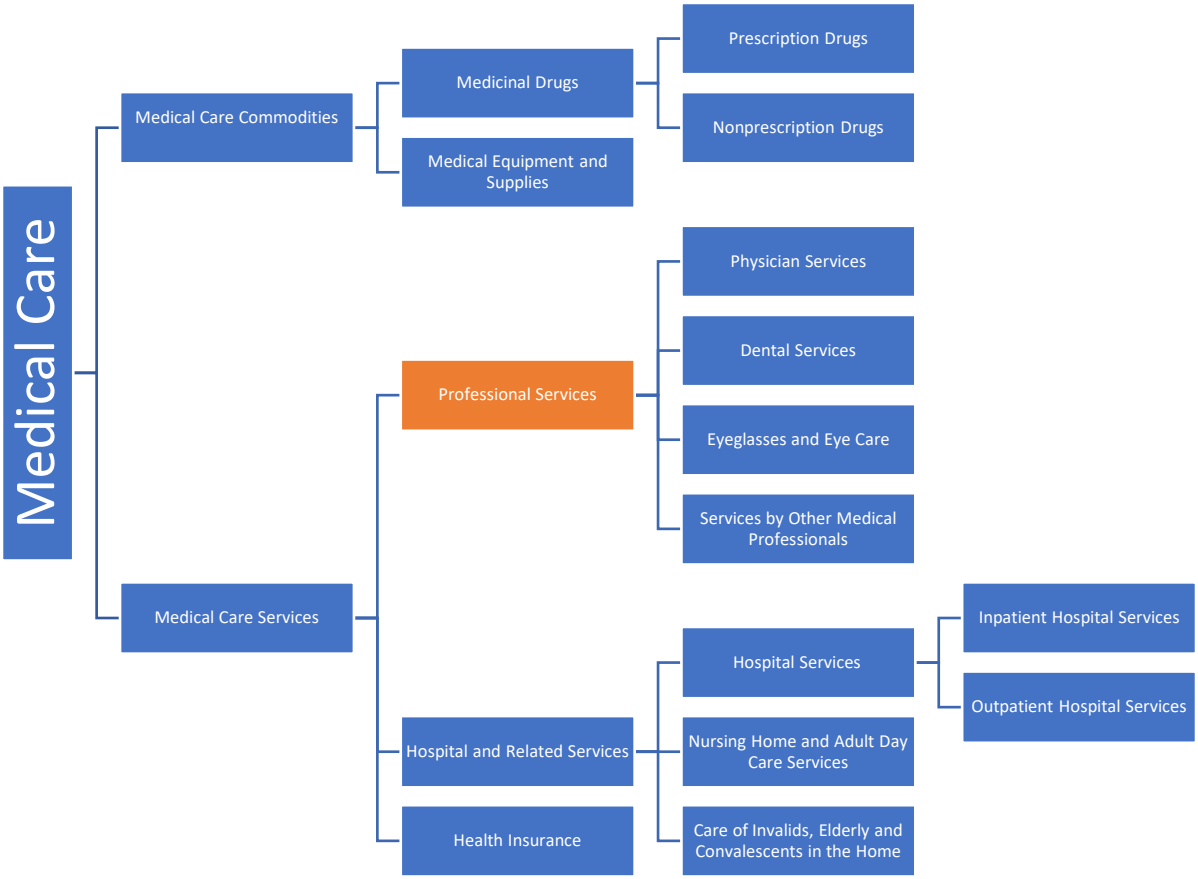
website.[30] There are 22 HRRs in Texas. Attachment 2 has a map of the HRRs in Texas. Boundaries for all HRRs in the United States are shown on the Dartmouth Atlas web site. The Texas HRRs are:

Abilene	Fort Worth	San Antonio
Amarillo	Harlingen	Temple
Austin	Houston	Tyler
Beaumont	Longview	Victoria
Bryan	Lubbock	Waco
Corpus Christi	McAllen	Wichita Falls
Dallas	Odessa	
El Paso	San Angelo	

Physician Services Component of the Consumer Price Index

35. Because of lags between service delivery and charge data analysis, the most recent Medicare charge data is usually about two years old at the time of analysis. RPC adjusts the percentile values to current dollars for the relevant year using the Professional Services component of the Medical Care component Consumer Price Index (CPI), as published by the Bureau of Labor Statistics (BLS).[31] These indices are available for download free from the Bureau of Labor Statistics website.[32]

[30] The Dartmouth Institute for Health Policy and Clinical Practice, The Dartmouth Atlas of Health Care, http://www.dartmouthatlas.org/, viewed May 6, 2017.
[31] https://www.bls.gov/cpi/
[32] https://www.bls.gov/cpi/



36. The Professional Services component of the CPI includes services by physicians, dentists, eye care providers, and other medical professionals such as psychologists, chiropractors, physical therapists, podiatrists, social workers, nurse practitioners, independent lab work and imaging services.[33] The graphic above shows the subcomponents in the CPI's Medical Care component and what is included in the Professional Services sub-component.

37. FH's benchmarks "are based on a recent 12-month window of claims." They do not state whether they make any inflationary adjustments to this data.[34] C4H uses the most recent 24 months of data, updated bi-annually, and performs an inflation adjustment every 6 months based on the CPI component for professional medical

[33] BLS. Measuring Price Change in the CPI: Medical Care. https://www.bls.gov/cpi/factsheets/medical-care.htm
[34] FH Benchmarks flyer. June 2019.

services.[35] Both MFB and PFR publish benchmarks for a year before that year begins (e.g. the 2021 versions will be published in late 2020). They do not disclose what, if any, inflation adjustments are made to forecast benchmarks.

RPC's Two Methods for Determining UCR Charges

38. The RPC database has percentile values for all non-anesthesia CPT codes, except temporary CPT codes. CPT codes with modifiers 26 or TC are analyzed separately from the unmodified codes. Line items with other modifier codes which may affect the amount a provider bills to Medicare are excluded from the analysis. For example, line items with modifier code 80, which indicates an assistant-at-surgery, were excluded. Most payors pay for an assistant-at-surgery at a fraction of the amount they pay for the primary surgeon. This fraction is usually less than 25%. Some providers bill for assistant-at-surgery services at the charge for the surgeon and assume the payor will apply its discount. Other providers bill for assistant-at-surgery services at the discounted amount. Including line items with this modifier could distort the UCR charge. The excluded codes are listed in Table 1 of Attachment 3. Modifier codes which do not modify payment amounts or billed amounts are ignored.

39. RPC combines data from the CMS files for three most recent years. As of this writing, they are the 2016, 2017, and 2018 files. Data from these files are combined with no inflationary adjustments. Each provider in the resulting dataset is identified by National Provider Identification (NPI) number. The average billed charge for each provider is calculated for each CPT code that provider billed fee for service Medicare. Each provider is assigned to an HRR based on practice zip code. Practice zip code is a data element in the CMS Carrier 5% SAF. If a

[35] Context4Healthcare, Inc. Usual, Customary & Reasonable Fee Database Methodology: A White Paper. January 2010.

provider changes practice HRRs, its charges from each HRR are included in that HRR's calculations only.

40. RPC uses one of two methods to calculate the percentile values for each CPT code in each HRR. The method used depends on the number of providers who billed each CPT code in the HRR.

41. If there are five or more providers in the dataset for a CPT/HRR combination, RPC calculates the percentile values directly. If there are fewer than five providers, RPC calculates national percentile values and adjusts the national percentile with a GAF specific to the percentile, code category, and HRR.

Method 1

42. RPC uses Method 1 when a CPT/HRR combination has charges for five or more providers. In Method 1, the percentiles values for a CPT code are directly calculated from the average charges of all providers in the HRR who billed that CPT code. Codes with a 26 or TC modifier are only analyzed with Method 1. RPC does not calculate benchmarks for -26 or -TC codes with fewer than five providers in an HRR.

Method 2

43. When fewer than five providers in an HRR billed a CPT code, RPC calculates national percentile values and adjusts the national percentile values to the HRR by a GAF specific to the HRR, CPT code category, and percentile.

44. RPC calculates GAFs for CPT code categories defined by the American Medical Association. RPC does not include the Anesthesia code category in our UCR database. The code categories included are:

- Evaluation & Management,
- Surgery,

- Radiology,
- Laboratory & Pathology, and
- Medicine. [36]

45. All Code Category/HRR combinations have at least five CPT codes with at least five providers except for Radiology codes in San Angelo. At this time, RPC's database does not include UCR values for Radiology codes in San Angelo. RPC calculates Method 2 GAFs and resulting percentile values using these steps:

- Create a ratio of the Method 1 HRR percentile value to the national percentile value for every CPT code in the category with a Method 1 percentile value.
- Calculate a weighted average of all ratios from step i), weighted by the frequency of included CPT codes in the national CMS database. This is the Code Category/HRR/Percentile specific GAF.
- Multiply the resulting GAF by the national percentile amount to determine the Method 2 UCR percentile for the CPT/HRR.

Example Method 2 Calculation

46. Only one provider in the San Angelo HRR provided CPT code 80051 "Electrolyte Panel; this panel must include the following: carbon dioxide (bicarbonate) (82374) Chloride (82435) Potassium (84132) Sodium (84295)" in the three-year time period. Method 1 cannot be used, so Method 2 is used. This CPT code is in the category "Pathology and Laboratory." There are seven CPT codes in the San Angelo HRR in the Pathology and Laboratory category for which at least 5 providers billed the code. For each of the seven codes, RPC divided the percentile value for the code in the San Angelo HRR by the national percentile value. The average of these ratios weighted by the frequency of each code in the national CMS database is the GAF for the Pathology and Laboratory category in

[36] https://www.medicalbillingandcoding.org/intro-to-cpt/

the San Angelo HRR. This calculation is repeated for each reported threshold percentile. For the 80th percentile,

$$GAF_{San\ Angelo,\ \ Laborary\ and\ Pathology,\ \ 80th\ \%ile} = \frac{\sum_{i=1}^{7}\left(\frac{CPT_i\ San\ Angelo\ 80th\ \%ile}{CPT_i\ National\ 80th\ \%ile}\ x\ Frequency_i\right)}{\sum_{i=1}^{7} Frequency_i}$$

The table below calculates the GAF for San Angelo for Pathology and Laboratory codes at the 80th percentile.

Code	San Angelo 80th Percentile	National 80th Percentile	Ratio	National Frequency	Code Weight
80053	$115.50	$65.77	1.756	7,067	7.09%
87804	$56.00	$50.00	1.120	14,251	14.29%
81002	$30.00	$20.00	1.500	23,238	23.30%
81003	$36.00	$23.77	1.514	15,535	15.58%
87880	$85.00	$50.00	1.700	13,960	14.00%
82962	$19.50	$20.00	0.975	10,896	10.93%
83036	$43.54	$50.00	0.871	14,766	14.81%
Weighted Average Ratio = GAF			1.344		

CPT/HRR Coverage for Texas HRRs

47. Nationally, the CMS Carrier SAF 5% Sample file has 7,129 CPT codes without a -26 or -TC modifier with charges billed by at least five providers during the three-year period. For Texas, the RPC database includes percentile values for the 7,129 CPT codes for each HRR other than Radiology codes in San Angelo, for 156,327 CPT/HRR combinations (7,129 codes x 22 HRRs - 511 Radiology codes x 1 HRR). RPC calculated 13,551 of the CPT/HRR combinations using Method 1. RPC calculated 142,776 of the CPT/HRR combinations using Method 2. For some codes, we calculated percentile values using Method 2 but no providers in

the HRR billed the code. The database shows the number of providers of each code in each HRR. Caution should be used when drawing conclusions about percentiles with no recorded billings in an HRR.

48. For Texas, there are 3,320 CPT/HRR combinations with a -26 or -TC modifier with five or more providers allowing us to use Method 1. This creates 159,647 Code/Modifier/HRR combinations in the database. The table below shows these combinations by method used to calculate UCR percentiles. While only 10.6% of CPT/HRR combinations have percentiles calculated via Method 1, these are the most frequently occurring codes. For example, in 2018, these Method 1 codes accounted for 92.7% of all CPT codes billed in the CMS Carrier 5% SAF in Texas.

Method	Code/Modifier/HRR Combinations Calculated	% of Code/HRR Combinations	% of Codes Billed in Texas in 2018
Method 1	16,871	10.6%	87.6%
Method 2	142,776	89.4%	12.4%
Total	**159,647**	**100.0%**	**100%**

RPC Percentile Values Compared to MFB Percentile Values

49. In comparing RPC's database to an existing database, we focused on three issues. First, there will always be different calculated results when different data and methods are used. It is important not just to identify that values are different across databases, but instead to look for systematic differences across geographic areas (in this case HRRs) or across code categories. Second, it is important to determine the magnitude of the differences. Are they small enough to be ignored? Third, because RPC's Method 1 is a direct calculation of a UCR charge only within the region in question, it is presumed to be more accurate than any interpolated or estimated UCR charge in another database like the MFB. Whether

or not RPC's Method 2 is a better metric than another UCR database's estimates can be evaluated in part by seeing if RPC's Method 2 results show the same patterns as RPC's Method 1 results when compared to another database like the MFB.

Comparison of RPC Method 1 75th Percentile Values to MFB 2017 75th Percentile Values

HRR	Evaluation & Management Services	Medicine	Pathology and Laboratory	Radiology	Surgery Services
Abilene	59%	24%	15%	4%	39%
Amarillo	37%	26%	14%	8%	32%
Austin	49%	27%	19%	21%	51%
Beaumont	43%	30%	20%	84%	56%
Bryan	44%	26%	78%	44%	44%
Corpus Christi	23%	16%	32%	10%	31%
Dallas	57%	32%	47%	52%	46%
El Paso	54%	21%	22%	39%	40%
Fort Worth	49%	26%	39%	78%	43%
Harlingen	31%	32%	39%	22%	43%
Houston	53%	43%	51%	65%	70%
Longview	15%	12%	50%	17%	61%
Lubbock	48%	23%	49%	39%	40%
McAllen	50%	29%	26%	28%	35%
Odessa	78%	44%	71%	80%	45%
San Angelo	42%	21%	80%	0%	43%
San Antonio	49%	15%	15%	22%	47%
Temple	58%	40%	67%	84%	46%
Tyler	47%	35%	26%	2%	46%
Victoria	33%	21%	53%	31%	31%
Waco	61%	36%	50%	62%	44%
Wichita Falls	70%	35%	67%	33%	30%

50. RPC compared its percentile values to those published in MFB, 2017. RPC did not inflate its values before comparing, so the calculation represents RPC's direct calculations from the 2017 base year to MFB's 2017 publication. The MFB values for each HRR were adjusted by the corresponding GAF published in the MFB. The table below shows, for each HRR and code category, the percentage of codes where RPC's Method 1 75th percentile value was higher than the GAF-adjusted 75th percentile value in the MFB. Shaded cells indicate when RPC percentile values for over 50% of codes were higher than the MFB.

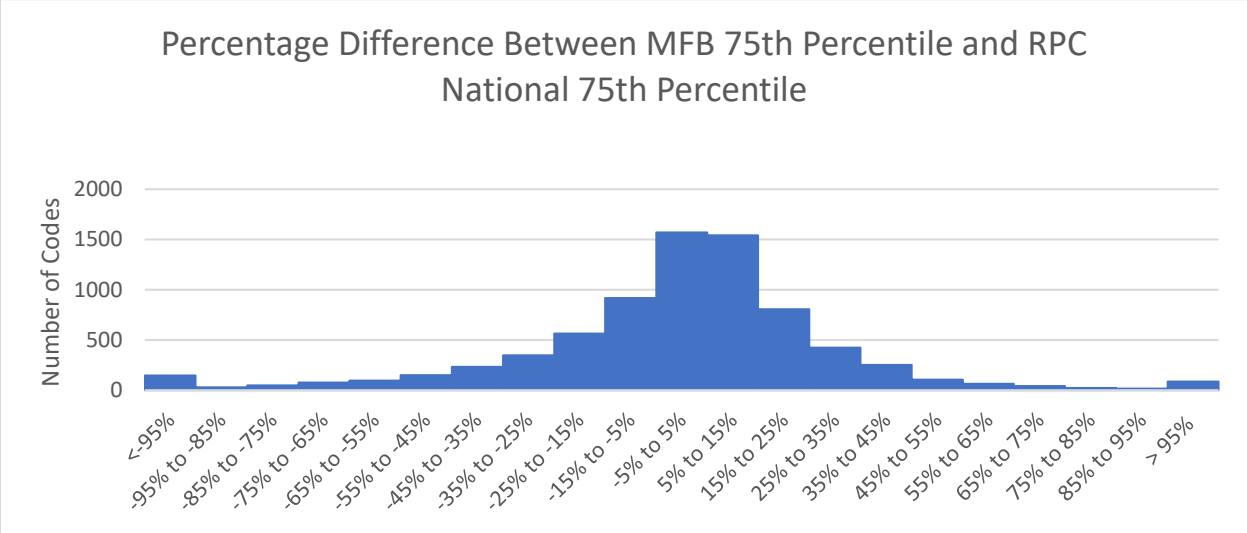
51. Neither source was consistently higher than the other across all code categories or HRRs. RPC's 75th percentile value was usually lower for Medicine and Surgery codes. RPC's 75th percentile value was usually higher in the Houston HRR, and lower in Abilene, Amarillo, Austin, Bryan, Corpus Christi, El Paso, Fort Worth, Harlingen, Longview, Lubbock, McAllen, San Angelo, San Antonio, and Victoria. Other HRRs and Categories were mixed.

52. As mentioned above, RPC's Method 1 results should be better than MFB estimates, which are based on national data adjusted by a GAF. The MFB only has GAFs for seven areas in Texas, which further limits its ability to provide accurate UCR results compared to RPC's Method 1.

53. To help understand what portion of the differences between RPC's Method 1 and the MFB are due to the MFB's GAF versus other differences in data or methods, RPC compared our national percentile values to those of the MFB. There are three major differences between RPC's national percentile values and the MFB's national percentile values. First, the MFB treats every charge as an observation, while RPC treats every provider as an observation. Second, the MFB values for 2017 were published before 2017, so they are based on older charges which have presumably been inflated, although the MFB does say so. Third, the MFB uses

C4H's third-party payor data while RPC used the Medicare Carrier SAF 5% sample file.

54. The graph below is a histogram of the difference between the MFB 75th percentile values and the RPC national 75th percentile values. The histogram shows a normal distribution centered around an approximate 5% difference. An analysis of the difference shows larger differences where there were fewer national providers. The MFB inflation adjustment likely accounts for less than a 10% difference in the percentile values, while the treatment of providers versus claims as observations and the different underlying data account for the remainder.



55. The next table shows, for each HRR and code category, the percentage of codes where RPC's Method 2 75th percentile value was higher than MFB's GAF-adjusted 75th percentile value. Highlighted cells indicate when the RPC percentile values of over 50% of codes were higher than the MFB.

Comparison of RPC Method 2 75th Percentile to MFB 2017 75th Percentile

HRR	Evaluation & Management Services	Medicine	Pathology and Laboratory	Radiology	Surgery Services
Abilene	69%	26%	42%	22%	39%
Amarillo	58%	35%	43%	19%	29%
Austin	68%	33%	50%	42%	83%
Beaumont	71%	42%	58%	88%	92%
Bryan	55%	41%	86%	44%	79%
Corpus Christi	42%	28%	46%	29%	40%
Dallas	72%	46%	66%	83%	71%
El Paso	69%	37%	48%	77%	70%
Fort Worth	66%	40%	70%	91%	70%
Harlingen	60%	54%	63%	67%	52%
Houston	68%	56%	77%	85%	82%
Longview	45%	25%	66%	25%	53%
Lubbock	61%	36%	71%	39%	50%
McAllen	67%	49%	57%	71%	36%
Odessa	82%	60%	75%	87%	56%
San Angelo	58%	31%	74%	N/A	91%
San Antonio	67%	36%	49%	45%	61%
Temple	76%	51%	86%	90%	73%
Tyler	70%	52%	60%	31%	71%
Victoria	57%	34%	69%	23%	37%
Waco	80%	97%	54%	86%	59%
Wichita Falls	82%	54%	73%	51%	38%

56. RPC's Method 2 produced percentile calculations higher than those in the MFB for most categories in most HRRs. The notable exception is for Medicine codes, where MFB estimates were usually higher.

57. Averaging across all codes and HRRs, RPC's combined methods generated a higher 75th percentile value for about 43% of codes calculated with Method 1, for about 59% of codes calculated with Method 2, and for about 57% of codes overall.

58. The differences between RPC's 75th percentile estimates and the MFB 75th percentile estimates are substantial. The table below shows the average absolute percentage difference between RPC's Method 1 75th percentile values and the MFB 75th percentile value by category and HRR. Absolute (unsigned) differences are used so that positive differences and negative differences do not cancel each other out.

Difference (%) Between RPC Method 1 75th Percentile Values and MFB 2017 75th Percentile Values

HRR	Evaluation & Management Services	Medicine	Pathology and Laboratory	Radiology	Surgery Services
Abilene	21%	31%	33%	29%	23%
Amarillo	17%	25%	41%	22%	32%
Austin	15%	24%	40%	27%	38%
Beaumont	21%	34%	29%	40%	43%
Bryan	12%	41%	27%	16%	25%
Corpus Christi	26%	36%	32%	32%	33%
Dallas	15%	19%	29%	24%	29%
El Paso	22%	28%	36%	18%	34%
Fort Worth	18%	27%	27%	37%	34%
Harlingen	22%	31%	25%	14%	27%
Houston	17%	23%	27%	32%	35%
Longview	15%	30%	19%	20%	30%
Lubbock	16%	27%	22%	13%	24%
McAllen	19%	35%	39%	24%	27%
Odessa	18%	21%	24%	18%	21%

San Angelo	18%	28%	29%	43%	27%
San Antonio	17%	27%	34%	21%	30%
Temple	15%	37%	23%	27%	35%
Tyler	18%	28%	36%	22%	28%
Victoria	14%	27%	25%	24%	22%
Waco	18%	27%	15%	11%	25%
Wichita Falls	15%	36%	18%	25%	22%

59. The estimates from the two sources were closest on average for Evaluation & Management Services. Medicine, Surgery, and Pathology and Laboratory Services had average differences of 29%.

60. RPC Method 2 results also differed substantially from MFB 75th percentile values, as shown in the table below.

Difference (%) Between RPC Method 2 75th Percentile and MFB 2017 75th Percentile

HRR	Evaluation & Management Services	Medicine	Pathology and Laboratory	Radiology	Surgery Services
Abilene	28%	25%	35%	20%	19%
Amarillo	28%	23%	35%	23%	21%
Austin	35%	25%	35%	20%	27%
Beaumont	27%	23%	35%	31%	37%
Bryan	26%	22%	47%	17%	23%
Corpus Christi	27%	25%	34%	19%	19%
Dallas	34%	28%	41%	31%	22%
El Paso	33%	25%	35%	23%	21%
Fort Worth	32%	25%	38%	41%	21%
Harlingen	27%	23%	36%	19%	18%
Houston	34%	27%	45%	34%	28%

Longview	24%	26%	36%	19%	18%
Lubbock	30%	24%	38%	18%	19%
McAllen	29%	23%	35%	20%	19%
Odessa	34%	22%	40%	27%	19%
San Angelo	23%	24%	39%		34%
San Antonio	35%	27%	35%	21%	20%
Temple	28%	22%	46%	32%	21%
Tyler	30%	23%	36%	19%	21%
Victoria	26%	23%	37%	20%	19%
Waco	30%	483%	34%	25%	19%
Wichita Falls	33%	22%	39%	17%	19%

61. Averaging across all codes and HRRs, RPC's combined methods generated 75th percentile values which differed from MFB estimates by 28% for codes calculated with Method 1, 27% for codes calculated with Method 2, and 27% for codes overall.

Codes Not Included in the RPC UCR Database

62. The RPC database does not include Radiology codes in the San Angelo HRR at this time. It does not include codes for services Medicare does not cover. Examples of codes for services Medicare does not cover are.

- CPT 97010 "Application of a modality to 1 or more areas; hot or cold packs"
- CPT Codes 99241-99245 "Office consultation for a new or established patient … Counseling and/or coordination of care with other physicians, other qualified health care professionals, or agencies are provided consistent with the nature of the problems."
- CPT 98943 "Chiropractic manipulative treatment; extraspinal, 1 or more regions"

To determine UCR charges for these and other CPT codes not included in RPC's database, we rely on 75th percentile charges from *Medical Fees in the United States*.

Data Elements

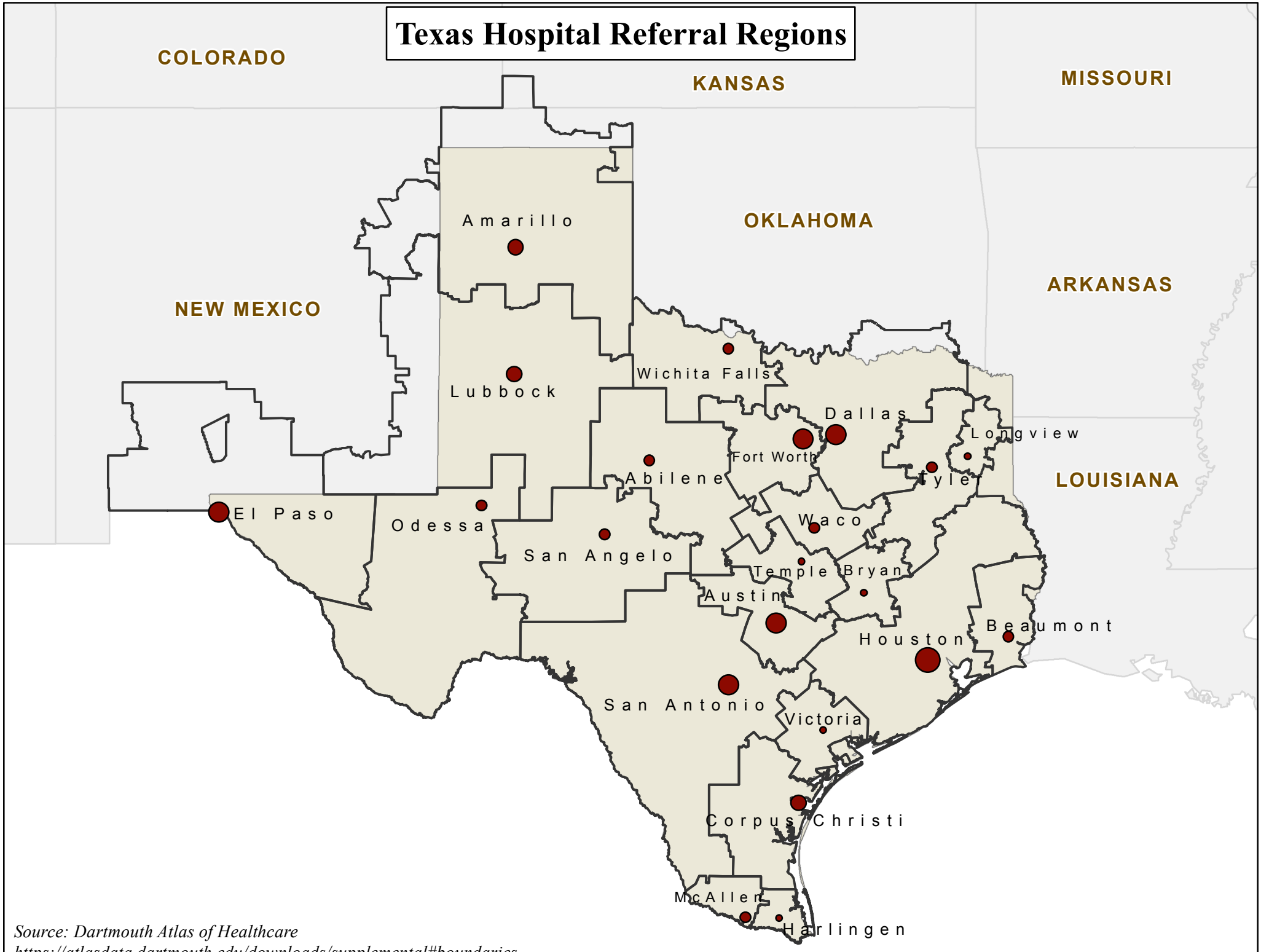
The database consists of 14 data elements, as described below.

Data Element	Data Type	Description
CPT_CODE	Char(5)	Common Procedural Terminology Code Values are 5-digit codes beginning with numerals 1-9. There are 7,046 unique codes in the database
MODIFIER	Char(2)	Modifier codes applied to CPT which affect provider charges. Codes with modifiers are analyzed separately from each other and from un-modified codes. Values are: '26' 'TC' 'NULL'
CATEGORY	Varchar	Category into which CPT code falls. Possible categories are: 'Evaluation & Management' 'Surgery' 'Radiology' 'Laboratory & Pathology' 'Medicine'
HRR_CITY	Varchar	Hospital Referral Region for which percentiles are calculated. Possible values are: 'Abilene' 'Amarillo' 'Austin' 'Beaumont' 'Bryan' 'Corpus Christi' 'Dallas' 'El Paso' 'Fort Worth' 'Harlingen' 'Houston' 'Longview' 'Lubbock'

Data Element	Data Type	Description
		'McAllen' 'Odessa' 'San Angelo' 'San Antonio' 'Temple' 'Tyler' 'Victoria' 'Waco' 'Wichita Falls'
PERC_50	Float	50th Percentile calculated charge for CPT code in HRR
PERC_75	Float	75th Percentile calculated charge for CPT code in HRR
PERC_80	Float	80th Percentile calculated charge for CPT code in HRR
PERC_90	Float	90th Percentile calculated charge for CPT code in HRR
GAF_50	Float	Geographic Adjustment Factor used to calculate 50th percentile charge. The field is null if charge was calculated under Method 1.
GAF_75	Float	Geographic Adjustment Factor used to calculate 75th percentile charge. The field is null if charge was calculated under Method 1.
GAF_80	Float	Geographic Adjustment Factor used to calculate 80th percentile charge. The field is null if charge was calculated under Method 1.
GAF_90	Float	Geographic Adjustment Factor used to calculate 90th percentile charge. The field is null if charge was calculated under Method 1.
METHOD	Char(1)	Method used to calculate percentiles. Possible values are: '1' '2'
PROV_COUNT	Int	Number of providers billing code/modifier in the HRR
YEAR	Int	Base year of dataset (middle year of three years used)

Attachment 7

Texas Hospital Referral Regions



Source: Dartmouth Atlas of Healthcare
https://atlasdata.dartmouth.edu/downloads/supplemental#boundaries