



# Report to Congress: Unified Payment for Medicare-Covered Post-Acute Care

Analysis and development of the prototype Unified PAC  
prospective payment system called for in the IMPACT Act

## Appendix L

Prototype Results—Utilization Trends in 2020

July 2022

**Table L-1. Average Total Cost of PAC Stays by Unified PAC Clinical Group (UPCG) and PAC Setting Type - 2017 to 2020**

Unified PAC Clinical Group (UPCG)	2017				2018			
	IRF	SNF	HHA	LTCH	IRF	SNF	HHA	LTCH
<b>MMTA: Cardiac</b>	-	-	\$3,264	-	-	-	\$3,274	-
<b>MMTA: Endocrine</b>	-	-	\$3,349	-	-	-	\$3,311	-
<b>MMTA: Gastrointestinal/Genitourinary</b>	-	-	\$2,959	-	-	-	\$2,994	-
<b>MMTA: Infections</b>	-	-	\$3,102	-	-	-	\$3,075	-
<b>MMTA: Respiratory</b>	-	-	\$3,209	-	-	-	\$3,213	-
<b>MMTA: Surgical Aftercare</b>	-	-	\$2,652	-	-	-	\$2,631	-
<b>MMTA: Other</b>	-	-	\$2,997	-	-	-	\$3,027	-
<b>Lower Extremity Fracture (Including with Joint Replacement)</b>	\$17,136	\$16,324	\$3,584	\$30,579	\$17,187	\$16,070	\$3,508	\$30,513
<b>Major Joint Replacement Without Lower Extremity Fracture</b>	\$13,643	\$9,264	\$2,334	\$30,348	\$13,747	\$9,560	\$2,263	\$32,025
<b>Orthopedic Surgery (Not Joint Replacement)</b>	\$17,812	\$17,795	\$3,465	\$37,205	\$17,880	\$17,367	\$3,404	\$37,185
<b>Trauma</b>	\$18,031	\$14,998	\$3,396	\$38,936	\$18,306	\$15,138	\$3,399	\$41,181
<b>Limb Loss</b>	\$20,252	\$17,544	\$4,251	\$41,311	\$20,224	\$17,346	\$4,112	\$40,986
<b>Orthopedic (Other)</b>	\$15,836	\$14,888	\$3,166	\$43,101	\$15,843	\$14,732	\$2,979	\$45,476
<b>Stroke</b>	\$20,995	\$17,728	\$4,114	\$33,861	\$20,930	\$17,612	\$4,155	\$33,381
<b>Non-Traumatic Brain Dysfunction</b>	\$19,651	\$15,792	\$3,504	\$36,969	\$20,056	\$15,758	\$3,597	\$37,408
<b>Spinal Dysfunction</b>	\$26,512	\$19,652	\$3,884	\$64,626	\$25,031	\$20,509	\$4,564	\$40,917
<b>Traumatic Brain Injury</b>	\$18,539	\$14,423	\$3,421	\$35,496	\$18,348	\$14,146	\$3,303	\$40,717
<b>Neurological (Other)</b>	\$17,206	\$14,707	\$3,341	\$29,266	\$17,239	\$14,702	\$3,329	\$33,135
<b>Respiratory</b>	\$16,630	\$13,435	\$3,070	\$32,107	\$16,362	\$13,302	\$2,829	\$33,572
<b>Cardiovascular</b>	\$15,473	\$13,356	\$3,669	\$35,149	\$15,513	\$13,302	\$3,764	\$37,811
<b>Behavioral Health</b>	-	-	\$3,046	-	-	-	\$2,979	-
<b>Coma</b>	\$19,443	\$19,116	\$4,381	\$66,235	\$19,333	\$16,929	\$3,995	\$66,867
<b>Invasive Ventilator</b>	\$22,347	\$24,922	\$4,193	\$60,316	\$22,690	\$25,190	\$3,852	\$62,646
<b>Gastrointestinal &amp; Hepatobiliary</b>	\$15,906	\$12,745	\$2,940	\$37,665	\$16,038	\$12,733	\$2,984	\$38,227
<b>Infections</b>	\$18,455	\$14,262	\$2,821	\$35,674	\$18,068	\$14,331	\$2,881	\$36,721
<b>Kidney &amp; Urinary</b>	\$16,286	\$13,773	\$2,680	\$30,596	\$16,432	\$13,538	\$2,716	\$31,872
<b>Skin</b>	\$15,436	\$15,209	\$3,777	\$39,154	\$16,071	\$15,121	\$3,718	\$38,601
<b>Cancer</b>	\$17,527	\$11,822	\$3,236	\$29,147	\$17,491	\$11,652	\$3,262	\$33,420
<b>Transplant</b>	\$22,440	\$13,839	\$3,477	\$38,550	\$22,057	\$16,150	\$3,531	\$41,994
<b>Hematological</b>	\$19,632	\$13,367	\$2,677	\$27,931	\$16,358	\$13,093	\$3,196	\$31,501
<b>Other</b>	\$16,392	\$13,806	\$3,180	\$38,027	\$16,164	\$13,793	\$3,144	\$37,358
<b>COVID-19</b>	-	-	-	-	-	-	-	-
<b>Total</b>	\$17,756	\$14,245	\$3,166	\$42,131	\$17,752	\$14,197	\$3,121	\$43,778

Note: "-" indicates no cases.

**Table L-1. Average Total Cost of PAC Stays by Unified PAC Clinical Group (UPCG) and PAC Setting Type - 2017 to 2020 (continued)**

Unified PAC Clinical Group (UPCG)	2019				2020			
	IRF	SNF	HHA	LTCH	IRF	SNF	HHA	LTCH
<b>MMTA: Cardiac</b>	-	-	\$3,181	-	-	-	\$2,818	-
<b>MMTA: Endocrine</b>	-	-	\$3,229	-	-	-	\$2,830	-
<b>MMTA: Gastrointestinal/Genitourinary</b>	-	-	\$2,909	-	-	-	\$2,656	-
<b>MMTA: Infections</b>	-	-	\$2,998	-	-	-	\$2,749	-
<b>MMTA: Respiratory</b>	-	-	\$3,116	-	-	-	\$2,817	-
<b>MMTA: Surgical Aftercare</b>	-	-	\$2,597	-	-	-	\$2,489	-
<b>MMTA: Other</b>	-	-	\$2,900	-	-	-	\$2,603	-
<b>Lower Extremity Fracture (Including with Joint Replacement)</b>	\$17,371	\$15,577	\$3,397	\$32,618	\$18,041	\$14,793	\$3,102	\$36,231
<b>Major Joint Replacement Without Lower Extremity Fracture</b>	\$14,066	\$9,695	\$2,128	\$38,400	\$15,103	\$10,252	\$2,139	\$38,675
<b>Orthopedic Surgery (Not Joint Replacement)</b>	\$17,999	\$16,467	\$3,268	\$38,674	\$18,875	\$15,383	\$3,164	\$39,195
<b>Trauma</b>	\$18,046	\$14,293	\$3,319	\$35,695	\$18,795	\$13,460	\$3,034	\$33,569
<b>Limb Loss</b>	\$20,380	\$16,572	\$3,901	\$42,266	\$21,186	\$15,431	\$3,665	\$44,590
<b>Orthopedic (Other)</b>	\$15,849	\$14,501	\$2,860	\$45,027	\$16,760	\$13,670	\$2,557	\$46,793
<b>Stroke</b>	\$20,898	\$17,007	\$3,954	\$38,589	\$21,639	\$15,135	\$3,484	\$41,577
<b>Non-Traumatic Brain Dysfunction</b>	\$19,925	\$15,738	\$3,529	\$36,380	\$20,733	\$14,864	\$3,353	\$39,147
<b>Spinal Dysfunction</b>	\$27,514	\$20,708	\$3,628	\$93,828	\$28,782	\$16,436	\$4,311	\$120,065
<b>Traumatic Brain Injury</b>	\$18,792	\$13,909	\$3,269	\$39,002	\$19,088	\$13,439	\$3,066	\$48,195
<b>Neurological (Other)</b>	\$17,371	\$14,374	\$3,289	\$37,774	\$18,154	\$13,021	\$2,973	\$37,671
<b>Respiratory</b>	\$16,619	\$12,960	\$2,826	\$35,052	\$17,398	\$12,423	\$2,405	\$35,775
<b>Cardiovascular</b>	\$15,656	\$12,815	\$3,781	\$37,117	\$16,358	\$11,780	\$3,814	\$39,029
<b>Behavioral Health</b>	-	-	\$2,895	-	-	-	\$2,545	-
<b>Coma</b>	\$20,129	\$17,180	\$4,154	\$67,581	\$21,194	\$14,823	\$3,620	\$72,397
<b>Invasive Ventilator</b>	\$22,758	\$23,856	-	\$62,712	\$24,647	\$22,794	-	\$67,544
<b>Gastrointestinal &amp; Hepatobiliary</b>	\$16,507	\$12,211	\$3,000	\$37,704	\$16,948	\$11,804	\$2,680	\$38,055
<b>Infections</b>	\$18,340	\$13,545	\$2,991	\$36,732	\$19,328	\$12,945	\$2,831	\$38,140
<b>Kidney &amp; Urinary</b>	\$16,628	\$12,811	\$2,738	\$33,258	\$16,867	\$12,129	\$2,317	\$32,863
<b>Skin</b>	\$15,454	\$14,569	\$3,697	\$38,876	\$16,940	\$13,758	\$3,359	\$38,938
<b>Cancer</b>	\$17,101	\$11,416	\$3,068	\$33,231	\$17,778	\$10,877	\$2,984	\$36,189
<b>Transplant</b>	\$22,968	\$15,327	\$3,708	\$47,869	\$24,558	\$15,059	\$3,102	\$43,021
<b>Hematological</b>	\$15,445	\$12,336	\$2,578	\$36,981	\$17,047	\$11,706	\$2,604	\$45,091
<b>Other</b>	\$16,211	\$13,143	\$3,124	\$38,223	\$17,195	\$12,011	\$2,770	\$40,159
<b>COVID-19</b>	-	-	-	-	\$18,987	\$10,596	\$2,263	\$37,768
<b>Total</b>	\$17,824	\$13,775	\$3,040	\$44,534	\$18,683	\$12,823	\$2,797	\$46,477

Note: "-" indicates no cases.

**Table L-2. Average Length of PAC Stays (Number of Visits for HHA) by Unified PAC Clinical Group (UPCG) and PAC Setting Type - 2017 to 2020**

Unified PAC Clinical Group (UPCG)	2017				2018			
	IRF	SNF	HHA	LTCH	IRF	SNF	HHA	LTCH
MMTA: Cardiac	-	-	19.71	-	-	-	19.99	-
MMTA: Endocrine	-	-	20.79	-	-	-	20.59	-
MMTA: Gastrointestinal/Genitourinary	-	-	17.46	-	-	-	17.92	-
MMTA: Infections	-	-	17.52	-	-	-	17.47	-
MMTA: Respiratory	-	-	19.08	-	-	-	19.31	-
MMTA: Surgical Aftercare	-	-	15.10	-	-	-	15.20	-
MMTA: Other	-	-	17.72	-	-	-	17.98	-
Lower Extremity Fracture (Including with Joint Replacement)	13.06	36.03	21.45	21.56	12.96	35.30	21.31	22.64
Major Joint Replacement Without Lower Extremity Fracture	10.34	17.64	12.85	22.09	10.41	18.24	12.70	23.65
Orthopedic Surgery (Not Joint Replacement)	13.46	38.37	20.47	25.51	13.32	37.19	20.48	25.30
Trauma	13.56	32.31	20.71	26.37	13.46	33.34	20.85	25.98
Limb Loss	13.67	38.52	23.82	26.76	13.54	38.66	23.36	26.48
Orthopedic (Other)	12.35	33.22	18.73	29.41	12.22	32.85	17.73	30.15
Stroke	15.30	41.39	24.12	24.58	15.09	41.62	24.67	23.64
Non-Traumatic Brain Dysfunction	13.77	34.66	20.17	25.79	13.91	34.41	20.90	24.61
Spinal Dysfunction	19.43	43.01	21.33	45.11	17.87	44.41	27.17	31.88
Traumatic Brain Injury	13.81	32.18	20.01	25.67	13.56	31.22	19.68	26.93
Neurological (Other)	12.94	37.80	19.89	23.39	12.83	39.53	20.01	23.47
Respiratory	11.47	31.11	18.66	21.70	11.18	30.96	17.15	22.41
Cardiovascular	11.31	31.36	20.62	23.57	11.19	31.50	21.24	24.56
Behavioral Health	-	-	18.71	-	-	-	18.72	-
Coma	13.35	47.27	27.32	39.55	13.19	41.30	24.04	39.23
Invasive Ventilator	14.29	49.36	22.22	35.05	13.97	51.94	21.56	35.46
Gastrointestinal & Hepatobiliary	11.76	28.69	17.05	25.45	11.63	28.84	17.21	25.17
Infections	12.42	31.36	16.06	24.64	12.10	31.73	16.01	25.09
Kidney & Urinary	12.11	32.73	15.70	21.32	11.82	32.54	16.28	21.85
Skin	12.06	34.13	21.82	27.38	12.30	33.84	21.66	26.71
Cancer	12.79	26.12	18.29	20.77	12.42	25.69	18.34	22.42
Transplant	12.66	25.84	18.71	23.42	12.96	27.22	18.30	25.28
Hematological	13.37	31.95	15.70	20.52	11.33	31.66	16.86	21.22
Other	11.70	31.15	18.29	25.91	11.67	31.41	18.43	25.42
<b>COVID-19</b>	-	-	-	-	-	-	-	-
<b>Total</b>	<b>13.11</b>	<b>32.42</b>	<b>18.60</b>	<b>27.28</b>	<b>12.97</b>	<b>32.59</b>	<b>18.53</b>	<b>27.66</b>

Note: "-" indicates no cases.

**Table L-2. Average Length of PAC Stays (Number of Visits for HHA) by Unified PAC Clinical Group (UPCG) and PAC Setting Type - 2017 to 2020 (continued)**

Unified PAC Clinical Group (UPCG)	2019				2020			
	IRF	SNF	HHA	LTCH	IRF	SNF	HHA	LTCH
<b>MMTA: Cardiac</b>	-	-	19.91	-	-	-	17.39	-
<b>MMTA: Endocrine</b>	-	-	20.52	-	-	-	18.28	-
<b>MMTA: Gastrointestinal/Genitourinary</b>	-	-	17.84	-	-	-	15.99	-
<b>MMTA: Infections</b>	-	-	17.58	-	-	-	15.95	-
<b>MMTA: Respiratory</b>	-	-	19.30	-	-	-	17.05	-
<b>MMTA: Surgical Aftercare</b>	-	-	15.32	-	-	-	14.44	-
<b>MMTA: Other</b>	-	-	17.59	-	-	-	15.68	-
<b>Lower Extremity Fracture (Including with Joint Replacement)</b>	13.02	33.16	21.05	23.40	13.28	32.98	18.74	26.48
<b>Major Joint Replacement Without Lower Extremity Fracture</b>	10.62	18.68	12.21	26.38	11.09	21.05	12.39	25.62
<b>Orthopedic Surgery (Not Joint Replacement)</b>	13.34	34.54	20.11	25.91	13.84	33.95	18.83	26.43
<b>Trauma</b>	13.18	30.54	20.84	24.07	13.74	30.04	18.72	25.99
<b>Limb Loss</b>	13.56	35.61	23.01	27.29	13.91	35.47	21.26	27.74
<b>Orthopedic (Other)</b>	12.15	31.16	17.42	30.24	12.53	31.53	15.36	30.81
<b>Stroke</b>	15.05	37.46	24.04	26.27	15.48	36.18	20.69	27.40
<b>Non-Traumatic Brain Dysfunction</b>	13.85	33.23	20.91	24.29	14.18	32.76	19.60	25.95
<b>Spinal Dysfunction</b>	19.14	43.62	21.92	46.62	19.67	36.84	23.96	55.32
<b>Traumatic Brain Injury</b>	13.74	30.26	19.78	24.78	13.76	31.03	18.22	31.47
<b>Neurological (Other)</b>	12.85	33.42	20.09	26.58	13.22	32.75	17.86	26.73
<b>Respiratory</b>	11.21	28.23	17.12	23.11	11.58	29.75	13.57	23.76
<b>Cardiovascular</b>	11.20	28.16	21.73	24.42	11.52	27.96	21.26	25.48
<b>Behavioral Health</b>	-	-	18.47	-	-	-	15.87	-
<b>Coma</b>	12.91	37.69	24.45	37.61	13.66	34.70	19.43	41.16
<b>Invasive Ventilator</b>	14.07	46.63	-	34.81	14.55	45.00	-	36.34
<b>Gastrointestinal &amp; Hepatobiliary</b>	11.71	26.24	17.57	24.84	12.04	26.88	14.66	25.13
<b>Infections</b>	12.32	28.54	17.29	25.39	12.79	29.70	16.13	26.36
<b>Kidney &amp; Urinary</b>	11.97	28.83	17.16	22.68	12.29	29.35	13.37	22.45
<b>Skin</b>	11.97	31.85	21.98	26.54	12.57	32.54	19.80	27.07
<b>Cancer</b>	12.18	24.71	18.03	22.23	12.56	24.80	17.07	23.46
<b>Transplant</b>	13.10	25.39	20.11	30.47	13.52	27.38	18.53	28.78
<b>Hematological</b>	11.02	27.84	17.43	24.09	12.07	28.30	14.11	37.00
<b>Other</b>	11.62	28.14	18.54	25.83	12.14	28.46	15.25	26.37
<b>COVID-19</b>	-	-	-	-	13.10	31.24	13.87	24.63
<b>Total</b>	12.95	29.85	18.49	27.83	13.38	30.70	16.81	28.66

Note: "-" indicates no cases.

**Notes:**

- 1) IRF = Inpatient Rehabilitation Facility, SNF = Skilled Nursing Facility, LTCH = Long-Term Care Hospital, HHA = Home Health Agency, PAC = Post-Acute Care, MMTA = Medication Management, Teaching, and Assessment.
- 2) Unit of payment (i.e., unit of analysis for calibration of payment weights) is the PAC "stay." A stay may span more than one PAC claim.
- 3) Payment weights calibrated using all PAC Claims from a 50% random sample of PAC users within each year. Independent samples drawn from each
- 4) HHA claims aggregated to "stays" defined as sequences of HHA episodes representing a continuous course of care. Stays beginning with a recertification (indicating the sequence has additional claims in the prior year) were dropped.
- 5) LTCH stays include both stays paid under the LTCH PPS and under the site-neutral LTCH payment policy.
- 6) "Short stays" defined as length of stay of 3 calendar days or fewer for IRF, SNF, and LTCH, and 4 visits or fewer for HHA, were excluded from these
- 7) "Decedents" defined as the beneficiary being deceased upon discharge from the PAC stay, were excluded from these statistics.
- 8) Cost outliers (PAC stay total cost >3 SD from the mean within UPCG, P-CMG, and PAC Provider Type) were excluded from these statistics.
- 9) Total cost of the PAC stay is adjusted to account for geographic variation in wages using the CMS wage-index and labor share for each geographic area and PAC setting in each year.
- 10) Length of stay defined as number of calendar days for IRF, SNF, and LTCH, and as number of visits for HHA.

**Source:**

RTI International Analysis of Medicare Claims and Administrative Data – 2017 to 2020

RTI Program Reference: UPAC\_BS0040