COMMONWEALTH OF MASSACHUSETTS

HEALTH POLICY COMMISSION

TECHNICAL APPENDIX 6

COMMERCIAL PRICE TRENDS

ADDENDUM TO 2023 COST TRENDS REPORT

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1 Summary

This appendix describes the Health Policy Commission's (HPC) approach to the analyses contained in the **Price Chartpack.**

2 Data sources

The HPC used several data sources from the Center for Health Information and Analysis (CHIA) in the compilation of this chartpack. CHIA's Acute Hospital Case Mix Database was used for the exhibit "**Proportional composition of inpatient discharges by patient severity of illness, COVID-19 cases excluded, 2013-2021".** The exhibit "**Total inpatient spending per commercial discharge and average length of stay for commercial hospital stays, 2013-2020"** uses CHIA's Annual Report and CHIA's Total Medical Expenditures data book. For all other exhibits, the HPC used the CHIA Massachusetts All-Payer Claims Database v2021 (APCD), including data from 2017 to 2021, for the analyses on ambulatory and inpatient prices, as well as the hospital outpatient department (HOPD) price index. The HPC's APCD analytic files contain six of the largest commercial payers in the state: Blue Cross Blue Shield of Massachusetts, Tufts Health Plan, Harvard Pilgrim Health Care, Anthem (including Unicare, an Anthem offering), Health New England, and Mass General Brigham Health Plan (formerly known as AllWays). These six payers represent approximately 37% of the commercial market (including Connector plans) and primarily include claims for members enrolled in fully insured plans.

3 Inpatient payment trends

3.1 Composition of inpatient discharges by patient severity

For the exhibit, "**Proportional composition of inpatient discharges by patient severity of illness, COVID-19 cases excluded, 2013-2022"**, the HPC used data from the CHIA Hospital Inpatient Discharge Database (HIDD). Severity groups and typical payment amounts were defined using MassHealth (Medicaid) all-payer refined diagnosis related groups (APR-DRG) and patient severity of illness (SOI) on a four-level severity scale, with 4 being the highest acuity.

The data is comprised of all medical inpatient stays at acute care hospitals for Massachusetts residents, excluding behavioral health stays and extremely long length of stay (5 times the geometric mean by Medicare Severity DRG severity group) because these cases are usually not paid on a DRG basis. Other exclusions include transfers, patients who died, patients who went to Shriners Hospital for Children (Springfield and Boston). COVID-19 cases were defined as any inpatient stay with U071 for the primary or secondary diagnosis code.

3.2 Changes in inpatient prices, spending, acuity, volume and payments

The trend shown in the exhibit, **"Cumulative changes in prices, spending, acuity, volume, and payments per discharge for non-maternity and non-COVID-19 commercial stays, 2017-2021",** is developed with a subset of data that excludes discharges in maternity and newborn major diagnosis categories as well as inpatient stays where the primary or admitting diagnosis was COVID-19. Unlike the other inpatient price analyses, the data in this exhibit includes potential outliers in price and length of stay in order to correctly represent the trends in spending and utilization. Spending is measured as the sum of facility and professional spending per year, and total payment per discharge is the average of the same variable. In contrast, the price variable is the facility payment adjusted with the MassHealth APR-DRG weight that corresponds to the APR-DRG assigned to a given stay. Recorded acuity variable represents average APR-DRG weight for the inpatient stays each year. The slide also reports the cumulative change in total spending that includes maternity stays, since maternity stays had relatively stable volume and acuity trend and adding those reduced the growth in overall spending. This number was calculated using the same method while including stays with maternity MDC, while still excluding newborns and stays with COVID-19 diagnosis.

3.3 Inpatient payments

3.3.1 Inpatient stay analysis

The HPC constructed a dataset of inpatient stays in which all APCD claims were combined into inpatient stays based on member id, hospital id, and overlapping admission, discharge and service dates on the claims. The total payment for each discharge was defined as the total of allowed amounts for facility and professional claims associated with the discharge. Each facility claim originally had one Medicare Severity Diagnosis Related Groups (MS-DRG) and All-Payer Diagnosis Related Groups (APR-DRG with severity level) assigned using both the Medicare and APR-DRG classification software. Inpatient stays that had both maternity and newborn facility claims based on the associated DRGs were further split into separate mother and newborn stays. In rare instances when there were still different DRGs or severity levels on the claims that constituted a stay, the HPC picked the DRG with the highest weight to be associated with the entire stay.

The price for all inpatient stays included both the facility and professional payments for services received during the stay. Since each inpatient stay may vary in total services received (e.g., inpatient stay spending included both the facility DRG claim and any professional components delivered during the inpatient stay), this analysis refers to inpatient stay as price even though each inpatient stay may be compromised of different services as it is part of one inpatient episode.

3.3.2 Analyses

Average inpatient price growth includes both facility and professional claims for an inpatient stay. Types of inpatient stays were identified by APR-DRG.

3.3.3 Change in payments and volume for select high-volume types of inpatient stays

For the exhibit HPC selected top 13 APR-DRGs by volume combining the stays with all severity levels within the same APR-DRG. The data for the price calculation excludes outliers in length of stay (LOS) defined as stays with LOS greater than 3 times the median Medicare LOS for the same MS-DRG. Transfers out of the hospital into another acute care hospital are also excluded since those represent incomplete payment for a given APR-DRG. Volume measure is adjusted for total member months in each year.

3.3.4 Acuity-adjusted prices for non-maternity and maternity stays by hospital

This exhibit represents average hospital-level prices for maternity and non-maternity lines of services, both of which exclude newborns and COVID-19 stays. The sample for calculating hospital-level prices excludes outliers in length of stay and acute-care transfers out of the hospital. Acuity-adjusted total and facility prices are calculated by dividing facility or total (facility plus professional) price per stay by the corresponding MassHealth APR-DRG weight. Additionally, the sample for calculating hospital-level prices excludes extreme prices, defined as acuity-adjusted facility payment being 3 times higher or 4 times lower than the median acuity-adjusted facility payment, which results in dropping 1.5% at the upper range of the distribution and 2% at the bottom of the distribution in 2021 (mostly among non-maternity). The hospitals selected for the exhibit had at least 90 non-maternity stays or at least 75 maternity stays.

3.3.5 Hospital prices for low-acuity vaginal delivery

The data used in this exhibit excluded LOS and price outliers, as well as transfers out of the hospital (see 3.3.4 for details). Hospitals with at least 20 stays with APR-DRG 560 for vaginal delivery at severity level 1 were selected for this exhibit. Payments shown are actual unadjusted facility, professional and total prices for a comparable package of services – vaginal delivery of the lowest complexity.

HPC also calculated vaginal delivery prices by hospital for the top five payers included in APCD dataset and compared their prices at the largest hospitals.

3.3.6 Hospital prices for low-acuity obesity procedure (gastric bypass surgery)

The data used in this exhibit excluded LOS and price outliers, as well as transfers out of the hospital (see 3.3.4 for details). Hospitals with at least 20 stays with APR-DRG 403 for obesity procedure at severity level 1 were included in this exhibit. Prices shown are actual unadjusted facility, professional and total payments for a comparable package of services.

4 Ambulatory service encounters

4.1 Ambulatory analytic file creation

The HPC's commercial APCD analytic files contain claim line level detail. To evaluate service prices across a range of services in different ambulatory settings (primarily the office and HOPD), the HPC constructed an encounter-level file that allows for evaluation of prices using a uniform definition of a procedure code encounter across ambulatory settings. In this case, a

procedure-encounter is used, defined as claim lines billed for the same person (patient), on the same day (date of service), under the same procedure code (CPT).

To create an ambulatory service encounter file for analysis, the HPC began with all professional claims billed in ambulatory sites of service (for the purpose of these analyses: Office (11), Hospital Outpatient Department (19, 22), Ambulatory surgical center (24), and Independent Laboratory (81)) and all facility claims. Claim lines missing a procedure code were excluded, as were any claim lines billed by out of state providers.

Claim lines billed indicating emergency department utilization (using either Health Care Cost Institute methodology and/or CPT 99281-99285, 99291, 99292) and inpatient utilization were flagged.[1] Claim lines billed for the same person on the same date as any emergency department/inpatient utilization were excluded along with any emergency department/inpatient utilization to remove any procedures that were performed in an acute and emergent setting and were therefore beyond the scope of these ambulatory analyses.

Professional claims were identified according to the site of service. Encounters were defined as mentioned previously by grouping claim lines for the same person (based on a unique person identifier), that occurred on the same day (same date of service) and were billed with the same procedure code (CPT). Importantly, the place of service delivery can determine the billing conventions. For example, services billed in office-based settings typically only bill with professional claims, while the same service billed in a hospital outpatient department often bills facility claims in addition to professional claims for the same service. The total cost of the service in the HOPD setting is the combination of relevant professional and facility (if present) claims.

To compare service prices across care settings, encounters were constructed by collapsing claim lines and summing allowed amounts across multiple claims lines (most often, two distinct claim lines, composed of one facility and one professional claim if they are present) for each encounter. The above procedure was completed for commercial medical claims for each year of data, 2017 to 2021, the most recent commercial data available to the HPC at the time of publication.

4.2 Trimming and price validation

Claims data can contain data errors or unusual circumstances where amounts paid as indicated on an individual claim line may be unreliable. When computing average prices, the HPC excluded values that were more than 10 times the statewide median or less than 20% of the statewide median for a given procedure code.

[1] For more information on the Health Care Cost Institute's claim type categorization please see: https://healthcostinstitute.org/images/pdfs/HCCI_2018_Methodology_public_v1.pdf.

To validate the APCD-derived prices, the HPC analyzed prices reported by select hospitals for procedures that constitute a HOPD index using the hospital price transparency data that became available in 2021. The HPC compared the facility portion of APCD-derived mean prices to the facility prices hospitals reported themselves and found they were highly concordant.

4.3 Analyses

4.3.1 General methodology notes

Unless specified otherwise in text, the unit of analysis for all ambulatory care encounters is the procedure code encounter and therefore includes all payments made for the same procedure code (including relevant facility and professional payments which can often be billed separately). The example procedures used in this chartpack vary greatly by volume and number of hospitals providing that care. Because of that, the HPC chose different reasonable minimum service thresholds for inclusion.

4.3.2 Percentage increase in aggregate prices by setting

For the exhibit, **"Annual Percentage Increase in Aggregate Commercial Prices by Setting, 2018-2021",** encounters and stays were divided into mutually exclusive care settings (office, HOPD, inpatient) and summarized at the appropriate aggregate unit of analysis (e.g., CPT for ambulatory services). For ambulatory settings (office, HOPD), average prices were computed for each CPT for each year included in analysis by setting. Yearly summarized files at the aggregate CPT level were merged to retain procedure codes that were billed consistently over time. Overall average prices were weighted according to the aggregate commercial spending for each CPT in each setting to compute a summary measure that reflects the wide variation in aggregate spending across different services and sites of service.

Price growth includes both facility and professional spending, where relevant, and is computed at the level of the procedure code encounter. Encounters are defined as the same person, same date of service, same procedure code to capture the potential for both facility and professional claims billed on the same day for the same service based on the setting. Procedure codes included in the office and HOPD analyses had to be billed consistently from 2018 through 2021 for inclusion. Annual price growth was calculated for each two-year period, and overall. Procedure codes with less than 20 services or less than $1,000 in aggregate spending in both years of the period were excluded. Overall average percent price growth in office and HOPD settings was weighted by the leading year aggregate spending for the procedure code in the respective setting (e.g., 2019 for 2018-2019 annual growth).

For inpatient price growth HPC calculated severity-adjusted price by dividing total payment (facility plus professional) by MassHealth DRG weight that corresponds to a given APR-DRG assigned to a stay. MassHealth DRG weights are highly correlated to the commercial weights, which aren't publicly available. Although technically APR-DRG weights are developed to adjust

only the facility portion of the inpatient payment, HPC applied the weight to adjust the total price as a reasonable approximation. For consistency, HPC applied the same version of APR-DRG software as well as the same version of MassHealth APR-DRG weights across the 2018-2021 time period.

4.4 Emergency Department (ED), Office, and Hospital Outpatient Department (HOPD) Price Trends

4.4.1 Distribution of emergency department visits by intensity level

For the exhibit "**Distribution of emergency department visits for commercially-insured patients by complexity level, 2017-2021"**, emergency department (ED) evaluation & management visits (99281-99285) were examined for changes in intensity (e.g., Level 1 "99281" is a lower intensity visit, while Level 5 "99285" is a higher intensity visit) between 2017 and 2021. Each bar represents the total volume of ED evaluation and management visits, and segments of the bar correspond to the share of visits for each level. ED severity was assigned based on ED procedure code 99281-99285 for the patient encounter. If a person had more than one ED evaluation and management code (99281-99285) on the same day, the visit was grouped with the higher procedure code billed. Providers and billing offices determine the billing level of the visit, and this has large implications for the cost of the visit.

4.4.2 Average price of a mammography performed in a HOPD by hospital

For the exhibit "**Average commercial price of a mammography performed in a HOPD, by hospital, 2021"**, facilities listed are limited to those with at least 700 commercial encounters for the service in 2021. Prices reflect encounters (same person, same date of service, same procedure code) to capture the potential for both facility and professional claims billed on the same day. Mammography (CPT 77067, 'Screening mammography, bilateral, including computer-aided detection (CAD) when performed'). Note: CPT 77067 was newly introduced in 2017 to replace a retiring CPT code, G0202.

4.4.3 Average price of a surgical pathology service performed in a HOPD by hospital

For the exhibit **"Average commercial price of a surgical pathology service performed in a HOPD, by hospital, 2021"**, data are for surgical pathology (CPT 88305, 'Level IV Surgical pathology, gross and microscopic examination'). Facilities listed are limited to those with at least 400 commercial encounters delivered in 2021. Prices reflect encounters (same person, same date of service, same procedure code) to capture the potential for both facility and professional claims billed on the same day.

4.4.4 Average price of a colonoscopy performed in a HOPD by hospital

For the exhibit **"Average commercial price for a common colonoscopy procedure (CPT CODE 45380) performed in a HOPD, by hospital, 2021"**, facilities listed are limited to those with at least 70 commercial encounters delivered in 2021. Includes all encounters where at least one endoscopy was performed, as defined by CCSR and/or BETOS, with matching procedure

codes on the highest-priced professional and the highest-priced facility claims. Additional details on how endoscopy encounters were identified may be found in section 3.5.1 of *Technical Appendix 2: Excessive Spending: Waste in Commercial Prices*. CPT code 45380 is defined as: "Colonoscopy, flexible; with biopsy, single or multiple".

4.5 Hospital Outpatient Department (HOPD) Commercial Price Index

The following methodology applies for exhibits **"Cost of the HOPD market basket per 100 patients by hospital, 2021"**, **"Cost of the HOPD market basket by hospital system, 2021"**, and **"Cost of the HOPD market basket by payer, 2021"**.

4.5.1 Defining the commercial price index

The HPC created a Laspeyres Price Index (i.e., a market basket of HOPD services) for services occurring in HOPDs to readily compare prices across hospitals, across payers, and over time.

Included services
As noted above, encounters are defined as the same person, same date of service, and same procedure code to capture the potential for both facility and professional claims billed on the same day for the same service based on the setting. As such, procedure prices and aggregate allowed amounts includes both facility and professional spending.

For a CPT code to be a candidate code for inclusion in the price index, it had to be present with sufficient volume (at least 20 encounters) at outpatient departments of 50 Massachusetts hospitals in 2019. The set of services included in the HOPD commercial price index was defined by first only including hospital-procedure code pairs where a hospital had at least 20 encounters for any individual CPT code and the HPC then ranked these codes in descending order based on aggregate statewide HOPD spending and then selected the top 50 procedure codes. Sensitivity analyses increasing the size of the code set did not demonstrably change the results. The set of 50 codes was chosen to include a range of typical HOPD services (e.g., visits, procedures, lab services, etc.).

Service quantities
The HPC defined the quantity of each code for use in the index to be the statewide utilization rate of each code per 100 commercially insured members observed in the APCD, as described earlier. Thus, the final market basket represents expected spending per 100 commercially insured members in each year for the services in the index. The quantities are fixed, for all entities and all years, at observed levels in 2019. In accordance with a Laspeyres index, the quantities do not vary by entity, and as a result, the output of the index represents how much it would cost for the identical utilization pattern occurring at hospital A versus hospital B or for payer X versus payer Y.

Service prices
Average prices are computed by averaging the price for each service for the given unit in question (hospital, payer, state, hospital system, etc.). Price trimming as described above in section 4.2 is applied to outlier prices. Because a key focus of the index was prices at hospitals,

the HPC used its standard method of computing the mean price only where a hospital contained at least 20 instances of the given procedure code in the given year. For hospitals without sufficient volume of these procedures, HPC used two different imputation methods as described below.

4.5.2 Imputation methods for missing procedure codes

Imputation of Incomplete Index Components
In 2018, 26 hospitals had sufficient volume (at least 20 encounters) for all 50 codes. The remainder had at least one procedure code with less than this minimum volume. HPC examined the following two imputation methods to impute average prices in such cases and selected Method 1.

Imputation using price ratios for non-missing procedure codes at a given hospital
This method involved the following steps:

1) For each non-missing procedure, calculate the ratio of the hospital's average procedure price and the statewide average price for that procedure code. For example, a hospital with an average price of procedure code X that is 10 percent higher than the statewide average would have a value of 1.1 for this ratio.
2) Calculate the simple average of the ratios from step 1 across all the hospital's non-missing HOPD procedures. For example, if a hospital had two missing codes and ratios of 1.1 and 1.0 for the two codes, this average of ratios would be 1.05.
3) Multiply the statewide average price for the missing procedure by the result from step 2) to impute a missing procedure price.

4.5.3 Computing the index

The price index was computed for each hospital as well as statewide for each year during 2019-2021 period. The hospital price index therefore is calculated as the weighted sum over all 50 codes of the average hospital-specific price for each code times the statewide fixed quantity of each code. The HPC calculated the statewide average HOPD index similarly using statewide average procedure prices. The formula for the calculation of the price index is represented below where j indexes hospitals in Massachusetts, i indexes the 50 procedure codes selected for inclusion in the HOPD index. μ_{i_j}represents the hospital-specific ("j-th") average price for procedure code i, and k_i represents the statewide utilization rate for procedure code i.

$$HOPD\ Price\ Index_j = \sum_{i=50}^{j} \mu_{i_j} * k_i$$

4.5.4 Additional payer data

Payer	2019	2021
Tufts	$32,826	$34,423
HPHC	$32,533	$34,176
BCSBS	$28,577	$29,095

Anthem	$27,866	$28,435
HNE	$25,270	$28,071
Mass General Brigham Health Plan	$27,735	$28,031

4.6 Laboratory Services Commercial Price Index

The following methodology applies for exhibits **"Cost of the lab market basket per 100 patients, including cost-sharing, by Massachusetts provider, 2021"**, **"Cost of the lab market basket by hospital system, 2021"**, and **"Cost of the lab market basket by setting of care and payer, 2021"**.

4.6.1 Defining the index

Unless specified otherwise in text, the laboratory services price index was defined following similar methodology described in section 4.5.1. As noted above, the HPC created a Laspeyres Price Index (i.e., a market basket of laboratory services) for laboratory services occurring in HOPDs, provider offices, and independent laboratories, to readily compare prices across providers, across payers, and over time. In addition to prices, the laboratory price index also reports on cost sharing, a component of the allowed amount for an encounter. The Medicare cost to provide the market basket was derived using rates from the Centers for Medicare and Medicaid Services, Clinical Laboratory Fee Schedule (CLFS) for 2021.

Included Services
As noted above, encounters are defined as the same person, same date of service, and same procedure code, such that procedure prices and aggregate allowed amounts include both facility and professional spending if they are both present. Specific to the laboratory services analytic file, if an encounter was composed of more than two claim lines it was excluded from analysis (e.g., a glucose tolerance test with multiple readings on one day) (less than 1% of encounters). Encounters billed with modifier 26 (professional component) were excluded from price analyses. Additionally, providers in the laboratory services analytic file were not restricted to Massachusetts to account for the possibility that lab samples are sent out of state for testing.

For a CPT code to be a candidate code for inclusion in the price index it had to be present with sufficient volume (at least 15% of aggregate service volume) at each setting of interest based on individual providers having sufficient volume of each code (at least 20 encounters). The set of services included in the laboratory price index was defined by first only including codes where each setting of care had at least 15% of the service volume for any individual CPT code. The HPC then ranked these codes in descending order based on aggregate statewide spending and then selected the top 50 procedure codes. Sensitivity analysis increasing the size of the code set did not demonstrably change the results.

For the remaining components of defining the price index, including service quantities and service prices, the laboratory services commercial price index followed the methodology described in section 4.5.1 under "Service quantities" and "Service prices" with the caveat that the laboratory price index goes beyond hospitals to include provider offices and independent laboratories.

4.6.2 Imputation methods for missing procedure codes

Imputation of incomplete index components
In 2019, all providers included in the final figure (56 providers) required at least one imputation (i.e., at least one procedure code had less than 20 encounters). The laboratory price index followed the methodology for imputation described in section 4.5.2 under "Imputation using price ratios for non-missing procedure codes at a given hospital" for all providers without sufficient volume of a given procedure code. The same methodology was used to impute cost sharing amounts.

Notably, all codes included in the index are paid on the CLFS except for a general health panel (CPT 80050). To construct the Medicare cost of the basket, the Medicare rate for a general health panel was manually constructed by summing the Medicare rates from the CLFS for a comprehensive metabolic panel (CPT 80053), thyroid stimulating hormone test (CPT 84443), and a complete blood count (CPT 85025).

4.6.3 Computing the index

The laboratory price index was computed for all providers following the methodology described in section 4.5.3 with the addition of cost sharing amounts and Medicare rates from the CLFS. In 2021, the statewide laboratory price index total was $7,513, including cost sharing.

5 Additional data:

HOPD index contents, 2019 and 2021:

		2019		2021		Utilization per 100 members per year, 2019
CPT	Description	Mean price ($)	Aggregate HOPD spend ($)	Mean price ($)	Aggregate HOPD spend ($)	
77067	SCREENING MAMMOGRAPHY, BILATERAL, INCLUDING CAD	319	49,477,712	317	43,280,648	9.70
45385	COLSC FLX PROX SPLENIC FLXR RMVL LES SNARE TQ	2,020	27,915,628	2,233	31,932,258	0.87
45380	COLONOSCOPY W/BIOPSY SINGLE/MULTIPLE	1,757	29,559,464	2,078	26,615,256	1.08
88305	LEVEL IV SURG PATHOLOGY	306	25,044,646	321	23,919,698	5.22

	GROSS&MICROSCOPIC EXAM					
93306	ECHO TTHRC R-T 2D W/WOM-MODE COMPL SPEC&COLR D	1,175	22,405,258	1,193	23,578,466	1.20
43239	EDG TRANSORAL BIOPSY SINGLE/MULTIPLE	1,554	22,295,264	1,655	21,701,184	0.91
74177	CT ABDOMEN & PELVIS W/CONTRAST MATERIAL	1,280	22,526,302	1,340	21,685,322	1.11
97110	THERAPEUTIC PX 1/> AREAS EACH 15 MIN EXERCISES	141	18,188,226	159	20,012,628	8.08
99214	OFFICE OUTPATIENT VISIT 25 MINUTES	193	22,101,140	229	17,681,298	7.83
45378	COLONOSCOPY FLX DX W/WO COLLJ SPECIMENS	1,577	19,380,170	1,590	15,865,124	0.77
77063	SCREENING DIGITAL BREAST TOMOSYNTHESIS, BILATERAL	99	9,902,805	84	10,164,582	6.29
80050	GENERAL HEALTH PANEL	120	8,490,652	135	9,699,423	4.45
99213	OFFICE OUTPATIENT VISIT 15 MINUTES	120	13,473,361	140	9,589,295	7.13
80061	LIPID PANEL	32	9,227,892	30	8,210,058	18.11
84443	ASSAY OF THYROID STIMULATING HORMONE TSH	54	9,921,444	51	7,785,953	11.53
96365	IV INFUSION THERAPY/PROPHYLAXIS /DX 1ST TO 1 HR	394	7,462,354	409	7,599,672	1.19
71260	CT THORAX W/CONTRAST MATERIAL	663	8,257,496	602	6,898,799	0.80
76642	US BREAST, UNILATERAL REAL TIME IMGE DOCM	251	7,053,467	234	6,366,266	1.76
85025	BLOOD COUNT COMPLETE AUTO&AUTO DIFRNTL WBC	29	7,524,639	26	6,095,237	16.49

93017	CV STRS TST XERS&/OR RX CONT ECG TRCG ONLY	509	6,140,385	524	5,858,484	0.76
80053	COMPREHENSIVE METABOLIC PANEL	30	6,698,277	27	5,752,647	15.13
77065	DIAGNOSTIC MAMMOGRAPHY, UNILATERAL, INCLUDING CAD	301	5,704,668	299	5,596,495	1.19
82306	25 HYDROXY INCLUDES FRACTIONS IF PERFORMED	87	7,654,372	84	5,477,616	5.47
76830	ULTRASOUND TRANSVAGINAL	296	6,450,383	280	5,394,870	1.37
71046	RADIOLOGIC EXAMINATION, CHEST; 2 VIEWS	158	8,112,475	160	5,111,190	3.22
97140	MANUAL THERAPY TQS 1/> REGIONS EACH 15 MINUTES	102	5,157,784	112	5,019,119	3.23
88342	IMHISTOCHEM/CYTC HM 1ST SEP IDENT ANTIBODY SLIDE	248	3,595,116	368	4,937,326	0.91
83036	HEMOGLOBIN GLYCOSYLATED A1C	31	5,140,005	29	4,768,010	10.41
93005	ECG ROUTINE ECG W/LEAST 12 LDS TRCG ONLY W/O I&R	88	3,847,250	116	4,575,698	2.72
76536	US SOFT TISSUE HEAD & NECK REAL TIME IMGE DOCM	328	5,417,749	293	4,546,748	1.04
76856	US PELVIC NONOBSTETRIC REAL-TIME IMAGE COMPLETE	334	5,721,248	294	4,382,283	1.07
77066	DIAGNOSTIC MAMMOGRAPHY, BILATERAL, INCLUDING CAD	393	4,014,332	391	4,239,953	0.64
71250	CT THORAX W/O CONTRAST MATERIAL	485	4,675,824	470	3,952,734	0.61
97161	LOW COMPLEXITY PHYSICAL THERAPY EVALUATION	217	4,683,065	207	3,848,032	1.35

77080	DXA BONE DENSITY STUDY 1/> SITES AXIAL SKEL	231	3,952,133	242	3,818,524	1.08
76700	US ABDOMINAL REAL TIME W/IMAGE DOCUMENTATION	373	4,747,138	337	3,505,798	0.80
76770	US RETROPERITONEAL REAL TIME W/IMAGE COMPLETE	382	4,168,294	345	3,062,279	0.69
85027	BLOOD COUNT COMPLETE AUTOMATED	21	3,828,379	19	2,855,346	11.22
73630	RADEX FOOT COMPLETE MINIMUM 3 VIEWS	158	3,168,779	164	2,785,308	1.26
76705	ULTRASOUND ABDOMINAL REAL TIME W/IMAGE LIMITED	328	3,004,760	285	2,694,617	0.59
80048	BASIC METABOLIC PANEL CALCIUM TOTAL	24	3,471,101	21	2,610,929	8.99
93971	DUP-SCAN XTR VEINS UNILATERAL/LIMITED STUDY	360	2,929,969	337	2,457,793	0.52
82728	ASSAY OF FERRITIN	45	2,625,368	42	2,344,178	3.63
94060	BRNCDILAT RSPSE SPMTRY PRE&POST-BRNCDILAT ADMN	343	1,915,313	445	2,206,613	0.36
84153	ASSAY OF PROSTATE SPECIFIC ANTIGEN TOTAL	55	2,404,689	51	2,181,078	2.73
82607	CYANOCOBALAMIN VITAMIN B-12	45	2,226,486	42	2,057,010	3.08
83970	ASSAY OF PARATHORMONE	137	2,257,814	123	1,937,766	1.03
73030	RADEX SHOULDER COMPLETE MINIMUM 2 VIEWS	153	1,952,081	158	1,858,886	0.80
73610	RADEX ANKLE COMPLETE MINIMUM 3 VIEWS	159	1,889,809	160	1,689,270	0.75
84439	ASSAY OF FREE THYROXINE	31	1,920,641	29	1,637,888	3.94

Laboratory Services Commercial Price Index contents, 2019 and 2021:

			2019		2021		
CPT	Description	Providers w/≥ 20 encounters	Mean price ($)	Aggregate provider spend ($)	Mean price ($)	Aggregate provider spend ($)	Utilization per 100 members per year, 2019
80061	LIPID PANEL	56	24	13,841,171	23	12,031,471	36.1
87491	IADNA CHLAMYDIA TRACHOMATIS AMPLIFIED PROBE TQ	54	65	13,651,855	66	9,554,673	13.1
84443	ASSAY OF THYROID STIMULATING HORMONE TSH	56	41	13,432,216	39	10,339,292	20.5
87591	IADNA NEISSERIA GONORRHOEAE AMPLIFIED PROBE TQ	54	66	13,116,773	67	9,219,790	12.4
80050	GENERAL HEALTH PANEL	56	90	12,871,336	99	13,349,479	8.9
85025	BLOOD COUNT COMPLETE AUTO&AUTO DIFRNTL WBC	56	22	9,667,403	21	7,749,262	27.6
83036	HEMOGLOBIN GLYCOSYLATED A1C	56	22	7,838,636	21	6,933,022	21.9
80048	BASIC METABOLIC PANEL CALCIUM TOTAL	56	20	4,593,425	18	3,570,886	14.1
84153	ASSAY OF PROSTATE SPECIFIC ANTIGEN TOTAL	54	39	3,894,704	36	3,393,992	6.3
82607	CYANOCOBALAMIN VITAMIN B-12	55	35	3,124,976	33	2,827,497	5.6
80307	PRESUMPTIVE DRUG CLASS SCREENING	46	123	2,312,020	107	1,437,817	1.2
82670	ASSAY OF ESTRADIOL	51	63	1,942,960	57	1,779,536	1.9
84702	GONADOTROPIN CHORIONIC QUANTITATIVE	56	37	1,926,806	33	1,441,887	3.3

86780	ANTIBODY TREPONEMA PALLIDUM	39	36	1,644,728	33	1,466,741	2.8
87081	CUL PRSMPTV PTHGNC ORGANISM SCRN W/COLONY ESTIMJ	43	14	1,384,263	13	680,832	6.2
83540	ASSAY OF IRON	53	16	1,349,583	15	1,219,441	5.3
84146	ASSAY OF PROLACTIN	55	50	1,131,044	44	914,778	1.4
87660	IADNA TRICHOMONAS VAGINALIS DIRECT PROBE TQ	28	41	1,103,605	43	718,339	1.7
82043	ALBUMIN URINE MICROALBUMIN QUANTIATIVE	56	13	1,091,494	13	967,887	5.3
83002	GONADOTROPIN LUTEINIZING HORMONE	55	43	1,064,731	40	959,855	1.5
87480	IADNA CANDIDA SPECIES DIRECT PROBE TQ	28	40	1,038,611	42	643,881	1.6
87510	IADNA GARDNERELLA VAGINALIS DIRECT PROBE TQ	27	40	1,037,550	43	401,911	1.6
82570	CREATININE OTHER SOURCE	55	12	985,545	11	867,227	5.2
84460	TRANSFERASE ALANINE AMINO ALT SGPT	55	11	970,168	10	821,512	5.7
85610	PROTHROMBIN TIME	56	11	954,121	10	642,368	5.6
81001	URNLS DIP STICK/TABLET REAGENT AUTO MICROSCOPY	49	7	949,768	7	753,640	8.1
83655	ASSAY OF LEAD	41	21	914,570	20	704,313	2.7
84270	ASSAY OF SEX HORMONE BINDING GLOBULIN	36	45	573,096	43	574,125	0.8
83013	HPYLORI BREATH ANAL UREASE ACT NON-RADACT ISTOPE	18	109	517,791	101	319,107	0.3

82274	BLOOD OCCULT FECAL HGB DETER IA QUAL FECES 1-3	32	27	438,824	28	374,687	1.0
82947	GLUCOSE QUANTITATIVE BLOOD XCPT REAGENT STRIP	53	8	408,917	8	296,848	3.2
82550	CREATINE KINASE TOTAL	52	13	381,531	12	311,176	1.9
83921	ORGANIC ACID 1 QUANTITATIVE	31	43	278,021	43	259,477	0.4
87625	INFECTIOUS AGENT ANTIGEN DETECTION	16	60	262,104	71	308,016	0.3
86431	RHEUMATOID FACTOR QUANTITATIVE	43	14	238,229	13	200,001	1.0
83718	LIPOPROTEIN DIR MEAS HIGH DENSITY CHOLESTEROL	36	18	238,007	17	173,815	0.8
82040	ALBUMIN SERUM PLASMA/WHOLE BLOOD	44	11	215,394	10	187,618	1.3
83721	LIPOPROTEIN DIRECT MEASUREMENT LDL CHOLESTEROL	43	18	214,100	18	174,750	0.8
82465	CHOLESTEROL SERUM/WHOLE BLOOD TOTAL	41	8	175,171	8	130,526	1.3
84703	GONADOTROPIN CHORIONIC QUALITATIVE	30	16	177,748	15	110,657	0.7
84436	ASSAY OF THYROXINE TOTAL	39	13	174,848	12	116,520	0.8
87449	IAAD EIA MULT STEP METHOD NOS EACH ORGANISM	21	31	159,975	29	108,186	0.3
86308	HETEROPHILE ANTIBODIES SCREEN	41	11	158,458	10	73,925	0.9
89322	SEMEN ANALYSIS STRICT MORPHOLOGIC CRITERIA	11	36	107,587	30	91,612	0.2

86663	ANTIBODY EPSTEIN-BARR EB VIRUS EARLY ANTIGEN EA	18	25	102,203	25	57,500	0.3
85014	BLOOD COUNT HEMATOCRIT	44	5	96,183	5	75,294	1.3
87808	IAADIADOO TRICHOMONAS VAGINALIS	9	31	91,898	26	54,815	0.2
84681	ASSAY OF C-PEPTIDE	16	45	79,086	39	90,136	0.1
86705	HEPATITIS B CORE ANTIBODY HBCAB IGM ANTIBODY	19	29	65,721	26	49,520	0.1
87511	IADNA GARDNERELLA VAGINALIS AMPLIFIED PROBE TQ	3	56	55,466	61	44,177	0.1