



HHS Public Access

Author manuscript

Med Care. Author manuscript; available in PMC 2023 November 16.

Published in final edited form as:

Med Care. 2023 October 01; 61(10): 644–650. doi:10.1097/MLR.0000000000001900.

Professional Fees for U.S. Hospital Care, 2016–2020

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Abstract

Background: The latest comprehensive diagnosis-specific estimates of hospital professional fees relative to facility fees are from 2004 to 2012.

Objective: Update professional fee ratio (PFR) estimates to improve cost analysis opportunities with hospital discharge data sources and compare them with previous PFR estimates.

Subjects: 2016–2020 MarketScan inpatient admissions and emergency department (ED) treat and release claims.

Measures: PFR was calculated as total admission or ED visit payment divided by facility-only payment. This measure can be multiplied by hospital facility costs to yield a total cost estimate.

Research Design: Generalized linear regression models controlling for selected patient and service characteristics were used to calculate adjusted mean PFR per admission or ED visit by health payer type (commercial or Medicaid) and by selected diagnostic categories representing all clinical diagnoses (Major Diagnostic Category, Diagnostic Related Group, and Clinical Classification Software Revised).

Results: Mean 2016–2020 PFR was 1.224 for admissions with commercial payers (n = 6.7 million admissions) and 1.178 for Medicaid (n = 4.2 million), indicating professional payments on average increased total payments by 22.4% and 17.8%, respectively, above facility-only payments. This is a 9% and 3% decline in PFR, respectively, compared with 2004 estimates. PFR for ED visits during 2016–2020 was 1.283 for commercial payers (n = 22.2 million visits) and 1.415 for Medicaid (n = 17.7 million). This is a 12% and 5% decline in PFR, respectively, compared with 2004 estimates.

Conclusions: Professional fees comprise a declining proportion of hospital-based care costs. Adjustments for professional fees are recommended when hospital facility-only financial data are used to estimate hospital care costs.

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The authors declare no conflict of interest.

Supplemental Digital Content is available for this article. Direct URL citations are provided in the HTML and PDF versions of this article on the journal's website, www.lww-medicalcare.com.

Keywords

costs and cost analysis; economics; hospital; hospital charges

Hospital discharge data are collected in most U.S. states and commonly used for cost-of-illness analyses despite two notable limitations. The first is that such data sources typically report hospitals' billed charges rather than payments (or revenue) received. Hospital discharge data are thus different from medical claims data sources, which report payments to hospitals and providers. This limitation can be mitigated by applying cost-to-charge ratios (CCRs) from the Centers for Medicare and Medicaid Services, yielding a reasonable proxy for payments that hospitals receive.^{1,2} The second limitation is that hospital discharge data sources typically report only facility charges, excluding physician or professional fees.³ Facility charges include, for example, room and board fees, and all other payments to hospitals.⁴ Professional charges reflect services by physicians and other skilled health care professionals licensed for independent practice, including many clinicians treating patients in hospitals.

Using a large medical claims data source, it was most recently estimated that professional payments in 2012 added an average of 26.4% for commercial payers and 17.7% for Medicaid above facility-only payments for U.S. hospital admissions, and an additional 28.6% for commercial payers and 44.0% for Medicaid above facility-only payments for hospital emergency department (ED) treat and release visits (ED visits).⁵ Such professional fee ratio (PFR) estimates used in combination with CCR can provide better estimates of total hospital care cost when hospital discharge data are used (ie, hospital facility charge * CCR * PFR = total payment). This study aimed to update PFR estimates to improve cost analysis opportunities with hospital discharge data sources and compare them with previous PFR estimates.

METHODS

This study used publicly available data. We identified admissions and ED visits among a large all-ages convenience sample of individuals with employer-sponsored insurance or Medicaid reported in the 2016–2020 Merative MarketScan Commercial, Medicare Supplemental, and Medicaid databases. MarketScan reports clinical diagnoses and associated payments (charges submitted by providers are not reported) to health care facilities and providers from a selection of large employers and employer-sponsored health plans (Commercial/Medicare Supplemental) or state Medicaid agencies and Medicaid-contracted health plans (Medicaid).

Study outcome measures were associations between PFR and selected patient and service characteristics, adjusted mean PFR for all admissions and ED visits by payer type (Commercial or Medicaid), and adjusted mean PFR by selected diagnostic categories representing all clinical diagnoses: Major Diagnostic Category (MDC; 25 categories), Clinical Classification Software Refined (CCSR; > 500 categories), and Diagnostic Related Group (DRG; > 900 inpatient categories). Dollar values were adjusted to 2020 medical prices.⁶ PFR was calculated as total admission or ED visit payment divided by facility-only

payment as reported in the data source. This measure can be multiplied by facility-only costs for hospital care to yield a total cost estimate. For example, if the admission facility cost in a hospital discharge data source is \$1000 and the corresponding estimated PFR for the admission clinical diagnosis is 1.240, the total estimated direct medical cost of the admission can be calculated as \$1240.

We combined patients' inpatient (and preceding ED) and outpatient ED payment records and clinical information for services beginning on the same date. Where > 1 International Classification of Diseases, Tenth Revision, Clinical Modification diagnosis was reported as the admission primary diagnosis (< 0.2% of analyzed admissions), we classified the admission using the first-listed primary diagnosis. We identified the ED visit primary diagnosis based on the first-listed diagnosis to which the facility payment was attributed; ED visits with > 1 set of diagnoses with associated facility payments (< 0.6% of the potential sample) were excluded. We excluded admissions and ED visits with missing or illogical diagnostic information (ie, ICD-9-CM diagnosis codes) or illogical payment values (ie, negative or zero total payments or facility payments or total payments less than facility payments). We excluded outliers with the lowest 1% value of facility payments for the sample per hospitalized day (ie, <\$396 per day for Commercial insurance and <\$74 per day for Medicaid admissions) or ED visit (ie, <\$31 total facility payment for Commercial and <\$13 for Medicaid ED visits). Adult (≥ 18 y old) comorbidities among inpatient admissions were identified using HCUP Comorbidity Software⁷ and child (< 18 y old) comorbidities were identified using the Child Comorbidity Index.⁸ Surgery was identified by DRG (classified as surgical or medical) for inpatient admissions and Current Procedural Terminology codes (10021–69990) for ED visits.

SAS 9.4 was used for sample selection and Stata 17 was used for regression modeling. Generalized linear regression models with log links controlling for selected patient and service characteristics were used to calculate adjusted mean PFR per admission or ED visit. Models controlled for patient age, sex, race/ethnicity (Medicaid only), health insurance plan type (eg, health maintenance organization), ED services preceding an inpatient admission, number of patient comorbidities (admissions only), whether the admission or ED visit included surgical procedures, length of inpatient stay (admissions only), discharge status (admissions only), U.S. Census region (Commercial only), and DRG (admissions models) or CCSR (ED visit models). Adjusted mean PFR per year or diagnostic classification was calculated as the mean value of the model-predicted PFR for each admission or visit (Stata "margins" program). PFR for clinical classifications with <100 admissions or ED visits was not calculated. Machine-readable PFR estimates by payer type for all analyzed clinical classifications are reported in Supplemental Digital Content 1 (<http://links.lww.com/MLR/C695>).

RESULTS

Analysis included 6.7 million Commercial admissions, 4.2 million Medicaid payer admissions, 22.2 million Commercial ED visits, and 17.7 million Medicaid payer ED visits (Fig. 1). Higher patient age, non-White race/ethnicity, and longer inpatient stay were associated with lower PFR, as was female sex—except among Medicaid payer

ED visits (Supplemental Digital Content 2, <http://links.lww.com/MLR/C696>). Commercial comprehensive health plans (ie, no incentive for patients to use particular providers) were generally associated with lower PFR. Medicaid health maintenance organization and preferred provider organization plans were associated with higher PFR, and Medicaid point of service with capitation plans had a mixed relationship with PFR (ie, associated with lower PFR for admissions and higher ED visits). Admissions with preceding ED care, a higher number of patient comorbidities, and non-home inpatient discharge destination were associated with higher PFR. ED visits with surgical procedures were associated with higher PFR for Commercial visits but lower PFR for Medicaid payer ED visits. Hospitals in the Northeast were associated with higher PFR for Commercial admissions and ED visits compared with hospitals in the West, lower PFR compared with hospitals in the South, and a mixed relationship (lower for admissions, higher for ED visits) compared with hospitals in the North Central region.

Adjusted mean PFR for 2016–2020 admissions was 1.224 for Commercial admissions and 1.178 for Medicaid admissions, indicating professional payments on average increased total payments by 22.4% and 17.8%, respectively, above facility-only payments (Table 1). This is a 9% and 3% decline in average PFR, respectively, compared with 2004 estimates (1.342 and 1.211).⁵ Adjusted mean PFR for ED visits during 2016–2020 was 1.283 for Commercial and 1.415 for Medicaid visits. This is a 12% and 5% decline in average PFR, respectively, compared with 2004 estimates (1.452 and 1.490).

PFR was highest by MDC for admissions with MDC 14 “pregnancy, childbirth, and the puerperium” (Commercial PFR: 1.485; Medicaid: 1.391) and lowest for Commercial admissions with MDC 20 “alcohol or drug use or induced organic mental disorders” (PFR: 1.062) and Medicaid admissions with MDC 17 “myeloproliferative diseases and disorders, poorly differentiated neoplasms” (PFR: 1.090) (Table 2). PFR was highest by MDC for Commercial ED visits with MDC 9 “diseases and disorders of the skin, subcutaneous tissue, and breast” (PFR: 1.367) and Medicaid ED visits with MDC 3 “diseases and disorders of the ear, nose, mouth, and throat” (PFR: 1.496) and lowest for MDC 17 “myeloproliferative diseases and disorders, poorly differentiated neoplasms” (commercial PFR: 1.102; Medicaid PFR: 1.241). PFR was highest by CCSR for Commercial ED visits with CCSR NEO066 “malignant neuroendocrine tumors” (PFR: 1.467) and Medicaid ED visits with CCSR END013 “pituitary disorders” (PFR: 1.789) (Table 3). PFR was highest by DRG for Commercial admissions with DRG 583 “mastectomy for malignancy without complication or comorbidity/major complication or comorbidity (PFR: 1.803) and Medicaid admissions with 785 “cesarean section with sterilization without complication or comorbidity/major complication or comorbidity” (PFR: 1.575) (Table 4).

DISCUSSION

In this study, we updated estimates of the amount by which facility-only financial data reported in hospital discharge data sources can underestimate the full cost of medical care patients receive during hospital admissions and ED visits by excluding professional fees. Financial information in this study’s analyzed data source facilitated diagnosis-specific PFR estimates, adjusted for multiple patient and service factors, and the PFR estimates reported

here are designed to be directly applied to hospital discharge data sources for cost of illness analysis.

This study's results suggest that professional fees comprised a declining proportion of hospital-based care costs over approximately the last 2 decades. These results are consistent with our previous PFR investigation of 2004–2012 data years,⁵ a subsequent similar analysis of 2007–2014 data years by other researchers using a different data source,⁹ and analyses of specific hospital-based services and diagnoses.^{10,11} Another report on aggregate health care expenditures using sources such as the National Health Expenditure Accounts has pointed to overall spending increases during the same period for both inpatient and professional services, but these topics were not investigated in the manner presented here; that is, this study examined professional fees specific to hospital-based care.^{12,13}

This study had several limitations. Investigation into why PFRs changed over the study period is beyond the scope of this study. Different hospital prices for similar services, financial incentives to improve physician quality, and efforts to improve hospital price transparency and comparability for consumers and health care payers are the subject of direct investigation in other studies.^{14–16} MarketScan Commercial data are not nationally representative of the population with employer-sponsored insurance nor Medicare coverage and the MarketScan Medicaid sample included a limited number of states. U.S. Census region is a crude indicator of geographic differences in health care costs; we lacked consistent data to further control for geographic variation, such as urban/rural location. Although our previous 2004–2012 PFR estimates did not include Commercial patients age older than 65 years (ie, those with Medicare supplemental plans), a separate analysis for the present study restricted to age 0–64 patients was not materially different compared with the all-age estimates. This study controlled for observable patient and insurance characteristics, including health plan type, which addressed patients enrolled in managed care plans. However, this study could not control for provider characteristics, such as physician specialty, and hospital facility characteristics, such as ownership, organization, and geographic location, which influence health care costs.^{2,17–20} Hospitals' costs vary widely by service type; for example, maternity services—a frequent cause for inpatient admission—are known outliers²¹; therefore, PFR estimates by clinical classification (comprehensively reported in Supplemental Digital Content 1, <http://links.lww.com/MLR/C695>) may be most relevant for some health services research questions.

This study estimated PFR per admission and ED visit based on payments that hospitals and physicians received for medical services, whereas hospital charges typically reported in hospital discharge data sources multiplied by CCR provide an estimate of hospitals' costs to provide services. Both approaches yield recognized estimates of medical costs, but this means that PFR estimates are not precisely complementary to facility cost estimates from hospital discharge data. This issue might be mitigated given that CCR can be a reasonable proxy for price (or payments)-to-charge ratios, which are more directly analogous to the PFR estimates presented here. Despite what might be modest differences in the nature of financial data underlying our PFR estimates versus that underlying hospital discharge data, we propose that our approach offers a reasonable option for improving cost estimates from hospital discharge data by accounting for professional fees.

By comparing hospital-based professional versus facility fees over time, it seems that professional fees comprised a declining proportion of hospital-based care costs during approximately the past 2 decades. Still, adjustments for professional fees remain an important analytic step when hospital facility-only financial data are used to estimate health care costs. The PFR estimates generated in this study offer an opportunity to address the systematic and substantial underestimation of health care service costs using facility-only costs reported in hospital discharge data.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Inpatient admissions		Payer	ED T&R visits	
Commercial	Medicaid		Commercial	Medicaid
n=6,822,326 (100%)	n=7,408,661 (100%)	Total admissions or visits	n=25,788,079 (100%)	n=39,867,241 (100%)
n=6,822,326 (100%)	n=7,403,606 (99.93%)	Non-missing key data ^a	n=25,788,079 (100%)	n=39,864,766 (99.99%)
n=6,812,056 (99.85%)	n=7,384,836 (99.68%)	Non-missing dx values ^b	n=23,257,907 (90.19%)	n=35,078,647 (87.99%)
n=6,676,598 (97.86%)	n=4,202,967 (56.73%)	Non-zero, logical payment values ^c	n=22,230,440 (86.20%)	n=17,693,311 (44.38%)
2016: 1,718,178 2017: 1,506,410 2018: 1,418,715 2019: 1,051,469 2020: <u>981,826</u> Total: 6,676,598	2016: 976,199 2017: 960,162 2018: 708,626 2019: 819,525 2020: <u>738,455</u> Total: 4,202,967	Analyzed	2016: 5,458,856 2017: 4,973,312 2018: 4,882,119 2019: 3,834,384 2020: <u>3,081,769</u> Total: 22,230,440	2016: 4,283,977 2017: 4,187,398 2018: 2,921,659 2019: 3,638,693 2020: <u>2,661,584</u> Total: 17,693,311

FIGURE 1.

Sample selection for inpatient admissions and ED T&R visits by insurance payer type, 2016–2020. Data source: 2016–2020 Merative MarketScan databases. “a” indicates admissions were excluded if missing patient age, sex, or length of stay; ED visits were excluded if missing patient age or sex. “b” indicates assessed clinical diagnosis values: DRG = 1–999; MDC = 0–25; primary 3-digit ICD-10-CM (used to classify CCSR): A00–Z99. Admissions with more than one DRGs and/or MDCs were excluded. Primary ED visit diagnosis was defined as the diagnosis associated with a facility payment and visits with > 1 primary diagnosis, invalid diagnosis, MDC < 0 or MDC > 25, with an associated facility payment were excluded. “c” indicates admissions were excluded if hospital facility payment \$ 0, total payment \$ 0, or PFR < 1 (ie, total payment was less than the component hospital facility payment). Admissions with the lowest 1% of hospital facility payments per inpatient day (ie, total facility payment for admission divided by the length of stay) were excluded. ED visits were excluded if hospital facility payment was \$ 0 or professional payment was \$ < 0. Visits with the lowest 1% of hospital facility payments were excluded. CCSR indicates Clinical Classification Software Refined; DRG, Diagnostic Related Group; ED, emergency department; ICD-10-CM, International Classification of Diseases, 10th Revision, Clinical Modification; MDC, major diagnostic category; PFR, professional fee ratio; T&R, treat and release.

Table 1.

Professional Fee Ratios by Year and Payer Type, 2004–2020

Year	PFR Inpatient admissions		PFR Emergency department treat and release visits	
	Commercial	Medicaid	Commercial	Medicaid
2004 ^a	1.342	1.211	1.452	1.490
2005 ^a	1.336	1.209	1.406	1.540
2006 ^a	1.336	1.196	1.416	1.552
2007 ^a	1.334	1.158	1.457	1.531
2008 ^a	1.308	1.166	1.422	1.488
2009 ^a	1.294	1.159	1.438	1.477
2010 ^a	1.284	1.154	1.371	1.453
2011 ^a	1.269	1.143	1.294	1.444
2012 ^a	1.264	1.177	1.286	1.440
2016	1.227	1.165	1.300	1.397
2017	1.230	1.169	1.287	1.426
2018	1.227	1.181	1.280	1.442
2019	1.216	1.190	1.269	1.410
2020	1.212	1.189	1.268	1.406
2016–2020	1.224	1.178	1.283	1.415

Data source: 2016–2020 Merative™ MarketScan® databases.

^a2004–2012 data reproduced from Peterson et al. (2015). PFR indicates Professional Fee Ratio.

Table 2.

Professional Fee Ratios by Major Diagnostic Category and Payer Type, 2016–2020

MDC Code	MDC Description	PFR Inpatient admissions ^a		PFR Emergency department treat and release visits ^a	
		Commercial	Medicaid	Commercial	Medicaid
1	Diseases and disorders of the nervous system	1.171	1.151	1.261	1.430
2	Diseases and disorders of the eye	1.176	1.189	1.351	1.454
3	Diseases and disorders of the ear, nose, mouth and throat	1.189	1.161	1.326	1.496
4	Diseases and disorders of the respiratory system	1.131	1.124	1.268	1.378
5	Diseases and disorders of the circulatory system	1.138	1.121	1.240	1.332
6	Diseases and disorders of the digestive system	1.172	1.142	1.246	1.413
7	Diseases and disorders of the hepatobiliary system and pancreas	1.182	1.150	1.204	1.333
8	Diseases and disorders of the musculoskeletal system and connective tissue	1.208	1.153	1.313	1.366
9	Diseases and disorders of the skin, subcutaneous tissue and breast	1.234	1.137	1.367	1.447
10	Endocrine, nutritional and metabolic diseases and disorders	1.195	1.142	1.233	1.299
11	Diseases and disorders of the kidney and urinary tract	1.154	1.123	1.254	1.389
12	Diseases and disorders of the male reproductive system	1.280	1.168	1.279	1.424
13	Diseases and disorders of the female reproductive system	1.233	1.162	1.262	1.443
14	Pregnancy, childbirth and the puerperium	1.485	1.391	1.219	1.484
15	Newborns and other neonates with conditions originating in perinatal period	1.200	1.172	1.270	1.484
16	Diseases and disorders of blood, blood forming organs and immunologic disorders	1.131	1.117	1.223	1.307
17	Myeloproliferative diseases and disorders, poorly differentiated neoplasms	1.095	1.090	1.102	1.241
18	Infectious and parasitic diseases, systemic or unspecified sites	1.123	1.117	1.287	1.470
19	Mental diseases and disorders	1.128	1.132	1.285	1.393
20	Alcohol or drug use or induced organic mental disorders	1.062	1.112	1.218	1.350
21	Injuries, poisonings and toxic effects of drugs	1.143	1.165	1.299	1.413
22	Burns	1.118	1.147	1.322	1.393
23	Factors influencing health status and other contacts with health services	1.134	1.128	1.258	1.373
24	Multiple significant trauma	1.143	1.170	NA	NA
25	Human immunodeficiency virus infections	1.134	1.101	1.113	1.245

Data source: 2016–2020 Merative™ MarketScan® databases.

^aCounts for admissions and visits analyzed to produce these estimates and 95% confidence intervals reported in SDC1. MDC indicates Major Diagnostic Category; NA Not assessed (observations n<100); PFR Professional Fee Ratio.

Table 3. Top 25 Professional Fee Ratios by Clinical Classifications Software Category and Payer Type for ED treat and release visits^a, 2016–2020

Rank	Commercial			Medicaid			PFR
	CCSR code	CCSR description	PFR	CCSR code	CCSR description	PFR	
1	NEO066	Malignant neuroendocrine tumors	1.467	END013	Pituitary disorders	1.789	
2	FAC012	Other specified encounters and counseling	1.442	NVS002	Encephalitis	1.714	
3	MUS034	Crystal arthropathies (excluding gout)	1.438	PNL004	Neonatal cerebral disorders	1.708	
4	NVS005	Multiple sclerosis	1.415	NVS009	Epilepsy; convulsions	1.698	
5	SKN001	Skin and subcutaneous tissue infections	1.404	MBD022	Hallucinogen-related disorders	1.687	
6	EAR005	Postprocedural or postoperative ear and/or mastoid process complication	1.392	PRG027	Complications specified during the puerperium	1.660	
7	DIG002	Disorders of teeth and gingiva	1.380	MAL002	Digestive congenital anomalies	1.629	
8	SKN007	Other specified and unspecified skin disorders	1.374	INJ019	Burn and corrosion, initial encounter	1.628	
9	EAR006	Other specified and unspecified disorders of the ear	1.365	PRG003	Spontaneous abortion and complications of spontaneous abortion	1.621	
10	SKN005	Contact dermatitis	1.359	MBD023	Inhalant-related disorders	1.610	
11	MUS029	Disorders of jaw	1.358	MUS004	Juvenile arthritis	1.598	
12	INF009	Parasitic, other specified and unspecified infections	1.358	GEN022	Benign ovarian cyst	1.589	
13	DIG014	Hemorrhoids	1.354	CIR039	Other specified diseases of veins and lymphatics	1.587	
14	EAR001	Otitis media	1.352	RSP004	Acute and chronic tonsillitis	1.578	
15	SKN002	Other specified inflammatory condition of skin	1.352	MBD008	Disruptive, impulse-control and conduct disorders	1.571	
16	CIR018	Cardiac arrest and ventricular fibrillation	1.350	MAL005	Congenital malformations of eye, ear, face, neck	1.563	
17	INF004	Fungal infections	1.348	MBD007	Trauma- and stressor-related disorders	1.563	
18	RSP007	Other specified and unspecified upper respiratory disease	1.340	MAL001	Cardiac and circulatory congenital anomalies	1.551	
19	CIR035	Varicose veins of lower extremity	1.339	PRG018	Maternal care related to disorders of the placenta and placental implantation	1.541	
20	MUS023	Acquired deformities (excluding foot)	1.332	SKN001	Skin and subcutaneous tissue infections	1.539	
21	EYE001	Cornea and external disease	1.331	MBD014	Neurodevelopmental disorders	1.534	
22	EYE005	Retinal and vitreous conditions	1.330	GEN019	Endometriosis	1.533	
23	SKN006	Postprocedural or postoperative skin complication	1.329	EAR001	Otitis media	1.527	
24	MAL005	Congenital malformations of eye, ear, face, neck	1.327	GEN021	Menstrual disorders	1.527	
25	MUS033	Gout	1.327	MAL003	Genitourinary congenital anomalies	1.523	

Data source: 2016–2020 Merative™ MarketScan® databases.

Counts for admissions and visits analyzed to produce these estimates and 95% confidence intervals reported in SDC1. CCSR indicates Clinical Classification Software Refined; PFR Professional fee ratio.

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Table 4. Top 25 Professional Fee Ratios by Diagnostic Related Group and Payer Type for Inpatient Admissions, 2016–2020

Rank	Commercial		Medicaid		PFR	DRG description	PFR	DRG code	DRG description	PFR
	DRG code	DRG description	DRG code	DRG description						
1	583	MASTECTOMY FOR MALIGNANCY WITHOUT CC/MCC	1,803	785	1,575	CESAREAN SECTION WITH STERILIZATION WITHOUT CC/MCC				
2	582	MASTECTOMY FOR MALIGNANCY WITH CC/MCC	1,757	798	1,499	VAGINAL DELIVERY WITH STERILIZATION AND/OR D&C WITHOUT CC/MCC				
3	581	OTHER SKIN SUBCUTANEOUS TISSUE AND BREAST PROCEDURES WITHOUT CC/MCC	1,639	807	1,477	VAGINAL DELIVERY WITHOUT STERILIZATION OR D&C WITHOUT CC/MCC				
4	585	BREAST BIOPSY LOCAL EXCISION AND OTHER BREAST PROCEDURES WITHOUT CC/MCC	1,600	784	1,475	CESAREAN SECTION WITH STERILIZATION WITH CC				
5	775	VAGINAL DELIVERY WITHOUT COMPLICATING DIAGNOSES	1,565	806	1,449	VAGINAL DELIVERY WITHOUT STERILIZATION OR D&C WITH CC				
6	584	BREAST BIOPSY LOCAL EXCISION AND OTHER BREAST PROCEDURES WITH CC/MCC	1,556	797	1,445	VAGINAL DELIVERY WITH STERILIZATION AND/OR D&C WITH CC				
7	807	VAGINAL DELIVERY WITHOUT STERILIZATION OR D&C WITHOUT CC/MCC	1,533	775	1,440	VAGINAL DELIVERY WITHOUT COMPLICATING DIAGNOSES				
8	774	VAGINAL DELIVERY WITH COMPLICATING DIAGNOSES	1,506	783	1,428	CESAREAN SECTION WITH STERILIZATION WITH MCC				
9	806	VAGINAL DELIVERY WITHOUT STERILIZATION OR D&C WITH CC	1,499	805	1,419	VAGINAL DELIVERY WITHOUT STERILIZATION OR D&C WITH MCC				
10	767	VAGINAL DELIVERY WITH STERILIZATION AND/OR D&C	1,484	768	1,411	VAGINAL DELIVERY WITH O.R. PROCEDURES EXCEPT STERILIZATION AND/OR D&C				
11	30	SPINAL PROCEDURES WITHOUT CC/MCC	1,483	789	1,401	NEONATES DIED OR TRANSFERRED TO ANOTHER ACUTE CARE FACILITY				
12	798	VAGINAL DELIVERY WITH STERILIZATION AND/OR D&C WITHOUT CC/MCC	1,478	774	1,395	VAGINAL DELIVERY WITH COMPLICATING DIAGNOSES				
13	805	VAGINAL DELIVERY WITHOUT STERILIZATION OR D&C WITH MCC	1,475	788	1,395	CESAREAN SECTION WITHOUT STERILIZATION WITHOUT CC/MCC				
14	766	CESAREAN SECTION WITHOUT CC/MCC	1,469	767	1,394	VAGINAL DELIVERY WITH STERILIZATION AND/OR D&C				
15	578	SKIN GRAFT EXCEPT FOR SKIN ULCER OR CELLULITIS WITHOUT CC/MCC	1,466	796	1,377	VAGINAL DELIVERY WITH STERILIZATION AND/OR D&C WITH MCC				
16	768	VAGINAL DELIVERY WITH O.R. PROCEDURES EXCEPT STERILIZATION AND/OR D&C	1,458	787	1,370	CESAREAN SECTION WITHOUT STERILIZATION WITH CC				
17	797	VAGINAL DELIVERY WITH STERILIZATION AND/OR D&C WITH CC	1,440	998	1,368	PRINCIPAL DIAGNOSIS INVALID AS DISCHARGE DIAGNOSIS				
18	785	CESAREAN SECTION WITH STERILIZATION WITHOUT CC/MCC	1,439	766	1,343	CESAREAN SECTION WITHOUT CC/MCC				

Rank	Commercial		Medicaid		PFR
	DRG code	DRG description	DRG code	DRG description	
19	473	CERVICAL SPINAL FUSION WITHOUT CC/MCC	786	CESAREAN SECTION WITHOUT STERILIZATION WITH MCC	1.334
20	577	SKIN GRAFT EXCEPT FOR SKIN ULCER OR CELLULITIS WITH CC	534	FRACTURES OF FEMUR WITHOUT MCC	1.331
21	472	CERVICAL SPINAL FUSION WITH CC	473	CERVICAL SPINAL FUSION WITHOUT CC/MCC	1.329
22	765	CESAREAN SECTION WITH CC/MCC	999	UNGROUPABLE	1.324
23	788	CESAREAN SECTION WITHOUT STERILIZATION WITHOUT CC/MCC	765	CESAREAN SECTION WITH CC/MCC	1.311
25	998	PRINCIPAL DIAGNOSIS INVALID AS DISCHARGE DIAGNOSIS	472	CERVICAL SPINAL FUSION WITH CC	1.291
25	784	CESAREAN SECTION WITH STERILIZATION WITH CC	455	COMBINED ANTERIOR AND POSTERIOR SPINAL FUSION WITHOUT CC/MCC	1.280

Data source: 2016–2020 Merative™ MarketScan® databases.

^aCounts for admissions and visits analyzed to produce these estimates and 95% confidence intervals reported in SDC1. DRG indicates Diagnostic Related Group; PFR Professional fee ratio.