Comparison of US Hospital Cash Prices and Commercial Negotiated Prices for 70 Services

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Introduction
On January 1, 2021, the Centers for Medicare and Medicaid Services (CMS) implemented the Hospital Price Transparency Final Rule to promote price competition and improve hospital care affordability.1 Hospitals in the US are required to disclose, among other items, the cash prices and the payer-specific negotiated prices for 70 CMS-specified, high-volume common services; however, the compliance rate has remained low.1-3

Cash prices can affect the cost exposure of 26 million uninsured individuals and concern nearly one-third of US workers enrolled in high-deductible health plans, who are often responsible to pay for medical bills without a third-party contribution and thus are interested in having access to low cash prices.4-6 In contrast with the commercial price negotiated bilaterally between hospitals and insurers providing insurance plans, the cash price is determined unilaterally by the hospital and might be expected to be higher than negotiated prices. The relationship between these 2 prices, however, remains largely unexplored because of a lack of available data. Using decision analytical modeling and recently disclosed pricing information, we conducted a national analysis to compare US hospital cash prices with commercial negotiated prices for 70 CMS-specified services.

Methods
This economic evaluation was exempt from institutional review board approval because it did not meet criteria for human participant research, in accordance with the Common Rule. This study followed the Consolidated Health Economic Evaluation Reporting Standards (CHEERS) reporting guideline.

The 70 CMS-specified hospital services represent 74 unique Current Procedural Terminology (CPT)/diagnosis related group codes (4 services were represented by 2 codes). Cash prices and payer-specific negotiated prices for the 70 services were obtained from Turquoise Health, a data service company that specializes in collecting pricing information from hospitals.

For each service, hospitals that disclosed both the cash price and the commercial negotiated price were included in the sample. The following were calculated for these hospitals: (1) the median and interquartile cash prices and (2) the proportion of hospitals for which the cash price was lower than its median commercial negotiated price, lower than all commercial negotiated prices, or the same as the lowest commercial negotiated price. The Spearman test was used to assess correlations. Statistical significance was set at \( P < .001 \) (2-sided). Statistical analyses were conducted with SAS, version 9.4 (SAS Institute Inc).

Results
As of July 1, 2021, 5359 hospitals had been reviewed by Turquoise Health. Of these, a mean (SD) of 922 (488) hospitals from 49 states had disclosed both their cash price and commercial negotiated price across the 70 CMS-specified services (Table). The number of disclosing hospitals and the service's median cash price were negatively correlated (Spearman correlation coefficient, 0.39;
| Service\(^a\) | CPT/DRG code | No. of hospitals (No. of states)\(^b\) | Cash price, median (IQR), $\(^c\) | No. (%) of hospitals | Cash price less than median commercial priced | Cash price less than all commercial prices\(^e\) | Cash price equal to minimum commercial price\(^f\) |
|-----------------|--------------|---------------------------------|---------------------------------|-------------------|----------------------------------------------|---------------------------------|---------------------------------|
| **Evaluation and management services** | | | | | | | |
| Psychotherapy, 30 min | 90832 | 581 (50) | 141 (92-182) | 322 (55.4) | 96 (16.5) | 18 (3.1) |
| Psychotherapy, 45 min | 90834 | 592 (50) | 171 (111-263) | 325 (54.9) | 109 (18.4) | 18 (3.0) |
| Psychotherapy, 60 min | 90837 | 547 (50) | 199 (140-303) | 283 (51.7) | 87 (15.9) | 16 (2.9) |
| Family psychotherapy, not including patient, 50 min | 90846 | 447 (48) | 183 (117-296) | 237 (53.0) | 66 (14.8) | 19 (4.3) |
| Family psychotherapy, including patient, 50 min | 90847 | 499 (50) | 203 (129-310) | 257 (51.5) | 66 (13.2) | 17 (3.4) |
| Group psychotherapy | 90853 | 526 (50) | 122 (76-208) | 302 (57.4) | 78 (14.8) | 20 (3.8) |
| New patient office or other outpatient visit, typically 30 min | 99203 | 897 (50) | 166 (108-254) | 451 (50.3) | 127 (14.2) | 28 (3.1) |
| New patient office or other outpatient visit, typically 45 min | 99204 | 893 (50) | 203 (123-326) | 474 (53.1) | 149 (16.7) | 31 (3.5) |
| New patient office or other outpatient visit, typically 60 min | 99205 | 815 (50) | 246 (142-411) | 439 (53.9) | 133 (16.3) | 27 (3.3) |
| Patient office consultation, typically 40 min | 99234 | 348 (47) | 158 (116-264) | 195 (56.0) | 69 (19.8) | 8 (2.3) |
| Patient office consultation, typically 60 min | 99244 | 334 (48) | 205 (140-365) | 183 (50.1) | 52 (14.2) | 9 (2.7) |
| Initial new patient preventive medicine evaluation for patient aged 18-39 y | 99385 | 365 (48) | 152 (95-228) | 183 (50.1) | 52 (14.2) | 9 (2.7) |
| Initial new patient preventive medicine evaluation for patient aged 40-64 y | 99386 | 347 (48) | 166 (106-278) | 178 (51.3) | 53 (15.3) | 9 (2.6) |
| **Laboratory and pathology services** | | | | | | | |
| Basic metabolic panel | 80048 | 1498 (51) | 78 (36-137) | 625 (41.7) | 121 (8.1) | 45 (3.0) |
| Blood test, comprehensive group of blood chemicals | 80053 | 1494 (51) | 108 (47-187) | 598 (40.0) | 115 (7.7) | 45 (3.0) |
| Obstetric blood test panel | 80055 | 579 (47) | 187 (121-293) | 276 (47.7) | 59 (10.2) | 16 (2.8) |
| Blood test, lipids (cholesterol and triglycerides) | 80061 | 1521 (51) | 84 (43-142) | 616 (40.5) | 114 (7.5) | 39 (2.6) |
| Kidney function panel test | 80069 | 1459 (51) | 80 (37-138) | 575 (39.4) | 113 (7.7) | 45 (3.1) |
| Liver function blood test panel | 80076 | 1534 (51) | 85 (39.6-145) | 589 (38.4) | 111 (7.2) | 45 (2.9) |
| Manual urinalysis test with examination using a microscope | 81000 | 596 (51) | 20 (10-38) | 246 (41.3) | 56 (9.4) | 21 (3.3) |
| Manual urinalysis test with examination using a microscope | 81001 | 1444 (51) | 36 (16-58) | 593 (41.1) | 103 (7.1) | 42 (2.9) |
| Automated urinalysis test | 81002 | 1057 (51) | 17 (9-30) | 466 (44.1) | 94 (8.9) | 32 (3.0) |
| Automated urinalysis test | 81003 | 1436 (51) | 25 (10-40) | 614 (42.8) | 115 (8.0) | 48 (3.3) |
| PSA | 84153 | 1494 (51) | 82 (51-127) | 640 (42.8) | 137 (9.2) | 42 (2.8) |
| PSA | 84154 | 1307 (51) | 66 (46-110) | 628 (48.0) | 160 (12.2) | 35 (2.7) |
| Blood test, TSH | 84443 | 1563 (51) | 87 (48-137) | 653 (41.8) | 124 (7.9) | 47 (3.0) |
| Complete blood cell count, with differential white blood cells, automated | 85025 | 1494 (51) | 58 (28-92) | 636 (42.6) | 112 (7.5) | 37 (2.5) |
| Complete blood cell count, automated | 85027 | 1456 (51) | 46 (23-78) | 619 (42.5) | 116 (8.0) | 43 (3.0) |
| Blood test, clotting time | 85610 | 1553 (51) | 34 (18-55) | 632 (40.7) | 117 (7.5) | 50 (3.2) |
| Coagulation assessment blood test | 85730 | 1464 (50) | 47 (28-81) | 623 (42.6) | 108 (7.4) | 48 (3.3) |
| **Radiology services** | | | | | | | |
| CT scan, head or brain, without contrast | 70450 | 1604 (51) | 1037 (595-1525) | 645 (40.2) | 138 (8.6) | 46 (2.9) |
| MRI scan of brain before and after contrast | 70553 | 1565 (51) | 2306 (1394-3517) | 631 (40.3) | 146 (9.3) | 47 (3.0) |
| Radiography, lower back, minimum 4 views | 72110 | 1570 (51) | 329 (206-509) | 696 (44.3) | 152 (9.7) | 31 (2.0) |
| MRI scan of lower spinal canal | 72148 | 1584 (51) | 1625 (968-2431) | 662 (41.8) | 148 (9.3) | 42 (2.7) |
| CT scan, pelvis, with contrast | 72193 | 1492 (51) | 1308 (803-1887) | 615 (41.2) | 143 (9.6) | 47 (3.2) |
| MRI scan of leg joint | 73721 | 1530 (51) | 1534 (967-2298) | 655 (42.8) | 153 (10.0) | 47 (3.1) |
| CT scan of abdomen and pelvis with contrast | 74177 | 1598 (51) | 2268 (1278-3534) | 624 (39.0) | 127 (7.9) | 40 (2.5) |

(continued)
| Servicea | CPT/DRG code | No. of hospitals (No. of states)b | Cash price, median (IQR), $c | No. (%) of hospitals | Cash price less than median commercial priced | Cash price less than all commercial prices | Cash price equal to minimum commercial price |
|-----------|--------------|---------------------------------|-------------------------------|----------------------|---------------------------------------------|-------------------------------------------|---------------------------------------------|
| Ultrasonography of abdomen | 76700 | 1584 (51) | 560 (308-816) | 667 (42.1) | 141 (8.9) | 39 (2.5) |
| Abdominal ultrasonography of pregnant uterus single or first fetus | 76805 | 1305 (50) | 464 (286-686) | 627 (48.0) | 129 (9.9) | 47 (3.6) |
| Ultrasonography of pelvis through vagina | 76830 | 1565 (51) | 406 (246-619) | 716 (45.8) | 162 (10.4) | 40 (2.6) |
| Mammography of 1 breast | 77065 | 1241 (50) | 225 (157-323) | 659 (53.1) | 179 (14.4) | 43 (3.5) |
| Mammography of both breasts | 77066 | 1247 (50) | 277 (196-404) | 643 (51.6) | 162 (13.0) | 38 (3.0) |
| Mammography, screening, bilateral | 77067 | 1298 (50) | 233 (158-333) | 681 (52.5) | 197 (15.2) | 37 (2.9) |
| Medicine and surgery services | | | | | | |
| Cardiac valve and other procedures with cardiac catheterization with comorbidities | 216 | 309 (44) | 127 976 (78 402-212 558) | 175 (56.6) | 56 (18.1) | 11 (3.6) |
| Spinal fusion except cervical without complications (MCC) | 460 | 491 (47) | 51 366 (32 329-91 380) | 242 (49.3) | 91 (18.5) | 13 (2.6) |
| Major joint replacement or reattachment of lower extremity without complications | 470 | 710 (49) | 29 097 (17 735-45 214) | 375 (52.8) | 131 (18.5) | 13 (1.8) |
| Cervical spinal fusion without complications | 473 | 446 (46) | 34 044 (20 330-62 430) | 205 (46.0) | 83 (18.6) | 15 (3.4) |
| Uterine and adnexa procedures for nonmalignancy without complications (MCC) | 743 | 571 (49) | 18 429 (10 561-32 103) | 277 (48.5) | 86 (15.1) | 15 (2.6) |
| Removal of ≥1 breast growth, open procedure | 19120 | 671 (49) | 3677 (2311-6112) | 339 (50.5) | 108 (16.1) | 6 (0.9) |
| Shaving of shoulder bone using an endoscope | 29826 | 361 (47) | 4584 (1999-15 310) | 150 (41.6) | 39 (10.8) | 4 (1.1) |
| Removal of 1 knee cartilage using an endoscope | 29881 | 603 (49) | 4912 (3142-10 143) | 299 (49.6) | 95 (15.8) | 6 (1.0) |
| Removal of tonsils and adenoid glands of patient younger than 12 y | 42820 | 415 (47) | 4573 (2329-6718) | 212 (51.1) | 81 (19.5) | 4 (1.0) |
| Diagnostic examination of, eg, esophagus, stomach, using an endoscope | 43235 | 954 (50) | 1584 (928-2596) | 472 (49.5) | 155 (16.2) | 21 (2.2) |
| Biopsy of the esophagus, stomach, and/or upper small bowel using an endoscope | 43239 | 1015 (50) | 1640 (982-2778) | 510 (50.2) | 144 (14.2) | 26 (2.6) |
| Diagnostic examination of large bowel using an endoscope | 45378 | 971 (50) | 1615 (993-2741) | 492 (50.7) | 155 (16.0) | 27 (2.8) |
| Biopsy of large bowel using an endoscope | 45380 | 935 (50) | 2005 (1244-3170) | 448 (47.9) | 124 (13.3) | 20 (2.1) |
| Removal of polyps or growths of large bowel using an endoscope | 45385 | 898 (50) | 1984 (1243-3416) | 439 (48.9) | 115 (12.8) | 21 (2.3) |
| Ultrasonographic examination of lower large bowel using an endoscope | 45391 | 268 (46) | 1492 (1148-2329) | 145 (54.1) | 63 (23.5) | 10 (3.7) |
| Removal of gallbladder using an endoscope | 47562 | 677 (49) | 6923 (4496-13482) | 319 (47.1) | 109 (16.1) | 5 (0.7) |
| Repair of groin hernia, patient aged ≥5 y | 49505 | 666 (49) | 5163 (3058-9644) | 310 (46.5) | 105 (15.8) | 4 (0.6) |
| Biopsy of prostate gland | 55700 | 777 (49) | 1794 (916-3280) | 402 (51.7) | 149 (19.2) | 10 (1.3) |
| Surgical removal of prostate and surrounding lymph nodes using an endoscope | 55866 | 188 (46) | 11 790 (7761-21 041) | 95 (50.5) | 36 (19.1) | 2 (1.1) |
| Routine obstetric care for vaginal delivery, including predelivery and postdelivery care | 59400 | 127 (36) | 3322 (2400-4514) | 79 (62.2) | 28 (22.0) | 3 (2.4) |
| Routine obstetric care for cesarean delivery, including predelivery and postdelivery care | 59510 | 108 (32) | 3650 (2665-5571) | 74 (68.5) | 27 (25.0) | 4 (3.7) |
| Routine obstetric care for vaginal delivery after prior cesarean delivery | 59610 | 51 (28) | 4010 (2624-6157) | 29 (56.9) | 10 (19.6) | 2 (3.9) |
| Injection of substance into spinal canal of lower back using imaging guidance | 62322 | 609 (48) | 900 (639-1453) | 369 (60.6) | 134 (22.0) | 23 (3.8) |
| Injection of substance into spinal canal of lower back using imaging guidance | 62323 | 968 (50) | 1177 (746-1930) | 561 (58.0) | 158 (16.3) | 30 (3.1) |

(continued)
Cash prices varied substantially across hospitals for most services, as evidenced by large IQRs. The proportion of hospitals that set their cash price below their median commercial negotiated price ranged from 58% of 1534 (38.4%) for CPT 80076 (liver function blood test panel) to 74% of 108 (68.5%) for CPT 59510 (routine obstetric care for cesarean delivery) (mean [SD], 48.7% [6.4%]). The proportion of hospitals that set their cash price below all of their commercial negotiated prices ranged from 10% of 1444 (71%) for CPT 81001 (manual urinalysis test with examination using a microscope) to 77% of 108 (70.5%) for CPT 59510 (routine obstetric care for cesarean delivery) (mean [SD], 13.7% [4.7%]). Across procedures, between 0.6% of hospitals (4 of 49 hospitals for CPT 49505) and 4.3% of hospitals (19 of 48 hospitals for CPT 90846) set their cash price exactly equal to their lowest commercial negotiated price (mean [SD], 2.7% [0.8%]).

Discussion

Across the 70 CMS-specified services, only a mean of 922 hospitals in this economic evaluation had disclosed both their cash price and commercial negotiated price as of July 1, 2021. As evidenced by the negative correlation between the median cash price of a service and the number of hospitals disclosing a price for the service, more expensive services were less likely to be disclosed, which might suggest strategic disclosing decisions. Some hospitals set their cash price comparable to or lower than their commercial negotiated price.

To the extent that more hospitals will disclose prices to comply with the Hospital Price Transparency Final Rule, the cross-hospital variation of cash prices will likely increase. Because of its descriptive nature, this study was unable to identify factors or outcomes associated with the cash price variation. The results of this study, limited to 70 CMS-specified services, may not be generalizable to all hospital services.
In summary, cash prices determined unilaterally by hospitals are often lower than commercial prices negotiated between hospitals and insurers. Uninsured and underinsured patients who choose to take the cash price offered by hospitals might benefit financially.

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