

## Appendix C – Year Two (Cycle Two) Methodologies and Data

### Executive Summary

The Department contracted with the actuarial firm **Optumas** to provide support in comparing Colorado Medicaid provider rates to those of other payers (a comparable benchmark) and for calculating access to care metrics.

The following service groups were reviewed by **Optumas** as part of the 2022 Medicaid Provider Rate Review Analysis Report:

- Non-Facility Dialysis/Nephrology
- Facility Dialysis/Nephrology
- Laboratory/Pathology
- Injections/Miscellaneous J-Codes
- Vision

The work performed on Year Two (Cycle Two) services comprised three analyses:

- 1) Data validation
- 2) Rate comparison benchmark
- 3) Access to care

The data validation process includes:

- Volume checks over time to determine completeness and reliability of data
- Determination of relevant utilization base and appropriate exclusions
- Incurred but not reported (IBNR) adjustment

The rate comparison benchmark analysis for January 1, 2020, through December 31, 2020 (CY 2020) compares Colorado Medicaid's latest fee schedule estimated reimbursement with the estimated reimbursement of the overall benchmark(s). The rate comparison benchmark analysis for Year 2 (Cycle 2) considers Medicare rates the primary comparator. In cases where Medicare rates were not used for comparison, an average rate from a selected group of other states was used.

All else being equal, if Colorado Medicaid were to reimburse at 100.0% of the overall benchmark, expenditures for CY 2020 would see the estimated total funds impacts summarized in **Table 1**:

**Table 1. Colorado as a Percent of the Benchmark and Estimated CY 2020 Fund Impact**

Service Group	Colorado Repriced	Benchmark Repriced	Colorado as a Percent of Benchmark	Estimated CY 2020 Total Fund Impact
Non-Facility Dialysis/Nephrology	\$910,930	\$1,490,140	61.1%	\$579,210
Facility Dialysis/Nephrology	\$8,444,228	\$10,761,508	78.5%	\$2,317,280
Laboratory/Pathology	\$115,872,840	\$89,507,716	129.5%	\$(26,365,123)

Service Group	Colorado Repriced	Benchmark Repriced	Colorado as a Percent of Benchmark	Estimated CY 2020 Total Fund Impact
Injections/J-Codes	\$1,250,195	\$1,307,505	95.6%	\$57,310
Vision	\$51,452,059	\$89,604,100	57.4%	\$38,152,040

The access to care analysis consists of a set of metrics to assist the Department in determining the ease in which members can obtain needed medical services by county classification over time and for the CY 2020 time period. **Table 2** lists the access to care metrics, definitions, and the time period for which the metric was evaluated when available.

**Table 2. Access to Care Definitions**

Metric	Definition	Time Period
Utilizers	The count of distinct utilizers	January 2018 – December 2020, Monthly
Providers	The count of active providers	January 2018 – December 2020, Monthly
Utilizers Per Provider (Panel Size)	Panel Size is the ratio of utilizers to active providers, and estimates average Medicaid members seen per provider	January 2018 – December 2020, Monthly
Member to Provider Ratio	Expressed as providers per 1,000 members, and allows for comparison across areas with large differences in population size	CY 2020
Utilizer Density Map	Utilizer count by county of residence	CY 2020
Penetration Rate Map	The estimated share of total Medicaid members that received the service by county of residence expressed as per 1,000 members	CY 2020

All metrics are screened for personal health information (PHI).

## Data Validation

The Department provided three years (January 2018 through December 2020) of eligibility data and fee-for-service (FFS) claims data to **Optumas**. The data validation process included utilization and dollar volume summaries over time which were validated against the Department's expectations, as well as **Optumas'** expectations based on prior analyses to identify potential inconsistencies. In addition, a frequency analysis was performed to examine valid values appearing across all fields contained in the data. Overall, results of this process suggested that the CY 2020 claims data is reliable.

Next, the data was reviewed to determine the relevant utilization after accounting for applicable exclusions. The exclusion criteria adhere to the general guidelines set forth in the Rate Review Schedule:<sup>1</sup>

- Claims attributed to members that are non-TXIX Medicaid eligible, i.e., Child Health Plan *Plus* (CHP+) program;
- Claims attributed to members with no corresponding eligibility span; and
- Claims associated with members enrolled in Medicaid and Medicare (dual membership).

Furthermore, for the rate comparison benchmark, the validation process included four additional exclusions:

- Procedure codes that are manually priced, and therefore not comparable;
- Procedure codes that were in the data, but the most recent Colorado fee schedule lists them as “not a benefit;”
- Procedure codes that were in the data, but they are not found on the most recent Colorado fee schedule; and
- Procedure codes that do not have a comparable Medicare or other states’ average rate

The list of procedure codes that were excluded from this analysis are shown in **Table 3(a)** below.

**Table 3(a). List of Procedure Codes Excluded**

Service Group	Procedure Code	Modifier	Procedure Description	Reason for Removal
Dialysis/Nephrology (Non-Facility)	90999		DIALYSIS PROCEDURE	manually priced
Laboratory/Pathology	88399	26	SURGICAL PATHOLOGY PROCEDURE	manually priced
Laboratory/Pathology	81545		ONCOLOGY THYROID	not a benefit
Injections/J-Codes	J0131		ACETAMINOPHEN INJECTION	manually priced
Injections/J-Codes	J7999		COMPOUNDED DRUG, NOC	manually priced
Vision	V2615		TELESCOP/OTHR COMPOUND LENS	no comparable rate
Vision	V2787		ASTIGMATISM-CORRECT FUNCTION	no comparable rate
Vision	92499		EYE SERVICE OR PROCEDURE	manually priced
Vision	V2785		CORNEAL TISSUE PROCESSING	manually priced
Vision	V2599		CONTACT LENS/ES OTHER TYPE	manually priced

The number of excluded procedure codes for each service group is shown in **Table 3(b)**:

<sup>1</sup> See the [Rate Review Schedule](#) on the Department’s Medicaid Provider Rate Review Advisory Committee (MPRRAC) website.

**Table 3(b). Count of Procedure Codes Excluded**

Service Group	Manually Priced	Not a Benefit	No Comparable Rate Available
Dialysis/Nephrology (Non-Facility)	1	0	0
Laboratory/Pathology	1	1	0
Injections/J-Codes	2	0	0
Vision	3	0	2

Services were priced to the Colorado Medicaid fee schedules at the procedure code and modifier level. The summary of exclusions from the CY 2020 base data can be found in **Appendix C1**.

CY 2020 claims data was selected as the base data of the repricing analysis because it yields an annualized result derived from the most recent experience.<sup>2</sup> There is an inherent processing lag in claims between the time a claim is incurred and when it is billed. Claims rendered in any given month can take weeks or months to be reported in the claims system. The claims data for Year Two (Cycle Two) services were provided with ten months of claims runout. The raw claims data reflects the vast majority of FFS experience for Year Two (Cycle Two) services in CY 2020; for this reason, no IBNR adjustments were made to the data.

After the data validations steps, the rate comparison benchmark analysis is performed.

## Rate Comparison Benchmark Analysis

The first step in the rate comparison benchmark analysis was a repricing exercise using the most recent Colorado Medicaid fee schedules with rates effective July 1, 2021, by procedure code and the first modifier to obtain a Colorado repriced amount. The first modifier was considered to align with the repricing step using the Medicare physician fee schedule. *It should be noted that repricing for Dialysis/Nephrology for Facility is a different process from the other Year Two (Cycle Two) services and will be addressed in the service-specific section below.*

It was then necessary to identify other payer sources that would be used in the rate comparison benchmark analysis. Many of the Year Two (Cycle Two) services offered by Colorado Medicaid are covered by Medicare. To identify comparable rates, publicly available documentation on reimbursement policy was referenced, and the analysis employed a fee schedule specific to Colorado to produce a more valid comparison.<sup>3</sup> Rates were assigned by considering the procedure code and first modifier present on each claim and included consideration as to whether the service was performed at a facility or non-facility. Medicare's base rate which is listed by

<sup>2</sup> The Department is aware that CY 2020 data will show the impact of the global health emergency that occurred in 2020; however, the Department wanted to use the most recent experience to capture the data and will take this into consideration as the data is compiled, analyzed, and conclusions are developed.

<sup>3</sup> The payment rate comparison is influenced by the choice of fee schedule since Colorado-specific Medicare rates are higher than those derived from unadjusted national relative value units. All Medicare rates and relevant information were effective calendar year 2022.

procedure code and the first modifier includes a breakout for facility versus non-facility and is considered to compare an appropriate rate.

For services without a comparable Medicare rate, supplemental rates were drawn from other state Medicaid programs. The states' rates are averaged and then linked to the Colorado Medicaid claims on a procedure code and first modifier basis. The states used for comparison are shown in the service-specific sections below.

This left a small portion of the data for which a comparable rate could not be found under the Year Two (Cycle Two) service categories. The utilization in the base data associated with these non-comparable claims were excluded for the remainder of the rate comparison benchmark analysis.

The final step consisted of applying the base utilization to Colorado Medicaid's latest available fee schedule as well as the matched rates from Medicare or other states. This entailed multiplication of utilization and the corresponding rates from each source, followed by subtraction of third-party liability (TPL) and copayments, to calculate the estimated total dollars that would theoretically be reimbursed by each source.

The distribution of procedure codes compared across benchmark sources for each service group is shown in **Table 4**. Note that for Dialysis/Nephrology (Facility), all of the encounters were compared with Medicare and nothing was excluded.

**Table 4. Count of Codes by Comparison Source**

Service Group	Medicare	Other States	No Comparable Rate Available
Dialysis/Nephrology (Non-Facility)	18	1	1
Laboratory/Pathology	1,059	71	2
Injections/J-Codes	9	3	2
Vision	106	13	5

The range of ratios derived from comparing Health First Colorado rates to those of either Medicare or other states is shown by service group in **Table 5**:

**Table 5. Rate Ratio Ranges by Comparison Source**

Service Group	Medicare	Other States
Dialysis/Nephrology (Non-Facility)	26.9% - 99.9%	104.0%
Dialysis/Nephrology (Facility)	75.5% - 80.1%	N/A
Laboratory/Pathology	6.9% - 178.3%	18.8% - 1,138.1%
Injections/J-Codes	5.0% - 146.6%	83.5% - 184.9%
Vision	14.2% - 112.2%	51.9% - 191.6%

As an example, the figures in Table 5 can be interpreted to mean that when comparing Laboratory/Pathology services to Medicare rates by procedure code and modifier, the Colorado Medicaid rates were anywhere from 26.9% to 99.9% of the Medicare rate. For the Laboratory/Pathology procedure codes where Medicare did not have a comparative rate, the Colorado Medicaid rates were anywhere from 18.8% to 1,138.1% of the other states' average rates.

Estimated expenditures were only compared for the subset of Year Two (Cycle Two) services that are common between Colorado Medicaid and another source. In other words, if no comparable rate could be found for a specific service offered in Colorado Medicaid, then the associated utilization and costs were not shown within the comparison results.

In the service-specific payment comparison sections of the narrative that follow, more detailed information can be found on the Medicare and other states' portions of the rate comparison benchmark.

## Dialysis/Nephrology Payment Comparison

### Non-Facility

There is a matching Medicare rate for over 99.2% of the Non-Facility Dialysis/Nephrology Services utilization in CY 2020. Other States' average Medicaid rates were utilized for one procedure code and modifier 1 combinations and are shown in **Table 6** below. The states' rates used for Non-Facility Dialysis and Nephrology are Arizona, Oklahoma, Nebraska, Utah, Nevada, and Oregon. The Benchmark repriced amount shown below is the combination of Medicare and Other States' repriced amount combined.

**Table 6. Procedure Codes/Modifiers Repriced Using Other States' Average**

Procedure Code	Modifier	Procedure Description
90989		DIALYSIS TRAINING COMPLETE

**Table 7** summarizes the Non-Facility Dialysis/Nephrology Services rate benchmark by the comparison sources.

**Table 7. Benchmark Comparison Results by Comparison Source**

Comparison Source	Colorado Repriced	Benchmark Repriced	Colorado as a Percent of Benchmark
Other States Average	\$7,175	\$6,898	104.0%
Medicare	\$903,755	\$1,483,241	60.9%
<b>Total</b>	<b>\$910,930</b>	<b>\$1,490,140</b>	<b>61.1%</b>

**Table 8** summarizes the payment comparison and estimated fiscal impact in aggregate.

**Table 8. Estimated Fiscal Impact**

Colorado as a Percentage of Benchmark	61.1%
Colorado Repriced Amount	\$910,930
Benchmark Repriced Amount	\$1,490,140
Est. CY 2020 Total Fund Impact	\$579,210

**Table 8** can be interpreted to mean that for Non-Facility Dialysis/Nephrology services under review, Colorado Medicaid pays an estimated 61.1% of the benchmark. Had Colorado Medicaid reimbursed at 100.0% of the benchmark rates in CY 2020, the estimated impact to the Total Fund would be \$579,210. Detailed comparison results can be found in **Appendix C2**.

## **Facility**

The rate comparison analysis for Dialysis claims performed in a facility assigns Medicare rates to the base utilization based on information available on the claim. For this service group, 100.0% of the services were compared to a Medicare benchmark.

Dialysis treatment performed at Dialysis Centers is “bundled” into a single per diem facility payment that includes geographic adjustment based on the county where the dialysis facility is located.

The Health First Colorado Dialysis fee schedule, effective July 1, 2021, assigns a single rate per dialysis service that is split by geographic region, and prescribes which counties are categorized into the different regions. The per diem rate based on the county where the service was performed is applied to the paid units for these services to obtain a Colorado Repriced amount. The Health First Colorado dialysis per diem rates are shown in **Table 9**:

**Table 9. Health First Colorado Dialysis (Facility) Per Diem Rates**

Wage Index Region	FY2021-22 Rate
Boulder, CO	\$202.32
Colorado Springs, CO	\$193.24
Denver, Aurora, Lakewood	\$208.29
Fort Collins, CO	\$207.65
Grand Junction, CO	\$200.09
Greeley, CO	\$197.09
Pueblo, CO	\$181.50
Rural Colorado	\$200.89

Beginning July 1, 2020, per diem rates were added to the Health First Colorado Dialysis fee schedule for services performed at an in-home setting. The rates are shown below in **Table 10**.

**Table 10. Health First Colorado Dialysis (Facility) In-home Per Diem Rates**

Wage Index Region	FY2021-22 Rate
Boulder, CO	\$86.71
Colorado Springs, CO	\$82.82
Denver, Aurora, Lakewood	\$89.27
Fort Collins, CO	\$88.99
Grand Junction, CO	\$85.75
Greeley, CO	\$84.47
Pueblo, CO	\$77.79
Rural Colorado	\$86.10

Medicare reimburses Dialysis facility claims using a Prospective Payment System (PPS). The Medicare PPS prices dialysis with a national base rate, currently at \$257.90 and applies three types of payment adjustments: Provider adjustments, Claims adjustments, and Patient adjustments. A subset of the adjustments is included in the Medicare benchmark analysis based on the data fields available. **Table 11** lists the Medicare PPS Adjustments applied and **Table 12** lists those adjustments not incorporated:

**Table 11. Dialysis PPS Adjustments**

Adjustment Group	Medicare PPS Adjustments Applied
Provider	Wage Index Adjustment, Rural Adjustment
Claim	Training Add-On, Home Dialysis, Acute Kidney Failure Adjustment, Modality Adjustment
Patient	Age, Comorbidity

**Table 12. Dialysis PPS Adjustments Not Incorporated**

Adjustment Group	Medicare PPS Adjustments Not Incorporated
Provider	Low Volume Adjustment, Blended Payment Adjustment, QIP Reduction
Claim	Dialysis Onset, High-Cost Outlier Payments, Transitional Drug Add-On Payment Adjustment
Patient	Body Mass Index (BMI), Body Surface Area (BSA)

**Table 13** summarizes the payment comparison and estimated fiscal impact in aggregate.



**Table 13. Estimated Fiscal Impact**

Colorado as a Percentage of Medicare PPS Benchmark	78.5%
Colorado Repriced Amount	\$8,444,228
Medicare PPS Benchmark Repriced Amount	\$10,761,508
<b>Est. CY2020 Total Fund Impact</b>	<b>\$2,317,279</b>

**Table 13** can be interpreted to mean that for Dialysis facility services under review, Health First Colorado pays an estimated 78.5% of the Medicare benchmark. Had Health First Colorado reimbursed at 100.0% of the benchmark rates in CY2020, the estimated impact to the Total Fund would be \$2,317,279. Detailed comparison results can be found in **Appendix C2**.

## Laboratory/Pathology Payment Comparison

There is a matching Medicare rate for over 61.4% of the Laboratory/Pathology Services utilization in CY 2020. Other States' average Medicaid rates were utilized for seventy-four procedure code and modifier 1 combinations and are shown in **Table 14** below. The states' rates used for Laboratory/Pathology are Arizona, California, Oklahoma, Nebraska, Utah, Nevada, and Oregon. The Benchmark repriced amount shown below is the combination of Medicare and Other States' repriced amount combined.

**Table 14. Procedure Codes/Modifiers Repriced Using Other States' Average**

Procedure Code	Modifier	Procedure Description
80321		ALCOHOLS BIOMARKERS 1OR 2
80324		DRUG SCREEN AMPHETAMINES 1/2
80336		ANTIDEPRESSANT TRICYCLIC 3-5
80345		DRUG SCREENING BARBITURATES
80346		BENZODIAZEPINES1-12
80348		DRUG SCREENING BUPRENORPHINE
80349		CANNABINOIDS NATURAL
80352		CANNABINOID SYNTHETIC 7/MORE
80353		DRUG SCREENING COCAINE
80354		DRUG SCREENING FENTANYL
80356		HEROIN METABOLITE
80357		KETAMINE AND NORKETAMINE
80358		DRUG SCREENING METHADONE
80359		METHYLENEDIOXYAMPHETAMINES

Procedure Code	Modifier	Procedure Description
80361		OPIATES 1 OR MORE
80365		DRUG SCREENING OXYCODONE
80371		STIMULANTS SYNTHETIC
83992		ASSAY FOR PHENCYCLIDINE
99000		SPECIMEN HANDLING OFFICE-LAB
80050		GENERAL HEALTH PANEL
80320		DRUG SCREEN QUANTALCOHOLS
80323		ALKALOIDS NOS
80325		AMPHETAMINES 3OR 4
80326		AMPHETAMINES 5 OR MORE
80329		ANALGESICS NON-OPIOID 1 OR 2
80330		ANALGESICS NON-OPIOID 3-5
80331		ANALGESICS NON-OPIOID 6/MORE
80332		ANTIDEPRESSANTS CLASS 1 OR 2
80333		ANTIDEPRESSANTS CLASS 3-5
80334		ANTIDEPRESSANTS CLASS 6/MORE
80335		ANTIDEPRESSANT TRICYCLIC 1/2
80337		TRICYCLIC & CYCLICALS 6/MORE
80338		ANTIDEPRESSANT NOT SPECIFIED
80339		ANTIEPILEPTICS NOS 1-3
80340		ANTIEPILEPTICS NOS 4-6
80341		ANTIEPILEPTICS NOS 7/MORE
80342		ANTIPSYCHOTICS NOS 1-3
80343		ANTIPSYCHOTICS NOS 4-6
80344		ANTIPSYCHOTICS NOS 7/MORE
80347		BENZODIAZEPINES 13 OR MORE
80350		CANNABINOIDS SYNTHETIC 1-3
80351		CANNABINOIDS SYNTHETIC 4-6
80355		GABAPENTIN NON-BLOOD
80360		METHYLPHENIDATE
80362		OPIOIDS & OPIATE ANALOGS 1/2
80363		OPIOIDS & OPIATE ANALOGS 3/4
80364		OPIOID & OPIATE ANALOG 5/MORE
80366		DRUG SCREENING PREGABALIN
80367		DRUG SCREENING PROPOXYPHENE
80368		SEDATIVE HYPNOTICS
80369		SKELETAL MUSCLE RELAXANT 1/2

Procedure Code	Modifier	Procedure Description
80370		SKEL MUSC RELAXANT 3 OR MORE
80372		DRUG SCREENING TAPENTADOL
80373		DRUG SCREENING TRAMADOL
80374		STEREOISOMER ANALYSIS
80375		DRUG/SUBSTANCE NOS 1-3
80377		DRUG/SUBSTANCE NOS 7/MORE
80500		LAB PATHOLOGY CONSULTATION
86870		RBC ANTIBODY IDENTIFICATION
80322		ALCOHOLS BIOMARKERS 3/MORE
80376		DRUG/SUBSTANCE NOS 4-6
80502		LAB PATHOLOGY CONSULTATION
86920		COMPATIBILITY TEST SPIN
86923		COMPATIBILITY TEST ELECTRIC
87015	26	SPECIMEN INFECT AGNT CONCNTJ
87075	26	CULTR BACTERIA EXCEPT BLOOD
87076	26	CULTURE ANAEROBE IDENT EACH
87205	26	SMEAR GRAM STAIN
87206	26	SMEAR FLUORESCENT/ACID STAI
87210	26	SMEAR WET MOUNT SALINE/INK
P9041		ALBUMIN (HUMAN),5%, 50ML
P9045		ALBUMIN (HUMAN), 5%, 250 ML
P9047		ALBUMIN (HUMAN), 25%, 50ML
S3620		NEWBORN METABOLIC SCREENING

**Table 15** summarizes the Laboratory/Pathology Services rate benchmark by the comparison sources.

**Table 15. Benchmark Comparison Results by Comparison Source**

Comparison Source	Colorado Repriced	Benchmark Repriced	Colorado as a Percent of Benchmark
Other States Average	\$44,288,168	\$12,433,851	356.2%
Medicare	\$71,366,774	\$77,073,865	92.6%
<b>Total</b>	<b>\$115,654,942</b>	<b>\$89,507,716</b>	<b>129.2%</b>

**Table 16** summarizes the payment comparison and estimated fiscal impact in aggregate.

**Table 16. Estimated Fiscal Impact**

Colorado as a Percentage of Benchmark	129.2%
Colorado Repriced Amount	\$115,654,942
Benchmark Repriced Amount	\$89,507,716
Est. CY 2020 Total Fund Impact	\$(26,147,226)

**Table 16** can be interpreted to mean that for Laboratory/Pathology services under review, Colorado Medicaid pays an estimated 129.2% of the benchmark. Had Colorado Medicaid reimbursed at 100.0% of the benchmark rates in CY 2020, the estimated impact to the Total Fund would be \$(26,147,226). Detailed comparison results can be found in **Appendix C3**.

## *Injections/Miscellaneous J-Codes Payment Comparison*

There is a matching Medicare rate for over 61.4% of the Injections/Miscellaneous J-Codes Services utilization in CY 2020. Other States' average Medicaid rates were utilized for three procedure code and modifier 1 combinations and are shown in **Table 17** below. The states' rates used for Laboratory/Pathology are Arizona, California, Oklahoma, Nebraska, Utah, Nevada, and Oregon. The Benchmark repriced amount shown below is the combination of Medicare and Other States' repriced amount combined.

**Table 17. Procedure Codes/Modifiers Repriced Using Other States' Average**

Procedure Code	Modifier	Procedure Description
J2805		SINCALIDE INJECTION
Q9950		INJ SULF HEXA LIPID MICROSPH
Q9957		INJ PERFLUTREN LIP MICROS,ML

**Table 18** summarizes the Injections/Miscellaneous J-Codes Services rate benchmark by the comparison sources.

**Table 18. Benchmark Comparison Results by Comparison Source**

Comparison Source	Colorado Repriced	Benchmark Repriced	Colorado as a Percent of Benchmark
Other States Average	\$4,392	\$4,508	97.4%
Medicare	\$1,245,804	\$1,302,997	95.6%
<b>Total</b>	<b>\$1,250,195</b>	<b>\$1,307,505</b>	<b>95.6%</b>

**Table 19** summarizes the payment comparison and estimated fiscal impact in aggregate.

**Table 19. Estimated Fiscal Impact**

Colorado as a Percentage of Benchmark	95.6%
Colorado Repriced Amount	\$1,250,195
Benchmark Repriced Amount	\$1,307,505
Est. CY 2020 Total Fund Impact	<b>\$57,310</b>

**Table 19** can be interpreted to mean that for Injections/Miscellaneous J-Codes services under review, Colorado Medicaid pays an estimated 95.6% of the benchmark. Had Colorado Medicaid reimbursed at 100.0% of the benchmark rates in CY 2020, the estimated impact to the Total Fund would be \$57,310. Detailed comparison results can be found in **Appendix C4**.

## Vision Payment Comparison

There is a matching Medicare rate for over 93.1% of the Vision Services utilization in CY 2020. Other States' average Medicaid rates were utilized for ten procedure code and modifier 1 combinations and are shown in **Table 20** below. The states' rates used for Vision are Arizona, California, Louisiana, Nevada, and Oklahoma. The Benchmark repriced amount shown below is the combination of Medicare and Other States' repriced amount combined.

**Table 20. Procedure Codes/Modifiers Repriced Using Other States' Average**

Procedure Code	Modifier	Procedure Description
V2025		EYEGLASSES DELUX FRAMES
V2781		PROGRESSIVE LENS PER LENS
92310		CONTACT LENS FITTING
92340		FIT SPECTACLES MONOFOCAL
92015		DETERMINE REFRACTIVE STATE
92341		FIT SPECTACLES BIFOCAL
92314		PRESCRIPTION OF CONTACT LENS
92342		FIT SPECTACLES MULTIFOCAL
92354		FIT SPECTACLES SINGLE SYSTEM
92370		REPAIR & ADJUST SPECTACLES

**Table 21** summarizes the Vision Services rate benchmark by the comparison sources.

**Table 21. Benchmark Comparison Results by Comparison Source**

Comparison Source	Colorado Repriced	Benchmark Repriced	Colorado as a Percent of Benchmark
Other States Average	\$3,535,487	\$5,345,705	66.1%
Medicare	\$47,916,573	\$84,258,395	56.9%
<b>Total</b>	<b>\$51,452,060</b>	<b>\$89,604,100</b>	<b>57.4%</b>

**Table 22** summarizes the payment comparison and estimated fiscal impact in aggregate.

**Table 22. Estimated Fiscal Impact**

Colorado as a Percentage of Benchmark	57.4%
Colorado Repriced Amount	\$51,452,060
Benchmark Repriced Amount	\$89,604,100
<b>Est. CY 2020 Total Fund Impact</b>	<b>\$38,152,040</b>

**Table 22** can be interpreted to mean that for Vision services under review, Colorado Medicaid pays an estimated 57.4% of the benchmark. Had Colorado Medicaid reimbursed at 100.0% of the benchmark rates in CY 2020, the estimated impact to the Total Fund would be \$38,152,040. Detailed comparison results can be found in **Appendix C5**.

## Access to Care

This year, the Department contracted with **Optumas** to analyze access to care metrics for Year Two (Cycle Two) services. These metrics inform the Department about the ease with which members can access these services and patterns over time. The metrics analyzed included:

1. **Distinct utilizers over time by county classification** showing the monthly number of members that receive a service in each county classification of residence. Utilizers are identified by their unique Member ID. **Optumas** also included utilizers aggregated by year between CY 2018-2020
2. **Distinct utilizers by gender and age in CY 2018-2020** provides insight into the demographics of members that received services and allows the state to create distributions to understand discrepancies of utilization by gender and age bands.
3. **Top diagnosis codes for distinct utilizers in CY 2018-2020** identifies the most common diagnosis codes within each service group. This information is helpful for the state to identify what providers' resources are most likely going to be used for.

4. **Active providers over time by county classification** showing the monthly number of providers providing services to members residing in each county classification residence. Providers are identified by their billing provider's Medicaid ID which was considered the unique provider identifier;
5. **Utilizer per Provider (Panel Size) over time by county classification** estimating the number of utilizers per provider actively servicing members who reside in that county classification;
6. **Member-to-Provider Ratios by county classification in CY 2020** which is useful in normalizing, and eventually standardizing, the supply of active providers relative to total membership in different county classifications;
7. **Utilizer Density by county in CY 2018-2020** showing on a map the geographic distribution and prevalence of members utilizing each service group, and;
8. **Penetration Rates by county in CY 2018-2020** showing on a map the relative share of members utilizing each service group across different counties, normalizing for the total number of Medicaid members residing in each county expressed as per 1,000.

For the definition of each metric, please view Table 2 above. More detailed information including data visualization is included in the main body of the Department's 2022 Medicaid Provider Rate Review Analysis Report (the report).

### Data Validation

The access to care analysis applies the following exclusion criteria to the Year Two (Cycle Two) services January 2018 through December 2020 FFS claims data the Department provided as part of the rate review analysis:

- Claims attributed to members that are non-TXIX Medicaid eligible, i.e. Child Health Plan *Plus* (CHP+) program; and
- Claims attributed to members with no corresponding eligibility span.

No other adjustments are made to the access to care data.

### Interpretation of Results

To address access to care for Year Two (Cycle Two) services, different partitions in the data are analyzed to enhance the value and actionability of the results. There are considerations to be made at different levels of aggregation and data partitioning to accurately interpret what the summarized figures and distinct counts represent. Distinct counts of members and providers, when grouped by different dimensions, will have varying degrees of duplication and may not be directly summed to arrive back at total, undivided distinct utilizer and provider counts. The two main types of data partition are discussed below, along with considerations one should make when accurately interpreting access to care results.

### Geographic Partitions

Geographic partitions are arranged in the access metrics because they provide important distinctions when comparing and evaluating access to care for members residing in similar and dissimilar geographic locations. The utilizer and member counts grouped by county and county classification are nonduplicative when analyzed over

time on a monthly basis and may be duplicative at the CY 2020 aggregate level. However, the active provider counts grouped by county and county classification maintain potential for duplication even within a single month because these geographic partitions represent the county of residence for the utilizers in the data. For example, if a member resided in both an urban and rural county during the CY 2020 time period, that member would contribute to both the urban CY 2020 total utilizer counts as well as the rural CY 2020 total utilizer counts for the service groups applicable to this member. To the degree that members residing in multiple counties were able to access a single provider within a given month, that provider contributes to the active provider counts for all counties in which that provider's panel resides. Although this duplication does not adversely impact the informational value of the annualized access metrics, it should be considered when interpreting the aggregated results.



The following appendices provide more detailed rate comparison benchmark summaries and results that were introduced and discussed in the narrative.

## Appendix C1: Base Data Summary

	Dialysis/ Nephrology (Non-Facility)	Dialysis/ Nephrology (Facility)	Laboratory/ Pathology	Injections/ J-Codes	Vision
CY 2020 Paid Amount	\$1,107,528	\$12,013,282	\$112,812,411	\$1,425,681	\$48,654,219
Exclusions					
Non-TXIX	\$149,660	\$1,855,827	\$234,675	\$3,901	\$7,422
No Eligibility Span	\$2,439	\$12,610	\$162,054	\$569	\$37,050
Dual Eligible	\$57,591	\$447,129	\$365,902	\$13,856	\$79,675
Child Health Plan Plus (CHP+)	\$0	\$0	\$1,042	\$0	\$5,862
Manually Priced	\$4,613	\$0	\$82	\$749	\$92,291
Not A Benefit	\$0	\$0	\$280,454	\$0	\$0
No CO Medicaid Rate Found	\$0	\$0	\$0	\$0	\$0
No Comparable Rate	\$0	\$0	\$0	\$0	\$1,515
Total Exclusions	\$214,303	\$2,315,566	\$1,044,209	\$19,075	\$223,815
Repricing Base					
Year Two (Cycle Two) Base Data	\$893,225	\$9,697,716	\$111,768,202	\$1,406,606	\$48,430,404
Percentage of Raw	80.7%	80.7%	99.1%	98.7%	99.5%

Note: as an example, the Dialysis/Nephrology (Non-Facility) final figures in the above table can be interpreted to mean that 80.7% (accounting for \$893,225 in unadjusted paid dollars) of the CY 2020 data provided by the Department was appropriate for use in the payment rate comparison analysis.

## Appendix C2: Dialysis/Nephrology Rate Ratio Results

These appendices show the rate ratios for all unique combinations of Colorado Medicaid and benchmark comparison rates found in the rate comparison benchmark analysis at a procedure code level. Procedure codes are duplicated to the extent that Medicare's facility/non-facility break-out rates are applied.

The Dialysis/Nephrology Non-Facility rate comparison benchmark analysis was repriced using methodology that incorporates the following data elements:

- Procedure Code
- Modifier 1
- Facility/Non-facility

Dialysis/Nephrology Non-Facility Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
90935		HEMODIALYSIS ONE EVALUATION	Medicare Facility/Non-Facility Rate	\$63.90	\$73.22	87.3%
90937		HEMODIALYSIS REPEATED EVAL	Medicare Facility Rate	\$104.84	\$104.90	99.9%
90945		DIALYSIS ONE EVALUATION	Medicare Facility/Non-Facility Rate	\$23.51	\$87.49	26.9%
90947		DIALYSIS REPEATED EVAL	Medicare Facility Rate	\$104.76	\$125.77	83.3%
90954		ESRD SERV 4 VSTS P MO 2-11	Medicare Non-Facility Rate	\$599.07	\$1,034.80	57.9%
90958		ESRD SRV 2-3 VSTS P MO 12-19	Medicare Non-Facility Rate	\$325.04	\$515.97	63.0%
90959		ESRD SERV 1 VST P MO 12-19	Medicare Non-Facility Rate	\$213.26	\$333.84	63.9%
90960		ESRD SRV 4 VISITS P MO 20+	Medicare Non-Facility Rate	\$214.31	\$363.52	59.0%
90961		ESRD SRV 2-3 VSTS P MO 20+	Medicare Facility/Non-Facility Rate	\$172.88	\$301.69	57.3%
90962		ESRD SERV 1 VISIT P MO 20+	Medicare Non-Facility Rate	\$124.89	\$207.77	60.1%
90963		ESRD HOME PT SERV P MO <2YRS	Medicare Non-Facility Rate	\$413.04	\$622.58	66.3%
90964		ESRD HOME PT SERV P MO 2-11	Medicare Non-Facility Rate	\$343.98	\$534.28	64.4%

Dialysis/Nephrology Non-Facility Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
90965		ESRD HOME PT SERV P MO 12-19	Medicare Non-Facility Rate	\$327.23	\$513.55	63.7%
90966		ESRD HOME PT SERV P MO 20+	Medicare Non-Facility Rate	\$170.94	\$301.69	56.7%
90967		ESRD SVC PR DAY PT <2	Medicare Non-Facility Rate	\$14.84	\$18.09	82.0%
90968		ESRD HOME PT SRV P DAY 2-11	Medicare Non-Facility Rate	\$11.53	\$17.74	65.0%
90969		ESRD SVC PR DAY PT 12-19	Medicare Facility/Non-Facility Rate	\$11.24	\$17.40	64.6%
90970		ESRD SVC PR DAY PT 20+	Medicare Facility/Non-Facility Rate	\$5.98	\$9.76	61.3%
90989		DIALYSIS TRAINING COMPLETE	Other States' Average Rate	\$512.50	\$492.75	104.0%

The Dialysis/Nephrology Facility rate comparison benchmark analysis was repriced using methodology that incorporates the following data elements:

- Assigned Rate Area
- Condition Codes
- Revenue Codes

The benchmark rate is a function of the following factors: a geographic factor, a rural adjustment factor, a training add-on, an age factor, diagnosis, and whether the service was performed at a facility or an in-home setting.

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Boulder, CO	59			0821	\$202.32	\$265.57	76.2%
Boulder, CO	59			0821	\$202.32	\$258.40	78.3%
Boulder, CO	71			0821	\$202.32	\$268.22	75.4%

## Appendix C2: Dialysis/Nephrology Rate Ratio Results

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Boulder, CO	71			0821	\$202.32	\$265.05	76.3%
Boulder, CO	71			0821	\$202.32	\$265.57	76.2%
Boulder, CO	71			0821	\$202.32	\$258.40	78.3%
Boulder, CO	71			0821	\$202.32	\$244.89	82.6%
Boulder, CO	84			0821	\$202.32	\$257.12	78.7%
Boulder, CO	84			0821	\$202.32	\$264.25	76.6%
Boulder, CO	84			0821	\$202.32	\$257.62	78.5%
Boulder, CO	84			0821	\$202.32	\$265.05	76.3%
Boulder, CO	84			0821	\$202.32	\$258.40	78.3%
Boulder, CO	D9			0821	\$202.32	\$265.05	76.3%
Boulder, CO	DR			0821	\$202.32	\$268.22	75.4%
Boulder, CO	74	74		0841	\$86.71	\$114.95	75.4%
Boulder, CO	74	74		0841	\$86.71	\$113.82	76.2%
Boulder, CO	73			0851	\$202.32	\$360.35	56.1%
Boulder, CO	74	74		0851	\$86.71	\$113.82	76.2%
Boulder, CO	74	74		0851	\$86.71	\$114.95	75.4%
Boulder, CO	74	74		0851	\$86.71	\$125.60	69.0%
Boulder, CO	74			0851	\$86.71	\$113.82	76.2%
Boulder, CO	74			0851	\$86.71	\$114.95	75.4%
Boulder, CO	74			0851	\$86.71	\$120.39	72.0%
Boulder, CO	71			0881	\$202.32	\$268.22	75.4%
Colorado Springs, CO	59			0821	\$193.24	\$255.39	75.7%
Colorado Springs, CO	59			0821	\$193.24	\$244.40	79.1%
Colorado Springs, CO	59			0821	\$193.24	\$252.87	76.4%

## Appendix C2: Dialysis/Nephrology Rate Ratio Results

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Colorado Springs, CO	71			0821	\$193.24	\$252.87	76.4%
Colorado Springs, CO	71			0821	\$193.24	\$252.37	76.6%
Colorado Springs, CO	71			0821	\$193.24	\$255.39	75.7%
Colorado Springs, CO	71			0821	\$193.24	\$258.40	74.8%
Colorado Springs, CO	71			0821	\$193.24	\$247.33	78.1%
Colorado Springs, CO	71			0821	\$193.24	\$244.40	79.1%
Colorado Springs, CO	71			0821	\$193.24	\$261.48	73.9%
Colorado Springs, CO	73			0821	\$193.24	\$346.53	55.8%
Colorado Springs, CO	74	74		0821	\$193.24	\$255.39	75.7%
Colorado Springs, CO	76			0821	\$193.24	\$255.39	75.7%
Colorado Springs, CO	84			0821	\$193.24	\$244.40	79.1%
Colorado Springs, CO	84			0821	\$193.24	\$252.87	76.4%
Colorado Springs, CO	84			0821	\$193.24	\$255.39	75.7%
Colorado Springs, CO	84			0821	\$193.24	\$252.37	76.6%
Colorado Springs, CO	D2	74		0821	\$193.24	\$255.39	75.7%
Colorado Springs, CO	D9			0821	\$193.24	\$252.87	76.4%
Colorado Springs, CO	DR			0821	\$193.24	\$255.39	75.7%
Colorado Springs, CO	DR			0821	\$193.24	\$252.37	76.6%
Colorado Springs, CO	DR			0821	\$193.24	\$252.87	76.4%
Colorado Springs, CO	73			0841	\$193.24	\$346.53	55.8%
Colorado Springs, CO	6			0851	\$193.24	\$252.87	76.4%
Colorado Springs, CO	73			0851	\$193.24	\$346.53	55.8%
Colorado Springs, CO	73			0851	\$193.24	\$344.02	56.2%
Colorado Springs, CO	74	74		0851	\$82.82	\$109.45	75.7%

## Appendix C2: Dialysis/Nephrology Rate Ratio Results

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Colorado Springs, CO	74	74		0851	\$82.82	\$108.16	76.6%
Colorado Springs, CO	74	74		0851	\$82.82	\$108.37	76.4%
Colorado Springs, CO	74	74		0851	\$82.82	\$114.63	72.3%
Colorado Springs, CO	74			0851	\$82.82	\$109.45	75.7%
Colorado Springs, CO	74			0851	\$82.82	\$108.16	76.6%
Colorado Springs, CO	74			0851	\$82.82	\$108.37	76.4%
Colorado Springs, CO	74			0851	\$82.82	\$114.63	72.3%
Colorado Springs, CO	71			0881	\$193.24	\$252.37	76.6%
Colorado Springs, CO	71			0881	\$193.24	\$255.39	75.7%
Denver, Aurora, Lakewood	17			0821	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	59			0821	\$208.29	\$244.89	85.1%
Denver, Aurora, Lakewood	59			0821	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	59			0821	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	59			0821	\$208.29	\$231.98	89.8%
Denver, Aurora, Lakewood	59			0821	\$208.29	\$257.89	80.8%
Denver, Aurora, Lakewood	59			0821	\$208.29	\$257.12	81.0%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$268.22	77.7%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$257.89	80.8%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$244.89	85.1%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$341.20	61.0%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$244.40	85.2%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$257.12	81.0%

## Appendix C2: Dialysis/Nephrology Rate Ratio Results

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Denver, Aurora, Lakewood	71			0821	\$208.29	\$231.98	89.8%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$258.90	80.5%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$247.33	84.2%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$285.14	73.0%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$341.86	60.9%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$261.48	79.7%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$264.25	78.8%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$252.87	82.4%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$335.80	62.0%
Denver, Aurora, Lakewood	71			0821	\$208.29	\$258.39	80.6%
Denver, Aurora, Lakewood	73		74	0821	\$208.29	\$353.45	58.9%
Denver, Aurora, Lakewood	73			0821	\$208.29	\$353.45	58.9%
Denver, Aurora, Lakewood	73			0821	\$208.29	\$356.02	58.5%
Denver, Aurora, Lakewood	74	74		0821	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	74	74		0821	\$208.29	\$341.20	61.0%
Denver, Aurora, Lakewood	74	74		0821	\$208.29	\$232.44	89.6%
Denver, Aurora, Lakewood	74		74	0821	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	74			0821	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	76		74	0821	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	76			0821	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	76			0821	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	84			0821	\$208.29	\$257.12	81.0%
Denver, Aurora, Lakewood	84			0821	\$208.29	\$257.89	80.8%
Denver, Aurora, Lakewood	84			0821	\$208.29	\$260.97	79.8%

## Appendix C2: Dialysis/Nephrology Rate Ratio Results **CBIZ Optumas**

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Denver, Aurora, Lakewood	84			0821	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	84			0821	\$208.29	\$255.39	81.6%
Denver, Aurora, Lakewood	A6			0821	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	D0			0821	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	D0			0821	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	D9			0821	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	D9			0821	\$208.29	\$257.89	80.8%
Denver, Aurora, Lakewood	D9			0821	\$208.29	\$247.33	84.2%
Denver, Aurora, Lakewood	D9			0821	\$208.29	\$258.90	80.5%
Denver, Aurora, Lakewood	DR			0821	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	DR			0821	\$208.29	\$257.89	80.8%
Denver, Aurora, Lakewood	DR			0821	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	DR			0821	\$208.29	\$247.33	84.2%
Denver, Aurora, Lakewood				0821	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	74	74		0829	\$208.29	\$257.89	80.8%
Denver, Aurora, Lakewood				0829	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	71			0831	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	73		74	0841	\$89.27	\$353.45	25.3%
Denver, Aurora, Lakewood	73			0841	\$208.29	\$343.40	60.7%
Denver, Aurora, Lakewood	73			0841	\$208.29	\$356.02	58.5%
Denver, Aurora, Lakewood	73			0841	\$208.29	\$353.45	58.9%
Denver, Aurora, Lakewood	74	74		0841	\$89.27	\$111.85	79.8%
Denver, Aurora, Lakewood	74	74		0841	\$89.27	\$110.74	80.6%
Denver, Aurora, Lakewood	74		74	0841	\$89.27	\$110.74	80.6%



## Appendix C2: Dialysis/Nephrology Rate Ratio Results **CBIZ Optumas**

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Denver, Aurora, Lakewood	74			0841	\$89.27	\$110.52	80.8%
Denver, Aurora, Lakewood	74			0841	\$89.27	\$111.85	79.8%
Denver, Aurora, Lakewood	76		74	0841	\$89.27	\$258.40	34.5%
Denver, Aurora, Lakewood	76			0841	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	DR			0841	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood				0841	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	71			0851	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	73		74	0851	\$89.27	\$353.45	25.3%
Denver, Aurora, Lakewood	73			0851	\$208.29	\$378.39	55.0%
Denver, Aurora, Lakewood	73			0851	\$208.29	\$343.40	60.7%
Denver, Aurora, Lakewood	73			0851	\$208.29	\$356.02	58.5%
Denver, Aurora, Lakewood	73			0851	\$208.29	\$353.45	58.9%
Denver, Aurora, Lakewood	74	74		0851	\$89.27	\$117.14	76.2%
Denver, Aurora, Lakewood	74	74		0851	\$89.27	\$111.85	79.8%
Denver, Aurora, Lakewood	74	74		0851	\$89.27	\$121.43	73.5%
Denver, Aurora, Lakewood	74	74		0851	\$89.27	\$110.74	80.6%
Denver, Aurora, Lakewood	74	74		0851	\$89.27	\$111.85	79.8%
Denver, Aurora, Lakewood	74	74		0851	\$89.27	\$117.14	76.2%
Denver, Aurora, Lakewood	74	74		0851	\$89.27	\$121.43	73.5%
Denver, Aurora, Lakewood	74	74		0851	\$89.27	\$110.52	80.8%
Denver, Aurora, Lakewood	74	74		0851	\$89.27	\$122.20	73.0%
Denver, Aurora, Lakewood	74	74		0851	\$89.27	\$112.06	79.7%
Denver, Aurora, Lakewood	74	74		0851	\$89.27	\$110.41	80.9%
Denver, Aurora, Lakewood	74		74	0851	\$89.27	\$110.74	80.6%

## Appendix C2: Dialysis/Nephrology Rate Ratio Results

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Denver, Aurora, Lakewood	74			0851	\$89.27	\$111.85	79.8%
Denver, Aurora, Lakewood	74			0851	\$89.27	\$110.52	80.8%
Denver, Aurora, Lakewood	74			0851	\$89.27	\$121.43	73.5%
Denver, Aurora, Lakewood	74			0851	\$89.27	\$117.14	76.2%
Denver, Aurora, Lakewood	74			0851	\$89.27	\$110.74	80.6%
Denver, Aurora, Lakewood	74			0851	\$89.27	\$122.20	73.0%
Denver, Aurora, Lakewood	74			0851	\$89.27	\$112.06	79.7%
Denver, Aurora, Lakewood	76		74	0851	\$89.27	\$258.40	34.5%
Denver, Aurora, Lakewood	D0	74		0851	\$89.27	\$257.89	34.6%
Denver, Aurora, Lakewood	D1			0851	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	D1			0851	\$208.29	\$257.89	80.8%
Denver, Aurora, Lakewood	D2	74		0851	\$89.27	\$258.40	34.5%
Denver, Aurora, Lakewood	D2	74		0851	\$89.27	\$260.97	34.2%
Denver, Aurora, Lakewood	D2			0851	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood	DR			0851	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood				0851	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood				0851	\$208.29	\$260.97	79.8%
Denver, Aurora, Lakewood				0851	\$208.29	\$257.89	80.8%
Denver, Aurora, Lakewood	71			0881	\$208.29	\$257.89	80.8%
Denver, Aurora, Lakewood	71			0881	\$208.29	\$244.40	85.2%
Denver, Aurora, Lakewood	71			0881	\$208.29	\$258.40	80.6%
Denver, Aurora, Lakewood	71			0881	\$208.29	\$258.90	80.5%
Denver, Aurora, Lakewood	71			0881	\$208.29	\$247.33	84.2%
Denver, Aurora, Lakewood	71			0881	\$208.29	\$260.97	79.8%

## Appendix C2: Dialysis/Nephrology Rate Ratio Results

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Fort Collins, CO	59			0821	\$207.65	\$260.59	79.7%
Fort Collins, CO	59			0821	\$207.65	\$258.02	80.5%
Fort Collins, CO	71			0821	\$207.65	\$244.40	85.0%
Fort Collins, CO	71			0821	\$207.65	\$247.33	84.0%
Fort Collins, CO	71			0821	\$207.65	\$258.02	80.5%
Fort Collins, CO	71			0821	\$207.65	\$284.72	72.9%
Fort Collins, CO	71			0821	\$207.65	\$260.59	79.7%
Fort Collins, CO	84			0821	\$207.65	\$260.59	79.7%
Fort Collins, CO	84			0821	\$207.65	\$257.51	80.6%
Fort Collins, CO	DR			0821	\$207.65	\$247.33	84.0%
Fort Collins, CO	DR			0821	\$207.65	\$260.59	79.7%
Fort Collins, CO				0829	\$207.65	\$260.59	79.7%
Fort Collins, CO	74			0851	\$88.99	\$111.68	79.7%
Grand Junction, CO	71			0821	\$200.09	\$250.23	80.0%
Greeley, CO	6			0821	\$197.09	\$244.89	80.5%
Greeley, CO	59			0821	\$197.09	\$244.89	80.5%
Greeley, CO	71			0821	\$197.09	\$244.40	80.6%
Greeley, CO	71			0821	\$197.09	\$244.89	80.5%
Greeley, CO	71			0821	\$197.09	\$243.67	80.9%
Greeley, CO	71			0821	\$197.09	\$247.33	79.7%
Greeley, CO	71			0821	\$197.09	\$270.23	72.9%
Greeley, CO	71			0821	\$197.09	\$258.02	76.4%
Greeley, CO	74	74		0821	\$197.09	\$243.67	80.9%
Greeley, CO	76			0821	\$197.09	\$244.40	80.6%

## Appendix C2: Dialysis/Nephrology Rate Ratio Results

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Greeley, CO	84			0821	\$197.09	\$244.40	80.6%
Greeley, CO	84			0821	\$197.09	\$265.05	74.4%
Greeley, CO	84			0821	\$197.09	\$264.25	74.6%
Greeley, CO	84			0821	\$197.09	\$244.89	80.5%
Greeley, CO	A6			0821	\$197.09	\$244.89	80.5%
Greeley, CO	D9			0821	\$197.09	\$258.02	76.4%
Greeley, CO	DR			0821	\$197.09	\$244.89	80.5%
Greeley, CO	73			0841	\$197.09	\$344.50	57.2%
Greeley, CO	74	74		0851	\$84.47	\$104.43	80.9%
Greeley, CO	74	74		0851	\$84.47	\$104.95	80.5%
Greeley, CO	74			0851	\$84.47	\$104.95	80.5%
Greeley, CO	71			0881	\$197.09	\$244.89	80.5%
Greeley, CO	71			0881	\$197.09	\$258.02	76.4%
Greeley, CO	D9			0881	\$197.09	\$258.02	76.4%
Pueblo, CO	59			0821	\$181.50	\$234.76	77.3%
Pueblo, CO	59			0821	\$181.50	\$231.98	78.2%
Pueblo, CO	71			0821	\$181.50	\$234.76	77.3%
Pueblo, CO	71			0821	\$181.50	\$232.44	78.1%
Pueblo, CO	71			0821	\$181.50	\$231.98	78.2%
Pueblo, CO	71			0821	\$181.50	\$255.39	71.1%
Pueblo, CO	71			0821	\$181.50	\$306.92	59.1%
Pueblo, CO	71			0821	\$181.50	\$231.29	78.5%
Pueblo, CO	74	74		0821	\$181.50	\$234.76	77.3%
Pueblo, CO	74	74		0821	\$181.50	\$232.44	78.1%

## Appendix C2: Dialysis/Nephrology Rate Ratio Results

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Pueblo, CO	74			0821	\$181.50	\$232.44	78.1%
Pueblo, CO	84			0821	\$181.50	\$234.76	77.3%
Pueblo, CO	84			0821	\$181.50	\$232.44	78.1%
Pueblo, CO	84			0821	\$181.50	\$231.98	78.2%
Pueblo, CO	A6			0821	\$181.50	\$232.44	78.1%
Pueblo, CO	A6			0821	\$181.50	\$231.98	78.2%
Pueblo, CO	73			0841	\$181.50	\$311.50	58.3%
Pueblo, CO	73			0851	\$181.50	\$311.50	58.3%
Pueblo, CO	74	74		0851	\$77.79	\$99.62	78.1%
Pueblo, CO	74	74		0851	\$77.79	\$99.62	78.1%
Pueblo, CO	74			0851	\$77.79	\$99.62	78.1%
Pueblo, CO	74			0851	\$77.79	\$100.61	77.3%
Rural Colorado	17			0821	\$200.89	\$260.85	77.0%
Rural Colorado	59			0821	\$200.89	\$260.33	77.2%
Rural Colorado	59			0821	\$200.89	\$263.44	76.3%
Rural Colorado	71			0821	\$200.89	\$281.13	71.5%
Rural Colorado	71			0821	\$200.89	\$287.28	69.9%
Rural Colorado	71			0821	\$200.89	\$287.84	69.8%
Rural Colorado	71			0821	\$200.89	\$260.85	77.0%
Rural Colorado	71			0821	\$200.89	\$249.18	80.6%
Rural Colorado	71			0821	\$200.89	\$260.33	77.2%
Rural Colorado	71			0821	\$200.89	\$263.44	76.3%
Rural Colorado	71			0821	\$200.89	\$259.82	77.3%
Rural Colorado	71			0821	\$200.89	\$249.62	80.5%

## Appendix C2: Dialysis/Nephrology Rate Ratio Results

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Rural Colorado	71			0821	\$200.89	\$262.93	76.4%
Rural Colorado	71			0821	\$200.89	\$234.19	85.8%
Rural Colorado	71			0821	\$200.89	\$246.72	81.4%
Rural Colorado	71			0821	\$200.89	\$259.55	77.4%
Rural Colorado	71			0821	\$200.89	\$233.72	86.0%
Rural Colorado	71			0821	\$200.89	\$341.86	58.8%
Rural Colorado	73			0821	\$200.89	\$340.18	59.1%
Rural Colorado	74	74		0821	\$200.89	\$263.44	76.3%
Rural Colorado	74	74		0821	\$200.89	\$260.85	77.0%
Rural Colorado	74			0821	\$200.89	\$263.44	76.3%
Rural Colorado	74			0821	\$200.89	\$260.85	77.0%
Rural Colorado	76	74		0821	\$200.89	\$260.85	77.0%
Rural Colorado	84			0821	\$200.89	\$257.62	78.0%
Rural Colorado	84			0821	\$200.89	\$260.33	77.2%
Rural Colorado	84			0821	\$200.89	\$260.85	77.0%
Rural Colorado	84			0821	\$200.89	\$257.12	78.1%
Rural Colorado	84			0821	\$200.89	\$260.34	77.2%
Rural Colorado	D0			0821	\$200.89	\$260.85	77.0%
Rural Colorado	DR			0821	\$200.89	\$260.85	77.0%
Rural Colorado				0821	\$200.89	\$260.85	77.0%
Rural Colorado				0821	\$200.89	\$234.19	85.8%
Rural Colorado	73			0841	\$200.89	\$337.07	59.6%
Rural Colorado	73			0841	\$200.89	\$337.58	59.5%
Rural Colorado	73			0841	\$200.89	\$356.25	56.4%

Dialysis/Nephrology Facility Rate Ratio Results							
Assigned Rate Area	Condition Code 1	Condition Code 2	Condition Code 3	Revenue Code	Colorado Rate	Benchmark Rate	Rate Ratio
Rural Colorado	74	74		0841	\$86.10	\$111.79	77.0%
Rural Colorado	74			0841	\$86.10	\$111.79	77.0%
Rural Colorado	71			0851	\$200.89	\$260.85	77.0%
Rural Colorado	73			0851	\$200.89	\$337.07	59.6%
Rural Colorado	73			0851	\$200.89	\$337.58	59.5%
Rural Colorado	73			0851	\$200.89	\$356.25	56.4%
Rural Colorado	74	74		0851	\$86.10	\$111.79	77.0%
Rural Colorado	74	74		0851	\$86.10	\$112.90	76.3%
Rural Colorado	74	74		0851	\$86.10	\$121.67	70.8%
Rural Colorado	74			0851	\$86.10	\$111.79	77.0%
Rural Colorado	74			0851	\$86.10	\$111.57	77.2%
Rural Colorado	74			0851	\$86.10	\$112.90	76.3%
Rural Colorado	74			0851	\$86.10	\$121.67	70.8%
Rural Colorado	76	74		0851	\$86.10	\$260.85	33.0%
Rural Colorado	D0	74		0851	\$86.10	\$263.44	32.7%
Rural Colorado	D2	74		0851	\$86.10	\$260.85	33.0%
Rural Colorado	D2	74		0851	\$86.10	\$263.44	32.7%
Rural Colorado	D2			0851	\$200.89	\$263.44	76.3%
Rural Colorado	71			0881	\$200.89	\$260.85	77.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

These appendices show the rate ratios for all unique combinations of Colorado Medicaid and benchmark comparison rates found in the rate comparison benchmark analysis at a procedure code level. Procedure codes are duplicated to the extent that Medicare's facility/non-facility break-out rates are applied.

The services analyzed in the dialysis rate comparison benchmark analysis is repriced using methodology that incorporates the following data elements:

- Procedure Code
- Modifier 1
- Facility/Non-Facility

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
80047		METABOLIC PANEL IONIZED CA	Medicare Non-Facility Rate	\$13.73	\$13.73	100.0%
80048		METABOLIC PANEL TOTAL CA	Medicare Facility/Non-Facility Rate	\$8.46	\$8.46	100.0%
80050		GENERAL HEALTH PANEL	Other States' Average Rate	\$46.70	\$36.00	129.7%
80051		ELECTROLYTE PANEL	Medicare Facility/Non-Facility Rate	\$7.01	\$7.01	100.0%
80053		COMPREHEN METABOLIC PANEL	Medicare Facility/Non-Facility Rate	\$10.56	\$10.56	100.0%
80055		OBSTETRIC PANEL	Medicare Facility/Non-Facility Rate	\$47.81	\$47.81	100.0%
80061		LIPID PANEL	Medicare Facility/Non-Facility Rate	\$13.39	\$13.39	100.0%
80069		RENAL FUNCTION PANEL	Medicare Facility/Non-Facility Rate	\$8.68	\$8.68	100.0%
80074		ACUTE HEPATITIS PANEL	Medicare Facility/Non-Facility Rate	\$47.63	\$47.63	100.0%
80076		HEPATIC FUNCTION PANEL	Medicare Facility/Non-Facility Rate	\$8.17	\$8.17	100.0%
80081		OBSTETRIC PANEL	Medicare Non-Facility Rate	\$74.86	\$74.86	100.0%
80145		DRUG ASSAY ADALIMUMAB	Medicare Non-Facility Rate	\$38.57	\$38.57	100.0%
80150		ASSAY OF AMIKACIN	Medicare Non-Facility Rate	\$15.08	\$15.08	100.0%



## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
80155		DRUG ASSAY CAFFEINE	Medicare Non-Facility Rate	\$38.57	\$38.57	100.0%
80156		ASSAY CARBAMAZEPINE TOTAL	Medicare Facility/Non-Facility Rate	\$14.57	\$14.57	100.0%
80157		ASSAY CARBAMAZEPINE FREE	Medicare Non-Facility Rate	\$13.25	\$13.25	100.0%
80158		DRUG ASSAY CYCLOSPORINE	Medicare Non-Facility Rate	\$18.05	\$18.05	100.0%
80159		DRUG ASSAY CLOZAPINE	Medicare Facility/Non-Facility Rate	\$20.15	\$20.15	100.0%
80162		ASSAY OF DIGOXIN TOTAL	Medicare Non-Facility Rate	\$13.28	\$13.28	100.0%
80164		ASSAY DIPROPYLACETIC ACD TOT	Medicare Facility/Non-Facility Rate	\$13.54	\$13.54	100.0%
80165		DIPROPYLACETIC ACID FREE	Medicare Non-Facility Rate	\$13.54	\$13.54	100.0%
80168		ASSAY OF ETHOSUXIMIDE	Medicare Non-Facility Rate	\$16.34	\$16.34	100.0%
80169		DRUG ASSAY EVEROLIMUS	Medicare Non-Facility Rate	\$13.73	\$13.73	100.0%
80170		ASSAY OF GENTAMICIN	Medicare Non-Facility Rate	\$16.38	\$16.38	100.0%
80171		DRUG SCREEN QUANT GABAPENTIN	Medicare Non-Facility Rate	\$21.67	\$21.67	100.0%
80173		ASSAY OF HALOPERIDOL	Medicare Non-Facility Rate	\$15.78	\$15.78	100.0%
80175		DRUG SCREEN QUAN LAMOTRIGINE	Medicare Non-Facility Rate	\$13.25	\$13.25	100.0%
80177		DRUG SCR N QUAN LEVETIRACETAM	Medicare Non-Facility Rate	\$13.25	\$13.25	100.0%
80178		ASSAY OF LITHIUM	Medicare Facility/Non-Facility Rate	\$6.61	\$6.61	100.0%
80180		DRUG SCR N QUAN MYCOPHENOLATE	Medicare Non-Facility Rate	\$18.05	\$18.05	100.0%
80183		DRUG SCR N QUANT OXCARBAZEPIN	Medicare Non-Facility Rate	\$13.25	\$13.25	100.0%
80184		ASSAY OF PHENOBARBITAL	Medicare Non-Facility Rate	\$15.30	\$15.30	100.0%
80185		ASSAY OF PHENYTOIN TOTAL	Medicare Non-Facility Rate	\$13.25	\$13.25	100.0%
80186		ASSAY OF PHENYTOIN FREE	Medicare Non-Facility Rate	\$13.76	\$13.76	100.0%
80187		DRUG ASSAY POSACONAZOLE	Medicare Non-Facility Rate	\$27.11	\$27.11	100.0%
80188		ASSAY OF PRIMIDONE	Medicare Non-Facility Rate	\$16.59	\$16.59	100.0%
80195		ASSAY OF SIROLIMUS	Medicare Non-Facility Rate	\$13.73	\$13.73	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
80197		ASSAY OF TACROLIMUS	Medicare Non-Facility Rate	\$13.73	\$13.73	100.0%
80198		ASSAY OF THEOPHYLLINE	Medicare Non-Facility Rate	\$14.14	\$14.14	100.0%
80200		ASSAY OF TOBRAMYCIN	Medicare Non-Facility Rate	\$16.13	\$16.13	100.0%
80201		ASSAY OF TOPIRAMATE	Medicare Non-Facility Rate	\$11.92	\$11.92	100.0%
80202		ASSAY OF VANCOMYCIN	Medicare Non-Facility Rate	\$13.54	\$13.54	100.0%
80203		DRUG SCREEN QUANT ZONISAMIDE	Medicare Non-Facility Rate	\$13.25	\$13.25	100.0%
80230		DRUG ASSAY INFliximab	Medicare Non-Facility Rate	\$38.57	\$38.57	100.0%
80235		DRUG ASSAY LACOSAMIDE	Medicare Non-Facility Rate	\$27.11	\$27.11	100.0%
80280		DRUG ASSAY VEDOLIZUMAB	Medicare Non-Facility Rate	\$38.57	\$38.57	100.0%
80285		DRUG ASSAY VORICONAZOLE	Medicare Non-Facility Rate	\$27.11	\$27.11	100.0%
80299		QUANTITATIVE ASSAY DRUG	Medicare Non-Facility Rate	\$18.64	\$18.64	100.0%
80305		DRUG TEST PRSMV DIR OPT OBS	Medicare Facility/Non-Facility Rate	\$12.60	\$12.60	100.0%
80306		DRUG TEST PRSMV INSTRMNT	Medicare Non-Facility Rate	\$17.14	\$17.14	100.0%
80307		DRUG TEST PRSMV CHEM ANALYZR	Medicare Facility/Non-Facility Rate	\$16.18	\$62.14	26.0%
80320		DRUG SCREEN QUANTALCOHOLS	Medicare Facility/Non-Facility Rate	\$17.51	\$3.66	478.4%
80321		ALCOHOLS BIOMARKERS 1OR 2	Other States' Average Rate	\$17.51	\$4.19	417.9%
80322		ALCOHOLS BIOMARKERS 3/MORE	Other States' Average Rate	\$17.51	\$3.51	498.9%
80323		ALKALOIDS NOS	Other States' Average Rate	\$17.51	\$4.11	426.0%
80324		DRUG SCREEN AMPHETAMINES 1/2	Other States' Average Rate	\$17.51	\$4.19	417.9%
80325		AMPHETAMINES 3OR 4	Other States' Average Rate	\$17.51	\$1.54	1137.0%
80326		AMPHETAMINES 5 OR MORE	Other States' Average Rate	\$17.51	\$4.11	426.0%
80329		ANALGESICS NON-OPIOID 1 OR 2	Medicare Facility/Non-Facility Rate	\$17.51	\$3.66	478.4%
80330		ANALGESICS NON-OPIOID 3-5	Other States' Average Rate	\$17.51	\$4.79	365.6%
80331		ANALGESICS NON-OPIOID 6/MORE	Other States' Average Rate	\$17.51	\$3.51	498.9%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
80332		ANTIDEPRESSANTS CLASS 1 OR 2	Other States' Average Rate	\$17.51	\$3.66	478.4%
80333		ANTIDEPRESSANTS CLASS 3-5	Other States' Average Rate	\$17.51	\$4.79	365.6%
80334		ANTIDEPRESSANTS CLASS 6/MORE	Other States' Average Rate	\$17.51	\$3.51	498.9%
80335		ANTIDEPRESSANT TRICYCLIC 1/2	Other States' Average Rate	\$17.51	\$1.54	1137.0%
80336		ANTIDEPRESSANT TRICYCLIC 3-5	Other States' Average Rate	\$17.51	\$1.54	1137.0%
80337		TRICYCLIC & CYCLICALS 6/MORE	Other States' Average Rate	\$17.51	\$3.66	478.4%
80338		ANTIDEPRESSANT NOT SPECIFIED	Other States' Average Rate	\$17.51	\$3.66	478.4%
80339		ANTIEPILEPTICS NOS 1-3	Other States' Average Rate	\$17.51	\$3.29	532.2%
80340		ANTIEPILEPTICS NOS 4-6	Other States' Average Rate	\$17.51	\$4.79	365.6%
80341		ANTIEPILEPTICS NOS 7/MORE	Other States' Average Rate	\$17.51	\$3.51	498.9%
80342		ANTIPSYCHOTICS NOS 1-3	Other States' Average Rate	\$17.51	\$3.66	478.4%
80343		ANTIPSYCHOTICS NOS 4-6	Other States' Average Rate	\$17.51	\$3.51	498.9%
80344		ANTIPSYCHOTICS NOS 7/MORE	Other States' Average Rate	\$17.51	\$4.79	365.6%
80345		DRUG SCREENING BARBITURATES	Other States' Average Rate	\$17.51	\$4.11	426.0%
80346		BENZODIAZEPINES1-12	Other States' Average Rate	\$17.51	\$4.19	417.9%
80347		BENZODIAZEPINES 13 OR MORE	Other States' Average Rate	\$17.51	\$1.54	1137.0%
80348		DRUG SCREENING BUPRENORPHINE	Other States' Average Rate	\$17.51	\$4.19	417.9%
80349		CANNABINOIDS NATURAL	Other States' Average Rate	\$17.51	\$4.19	417.9%
80350		CANNABINOIDS SYNTHETIC 1-3	Other States' Average Rate	\$17.51	\$3.51	498.9%
80351		CANNABINOIDS SYNTHETIC 4-6	Other States' Average Rate	\$17.51	\$1.54	1137.0%
80352		CANNABINOID SYNTHETIC 7/MORE	Other States' Average Rate	\$17.51	\$1.54	1137.0%
80353		DRUG SCREENING COCAINE	Other States' Average Rate	\$17.51	\$4.19	417.9%
80354		DRUG SCREENING FENTANYL	Other States' Average Rate	\$17.51	\$4.19	417.9%
80355		GABAPENTIN NON-BLOOD	Other States' Average Rate	\$17.51	\$4.79	365.6%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
80356		HEROIN METABOLITE	Other States' Average Rate	\$17.51	\$3.61	485.0%
80357		KETAMINE AND NORKETAMINE	Other States' Average Rate	\$17.51	\$3.17	552.4%
80358		DRUG SCREENING METHADONE	Other States' Average Rate	\$17.51	\$4.11	426.0%
80359		METHYLENEDIOXYAMPHETAMINES	Other States' Average Rate	\$17.51	\$4.19	417.9%
80360		METHYLPHENIDATE	Other States' Average Rate	\$17.51	\$3.17	552.4%
80361		OPIATES 1 OR MORE	Other States' Average Rate	\$17.51	\$4.19	417.9%
80362		OPIOIDS & OPIATE ANALOGS 1/2	Other States' Average Rate	\$17.51	\$4.19	417.9%
80363		OPIOIDS & OPIATE ANALOGS 3/4	Other States' Average Rate	\$17.51	\$3.29	532.2%
80364		OPIOID & OPIATE ANALOG 5/MORE	Other States' Average Rate	\$17.51	\$4.79	365.6%
80365		DRUG SCREENING OXYCODONE	Other States' Average Rate	\$17.51	\$4.11	426.0%
80366		DRUG SCREENING PREGABALIN	Other States' Average Rate	\$17.51	\$3.17	552.4%
80367		DRUG SCREENING PROPOXYPHENE	Other States' Average Rate	\$17.51	\$4.19	417.9%
80368		SEDATIVE HYPNOTICS	Other States' Average Rate	\$17.51	\$3.66	478.4%
80369		SKELETAL MUSCLE RELAXANT 1/2	Other States' Average Rate	\$17.51	\$3.66	478.4%
80370		SKEL MUSC RELAXANT 3 OR MORE	Other States' Average Rate	\$17.51	\$3.66	478.4%
80371		STIMULANTS SYNTHETIC	Other States' Average Rate	\$17.51	\$1.54	1137.0%
80372		DRUG SCREENING TAPENTADOL	Other States' Average Rate	\$17.51	\$4.19	417.9%
80373		DRUG SCREENING TRAMADOL	Other States' Average Rate	\$17.51	\$4.19	417.9%
80374		STEREISOMER ANALYSIS	Other States' Average Rate	\$17.51	\$1.54	1137.0%
80375		DRUG/SUBSTANCE NOS 1-3	Other States' Average Rate	\$17.51	\$3.66	478.4%
80376		DRUG/SUBSTANCE NOS 4-6	Other States' Average Rate	\$17.51	\$3.51	498.9%
80377		DRUG/SUBSTANCE NOS 7/MORE	Other States' Average Rate	\$17.51	\$3.66	478.4%
80400		ACTH STIMULATION PANEL	Medicare Non-Facility Rate	\$32.62	\$32.62	100.0%
80406		ACTH STIMULATION PANEL	Medicare Non-Facility Rate	\$78.26	\$78.26	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
80500		LAB PATHOLOGY CONSULTATION	Medicare Facility/Non-Facility Rate	\$19.91	\$10.82	184.0%
80502		LAB PATHOLOGY CONSULTATION	Other States' Average Rate	\$52.56	\$34.87	150.7%
81000		URINALYSIS NONAUTO W/SCOPE	Medicare Non-Facility Rate	\$4.02	\$4.02	100.0%
81001		URINALYSIS AUTO W/SCOPE	Medicare Facility/Non-Facility Rate	\$3.17	\$3.17	100.0%
81002		URINALYSIS NONAUTO W/O SCOPE	Medicare Facility/Non-Facility Rate	\$3.48	\$3.48	100.0%
81003		URINALYSIS AUTO W/O SCOPE	Medicare Facility/Non-Facility Rate	\$2.25	\$2.25	100.0%
81005		URINALYSIS	Medicare Non-Facility Rate	\$2.17	\$2.17	100.0%
81007		URINE SCREEN FOR BACTERIA	Medicare Non-Facility Rate	\$29.98	\$29.98	100.0%
81015		MICROSCOPIC EXAM OF URINE	Medicare Non-Facility Rate	\$3.05	\$3.05	100.0%
81025		URINE PREGNANCY TEST	Medicare Facility/Non-Facility Rate	\$8.61	\$8.61	100.0%
81050		URINALYSIS VOLUME MEASURE	Medicare Non-Facility Rate	\$3.64	\$3.64	100.0%
81120		IDH1 COMMON VARIANTS	Medicare Non-Facility Rate	\$193.25	\$193.25	100.0%
81121		IDH2 COMMON VARIANTS	Medicare Non-Facility Rate	\$295.79	\$295.79	100.0%
81162		BRCA1&2 GEN FULL SEQ DUP/DEL	Medicare Non-Facility Rate	\$1,824.88	\$1,824.88	100.0%
81170		ABL1 GENE	Medicare Non-Facility Rate	\$300.00	\$300.00	100.0%
81173		AR GENE FULL GENE SEQUENCE	Medicare Non-Facility Rate	\$301.35	\$301.35	100.0%
81184		CACNA1A GEN DETC ABNOR ALLEL	Medicare Non-Facility Rate	\$137.00	\$137.00	100.0%
81185		CACNA1A GENE FULL GENE SEQ	Medicare Non-Facility Rate	\$846.27	\$846.27	100.0%
81187		CNBP GENE DETC ABNOR ALLELE	Medicare Non-Facility Rate	\$137.00	\$137.00	100.0%
81189		CSTB GENE FULL GENE SEQUENCE	Medicare Non-Facility Rate	\$274.83	\$274.83	100.0%
81200		ASPA GENE	Medicare Non-Facility Rate	\$47.25	\$47.25	100.0%
81202		APC GENE KNOWN FAM VARIANTS	Medicare Non-Facility Rate	\$280.00	\$280.00	100.0%
81203		APC GENE DUP/DELET VARIANTS	Medicare Non-Facility Rate	\$200.00	\$200.00	100.0%
81206		BCR/ABL1 GENE MAJOR BP	Medicare Non-Facility Rate	\$163.96	\$163.96	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
81207		BCR/ABL1 GENE MINOR BP	Medicare Non-Facility Rate	\$144.84	\$144.84	100.0%
81208		BCR/ABL1 GENE OTHER BP	Medicare Non-Facility Rate	\$214.62	\$214.62	100.0%
81209		BLM GENE	Medicare Non-Facility Rate	\$39.31	\$39.31	100.0%
81210		BRAF GENE	Medicare Facility/Non-Facility Rate	\$175.40	\$175.40	100.0%
81212		BRCA1&2 185&5385&6174 VRNT	Medicare Non-Facility Rate	\$440.00	\$440.00	100.0%
81218		CEBPA GENE FULL SEQUENCE	Medicare Non-Facility Rate	\$241.90	\$241.90	100.0%
81219		CALR GENE COM VARIANTS	Medicare Non-Facility Rate	\$121.63	\$121.63	100.0%
81220		CFTR GENE COM VARIANTS	Medicare Non-Facility Rate	\$556.60	\$556.60	100.0%
81222		CFTR GENE DUP/DELET VARIANTS	Medicare Non-Facility Rate	\$435.07	\$435.07	100.0%
81223		CFTR GENE FULL SEQUENCE	Medicare Non-Facility Rate	\$499.00	\$499.00	100.0%
81224		CFTR GENE INTRON POLY T	Medicare Non-Facility Rate	\$168.75	\$168.75	100.0%
81229		CYTOGEN M ARRAY COPY NO&SNP	Medicare Non-Facility Rate	\$1,160.00	\$1,160.00	100.0%
81234		DMPK GENE DETC ABNOR ALLELE	Medicare Non-Facility Rate	\$137.00	\$137.00	100.0%
81235		EGFR GENE COM VARIANTS	Medicare Non-Facility Rate	\$324.58	\$324.58	100.0%
81236		EZH2 GENE FULL GENE SEQUENCE	Medicare Non-Facility Rate	\$282.88	\$282.88	100.0%
81238		F9 FULL GENE SEQUENCE	Medicare Non-Facility Rate	\$600.00	\$600.00	100.0%
81240		F2 GENE	Medicare Non-Facility Rate	\$65.69	\$65.69	100.0%
81241		F5 GENE	Medicare Non-Facility Rate	\$73.37	\$73.37	100.0%
81242		FANCC GENE	Medicare Non-Facility Rate	\$36.62	\$36.62	100.0%
81243		FMR1 GENE DETECTION	Medicare Non-Facility Rate	\$57.04	\$57.04	100.0%
81244		FMR1 GENE CHARAC ALLELES	Medicare Non-Facility Rate	\$44.89	\$44.89	100.0%
81245		FLT3 GENE	Medicare Non-Facility Rate	\$165.51	\$165.51	100.0%
81249		G6PD FULL GENE SEQUENCE	Medicare Non-Facility Rate	\$600.00	\$600.00	100.0%
81250		G6PC GENE	Medicare Non-Facility Rate	\$58.49	\$58.49	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
81251		GBA GENE	Medicare Non-Facility Rate	\$47.25	\$47.25	100.0%
81252		GJB2 GENE FULL SEQUENCE	Medicare Non-Facility Rate	\$101.12	\$101.12	100.0%
81255		HEXA GENE	Medicare Non-Facility Rate	\$51.45	\$51.45	100.0%
81256		HFE GENE	Medicare Non-Facility Rate	\$65.36	\$65.36	100.0%
81257		HBA1/HBA2 GENE	Medicare Non-Facility Rate	\$102.26	\$102.26	100.0%
81259		HBA1/HBA2 FULL GENE SEQUENCE	Medicare Non-Facility Rate	\$600.00	\$600.00	100.0%
81260		IKBKAP GENE	Medicare Non-Facility Rate	\$39.31	\$39.31	100.0%
81261		IGH GENE REARRANGE AMP METH	Medicare Non-Facility Rate	\$197.99	\$197.99	100.0%
81264		IGK REARRANGEABN CLONAL POP	Medicare Non-Facility Rate	\$172.73	\$172.73	100.0%
81265		STR MARKERS SPECIMEN ANAL	Medicare Non-Facility Rate	\$233.07	\$233.07	100.0%
81270		JAK2 GENE	Medicare Non-Facility Rate	\$91.66	\$91.66	100.0%
81271		HTT GENE DETC ABNOR ALLELES	Medicare Non-Facility Rate	\$137.00	\$137.00	100.0%
81272		KIT GENE TARGETED SEQ ANALYS	Medicare Facility/Non-Facility Rate	\$329.51	\$329.51	100.0%
81273		KIT GENE ANALYS D816 VARIANT	Medicare Non-Facility Rate	\$124.87	\$124.87	100.0%
81275		KRAS GENE VARIANTS EXON 2	Medicare Non-Facility Rate	\$193.25	\$193.25	100.0%
81276		KRAS GENE ADDL VARIANTS	Medicare Non-Facility Rate	\$193.25	\$193.25	100.0%
81283		IFNL3 GENE	Medicare Non-Facility Rate	\$73.37	\$73.37	100.0%
81286		FXN GENE FULL GENE SEQUENCE	Medicare Non-Facility Rate	\$274.83	\$274.83	100.0%
81290		MCOLN1 GENE	Medicare Non-Facility Rate	\$39.31	\$39.31	100.0%
81292		MLH1 GENE FULL SEQ	Medicare Non-Facility Rate	\$675.40	\$675.40	100.0%
81294		MLH1 GENE DUP/DELETE VARIANT	Medicare Non-Facility Rate	\$202.40	\$202.40	100.0%
81295		MSH2 GENE FULL SEQ	Medicare Non-Facility Rate	\$381.70	\$381.70	100.0%
81297		MSH2 GENE DUP/DELETE VARIANT	Medicare Non-Facility Rate	\$213.30	\$213.30	100.0%
81298		MSH6 GENE FULL SEQ	Medicare Non-Facility Rate	\$641.85	\$641.85	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
81300		MSH6 GENE DUP/DELETE VARIANT	Medicare Non-Facility Rate	\$238.00	\$238.00	100.0%
81301		MICROSATELLITE INSTABILITY	Medicare Non-Facility Rate	\$348.56	\$348.56	100.0%
81302		MECP2 GENE FULL SEQ	Medicare Non-Facility Rate	\$527.87	\$527.87	100.0%
81304		MECP2 GENE DUP/DELET VARIANT	Medicare Non-Facility Rate	\$150.00	\$150.00	100.0%
81305		MYD88 GENE P.LEU265PRO VRNT	Medicare Non-Facility Rate	\$175.40	\$175.40	100.0%
81307		PALB2 GENE FULL GENE SEQ	Medicare Non-Facility Rate	\$287.05	\$676.50	42.4%
81311		NRAS GENE VARIANTS EXON 2&3	Medicare Facility/Non-Facility Rate	\$295.79	\$295.79	100.0%
81314		PDGFRA GENE	Medicare Non-Facility Rate	\$329.51	\$329.51	100.0%
81315		PML/RARALPHA COM BREAKPOINTS	Medicare Non-Facility Rate	\$207.31	\$207.31	100.0%
81316		PML/RARALPHA 1 BREAKPOINT	Medicare Non-Facility Rate	\$207.31	\$207.31	100.0%
81317		PMS2 GENE FULL SEQ ANALYSIS	Medicare Non-Facility Rate	\$676.50	\$676.50	100.0%
81319		PMS2 GENE DUP/DELET VARIANTS	Medicare Non-Facility Rate	\$203.50	\$203.50	100.0%
81323		PTEN GENE DUP/DELET VARIANT	Medicare Non-Facility Rate	\$300.00	\$300.00	100.0%
81324		PMP22 GENE DUP/DELET	Medicare Non-Facility Rate	\$758.36	\$758.36	100.0%
81329		SMN1 GENE DOS/DELETION ALYS	Medicare Non-Facility Rate	\$137.00	\$137.00	100.0%
81330		SMPD1 GENE COMMON VARIANTS	Medicare Non-Facility Rate	\$47.00	\$47.00	100.0%
81331		SNRPN/UBE3A GENE	Medicare Non-Facility Rate	\$51.07	\$51.07	100.0%
81332		SERPINA1 GENE	Medicare Non-Facility Rate	\$43.65	\$43.65	100.0%
81334		RUNX1 GENE TARGETED SEQ ALYS	Medicare Non-Facility Rate	\$329.51	\$329.51	100.0%
81336		SMN1 GENE FULL GENE SEQUENCE	Medicare Non-Facility Rate	\$301.35	\$301.35	100.0%
81345		TERT GENE TARGETED SEQ ALYS	Medicare Non-Facility Rate	\$185.20	\$185.20	100.0%
81373		HLA I TYPING 1 LOCUS LR	Medicare Non-Facility Rate	\$127.43	\$127.43	100.0%
81376		HLA II TYPING 1 LOCUS LR	Medicare Non-Facility Rate	\$122.22	\$122.22	100.0%
81378		HLA I & II TYPING HR	Medicare Non-Facility Rate	\$345.57	\$345.57	100.0%



## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
81380		HLA I TYPING 1 LOCUS HR	Medicare Non-Facility Rate	\$177.25	\$177.25	100.0%
81382		HLA II TYPING 1 LOC HR	Medicare Non-Facility Rate	\$123.68	\$123.68	100.0%
81400		MOPATH PROCEDURE LEVEL 1	Medicare Non-Facility Rate	\$63.96	\$63.96	100.0%
81401		MOPATH PROCEDURE LEVEL 2	Medicare Non-Facility Rate	\$137.00	\$137.00	100.0%
81402		MOPATH PROCEDURE LEVEL 3	Medicare Non-Facility Rate	\$150.33	\$150.33	100.0%
81403		MOPATH PROCEDURE LEVEL 4	Medicare Non-Facility Rate	\$185.20	\$185.20	100.0%
81404		MOPATH PROCEDURE LEVEL 5	Medicare Non-Facility Rate	\$274.83	\$274.83	100.0%
81405		MOPATH PROCEDURE LEVEL 6	Medicare Non-Facility Rate	\$301.35	\$301.35	100.0%
81406		MOPATH PROCEDURE LEVEL 7	Medicare Non-Facility Rate	\$282.88	\$282.88	100.0%
81407		MOPATH PROCEDURE LEVEL 8	Medicare Non-Facility Rate	\$846.27	\$846.27	100.0%
81412		ASHKENAZI JEWISH ASSOC DIS	Medicare Non-Facility Rate	\$2,448.56	\$2,448.56	100.0%
81413		CAR ION CHNNLPATH INC 10 GNS	Medicare Non-Facility Rate	\$584.90	\$584.90	100.0%
81414		CAR ION CHNNLPATH INC 2 GNS	Medicare Non-Facility Rate	\$584.90	\$584.90	100.0%
81420		FETAL CHRMOML ANEUPLOIDY	Medicare Non-Facility Rate	\$759.05	\$759.05	100.0%
81422		FETAL CHRMOML MICRODEL TJ	Medicare Non-Facility Rate	\$759.05	\$759.05	100.0%
81432		HRDTRY BRST CA-RLATD DSORDRS	Medicare Non-Facility Rate	\$679.05	\$679.05	100.0%
81433		HRDTRY BRST CA-RLATD DSORDRS	Medicare Non-Facility Rate	\$438.93	\$438.93	100.0%
81437		HEREDTRY NURONDCRN TUM DSRDR	Medicare Non-Facility Rate	\$438.93	\$438.93	100.0%
81439		HRDTRY CARDMYPY GENE PANEL	Medicare Non-Facility Rate	\$584.90	\$584.90	100.0%
81442		NOONAN SPECTRUM DISORDERS	Medicare Non-Facility Rate	\$2,143.60	\$2,143.60	100.0%
81443		GENETIC TSTG SEVERE INH COND	Medicare Non-Facility Rate	\$2,448.56	\$2,448.56	100.0%
81507		FETAL ANEUPLOIDY TRISOM RISK	Medicare Non-Facility Rate	\$795.00	\$795.00	100.0%
81518		ONC BRST MRNA 11 GENES	Medicare Non-Facility Rate	\$3,873.00	\$3,873.00	100.0%
81519		ONCOLOGY BREAST MRNA	Medicare Non-Facility Rate	\$3,873.00	\$3,873.00	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
81521		ONC BREAST MRNA 70 GENES	Medicare Non-Facility Rate	\$3,873.00	\$3,873.00	100.0%
81525		ONCOLOGY COLON MRNA	Medicare Non-Facility Rate	\$3,116.00	\$3,116.00	100.0%
81528		ONCOLOGY COLORECTAL SCR	Medicare Non-Facility Rate	\$508.87	\$508.87	100.0%
81539		ONCOLOGY PROSTATE PROB SCORE	Medicare Non-Facility Rate	\$760.00	\$760.00	100.0%
81540		ONCOLOGY TUM UNKNOWN ORIGIN	Medicare Non-Facility Rate	\$3,750.00	\$3,750.00	100.0%
81541		ONC PROSTATE MRNA 46 GENES	Medicare Non-Facility Rate	\$3,873.00	\$3,873.00	100.0%
81596		NFCT DS CHRNC HCV 6 ASSAYS	Medicare Non-Facility Rate	\$72.19	\$72.19	100.0%
82010		ACETONE ASSAY	Medicare Facility/Non-Facility Rate	\$8.17	\$8.17	100.0%
82016		ACYLCARNITINES QUAL	Medicare Non-Facility Rate	\$16.49	\$16.49	100.0%
82017		ACYLCARNITINES QUANT	Medicare Non-Facility Rate	\$16.87	\$16.87	100.0%
82024		ASSAY OF ACTH	Medicare Non-Facility Rate	\$38.62	\$38.62	100.0%
82040		ASSAY OF SERUM ALBUMIN	Medicare Facility/Non-Facility Rate	\$4.95	\$4.95	100.0%
82042		OTHER SOURCE ALBUMIN QUAN EA	Medicare Facility/Non-Facility Rate	\$7.78	\$7.78	100.0%
82043		UR ALBUMIN QUANTITATIVE	Medicare Non-Facility Rate	\$5.78	\$5.78	100.0%
82044		UR ALBUMIN SEMIQUANTITATIVE	Medicare Non-Facility Rate	\$6.23	\$6.23	100.0%
82075		ASSAY OF BREATH ETHANOL	Medicare Non-Facility Rate	\$30.00	\$30.00	100.0%
82085		ASSAY OF ALDOLASE	Medicare Non-Facility Rate	\$9.71	\$9.71	100.0%
82088		ASSAY OF ALDOSTERONE	Medicare Non-Facility Rate	\$40.75	\$40.75	100.0%
82103		ALPHA-1-ANTITRYPSIN TOTAL	Medicare Non-Facility Rate	\$13.44	\$13.44	100.0%
82104		ALPHA-1-ANTITRYPSIN PHENO	Medicare Non-Facility Rate	\$14.46	\$14.46	100.0%
82105		ALPHA-FETOPROTEIN SERUM	Medicare Non-Facility Rate	\$16.77	\$16.77	100.0%
82106		ALPHA-FETOPROTEIN AMNIOTIC	Medicare Non-Facility Rate	\$17.00	\$17.00	100.0%
82107		ALPHA-FETOPROTEIN L3	Medicare Non-Facility Rate	\$64.41	\$64.41	100.0%
82108		ASSAY OF ALUMINUM	Medicare Non-Facility Rate	\$25.48	\$25.48	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
82127		AMINO ACID SINGLE QUAL	Medicare Non-Facility Rate	\$14.18	\$14.18	100.0%
82128		AMINO ACIDS MULT QUAL	Medicare Non-Facility Rate	\$13.87	\$13.87	100.0%
82131		AMINO ACIDS SINGLE QUANT	Medicare Non-Facility Rate	\$22.98	\$22.98	100.0%
82135		ASSAY AMINOLEVULINIC ACID	Medicare Non-Facility Rate	\$16.45	\$16.45	100.0%
82136		AMINO ACIDS QUANT 2-5	Medicare Non-Facility Rate	\$19.61	\$19.61	100.0%
82139		AMINO ACIDS QUAN 6 OR MORE	Medicare Non-Facility Rate	\$16.87	\$16.87	100.0%
82140		ASSAY OF AMMONIA	Medicare Facility/Non-Facility Rate	\$14.57	\$14.57	100.0%
82150		ASSAY OF AMYLASE	Medicare Facility/Non-Facility Rate	\$6.48	\$6.48	100.0%
82157		ASSAY OF ANDROSTENEDIONE	Medicare Non-Facility Rate	\$29.28	\$29.28	100.0%
82160		ASSAY OF ANDROSTERONE	Medicare Non-Facility Rate	\$25.55	\$25.55	100.0%
82164		ANGIOTENSIN I ENZYME TEST	Medicare Non-Facility Rate	\$14.60	\$14.60	100.0%
82172		ASSAY OF APOLIPOPROTEIN	Medicare Non-Facility Rate	\$21.09	\$21.09	100.0%
82175		ASSAY OF ARSENIC	Medicare Non-Facility Rate	\$18.97	\$18.97	100.0%
82180		ASSAY OF ASCORBIC ACID	Medicare Non-Facility Rate	\$9.89	\$9.89	100.0%
82232		ASSAY OF BETA-2 PROTEIN	Medicare Non-Facility Rate	\$16.18	\$16.18	100.0%
82239		BILE ACIDS TOTAL	Medicare Non-Facility Rate	\$17.12	\$17.12	100.0%
82247		BILIRUBIN TOTAL	Medicare Facility/Non-Facility Rate	\$5.02	\$5.02	100.0%
82248		BILIRUBIN DIRECT	Medicare Facility/Non-Facility Rate	\$5.02	\$5.02	100.0%
82261		ASSAY OF BIOTINIDASE	Medicare Non-Facility Rate	\$16.87	\$16.87	100.0%
82270		OCCULT BLOOD FECES	Medicare Non-Facility Rate	\$4.38	\$4.38	100.0%
82271		OCCULT BLOOD OTHER SOURCES	Medicare Non-Facility Rate	\$5.32	\$5.32	100.0%
82272		OCCULT BLD FECES 1-3 TESTS	Medicare Facility/Non-Facility Rate	\$4.23	\$4.23	100.0%
82274		ASSAY TEST FOR BLOOD FECAL	Medicare Facility/Non-Facility Rate	\$15.92	\$15.92	100.0%
82300		ASSAY OF CADMIUM	Medicare Non-Facility Rate	\$23.64	\$23.64	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
82306		VITAMIN D 25 HYDROXY	Medicare Facility/Non-Facility Rate	\$29.60	\$29.60	100.0%
82308		ASSAY OF CALCITONIN	Medicare Non-Facility Rate	\$26.79	\$26.79	100.0%
82310		ASSAY OF CALCIUM	Medicare Facility/Non-Facility Rate	\$5.16	\$5.16	100.0%
82330		ASSAY OF CALCIUM	Medicare Facility/Non-Facility Rate	\$13.68	\$13.68	100.0%
82331		CALCIUM INFUSION TEST	Medicare Non-Facility Rate	\$13.34	\$13.34	100.0%
82340		ASSAY OF CALCIUM IN URINE	Medicare Non-Facility Rate	\$6.03	\$6.03	100.0%
82355		CALCULUS ANALYSIS QUAL	Medicare Non-Facility Rate	\$11.58	\$11.58	100.0%
82360		CALCULUS ASSAY QUANT	Medicare Non-Facility Rate	\$12.87	\$12.87	100.0%
82365		CALCULUS SPECTROSCOPY	Medicare Non-Facility Rate	\$12.90	\$12.90	100.0%
82373		ASSAY C-D TRANSFER MEASURE	Medicare Non-Facility Rate	\$18.06	\$18.06	100.0%
82374		ASSAY BLOOD CARBON DIOXIDE	Medicare Non-Facility Rate	\$4.88	\$4.88	100.0%
82375		ASSAY CARBOXYHB QUANT	Medicare Non-Facility Rate	\$12.32	\$12.32	100.0%
82378		CARCINOEMBRYONIC ANTIGEN	Medicare Non-Facility Rate	\$18.96	\$18.96	100.0%
82379		ASSAY OF CARNITINE	Medicare Non-Facility Rate	\$16.87	\$16.87	100.0%
82380		ASSAY OF CAROTENE	Medicare Non-Facility Rate	\$9.22	\$9.22	100.0%
82382		ASSAY URINE CATECHOLAMINES	Medicare Non-Facility Rate	\$27.30	\$27.30	100.0%
82384		ASSAY THREE CATECHOLAMINES	Medicare Non-Facility Rate	\$25.25	\$25.25	100.0%
82390		ASSAY OF CERULOPLASMIN	Medicare Non-Facility Rate	\$10.74	\$10.74	100.0%
82397		CHEMILUMINESCENT ASSAY	Medicare Non-Facility Rate	\$14.12	\$14.12	100.0%
82435		ASSAY OF BLOOD CHLORIDE	Medicare Non-Facility Rate	\$4.60	\$4.60	100.0%
82436		ASSAY OF URINE CHLORIDE	Medicare Non-Facility Rate	\$5.75	\$5.75	100.0%
82438		ASSAY OTHER FLUID CHLORIDES	Medicare Non-Facility Rate	\$5.00	\$5.00	100.0%
82441		TEST FOR CHLOROHYDROCARBONS	Medicare Non-Facility Rate	\$6.01	\$6.01	100.0%
82465		ASSAY BLD/SERUM CHOLESTEROL	Medicare Non-Facility Rate	\$4.35	\$4.35	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
82480		ASSAY SERUM CHOLINESTERASE	Medicare Non-Facility Rate	\$7.87	\$7.87	100.0%
82495		ASSAY OF CHROMIUM	Medicare Non-Facility Rate	\$20.28	\$20.28	100.0%
82507		ASSAY OF CITRATE	Medicare Non-Facility Rate	\$27.80	\$27.80	100.0%
82523		COLLAGEN CROSSLINKS	Medicare Non-Facility Rate	\$18.68	\$18.68	100.0%
82525		ASSAY OF COPPER	Medicare Non-Facility Rate	\$12.41	\$12.41	100.0%
82528		ASSAY OF CORTICOSTERONE	Medicare Non-Facility Rate	\$22.52	\$22.52	100.0%
82530		CORTISOL FREE	Medicare Non-Facility Rate	\$16.71	\$16.71	100.0%
82533		TOTAL CORTISOL	Medicare Facility/Non-Facility Rate	\$16.30	\$16.30	100.0%
82540		ASSAY OF CREATINE	Medicare Non-Facility Rate	\$4.64	\$4.64	100.0%
82542		COL CHROMOTOGRAPHY QUAL/QUAN	Medicare Non-Facility Rate	\$24.09	\$24.09	100.0%
82550		ASSAY OF CK (CPK)	Medicare Facility/Non-Facility Rate	\$6.51	\$6.51	100.0%
82552		ASSAY OF CPK IN BLOOD	Medicare Non-Facility Rate	\$13.39	\$13.39	100.0%
82553		CREATINE MB FRACTION	Medicare Non-Facility Rate	\$11.55	\$11.55	100.0%
82565		ASSAY OF CREATININE	Medicare Facility/Non-Facility Rate	\$5.12	\$5.12	100.0%
82570		ASSAY OF URINE CREATININE	Medicare Facility/Non-Facility Rate	\$5.18	\$5.18	100.0%
82575		CREATININE CLEARANCE TEST	Medicare Non-Facility Rate	\$9.46	\$9.46	100.0%
82585		ASSAY OF CRYOFIBRINOGEN	Medicare Non-Facility Rate	\$14.14	\$14.14	100.0%
82595		ASSAY OF CRYOGLOBULIN	Medicare Non-Facility Rate	\$6.47	\$6.47	100.0%
82600		ASSAY OF CYANIDE	Medicare Non-Facility Rate	\$19.40	\$19.40	100.0%
82607		VITAMIN B-12	Medicare Facility/Non-Facility Rate	\$15.08	\$15.08	100.0%
82608		B-12 BINDING CAPACITY	Medicare Non-Facility Rate	\$14.32	\$14.32	100.0%
82610		CYSTATIN C	Medicare Non-Facility Rate	\$18.52	\$18.52	100.0%
82615		TEST FOR URINE CYSTINES	Medicare Non-Facility Rate	\$9.55	\$9.55	100.0%
82626		DEHYDROEPIANDROSTERONE	Medicare Non-Facility Rate	\$25.27	\$25.27	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
82627		DEHYDROEPIANDROSTERONE	Medicare Non-Facility Rate	\$22.23	\$22.23	100.0%
82633		DESOXYCORTICOSTERONE	Medicare Non-Facility Rate	\$30.98	\$30.98	100.0%
82634		DEOXYCORTISOL	Medicare Non-Facility Rate	\$29.28	\$29.28	100.0%
82642		DIHYDROTESTOSTERONE	Medicare Non-Facility Rate	\$29.28	\$29.28	100.0%
82652		VIT D 1 25-DIHYDROXY	Medicare Non-Facility Rate	\$38.50	\$38.50	100.0%
82656		PANCREATIC ELASTASE FECAL	Medicare Non-Facility Rate	\$11.53	\$11.53	100.0%
82657		ENZYME CELL ACTIVITY	Medicare Non-Facility Rate	\$22.17	\$22.17	100.0%
82664		ELECTROPHORETIC TEST	Medicare Non-Facility Rate	\$61.50	\$61.50	100.0%
82668		ASSAY OF ERYTHROPOIETIN	Medicare Non-Facility Rate	\$18.79	\$18.79	100.0%
82670		ASSAY OF ESTRADIOL	Medicare Non-Facility Rate	\$27.94	\$27.94	100.0%
82671		ASSAY OF ESTROGENS	Medicare Non-Facility Rate	\$32.30	\$32.30	100.0%
82672		ASSAY OF ESTROGEN	Medicare Non-Facility Rate	\$21.70	\$21.70	100.0%
82677		ASSAY OF ESTRADIOL	Medicare Non-Facility Rate	\$24.18	\$24.18	100.0%
82679		ASSAY OF ESTRONE	Medicare Non-Facility Rate	\$24.95	\$24.95	100.0%
82693		ASSAY OF ETHYLENE GLYCOL	Medicare Non-Facility Rate	\$14.90	\$14.90	100.0%
82705		FATS/LIPIDS FECES QUAL	Medicare Non-Facility Rate	\$5.10	\$5.10	100.0%
82710		FATS/LIPIDS FECES QUANT	Medicare Non-Facility Rate	\$16.80	\$16.80	100.0%
82725		ASSAY OF BLOOD FATTY ACIDS	Medicare Non-Facility Rate	\$18.77	\$18.77	100.0%
82726		LONG CHAIN FATTY ACIDS	Medicare Non-Facility Rate	\$19.75	\$19.75	100.0%
82728		ASSAY OF FERRITIN	Medicare Non-Facility Rate	\$13.63	\$13.63	100.0%
82731		ASSAY OF FETAL FIBRONECTIN	Medicare Non-Facility Rate	\$64.41	\$64.41	100.0%
82735		ASSAY OF FLUORIDE	Medicare Non-Facility Rate	\$18.54	\$18.54	100.0%
82746		ASSAY OF FOLIC ACID SERUM	Medicare Facility/Non-Facility Rate	\$14.70	\$14.70	100.0%
82747		ASSAY OF FOLIC ACID RBC	Medicare Non-Facility Rate	\$17.65	\$17.65	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
82776		GALACTOSE TRANSFERASE TEST	Medicare Non-Facility Rate	\$11.74	\$11.74	100.0%
82784		ASSAY IGA/IGD/IGG/IGM EACH	Medicare Non-Facility Rate	\$9.30	\$9.30	100.0%
82785		ASSAY OF IGE	Medicare Facility/Non-Facility Rate	\$16.46	\$16.46	100.0%
82787		IGG 1 2 3 OR 4 EACH	Medicare Non-Facility Rate	\$8.02	\$8.02	100.0%
82803		BLOOD GASES ANY COMBINATION	Medicare Facility/Non-Facility Rate	\$26.07	\$26.07	100.0%
82805		BLOOD GASES W/O2 SATURATION	Medicare Non-Facility Rate	\$78.77	\$78.77	100.0%
82820		HEMOGLOBIN-OXYGEN AFFINITY	Medicare Non-Facility Rate	\$13.34	\$13.34	100.0%
82941		ASSAY OF GASTRIN	Medicare Non-Facility Rate	\$17.63	\$17.63	100.0%
82943		ASSAY OF GLUCAGON	Medicare Non-Facility Rate	\$14.29	\$14.29	100.0%
82945		GLUCOSE OTHER FLUID	Medicare Facility/Non-Facility Rate	\$3.93	\$3.93	100.0%
82947		ASSAY GLUCOSE BLOOD QUANT	Medicare Facility/Non-Facility Rate	\$3.93	\$3.93	100.0%
82948		REAGENT STRIP/BLOOD GLUCOSE	Medicare Facility/Non-Facility Rate	\$5.04	\$5.04	100.0%
82950		GLUCOSE TEST	Medicare Non-Facility Rate	\$4.75	\$4.75	100.0%
82951		GLUCOSE TOLERANCE TEST (GTT)	Medicare Non-Facility Rate	\$12.87	\$12.87	100.0%
82952		GTT-ADDED SAMPLES	Medicare Non-Facility Rate	\$3.92	\$3.92	100.0%
82955		ASSAY OF G6PD ENZYME	Medicare Non-Facility Rate	\$9.70	\$9.70	100.0%
82962		GLUCOSE BLOOD TEST	Medicare Non-Facility Rate	\$3.28	\$3.28	100.0%
82977		ASSAY OF GGT	Medicare Facility/Non-Facility Rate	\$7.20	\$7.20	100.0%
82985		ASSAY OF GLYCATED PROTEIN	Medicare Non-Facility Rate	\$16.76	\$16.76	100.0%
83001		ASSAY OF GONADOTROPIN (FSH)	Medicare Non-Facility Rate	\$18.58	\$18.58	100.0%
83002		ASSAY OF GONADOTROPIN (LH)	Medicare Non-Facility Rate	\$18.52	\$18.52	100.0%
83003		ASSAY GROWTH HORMONE (HGH)	Medicare Non-Facility Rate	\$16.67	\$16.67	100.0%
83010		ASSAY OF HAPTOGLOBIN QUANT	Medicare Facility/Non-Facility Rate	\$12.58	\$12.58	100.0%
83013		H PYLORI (C-13) BREATH	Medicare Non-Facility Rate	\$67.36	\$67.36	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
83014		H PYLORI DRUG ADMIN	Medicare Non-Facility Rate	\$7.86	\$7.86	100.0%
83018		HEAVY METAL QUANT EACH NES	Medicare Non-Facility Rate	\$21.96	\$21.96	100.0%
83020		HEMOGLOBIN ELECTROPHORESIS	Medicare Non-Facility Rate	\$12.87	\$12.87	100.0%
83020	26	HEMOGLOBIN ELECTROPHORESIS	Medicare Facility Rate	\$13.84	\$18.42	75.1%
83021		HEMOGLOBIN CHROMOTOGRAPHY	Medicare Non-Facility Rate	\$18.06	\$18.06	100.0%
83036		GLYCOSYLATED HEMOGLOBIN TEST	Medicare Facility/Non-Facility Rate	\$9.71	\$9.71	100.0%
83037		GLYCOSYLATED HB HOME DEVICE	Medicare Non-Facility Rate	\$9.71	\$9.71	100.0%
83050		BLOOD METHEMOGLOBIN ASSAY	Medicare Non-Facility Rate	\$8.20	\$8.20	100.0%
83051		ASSAY OF PLASMA HEMOGLOBIN	Medicare Non-Facility Rate	\$7.31	\$7.31	100.0%
83065		ASSAY OF HEMOGLOBIN HEAT	Medicare Non-Facility Rate	\$9.00	\$9.00	100.0%
83068		HEMOGLOBIN STABILITY SCREEN	Medicare Non-Facility Rate	\$9.47	\$9.47	100.0%
83069		ASSAY OF URINE HEMOGLOBIN	Medicare Non-Facility Rate	\$3.95	\$3.95	100.0%
83070		ASSAY OF HEMOSIDERIN QUAL	Medicare Non-Facility Rate	\$4.75	\$4.75	100.0%
83080		ASSAY OF B HEXOSAMINIDASE	Medicare Non-Facility Rate	\$16.87	\$16.87	100.0%
83088		ASSAY OF HISTAMINE	Medicare Non-Facility Rate	\$29.53	\$29.53	100.0%
83090		ASSAY OF HOMOCYSTINE	Medicare Non-Facility Rate	\$17.92	\$17.92	100.0%
83150		ASSAY OF HOMOVANILLIC ACID	Medicare Non-Facility Rate	\$22.41	\$22.41	100.0%
83491		ASSAY OF CORTICOSTEROIDS 17	Medicare Non-Facility Rate	\$17.90	\$17.90	100.0%
83497		ASSAY OF 5-HIAA	Medicare Non-Facility Rate	\$12.90	\$12.90	100.0%
83498		ASSAY OF PROGESTERONE 17-D	Medicare Non-Facility Rate	\$27.17	\$27.17	100.0%
83516		IMMUNOASSAY NONANTIBODY	Medicare Non-Facility Rate	\$11.53	\$11.53	100.0%
83518		IMMUNOASSAY DIPSTICK	Medicare Non-Facility Rate	\$9.64	\$9.64	100.0%
83519		RIA NONANTIBODY	Medicare Non-Facility Rate	\$18.40	\$18.40	100.0%
83520		IMMUNOASSAY QUANT NOS NONAB	Medicare Non-Facility Rate	\$17.27	\$17.27	100.0%



## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
83525		ASSAY OF INSULIN	Medicare Non-Facility Rate	\$11.43	\$11.43	100.0%
83527		ASSAY OF INSULIN	Medicare Non-Facility Rate	\$12.95	\$12.95	100.0%
83540		ASSAY OF IRON	Medicare Facility/Non-Facility Rate	\$6.47	\$6.47	100.0%
83550		IRON BINDING TEST	Medicare Facility/Non-Facility Rate	\$8.74	\$8.74	100.0%
83586		ASSAY 17- KETOSTEROIDS	Medicare Non-Facility Rate	\$12.80	\$12.80	100.0%
83605		ASSAY OF LACTIC ACID	Medicare Facility/Non-Facility Rate	\$11.57	\$11.57	100.0%
83615		LACTATE (LD) (LDH) ENZYME	Medicare Facility/Non-Facility Rate	\$6.04	\$6.04	100.0%
83625		ASSAY OF LDH ENZYMES	Medicare Non-Facility Rate	\$12.79	\$12.79	100.0%
83630		LACTOFERRIN FECAL (QUAL)	Medicare Non-Facility Rate	\$19.70	\$19.70	100.0%
83631		LACTOFERRIN FECAL (QUANT)	Medicare Non-Facility Rate	\$19.63	\$19.63	100.0%
83655		ASSAY OF LEAD	Medicare Non-Facility Rate	\$12.11	\$12.11	100.0%
83690		ASSAY OF LIPASE	Medicare Facility/Non-Facility Rate	\$6.89	\$6.89	100.0%
83695		ASSAY OF LIPOPROTEIN(A)	Medicare Non-Facility Rate	\$14.32	\$14.32	100.0%
83698		ASSAY LIPOPROTEIN PLA2	Medicare Non-Facility Rate	\$46.31	\$46.31	100.0%
83700		LIOPRO BLD ELECTROPHORETIC	Medicare Non-Facility Rate	\$11.26	\$11.26	100.0%
83701		LIOPROTEIN BLD HR FRACTION	Medicare Non-Facility Rate	\$33.86	\$33.86	100.0%
83704		LIOPROTEIN BLD QUAN PART	Medicare Non-Facility Rate	\$34.19	\$34.19	100.0%
83718		ASSAY OF LIPOPROTEIN	Medicare Non-Facility Rate	\$8.19	\$8.19	100.0%
83721		ASSAY OF BLOOD LIPOPROTEIN	Medicare Non-Facility Rate	\$10.50	\$10.50	100.0%
83727		ASSAY OF LRH HORMONE	Medicare Non-Facility Rate	\$17.19	\$17.19	100.0%
83735		ASSAY OF MAGNESIUM	Medicare Facility/Non-Facility Rate	\$6.70	\$6.70	100.0%
83785		ASSAY OF MANGANESE	Medicare Non-Facility Rate	\$26.65	\$26.65	100.0%
83789		MASS SPECTROMETRY QUAL/QUAN	Medicare Facility/Non-Facility Rate	\$24.11	\$24.11	100.0%
83825		ASSAY OF MERCURY	Medicare Non-Facility Rate	\$16.26	\$16.26	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
83835		ASSAY OF METANEPHRINES	Medicare Non-Facility Rate	\$16.94	\$16.94	100.0%
83861		MICROFLUID ANALY TEARS	Medicare Non-Facility Rate	\$22.48	\$22.48	100.0%
83872		ASSAY SYNOVIAL FLUID MUCIN	Medicare Non-Facility Rate	\$5.86	\$5.86	100.0%
83873		ASSAY OF CSF PROTEIN	Medicare Non-Facility Rate	\$17.20	\$17.20	100.0%
83874		ASSAY OF MYOGLOBIN	Medicare Non-Facility Rate	\$12.92	\$12.92	100.0%
83876		ASSAY MYELOPEROXIDASE	Medicare Non-Facility Rate	\$50.86	\$50.86	100.0%
83880		ASSAY OF NATRIURETIC PEPTIDE	Medicare Facility/Non-Facility Rate	\$39.26	\$39.26	100.0%
83883		ASSAY NEPHELOMETRY NOT SPEC	Medicare Non-Facility Rate	\$13.60	\$13.60	100.0%
83885		ASSAY OF NICKEL	Medicare Non-Facility Rate	\$24.51	\$24.51	100.0%
83915		ASSAY OF NUCLEOTIDASE	Medicare Non-Facility Rate	\$11.15	\$11.15	100.0%
83916		OLIGOCLONAL BANDS	Medicare Non-Facility Rate	\$27.39	\$27.39	100.0%
83918		ORGANIC ACIDS TOTAL QUANT	Medicare Non-Facility Rate	\$23.60	\$23.60	100.0%
83919		ORGANIC ACIDS QUAL EACH	Medicare Non-Facility Rate	\$16.45	\$16.45	100.0%
83921		ORGANIC ACID SINGLE QUANT	Medicare Non-Facility Rate	\$21.21	\$21.21	100.0%
83930		ASSAY OF BLOOD OSMOLALITY	Medicare Facility/Non-Facility Rate	\$6.61	\$6.61	100.0%
83935		ASSAY OF URINE OSMOLALITY	Medicare Facility/Non-Facility Rate	\$6.82	\$6.82	100.0%
83937		ASSAY OF OSTEOCALCIN	Medicare Non-Facility Rate	\$29.85	\$29.85	100.0%
83945		ASSAY OF OXALATE	Medicare Non-Facility Rate	\$14.45	\$14.45	100.0%
83970		ASSAY OF PARATHORMONE	Medicare Non-Facility Rate	\$41.28	\$41.28	100.0%
83986		ASSAY PH BODY FLUID NOS	Medicare Non-Facility Rate	\$3.58	\$3.58	100.0%
83992		ASSAY FOR PHENCYCLIDINE	Other States' Average Rate	\$19.86	\$10.63	186.8%
83993		ASSAY FOR CALPROTECTIN FECAL	Medicare Non-Facility Rate	\$19.63	\$19.63	100.0%
84030		ASSAY OF BLOOD PKU	Medicare Facility/Non-Facility Rate	\$5.50	\$5.50	100.0%
84066		ASSAY PROSTATE PHOSPHATASE	Medicare Non-Facility Rate	\$9.66	\$9.66	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
84075		ASSAY ALKALINE PHOSPHATASE	Medicare Facility/Non-Facility Rate	\$5.18	\$5.18	100.0%
84080		ASSAY ALKALINE PHOSPHATASES	Medicare Non-Facility Rate	\$14.78	\$14.78	100.0%
84100		ASSAY OF PHOSPHORUS	Medicare Facility/Non-Facility Rate	\$4.74	\$4.74	100.0%
84105		ASSAY OF URINE PHOSPHORUS	Medicare Non-Facility Rate	\$5.78	\$5.78	100.0%
84110		ASSAY OF PORPHOBILINOGEN	Medicare Non-Facility Rate	\$8.44	\$8.44	100.0%
84112		EVAL AMNIOTIC FLUID PROTEIN	Medicare Facility Rate	\$98.11	\$98.11	100.0%
84120		ASSAY OF URINE PORPHYRINS	Medicare Non-Facility Rate	\$14.71	\$14.71	100.0%
84126		ASSAY OF FECES PORPHYRINS	Medicare Non-Facility Rate	\$39.11	\$39.11	100.0%
84132		ASSAY OF SERUM POTASSIUM	Medicare Facility/Non-Facility Rate	\$4.76	\$4.76	100.0%
84133		ASSAY OF URINE POTASSIUM	Medicare Non-Facility Rate	\$4.73	\$4.73	100.0%
84134		ASSAY OF PREALBUMIN	Medicare Non-Facility Rate	\$14.59	\$14.59	100.0%
84140		ASSAY OF PREGNENOLONE	Medicare Non-Facility Rate	\$20.67	\$20.67	100.0%
84143		ASSAY OF 17-HYDROXYPREGNENO	Medicare Non-Facility Rate	\$22.81	\$22.81	100.0%
84144		ASSAY OF PROGESTERONE	Medicare Non-Facility Rate	\$20.86	\$20.86	100.0%
84145		PROCALCITONIN (PCT)	Medicare Non-Facility Rate	\$27.22	\$27.22	100.0%
84146		ASSAY OF PROLACTIN	Medicare Facility/Non-Facility Rate	\$19.38	\$19.38	100.0%
84152		ASSAY OF PSA COMPLEXED	Medicare Non-Facility Rate	\$18.39	\$18.39	100.0%
84153		ASSAY OF PSA TOTAL	Medicare Non-Facility Rate	\$18.39	\$18.39	100.0%
84154		ASSAY OF PSA FREE	Medicare Non-Facility Rate	\$18.39	\$18.39	100.0%
84155		ASSAY OF PROTEIN SERUM	Medicare Facility/Non-Facility Rate	\$3.67	\$3.67	100.0%
84156		ASSAY OF PROTEIN URINE	Medicare Facility/Non-Facility Rate	\$3.67	\$3.67	100.0%
84157		ASSAY OF PROTEIN OTHER	Medicare Facility/Non-Facility Rate	\$4.00	\$4.00	100.0%
84160		ASSAY OF PROTEIN ANY SOURCE	Medicare Non-Facility Rate	\$5.61	\$5.61	100.0%
84163		PAPPA SERUM	Medicare Non-Facility Rate	\$15.05	\$15.05	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
84165		PROTEIN E-PHORESIS SERUM	Medicare Non-Facility Rate	\$10.74	\$10.74	100.0%
84165	26	PROTEIN E-PHORESIS SERUM	Medicare Facility Rate	\$12.11	\$18.42	65.7%
84166		PROTEIN E-PHORESIS/URINE/CSF	Medicare Non-Facility Rate	\$17.83	\$17.83	100.0%
84166	26	PROTEIN E-PHORESIS/URINE/CSF	Medicare Facility Rate	\$12.27	\$18.42	66.6%
84181		WESTERN BLOT TEST	Medicare Non-Facility Rate	\$17.03	\$17.03	100.0%
84182		PROTEIN WESTERN BLOT TEST	Medicare Non-Facility Rate	\$29.21	\$29.21	100.0%
84202		ASSAY RBC PROTOPORPHYRIN	Medicare Non-Facility Rate	\$14.35	\$14.35	100.0%
84206		ASSAY OF PROINSULIN	Medicare Non-Facility Rate	\$26.69	\$26.69	100.0%
84207		ASSAY OF VITAMIN B-6	Medicare Non-Facility Rate	\$28.10	\$28.10	100.0%
84210		ASSAY OF PYRUVATE	Medicare Non-Facility Rate	\$14.48	\$14.48	100.0%
84220		ASSAY OF PYRUVATE KINASE	Medicare Non-Facility Rate	\$9.44	\$9.44	100.0%
84228		ASSAY OF QUININE	Medicare Non-Facility Rate	\$11.63	\$11.63	100.0%
84238		ASSAY NONENDOCRINE RECEPTOR	Medicare Non-Facility Rate	\$36.57	\$36.57	100.0%
84244		ASSAY OF RENIN	Medicare Non-Facility Rate	\$21.99	\$21.99	100.0%
84252		ASSAY OF VITAMIN B-2	Medicare Non-Facility Rate	\$20.24	\$20.24	100.0%
84255		ASSAY OF SELENIUM	Medicare Non-Facility Rate	\$25.53	\$25.53	100.0%
84260		ASSAY OF SEROTONIN	Medicare Non-Facility Rate	\$30.98	\$30.98	100.0%
84270		ASSAY OF SEX HORMONE GLOBUL	Medicare Non-Facility Rate	\$21.73	\$21.73	100.0%
84275		ASSAY OF SIALIC ACID	Medicare Non-Facility Rate	\$13.44	\$13.44	100.0%
84295		ASSAY OF SERUM SODIUM	Medicare Non-Facility Rate	\$4.81	\$4.81	100.0%
84300		ASSAY OF URINE SODIUM	Medicare Facility/Non-Facility Rate	\$5.06	\$5.06	100.0%
84302		ASSAY OF SWEAT SODIUM	Medicare Non-Facility Rate	\$4.86	\$4.86	100.0%
84305		ASSAY OF SOMATOMEDIN	Medicare Non-Facility Rate	\$21.26	\$21.26	100.0%
84307		ASSAY OF SOMATOSTATIN	Medicare Non-Facility Rate	\$18.28	\$18.28	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
84311		SPECTROPHOTOMETRY	Medicare Non-Facility Rate	\$8.10	\$8.10	100.0%
84315		BODY FLUID SPECIFIC GRAVITY	Medicare Non-Facility Rate	\$3.28	\$3.28	100.0%
84376		SUGARS SINGLE QUAL	Medicare Non-Facility Rate	\$5.50	\$5.50	100.0%
84377		SUGARS MULTIPLE QUAL	Medicare Non-Facility Rate	\$5.50	\$5.50	100.0%
84378		SUGARS SINGLE QUANT	Medicare Non-Facility Rate	\$11.53	\$11.53	100.0%
84392		ASSAY OF URINE SULFATE	Medicare Non-Facility Rate	\$5.49	\$5.49	100.0%
84402		ASSAY OF FREE TESTOSTERONE	Medicare Non-Facility Rate	\$25.47	\$25.47	100.0%
84403		ASSAY OF TOTAL TESTOSTERONE	Medicare Non-Facility Rate	\$25.81	\$25.81	100.0%
84410		TESTOSTERONE BIOAVAILABLE	Medicare Non-Facility Rate	\$51.28	\$51.28	100.0%
84425		ASSAY OF VITAMIN B-1	Medicare Non-Facility Rate	\$21.23	\$21.23	100.0%
84431		THROMBOXANE URINE	Medicare Non-Facility Rate	\$35.11	\$35.11	100.0%
84432		ASSAY OF THYROGLOBULIN	Medicare Non-Facility Rate	\$16.06	\$16.06	100.0%
84436		ASSAY OF TOTAL THYROXINE	Medicare Facility/Non-Facility Rate	\$6.87	\$6.87	100.0%
84437		ASSAY OF NEONATAL THYROXINE	Medicare Non-Facility Rate	\$6.47	\$6.47	100.0%
84439		ASSAY OF FREE THYROXINE	Medicare Facility/Non-Facility Rate	\$9.02	\$9.02	100.0%
84442		ASSAY OF THYROID ACTIVITY	Medicare Non-Facility Rate	\$14.78	\$14.78	100.0%
84443		ASSAY THYROID STIM HORMONE	Medicare Facility/Non-Facility Rate	\$16.80	\$16.80	100.0%
84445		ASSAY OF TSI GLOBULIN	Medicare Non-Facility Rate	\$50.86	\$50.86	100.0%
84446		ASSAY OF VITAMIN E	Medicare Non-Facility Rate	\$14.18	\$14.18	100.0%
84449		ASSAY OF TRANSFCORTIN	Medicare Non-Facility Rate	\$18.00	\$18.00	100.0%
84450		TRANSFERASE (AST) (SGOT)	Medicare Facility/Non-Facility Rate	\$5.18	\$5.18	100.0%
84460		ALANINE AMINO (ALT) (SGPT)	Medicare Facility/Non-Facility Rate	\$5.30	\$5.30	100.0%
84466		ASSAY OF TRANSFERRIN	Medicare Non-Facility Rate	\$12.76	\$12.76	100.0%
84478		ASSAY OF TRIGLYCERIDES	Medicare Facility/Non-Facility Rate	\$5.74	\$5.74	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
84479		ASSAY OF THYROID (T3 OR T4)	Medicare Facility/Non-Facility Rate	\$6.47	\$6.47	100.0%
84480		ASSAY TRIIODOTHYRONINE (T3)	Medicare Non-Facility Rate	\$14.18	\$14.18	100.0%
84481		FREE ASSAY (FT-3)	Medicare Non-Facility Rate	\$16.94	\$16.94	100.0%
84482		T3 REVERSE	Medicare Non-Facility Rate	\$15.76	\$15.76	100.0%
84484		ASSAY OF TROPONIN QUANT	Medicare Non-Facility Rate	\$12.47	\$12.47	100.0%
84510		ASSAY OF TYROSINE	Medicare Non-Facility Rate	\$10.63	\$10.63	100.0%
84520		ASSAY OF UREA NITROGEN	Medicare Non-Facility Rate	\$3.95	\$3.95	100.0%
84540		ASSAY OF URINE/UREA-N	Medicare Facility/Non-Facility Rate	\$5.56	\$5.56	100.0%
84545		UREA-N CLEARANCE TEST	Medicare Non-Facility Rate	\$7.20	\$7.20	100.0%
84550		ASSAY OF BLOOD/URIC ACID	Medicare Facility/Non-Facility Rate	\$4.52	\$4.52	100.0%
84560		ASSAY OF URINE/URIC ACID	Medicare Non-Facility Rate	\$5.08	\$5.08	100.0%
84585		ASSAY OF URINE VMA	Medicare Non-Facility Rate	\$15.50	\$15.50	100.0%
84586		ASSAY OF VIP	Medicare Non-Facility Rate	\$35.33	\$35.33	100.0%
84588		ASSAY OF VASOPRESSIN	Medicare Non-Facility Rate	\$33.94	\$33.94	100.0%
84590		ASSAY OF VITAMIN A	Medicare Non-Facility Rate	\$11.61	\$11.61	100.0%
84591		ASSAY OF NOS VITAMIN	Medicare Non-Facility Rate	\$17.06	\$17.06	100.0%
84597		ASSAY OF VITAMIN K	Medicare Facility/Non-Facility Rate	\$13.72	\$13.72	100.0%
84600		ASSAY OF VOLATILES	Medicare Non-Facility Rate	\$17.11	\$17.11	100.0%
84630		ASSAY OF ZINC	Medicare Non-Facility Rate	\$11.39	\$11.39	100.0%
84681		ASSAY OF C-PEPTIDE	Medicare Non-Facility Rate	\$20.81	\$20.81	100.0%
84702		CHORIONIC GONADOTROPIN TEST	Medicare Facility/Non-Facility Rate	\$15.05	\$15.05	100.0%
84703		CHORIONIC GONADOTROPIN ASSAY	Medicare Facility/Non-Facility Rate	\$7.52	\$7.52	100.0%
84704		HCG FREE BETACHAIN TEST	Medicare Non-Facility Rate	\$15.29	\$15.29	100.0%
85004		AUTOMATED DIFF WBC COUNT	Medicare Non-Facility Rate	\$6.47	\$6.47	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
85007		BL SMEAR W/DIFF WBC COUNT	Medicare Facility/Non-Facility Rate	\$3.80	\$3.80	100.0%
85013		SPUN MICROHEMATOCRIT	Medicare Non-Facility Rate	\$7.00	\$7.00	100.0%
85014		HEMATOCRIT	Medicare Facility/Non-Facility Rate	\$2.37	\$2.37	100.0%
85018		HEMOGLOBIN	Medicare Facility/Non-Facility Rate	\$2.37	\$2.37	100.0%
85025		COMPLETE CBC W/AUTO DIFF WBC	Medicare Facility/Non-Facility Rate	\$7.77	\$7.77	100.0%
85027		COMPLETE CBC AUTOMATED	Medicare Facility/Non-Facility Rate	\$6.47	\$6.47	100.0%
85041		AUTOMATED RBC COUNT	Medicare Non-Facility Rate	\$3.02	\$3.02	100.0%
85045		AUTOMATED RETICULOCYTE COUNT	Medicare Facility/Non-Facility Rate	\$3.99	\$3.99	100.0%
85046		RETICYTE/HGB CONCENTRATE	Medicare Non-Facility Rate	\$5.57	\$5.57	100.0%
85048		AUTOMATED LEUKOCYTE COUNT	Medicare Facility/Non-Facility Rate	\$2.54	\$2.54	100.0%
85049		AUTOMATED PLATELET COUNT	Medicare Non-Facility Rate	\$4.48	\$4.48	100.0%
85055		RETICULATED PLATELET ASSAY	Medicare Non-Facility Rate	\$35.74	\$35.74	100.0%
85060		BLOOD SMEAR INTERPRETATION	Medicare Facility/Non-Facility Rate	\$17.24	\$24.62	70.0%
85097		BONE MARROW INTERPRETATION	Medicare Facility Rate	\$36.34	\$48.74	74.6%
85097		BONE MARROW INTERPRETATION	Medicare Non-Facility Rate	\$36.34	\$70.85	51.3%
85210		CLOT FACTOR II PROTHROM SPEC	Medicare Non-Facility Rate	\$12.98	\$12.98	100.0%
85220		BLOOC CLOT FACTOR V TEST	Medicare Non-Facility Rate	\$17.65	\$17.65	100.0%
85230		CLOT FACTOR VII PROCONVERTIN	Medicare Non-Facility Rate	\$17.90	\$17.90	100.0%
85240		CLOT FACTOR VIII AHG 1 STAGE	Medicare Non-Facility Rate	\$17.90	\$17.90	100.0%
85244		CLOT FACTOR VIII RELTD ANTGN	Medicare Non-Facility Rate	\$20.42	\$20.42	100.0%
85245		CLOT FACTOR VIII VW RISTOCTN	Medicare Non-Facility Rate	\$22.94	\$22.94	100.0%
85246		CLOT FACTOR VIII VW ANTIGEN	Medicare Non-Facility Rate	\$22.94	\$22.94	100.0%
85247		CLOT FACTOR VIII MULTIMETRIC	Medicare Non-Facility Rate	\$22.94	\$22.94	100.0%
85250		CLOT FACTOR IX PTC/CHRSTMAS	Medicare Non-Facility Rate	\$19.04	\$19.04	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
85260		CLOT FACTOR X STUART-POWER	Medicare Non-Facility Rate	\$17.90	\$17.90	100.0%
85270		CLOT FACTOR XI PTA	Medicare Non-Facility Rate	\$17.90	\$17.90	100.0%
85280		CLOT FACTOR XII HAGEMAN	Medicare Non-Facility Rate	\$19.35	\$19.35	100.0%
85290		CLOT FACTOR XIII FIBRIN STAB	Medicare Non-Facility Rate	\$16.34	\$16.34	100.0%
85291		CLOT FACTOR XIII FIBRIN SCRIN	Medicare Non-Facility Rate	\$9.11	\$9.11	100.0%
85292		CLOT FACTOR FLETCHER FACT	Medicare Non-Facility Rate	\$18.93	\$18.93	100.0%
85300		ANTITHROMBIN III ACTIVITY	Medicare Facility/Non-Facility Rate	\$11.85	\$11.85	100.0%
85301		ANTITHROMBIN III ANTIGEN	Medicare Non-Facility Rate	\$10.81	\$10.81	100.0%
85302		CLOT INHIBIT PROT C ANTIGEN	Medicare Non-Facility Rate	\$12.01	\$12.01	100.0%
85303		CLOT INHIBIT PROT C ACTIVITY	Medicare Non-Facility Rate	\$13.84	\$13.84	100.0%
85305		CLOT INHIBIT PROT S TOTAL	Medicare Non-Facility Rate	\$11.61	\$11.61	100.0%
85306		CLOT INHIBIT PROT S FREE	Medicare Non-Facility Rate	\$15.32	\$15.32	100.0%
85307		ASSAY ACTIVATED PROTEIN C	Medicare Non-Facility Rate	\$15.32	\$15.32	100.0%
85335		FACTOR INHIBITOR TEST	Medicare Non-Facility Rate	\$12.87	\$12.87	100.0%
85360		EUGLOBULIN LYSIS	Medicare Non-Facility Rate	\$8.41	\$8.41	100.0%
85362		FIBRIN DEGRADATION PRODUCTS	Medicare Non-Facility Rate	\$6.89	\$6.89	100.0%
85378		FIBRIN DEGRADE SEMIQUANT	Medicare Non-Facility Rate	\$9.72	\$9.72	100.0%
85379		FIBRIN DEGRADATION QUANT	Medicare Non-Facility Rate	\$10.18	\$10.18	100.0%
85384		FIBRINOGEN ACTIVITY	Medicare Non-Facility Rate	\$9.72	\$9.72	100.0%
85385		FIBRINOGEN ANTIGEN	Medicare Non-Facility Rate	\$14.46	\$14.46	100.0%
85390		FIBRINOLYSINS SCREEN I&R	Medicare Facility/Non-Facility Rate	\$15.48	\$15.48	100.0%
85390	26	FIBRINOLYSINS SCREEN I&R	Medicare Facility/Non-Facility Rate	\$12.81	\$37.55	34.1%
85396		CLOTTING ASSAY WHOLE BLOOD	Medicare Facility Rate	\$18.16	\$19.87	91.4%
85397		CLOTTING FUNCT ACTIVITY	Medicare Non-Facility Rate	\$30.86	\$30.86	100.0%



## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
85410		FIBRINOLYTIC ANTIPLASMIN	Medicare Non-Facility Rate	\$7.71	\$7.71	100.0%
85415		FIBRINOLYTIC PLASMINOGEN	Medicare Non-Facility Rate	\$17.19	\$17.19	100.0%
85420		FIBRINOLYTIC PLASMINOGEN	Medicare Non-Facility Rate	\$6.53	\$6.53	100.0%
85421		FIBRINOLYTIC PLASMINOGEN	Medicare Non-Facility Rate	\$10.18	\$10.18	100.0%
85441		HEINZ BODIES DIRECT	Medicare Non-Facility Rate	\$4.20	\$4.20	100.0%
85445		HEINZ BODIES INDUCED	Medicare Non-Facility Rate	\$6.82	\$6.82	100.0%
85460		HEMOGLOBIN FETAL	Medicare Facility/Non-Facility Rate	\$7.73	\$7.73	100.0%
85520		HEPARIN ASSAY	Medicare Facility/Non-Facility Rate	\$13.09	\$13.09	100.0%
85540		WBC ALKALINE PHOSPHATASE	Medicare Non-Facility Rate	\$8.60	\$8.60	100.0%
85549		MURAMIDASE	Medicare Non-Facility Rate	\$18.75	\$18.75	100.0%
85555		RBC OSMOTIC FRAGILITY	Medicare Non-Facility Rate	\$7.47	\$7.47	100.0%
85557		RBC OSMOTIC FRAGILITY	Medicare Non-Facility Rate	\$13.36	\$13.36	100.0%
85576		BLOOD PLATELET AGGREGATION	Medicare Non-Facility Rate	\$24.91	\$24.91	100.0%
85576	26	BLOOD PLATELET AGGREGATION	Medicare Facility/Non-Facility Rate	\$13.87	\$18.42	75.3%
85597		PHOSPHOLIPID PLTTLT NEUTRALIZ	Medicare Non-Facility Rate	\$17.98	\$17.98	100.0%
85598		HEXAGNAL PHOSPH PLTTLT NEUTRL	Medicare Non-Facility Rate	\$17.98	\$17.98	100.0%
85610		PROTHROMBIN TIME	Medicare Facility/Non-Facility Rate	\$4.29	\$4.29	100.0%
85611		PROTHROMBIN TEST	Medicare Non-Facility Rate	\$3.94	\$3.94	100.0%
85612		VIPER VENOM PROTHROMBIN TIME	Medicare Non-Facility Rate	\$17.49	\$17.49	100.0%
85613		RUSSELL VIPER VENOM DILUTED	Medicare Non-Facility Rate	\$9.58	\$9.58	100.0%
85635		REPTILASE TEST	Medicare Non-Facility Rate	\$9.85	\$9.85	100.0%
85651		RBC SED RATE NONAUTOMATED	Medicare Non-Facility Rate	\$4.27	\$4.27	100.0%
85652		RBC SED RATE AUTOMATED	Medicare Non-Facility Rate	\$2.70	\$2.70	100.0%
85660		RBC SICKLE CELL TEST	Medicare Non-Facility Rate	\$5.51	\$5.51	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
85670		THROMBIN TIME PLASMA	Medicare Non-Facility Rate	\$5.77	\$5.77	100.0%
85705		THROMBOPLASTIN INHIBITION	Medicare Non-Facility Rate	\$9.63	\$9.63	100.0%
85730		THROMBOPLASTIN TIME PARTIAL	Medicare Facility/Non-Facility Rate	\$6.01	\$6.01	100.0%
85732		THROMBOPLASTIN TIME PARTIAL	Medicare Non-Facility Rate	\$6.47	\$6.47	100.0%
85810		BLOOD VISCOSITY EXAMINATION	Medicare Non-Facility Rate	\$11.67	\$11.67	100.0%
86001		ALLERGEN SPECIFIC IGG	Medicare Non-Facility Rate	\$7.82	\$7.82	100.0%
86003		ALLG SPEC IGE CRUDE XTRC EA	Medicare Facility/Non-Facility Rate	\$5.22	\$5.22	100.0%
86005		ALLG SPEC IGE MULTIALLG SCR	Medicare Non-Facility Rate	\$7.97	\$7.97	100.0%
86008		ALLG SPEC IGE RECOMB EA	Medicare Non-Facility Rate	\$17.93	\$17.93	100.0%
86021		WBC ANTIBODY IDENTIFICATION	Medicare Non-Facility Rate	\$15.05	\$15.05	100.0%
86022		PLATELET ANTIBODIES	Medicare Non-Facility Rate	\$18.37	\$18.37	100.0%
86023		IMMUNOGLOBULIN ASSAY	Medicare Non-Facility Rate	\$12.46	\$12.46	100.0%
86038		ANTINUCLEAR ANTIBODIES	Medicare Non-Facility Rate	\$12.09	\$12.09	100.0%
86039		ANTINUCLEAR ANTIBODIES (ANA)	Medicare Non-Facility Rate	\$11.16	\$11.16	100.0%
86060		ANTISTREPTOLYSIN O TITER	Medicare Facility/Non-Facility Rate	\$7.30	\$7.30	100.0%
86077		PHYS BLOOD BANK SERV XMATCH	Medicare Facility Rate	\$37.95	\$50.19	75.6%
86077		PHYS BLOOD BANK SERV XMATCH	Medicare Non-Facility Rate	\$37.95	\$54.18	70.0%
86078		PHYS BLOOD BANK SERV REACTJ	Medicare Facility Rate	\$38.73	\$50.19	77.2%
86078		PHYS BLOOD BANK SERV REACTJ	Medicare Non-Facility Rate	\$38.73	\$54.18	71.5%
86079		PHYS BLOOD BANK SERV AUTHRJ	Medicare Facility Rate	\$38.47	\$50.19	76.6%
86140		C-REACTIVE PROTEIN	Medicare Facility/Non-Facility Rate	\$5.18	\$5.18	100.0%
86141		C-REACTIVE PROTEIN HS	Medicare Non-Facility Rate	\$12.95	\$12.95	100.0%
86146		BETA-2 GLYCOPROTEIN ANTIBODY	Medicare Non-Facility Rate	\$25.45	\$25.45	100.0%
86147		CARDIOLIPIN ANTIBODY EA IG	Medicare Non-Facility Rate	\$25.45	\$25.45	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
86148		ANTI-PHOSPHOLIPID ANTIBODY	Medicare Non-Facility Rate	\$16.07	\$16.07	100.0%
86157		COLD AGGLUTININ TITER	Medicare Non-Facility Rate	\$8.06	\$8.06	100.0%
86160		COMPLEMENT ANTIGEN	Medicare Non-Facility Rate	\$12.00	\$12.00	100.0%
86161		COMPLEMENT/FUNCTION ACTIVITY	Medicare Non-Facility Rate	\$12.00	\$12.00	100.0%
86162		COMPLEMENT TOTAL (CH50)	Medicare Non-Facility Rate	\$20.32	\$20.32	100.0%
86200		CCP ANTIBODY	Medicare Non-Facility Rate	\$12.95	\$12.95	100.0%
86215		DEOXYRIBONUCLEASE ANTIBODY	Medicare Non-Facility Rate	\$13.25	\$13.25	100.0%
86225		DNA ANTIBODY NATIVE	Medicare Non-Facility Rate	\$13.74	\$13.74	100.0%
86226		DNA ANTIBODY SINGLE STRAND	Medicare Non-Facility Rate	\$12.11	\$12.11	100.0%
86235		NUCLEAR ANTIGEN ANTIBODY	Medicare Non-Facility Rate	\$17.93	\$17.93	100.0%
86255		FLUORESCENT ANTIBODY SCREEN	Medicare Non-Facility Rate	\$12.05	\$12.05	100.0%
86255	26	FLUORESCENT ANTIBODY SCREEN	Medicare Facility Rate	\$13.59	\$18.42	73.8%
86256		FLUORESCENT ANTIBODY TITER	Medicare Non-Facility Rate	\$12.05	\$12.05	100.0%
86256	26	FLUORESCENT ANTIBODY TITER	Medicare Facility Rate	\$13.59	\$18.42	73.8%
86277		GROWTH HORMONE ANTIBODY	Medicare Non-Facility Rate	\$15.74	\$15.74	100.0%
86300		IMMUNOASSAY TUMOR CA 15-3	Medicare Non-Facility Rate	\$20.81	\$20.81	100.0%
86301		IMMUNOASSAY TUMOR CA 19-9	Medicare Non-Facility Rate	\$20.81	\$20.81	100.0%
86304		IMMUNOASSAY TUMOR CA 125	Medicare Facility/Non-Facility Rate	\$20.81	\$20.81	100.0%
86305		HUMAN EPIDIDYMIS PROTEIN 4	Medicare Non-Facility Rate	\$20.81	\$20.81	100.0%
86308		HETEROPHILE ANTIBODY SCREEN	Medicare Non-Facility Rate	\$5.18	\$5.18	100.0%
86309		HETEROPHILE ANTIBODY TITER	Medicare Non-Facility Rate	\$6.47	\$6.47	100.0%
86316		IMMUNOASSAY TUMOR OTHER	Medicare Non-Facility Rate	\$20.81	\$20.81	100.0%
86317		IMMUNOASSAY INFECTIOUS AGENT	Medicare Non-Facility Rate	\$14.99	\$14.99	100.0%
86318		IMMUNOASSAY INFECTIOUS AGENT	Medicare Non-Facility Rate	\$18.09	\$18.09	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
86320	26	SERUM IMMUNOELECTROPHORESIS	Medicare Facility Rate	\$14.12	\$18.42	76.7%
86325		OTHER IMMUNOELECTROPHORESIS	Medicare Non-Facility Rate	\$23.13	\$23.13	100.0%
86325	26	OTHER IMMUNOELECTROPHORESIS	Medicare Facility/Non-Facility Rate	\$14.12	\$18.42	76.7%
86328		SARS CORONAVIRUS 2	Medicare Non-Facility Rate	\$20.81	\$45.28	46.0%
86329		IMMUNODIFFUSION NES	Medicare Non-Facility Rate	\$14.05	\$14.05	100.0%
86331		IMMUNODIFFUSION OUCHTERLONY	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
86332		IMMUNE COMPLEX ASSAY	Medicare Non-Facility Rate	\$24.37	\$24.37	100.0%
86334		IMMUNOFIX E-PHORESIS SERUM	Medicare Non-Facility Rate	\$22.34	\$22.34	100.0%
86334	26	IMMUNOFIX E-PHORESIS SERUM	Medicare Facility Rate	\$14.12	\$18.42	76.7%
86335		IMMUNIFIX E-PHORSIS/URINE/CSF	Medicare Non-Facility Rate	\$29.35	\$29.35	100.0%
86335	26	IMMUNIFIX E-PHORSIS/URINE/CSF	Medicare Facility Rate	\$17.47	\$18.42	94.8%
86336		INHIBIN A	Medicare Non-Facility Rate	\$15.59	\$15.59	100.0%
86337		INSULIN ANTIBODIES	Medicare Non-Facility Rate	\$21.41	\$21.41	100.0%
86340		INTRINSIC FACTOR ANTIBODY	Medicare Non-Facility Rate	\$15.08	\$15.08	100.0%
86341		ISLET CELL ANTIBODY	Medicare Non-Facility Rate	\$23.57	\$23.57	100.0%
86343		LEUKOCYTE HISTAMINE RELEASE	Medicare Non-Facility Rate	\$12.46	\$12.46	100.0%
86352		CELL FUNCTION ASSAY W/STIM	Medicare Non-Facility Rate	\$135.86	\$135.86	100.0%
86353		LYMPHOCYTE TRANSFORMATION	Medicare Non-Facility Rate	\$49.03	\$49.03	100.0%
86355		B CELLS TOTAL COUNT	Medicare Non-Facility Rate	\$37.73	\$37.73	100.0%
86356		MONONUCLEAR CELL ANTIGEN	Medicare Non-Facility Rate	\$26.78	\$26.78	100.0%
86357		NK CELLS TOTAL COUNT	Medicare Non-Facility Rate	\$37.73	\$37.73	100.0%
86359		T CELLS TOTAL COUNT	Medicare Non-Facility Rate	\$37.73	\$37.73	100.0%
86360		T CELL ABSOLUTE COUNT/RATIO	Medicare Non-Facility Rate	\$46.98	\$46.98	100.0%
86361		T CELL ABSOLUTE COUNT	Medicare Non-Facility Rate	\$26.78	\$26.78	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
86376		MICROSOMAL ANTIBODY EACH	Medicare Non-Facility Rate	\$14.55	\$14.55	100.0%
86382		NEUTRALIZATION TEST VIRAL	Medicare Non-Facility Rate	\$16.91	\$16.91	100.0%
86403		PARTICLE AGGLUT ANTBDY SCRIN	Medicare Non-Facility Rate	\$11.54	\$11.54	100.0%
86413		SARS-COV-2 ANTB QUANTITATIVE	Medicare Non-Facility Rate	\$43.18	\$0.00	#DIV/0!
86430		RHEUMATOID FACTOR TEST QUAL	Medicare Non-Facility Rate	\$6.14	\$6.14	100.0%
86431		RHEUMATOID FACTOR QUANT	Medicare Non-Facility Rate	\$5.67	\$5.67	100.0%
86480		TB TEST CELL IMMUN MEASURE	Medicare Non-Facility Rate	\$61.98	\$61.98	100.0%
86481		TB AG RESPONSE T-CELL SUSP	Medicare Non-Facility Rate	\$100.00	\$100.00	100.0%
86486		SKIN TEST NOS ANTIGEN	Medicare Non-Facility Rate	\$3.74	\$6.42	58.3%
86510		HISTOPLASMOSIS SKIN TEST	Medicare Non-Facility Rate	\$8.36	\$7.87	106.2%
86580		TB INTRADERMAL TEST	Medicare Facility/Non-Facility Rate	\$6.77	\$11.14	60.8%
86592		SYPHILIS TEST NON-TREP QUAL	Medicare Facility/Non-Facility Rate	\$4.27	\$4.27	100.0%
86593		SYPHILIS TEST NON-TREP QUANT	Medicare Non-Facility Rate	\$4.40	\$4.40	100.0%
86602		ANTINOMYCES ANTIBODY	Medicare Non-Facility Rate	\$10.18	\$10.18	100.0%
86603		ADENOVIRUS ANTIBODY	Medicare Non-Facility Rate	\$12.87	\$12.87	100.0%
86606		ASPERGILLUS ANTIBODY	Medicare Non-Facility Rate	\$15.05	\$15.05	100.0%
86609		BACTERIUM ANTIBODY	Medicare Non-Facility Rate	\$12.88	\$12.88	100.0%
86611		BARTONELLA ANTIBODY	Medicare Non-Facility Rate	\$10.18	\$10.18	100.0%
86612		BLASTOMYCES ANTIBODY	Medicare Non-Facility Rate	\$12.90	\$12.90	100.0%
86615		BORDETELLA ANTIBODY	Medicare Non-Facility Rate	\$13.19	\$13.19	100.0%
86617		LYME DISEASE ANTIBODY	Medicare Non-Facility Rate	\$15.49	\$15.49	100.0%
86618		LYME DISEASE ANTIBODY	Medicare Non-Facility Rate	\$17.03	\$17.03	100.0%
86619		BORRELIA ANTIBODY	Medicare Non-Facility Rate	\$13.38	\$13.38	100.0%
86622		BRUCELLA ANTIBODY	Medicare Non-Facility Rate	\$8.93	\$8.93	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
86625		CAMPYLOBACTER ANTIBODY	Medicare Non-Facility Rate	\$13.12	\$13.12	100.0%
86628		CANDIDA ANTIBODY	Medicare Non-Facility Rate	\$12.01	\$12.01	100.0%
86631		CHLAMYDIA ANTIBODY	Medicare Non-Facility Rate	\$11.82	\$11.82	100.0%
86632		CHLAMYDIA IGM ANTIBODY	Medicare Non-Facility Rate	\$12.68	\$12.68	100.0%
86635		COCCIDIOIDES ANTIBODY	Medicare Non-Facility Rate	\$11.47	\$11.47	100.0%
86638		Q FEVER ANTIBODY	Medicare Non-Facility Rate	\$12.12	\$12.12	100.0%
86644		CMV ANTIBODY	Medicare Non-Facility Rate	\$14.39	\$14.39	100.0%
86645		CMV ANTIBODY IGM	Medicare Non-Facility Rate	\$16.85	\$16.85	100.0%
86648		DIPHTHERIA ANTIBODY	Medicare Non-Facility Rate	\$15.21	\$15.21	100.0%
86658		ENTEROVIRUS ANTIBODY	Medicare Non-Facility Rate	\$13.03	\$13.03	100.0%
86663		EPSTEIN-BARR ANTIBODY	Medicare Non-Facility Rate	\$13.12	\$13.12	100.0%
86664		EPSTEIN-BARR NUCLEAR ANTIGEN	Medicare Non-Facility Rate	\$15.29	\$15.29	100.0%
86665		EPSTEIN-BARR CAPSID VCA	Medicare Non-Facility Rate	\$18.14	\$18.14	100.0%
86666		EHRlichia ANTIBODY	Medicare Non-Facility Rate	\$10.18	\$10.18	100.0%
86668		FRANCISELLA TULARENSIS	Medicare Non-Facility Rate	\$14.16	\$14.16	100.0%
86671		FUNGUS NES ANTIBODY	Medicare Non-Facility Rate	\$12.25	\$12.25	100.0%
86674		GIARDIA LAMBLIA ANTIBODY	Medicare Non-Facility Rate	\$14.72	\$14.72	100.0%
86677		HELICOBACTER PYLORI ANTIBODY	Medicare Non-Facility Rate	\$16.85	\$16.85	100.0%
86682		HELMINTH ANTIBODY	Medicare Non-Facility Rate	\$13.01	\$13.01	100.0%
86684		HEMOPHILUS INFLUENZA ANTIBDY	Medicare Non-Facility Rate	\$15.84	\$15.84	100.0%
86687		HTLV-I ANTIBODY	Medicare Non-Facility Rate	\$9.09	\$9.09	100.0%
86688		HTLV-II ANTIBODY	Medicare Non-Facility Rate	\$14.00	\$14.00	100.0%
86689		HTLV/HIV CONFIRMJ ANTIBODY	Medicare Non-Facility Rate	\$19.35	\$19.35	100.0%
86692		HEPATITIS DELTA AGENT ANTBDY	Medicare Non-Facility Rate	\$17.16	\$17.16	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
86694		HERPES SIMPLEX NES ANTBDY	Medicare Non-Facility Rate	\$14.39	\$14.39	100.0%
86695		HERPES SIMPLEX TYPE 1 TEST	Medicare Non-Facility Rate	\$13.19	\$13.19	100.0%
86696		HERPES SIMPLEX TYPE 2 TEST	Medicare Non-Facility Rate	\$19.35	\$19.35	100.0%
86698		HISTOPLASMA ANTIBODY	Medicare Non-Facility Rate	\$13.79	\$13.79	100.0%
86701		HIV-1ANTIBODY	Medicare Non-Facility Rate	\$8.89	\$8.89	100.0%
86702		HIV-2 ANTIBODY	Medicare Non-Facility Rate	\$13.52	\$13.52	100.0%
86703		HIV-1/HIV-2 1 RESULT ANTBDY	Medicare Non-Facility Rate	\$13.71	\$13.71	100.0%
86704		HEP B CORE ANTIBODY TOTAL	Medicare Facility/Non-Facility Rate	\$12.05	\$12.05	100.0%
86705		HEP B CORE ANTIBODY IGM	Medicare Non-Facility Rate	\$11.77	\$11.77	100.0%
86706		HEP B SURFACE ANTIBODY	Medicare Facility/Non-Facility Rate	\$10.74	\$10.74	100.0%
86707		HEPATITIS BE ANTIBODY	Medicare Non-Facility Rate	\$11.57	\$11.57	100.0%
86708		HEPATITIS A ANTIBODY	Medicare Non-Facility Rate	\$12.39	\$12.39	100.0%
86709		HEPATITIS A IGM ANTIBODY	Medicare Non-Facility Rate	\$11.26	\$11.26	100.0%
86710		INFLUENZA VIRUS ANTIBODY	Medicare Non-Facility Rate	\$13.55	\$13.55	100.0%
86713		LEGIONELLA ANTIBODY	Medicare Non-Facility Rate	\$15.30	\$15.30	100.0%
86717		LEISHMANIA ANTIBODY	Medicare Non-Facility Rate	\$12.25	\$12.25	100.0%
86720		LEPTOSPIRA ANTIBODY	Medicare Non-Facility Rate	\$16.20	\$16.20	100.0%
86727		LYMPH CHORIOMENINGITIS AB	Medicare Non-Facility Rate	\$12.87	\$12.87	100.0%
86735		MUMPS ANTIBODY	Medicare Non-Facility Rate	\$13.05	\$13.05	100.0%
86738		MYCOPLASMA ANTIBODY	Medicare Non-Facility Rate	\$13.24	\$13.24	100.0%
86741		NEISSERIA MENINGITIDIS	Medicare Non-Facility Rate	\$13.19	\$13.19	100.0%
86747		PARVOVIRUS ANTIBODY	Medicare Non-Facility Rate	\$15.03	\$15.03	100.0%
86753		PROTOZOA ANTIBODY NOS	Medicare Non-Facility Rate	\$12.39	\$12.39	100.0%
86757		RICKETTSIA ANTIBODY	Medicare Non-Facility Rate	\$19.35	\$19.35	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
86762		RUBELLA ANTIBODY	Medicare Non-Facility Rate	\$14.39	\$14.39	100.0%
86769		SARS-COV-2 COVID-19 ANTIBODY	Medicare Non-Facility Rate	\$42.75	\$42.13	101.5%
86774		TETANUS ANTIBODY	Medicare Non-Facility Rate	\$14.80	\$14.80	100.0%
86777		TOXOPLASMA ANTIBODY	Medicare Non-Facility Rate	\$14.39	\$14.39	100.0%
86778		TOXOPLASMA ANTIBODY IGM	Medicare Non-Facility Rate	\$14.41	\$14.41	100.0%
86780		TREPONEMA PALLIDUM	Medicare Facility/Non-Facility Rate	\$13.24	\$13.24	100.0%
86787		VARICELLA-ZOSTER ANTIBODY	Medicare Non-Facility Rate	\$12.88	\$12.88	100.0%
86788		WEST NILE VIRUS AB IGM	Medicare Non-Facility Rate	\$16.85	\$16.85	100.0%
86789		WEST NILE VIRUS ANTIBODY	Medicare Non-Facility Rate	\$14.39	\$14.39	100.0%
86790		VIRUS ANTIBODY NOS	Medicare Non-Facility Rate	\$12.88	\$12.88	100.0%
86793		YERSINIA ANTIBODY	Medicare Non-Facility Rate	\$13.19	\$13.19	100.0%
86794		ZIKA VIRUS IGM ANTIBODY	Medicare Non-Facility Rate	\$16.85	\$16.85	100.0%
86800		THYROGLOBULIN ANTIBODY	Medicare Non-Facility Rate	\$15.91	\$15.91	100.0%
86803		HEPATITIS C AB TEST	Medicare Facility/Non-Facility Rate	\$14.27	\$14.27	100.0%
86804		HEP C AB TEST CONFIRM	Medicare Non-Facility Rate	\$15.49	\$15.49	100.0%
86812		HLA TYPING A B OR C	Medicare Non-Facility Rate	\$25.81	\$25.81	100.0%
86832		HLA CLASS I HIGH DEFIN QUAL	Medicare Non-Facility Rate	\$323.75	\$323.75	100.0%
86833		HLA CLASS II HIGH DEFIN QUAL	Medicare Non-Facility Rate	\$325.80	\$325.80	100.0%
86850		RBC ANTIBODY SCREEN	Medicare Non-Facility Rate	\$9.77	\$9.77	100.0%
86870		RBC ANTIBODY IDENTIFICATION	Other States' Average Rate	\$20.97	\$33.93	61.8%
86880		COOMBS TEST DIRECT	Medicare Non-Facility Rate	\$5.39	\$5.39	100.0%
86885		COOMBS TEST INDIRECT QUAL	Medicare Non-Facility Rate	\$5.72	\$5.72	100.0%
86886		COOMBS TEST INDIRECT TITER	Medicare Non-Facility Rate	\$5.18	\$5.18	100.0%
86900		BLOOD TYPING SEROLOGIC ABO	Medicare Non-Facility Rate	\$2.99	\$2.99	100.0%



## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
86901		BLOOD TYPING SEROLOGIC RH(D)	Medicare Non-Facility Rate	\$2.99	\$2.99	100.0%
86905		BLOOD TYPING RBC ANTIGENS	Medicare Non-Facility Rate	\$3.83	\$3.83	100.0%
86906		BLD TYPING SEROLOGIC RH PHNT	Medicare Non-Facility Rate	\$7.75	\$7.75	100.0%
86920		COMPATIBILITY TEST SPIN	Other States' Average Rate	\$12.28	\$27.76	44.2%
86923		COMPATIBILITY TEST ELECTRIC	Other States' Average Rate	\$7.41	\$14.29	51.9%
86940		HEMOLYSINS/AGGLUTININS AUTO	Medicare Non-Facility Rate	\$8.77	\$8.77	100.0%
86941		HEMOLYSINS/AGGLUTININS	Medicare Non-Facility Rate	\$12.11	\$12.11	100.0%
87015		SPECIMEN INFECT AGNT CONCNTJ	Medicare Non-Facility Rate	\$6.68	\$6.68	100.0%
87015	26	SPECIMEN INFECT AGNT CONCNTJ	Other States' Average Rate	\$7.53	\$6.57	114.6%
87040		BLOOD CULTURE FOR BACTERIA	Medicare Facility/Non-Facility Rate	\$10.32	\$10.32	100.0%
87045		FECES CULTURE AEROBIC BACT	Medicare Facility/Non-Facility Rate	\$9.44	\$9.44	100.0%
87046		STOOL CULTR AEROBIC BACT EA	Medicare Facility/Non-Facility Rate	\$9.44	\$9.44	100.0%
87070		CULTURE OTHR SPECIMN AEROBIC	Medicare Facility/Non-Facility Rate	\$8.62	\$8.62	100.0%
87071		CULTURE AEROBIC QUANT OTHER	Medicare Non-Facility Rate	\$9.89	\$9.89	100.0%
87075		CULTR BACTERIA EXCEPT BLOOD	Medicare Non-Facility Rate	\$9.47	\$9.47	100.0%
87075	26	CULTR BACTERIA EXCEPT BLOOD	Other States' Average Rate	\$9.30	\$8.39	110.8%
87076		CULTURE ANAEROBE IDENT EACH	Medicare Non-Facility Rate	\$8.08	\$8.08	100.0%
87076	26	CULTURE ANAEROBE IDENT EACH	Other States' Average Rate	\$6.97	\$6.67	104.5%
87077		CULTURE AEROBIC IDENTIFY	Medicare Facility/Non-Facility Rate	\$8.08	\$8.08	100.0%
87081		CULTURE SCREEN ONLY	Medicare Facility/Non-Facility Rate	\$6.63	\$6.63	100.0%
87084		CULTURE OF SPECIMEN BY KIT	Medicare Non-Facility Rate	\$27.07	\$27.07	100.0%
87086		URINE CULTURE/COLONY COUNT	Medicare Facility/Non-Facility Rate	\$8.07	\$8.07	100.0%
87088		URINE BACTERIA CULTURE	Medicare Facility/Non-Facility Rate	\$8.09	\$8.09	100.0%
87101		SKIN FUNGI CULTURE	Medicare Non-Facility Rate	\$7.71	\$7.71	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
87102		FUNGUS ISOLATION CULTURE	Medicare Facility/Non-Facility Rate	\$8.41	\$8.41	100.0%
87103		BLOOD FUNGUS CULTURE	Medicare Non-Facility Rate	\$20.46	\$20.46	100.0%
87106		FUNGI IDENTIFICATION YEAST	Medicare Non-Facility Rate	\$10.32	\$10.32	100.0%
87107		FUNGI IDENTIFICATION MOLD	Medicare Non-Facility Rate	\$10.32	\$10.32	100.0%
87109		MYCOPLASMA	Medicare Non-Facility Rate	\$15.39	\$15.39	100.0%
87110		CHLAMYDIA CULTURE	Medicare Non-Facility Rate	\$19.60	\$19.60	100.0%
87116		MYCOBACTERIA CULTURE	Medicare Facility/Non-Facility Rate	\$10.80	\$10.80	100.0%
87118		MYCOBACTERIC IDENTIFICATION	Medicare Non-Facility Rate	\$14.61	\$14.61	100.0%
87140		CULTURE TYPE IMMUNOFLUORESC	Medicare Non-Facility Rate	\$5.57	\$5.57	100.0%
87147		CULTURE TYPE IMMUNOLOGIC	Medicare Non-Facility Rate	\$5.18	\$5.18	100.0%
87149		DNA/RNA DIRECT PROBE	Medicare Non-Facility Rate	\$20.05	\$20.05	100.0%
87150		DNA/RNA AMPLIFIED PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87153		DNA/RNA SEQUENCING	Medicare Non-Facility Rate	\$115.36	\$115.36	100.0%
87168		MACROSCOPIC EXAM ARTHROPOD	Medicare Non-Facility Rate	\$4.27	\$4.27	100.0%
87169		MACROSCOPIC EXAM PARASITE	Medicare Non-Facility Rate	\$4.31	\$4.31	100.0%
87172		PINWORM EXAM	Medicare Non-Facility Rate	\$4.27	\$4.27	100.0%
87176		TISSUE HOMOGENIZATION CULTR	Medicare Facility/Non-Facility Rate	\$5.88	\$5.88	100.0%
87177		OVA AND PARASITES SMEARS	Medicare Non-Facility Rate	\$8.90	\$8.90	100.0%
87181		MICROBE SUSCEPTIBLE DIFFUSE	Medicare Non-Facility Rate	\$4.75	\$4.75	100.0%
87184		MICROBE SUSCEPTIBLE DISK	Medicare Non-Facility Rate	\$7.48	\$7.48	100.0%
87185		MICROBE SUSCEPTIBLE ENZYME	Medicare Facility/Non-Facility Rate	\$4.75	\$4.75	100.0%
87186		MICROBE SUSCEPTIBLE MIC	Medicare Facility/Non-Facility Rate	\$8.65	\$8.65	100.0%
87205		SMEAR GRAM STAIN	Medicare Non-Facility Rate	\$4.27	\$4.27	100.0%
87205	26	SMEAR GRAM STAIN	Other States' Average Rate	\$4.82	\$4.20	114.8%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
87206		SMEAR FLUORESCENT/ACID STAI	Medicare Non-Facility Rate	\$5.39	\$5.39	100.0%
87206	26	SMEAR FLUORESCENT/ACID STAI	Other States' Average Rate	\$5.29	\$5.29	100.0%
87207		SMEAR SPECIAL STAIN	Medicare Non-Facility Rate	\$5.99	\$5.99	100.0%
87207	26	SMEAR SPECIAL STAIN	Medicare Facility Rate	\$6.75	\$18.42	36.6%
87209		SMEAR COMPLEX STAIN	Medicare Non-Facility Rate	\$17.98	\$17.98	100.0%
87210		SMEAR WET MOUNT SALINE/INK	Medicare Non-Facility Rate	\$5.82	\$5.82	100.0%
87210	26	SMEAR WET MOUNT SALINE/INK	Other States' Average Rate	\$4.20	\$4.64	90.6%
87220		TISSUE EXAM FOR FUNGI	Medicare Non-Facility Rate	\$4.27	\$4.27	100.0%
87230		ASSAY TOXIN OR ANTITOXIN	Medicare Non-Facility Rate	\$19.74	\$19.74	100.0%
87252		VIRUS INOCULATION TISSUE	Medicare Facility/Non-Facility Rate	\$26.07	\$26.07	100.0%
87253		VIRUS INOCULATE TISSUE ADDL	Medicare Non-Facility Rate	\$20.20	\$20.20	100.0%
87254		VIRUS INOCULATION SHELL VIA	Medicare Non-Facility Rate	\$19.56	\$19.56	100.0%
87255		GENET VIRUS ISOLATE HSV	Medicare Non-Facility Rate	\$33.86	\$33.86	100.0%
87270		CHLAMYDIA TRACHOMATIS AG IF	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87272		CRYPTOSPORIDIUM AG IF	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87273		HERPES SIMPLEX 2 AG IF	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87274		HERPES SIMPLEX 1 AG IF	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87275		INFLUENZA B AG IF	Medicare Non-Facility Rate	\$12.25	\$12.25	100.0%
87276		INFLUENZA A AG IF	Medicare Non-Facility Rate	\$16.07	\$16.07	100.0%
87278		LEGION PNEUMOPHILIA AG IF	Medicare Non-Facility Rate	\$15.60	\$15.60	100.0%
87281		PNEUMOCYSTIS CARINII AG IF	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87283		RUBEOLA AG IF	Medicare Non-Facility Rate	\$60.80	\$60.80	100.0%
87290		VARICELLA ZOSTER AG IF	Medicare Non-Facility Rate	\$13.42	\$13.42	100.0%
87299		ANTIBODY DETECTION NOS IF	Medicare Non-Facility Rate	\$16.10	\$16.10	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
87301		ADENOVIRUS AG IA	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87305		ASPERGILLUS AG IA	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87324		CLOSTRIDIUM AG IA	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87327		CRYPTOCOCCUS NEOFORM AG IA	Medicare Non-Facility Rate	\$13.42	\$13.42	100.0%
87328		CRYPTOSPORIDIUM AG IA	Medicare Non-Facility Rate	\$13.82	\$13.82	100.0%
87329		GIARDIA AG IA	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87337		ENTAMOEBA HIST GROUP AG IA	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87338		HPYLORI STOOL IA	Medicare Non-Facility Rate	\$14.38	\$14.38	100.0%
87340		HEPATITIS B SURFACE AG IA	Medicare Facility/Non-Facility Rate	\$10.33	\$10.33	100.0%
87341		HEPATITIS B SURFACE AG IA	Medicare Non-Facility Rate	\$10.33	\$10.33	100.0%
87350		HEPATITIS BE AG IA	Medicare Non-Facility Rate	\$11.53	\$11.53	100.0%
87385		HISTOPLASMA CAPSUL AG IA	Medicare Non-Facility Rate	\$13.25	\$13.25	100.0%
87389		HIV-1 AG W/HIV-1 & HIV-2 AB	Medicare Facility/Non-Facility Rate	\$24.08	\$24.08	100.0%
87400		INFLUENZA A/B AG IA	Medicare Non-Facility Rate	\$14.13	\$14.13	100.0%
87420		RESP SYNCYTIAL AG IA	Medicare Non-Facility Rate	\$13.91	\$13.91	100.0%
87425		ROTAVIRUS AG IA	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87426		SARSCOV CORONAVIRUS AG IA	Medicare Facility/Non-Facility Rate	\$46.36	\$0.00	#DIV/0!
87427		SHIGA-LIKE TOXIN AG IA	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87430		STREP A AG IA	Medicare Non-Facility Rate	\$16.81	\$16.81	100.0%
87449		AG DETECT NOS IA MULT	Medicare Non-Facility Rate	\$11.98	\$11.98	100.0%
87471		BARTONELLA DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87476		LYME DIS DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87480		CANDIDA DNA DIR PROBE	Medicare Non-Facility Rate	\$20.05	\$20.05	100.0%
87481		CANDIDA DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
87482		CANDIDA DNA QUANT	Medicare Non-Facility Rate	\$55.74	\$55.74	100.0%
87483		CNS DNA AMP PROBE TYPE 12-25	Medicare Non-Facility Rate	\$416.78	\$416.78	100.0%
87486		CHYLM D PNEUM DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87490		CHYLM D TRACH DNA DIR PROBE	Medicare Non-Facility Rate	\$22.75	\$22.75	100.0%
87491		CHYLM D TRACH DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87492		CHYLM D TRACH DNA QUANT	Medicare Non-Facility Rate	\$53.47	\$53.47	100.0%
87493		C DIFF AMPLIFIED PROBE	Medicare Non-Facility Rate	\$37.27	\$37.27	100.0%
87496		CYTOMEG DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87497		CYTOMEG DNA QUANT	Medicare Non-Facility Rate	\$42.84	\$42.84	100.0%
87498		ENTEROVIRUS PROBE&REVRS TRNS	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87500		VANOMYCIN DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87501		INFLUENZA DNA AMP PROB 1+	Medicare Non-Facility Rate	\$51.31	\$51.31	100.0%
87502		INFLUENZA DNA AMP PROBE	Medicare Facility/Non-Facility Rate	\$95.80	\$95.80	100.0%
87503		INFLUENZA DNA AMP PROB ADDL	Medicare Facility/Non-Facility Rate	\$29.22	\$29.22	100.0%
87507		IADNA-DNA/RNA PROBE TQ 12-25	Medicare Non-Facility Rate	\$416.78	\$416.78	100.0%
87510		GARDNER VAG DNA DIR PROBE	Medicare Non-Facility Rate	\$20.05	\$20.05	100.0%
87511		GARDNER VAG DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87512		GARDNER VAG DNA QUANT	Medicare Non-Facility Rate	\$41.76	\$41.76	100.0%
87517		HEPATITIS B DNA QUANT	Medicare Non-Facility Rate	\$42.84	\$42.84	100.0%
87521		HEPATITIS C PROBE&RVRS TRNSC	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87522		HEPATITIS C REVRS TRNSCRPJ	Medicare Non-Facility Rate	\$42.84	\$42.84	100.0%
87529		HSV DNA AMP PROBE	Medicare Facility/Non-Facility Rate	\$35.09	\$35.09	100.0%
87530		HSV DNA QUANT	Medicare Non-Facility Rate	\$42.84	\$42.84	100.0%
87532		HHV-6 DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
87533		HHV-6 DNA QUANT	Medicare Non-Facility Rate	\$41.76	\$41.76	100.0%
87535		HIV-1 PROBE&REVERSE TRNSCRPJ	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87536		HIV-1 QUANT&REVRSE TRNSCRPJ	Medicare Facility/Non-Facility Rate	\$85.10	\$85.10	100.0%
87538		HIV-2 PROBE&REVRSE TRNSCRIPJ	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87541		LEGION PNEUMO DNA AMP PROB	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87551		MYCOBACTERIA DNA AMP PROBE	Medicare Non-Facility Rate	\$48.24	\$48.24	100.0%
87556		M.TUBERCULO DNA AMP PROBE	Medicare Non-Facility Rate	\$41.68	\$41.68	100.0%
87561		M.AVIUM-INTRA DNA AMP PROB	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87563		M. GENITALIUM AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87581		M.PNEUMON DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87590		N.GONORRHOEAE DNA DIR PROB	Medicare Non-Facility Rate	\$26.88	\$26.88	100.0%
87591		N.GONORRHOEAE DNA AMP PROB	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87592		N.GONORRHOEAE DNA QUANT	Medicare Non-Facility Rate	\$42.84	\$42.84	100.0%
87624		HPV HIGH-RISK TYPES	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87625		HPV TYPES 16 & 18 ONLY	Medicare Non-Facility Rate	\$40.55	\$40.55	100.0%
87631		RESP VIRUS 3-5 TARGETS	Medicare Facility/Non-Facility Rate	\$142.63	\$142.63	100.0%
87633		RESP VIRUS 12-25 TARGETS	Medicare Facility/Non-Facility Rate	\$416.78	\$416.78	100.0%
87634		RSV DNA/RNA AMP PROBE	Medicare Non-Facility Rate	\$70.20	\$70.20	100.0%
87635		SARS-COV-2 COVID-19 AMP PRB	Medicare Facility/Non-Facility Rate	\$50.82	\$51.31	99.0%
87636		SARSCOV2 / INF A/B AMP PRB	Medicare Non-Facility Rate	\$146.20	\$142.63	102.5%
87637		SARSCOV2&INF A&B&RSV AMP PRB	Medicare Non-Facility Rate	\$146.20	\$142.63	102.5%
87640		STAPH A DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87641		MR-STAPH DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87650		STREP A DNA DIR PROBE	Medicare Non-Facility Rate	\$20.05	\$20.05	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
87651		STREP A DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87652		STREP A DNA QUANT	Medicare Non-Facility Rate	\$41.76	\$41.76	100.0%
87653		STREP B DNA AMP PROBE	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87660		TRICHOMONAS VAGIN DIR PROBE	Medicare Non-Facility Rate	\$20.05	\$20.05	100.0%
87661		TRICHOMONAS VAGINALIS AMPLIF	Medicare Non-Facility Rate	\$35.09	\$35.09	100.0%
87662		ZIKA VIRUS DNA/RNA AMP PROBE	Medicare Non-Facility Rate	\$51.31	\$51.31	100.0%
87798		DETECT AGENT NOS DNA AMP	Medicare Facility/Non-Facility Rate	\$35.09	\$35.09	100.0%
87799		DETECT AGENT NOS DNA QUANT	Medicare Non-Facility Rate	\$42.84	\$42.84	100.0%
87800		DETECT AGNT MULT DNA DIREC	Medicare Non-Facility Rate	\$43.67	\$43.67	100.0%
87801		DETECT AGNT MULT DNA AMPLI	Medicare Non-Facility Rate	\$70.20	\$70.20	100.0%
87804		INFLUENZA ASSAY W/OPTIC	Medicare Facility/Non-Facility Rate	\$16.55	\$16.55	100.0%
87806		HIV ANTIGEN W/HIV ANTIBODIES	Medicare Facility/Non-Facility Rate	\$32.77	\$32.77	100.0%
87807		RSV ASSAY W/OPTIC	Medicare Non-Facility Rate	\$13.10	\$13.10	100.0%
87808		TRICHOMONAS ASSAY W/OPTIC	Medicare Non-Facility Rate	\$15.29	\$15.29	100.0%
87809		ADENOVIRUS ASSAY W/OPTIC	Medicare Non-Facility Rate	\$21.76	\$21.76	100.0%
87811		SARS-COV-2 COVID19 W/OPTIC	Medicare Non-Facility Rate	\$42.41	\$0.00	#DIV/0!
87880		STREP A ASSAY W/OPTIC	Medicare Facility/Non-Facility Rate	\$16.53	\$16.53	100.0%
87899		AGENT NOS ASSAY W/OPTIC	Medicare Non-Facility Rate	\$16.07	\$16.07	100.0%
87900		PHENOTYPE INFECT AGENT DRUG	Medicare Non-Facility Rate	\$130.35	\$130.35	100.0%
87901		GENOTYPE DNA HIV REVERSE T	Medicare Non-Facility Rate	\$257.45	\$257.45	100.0%
87902		GENOTYPE DNA/RNA HEP C	Medicare Non-Facility Rate	\$257.45	\$257.45	100.0%
87903		PHENOTYPE DNA HIV W/CULTURE	Medicare Non-Facility Rate	\$488.66	\$488.66	100.0%
87904		PHENOTYPE DNA HIV W/CLT ADD	Medicare Non-Facility Rate	\$26.07	\$26.07	100.0%
87905		SIALIDASE ENZYME ASSAY	Medicare Non-Facility Rate	\$12.22	\$12.22	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
87906		GENOTYPE DNA/RNA HIV	Medicare Non-Facility Rate	\$128.73	\$128.73	100.0%
87910		GENOTYPE CYTOMEGALOVIRUS	Medicare Non-Facility Rate	\$257.45	\$257.45	100.0%
87912		GENOTYPE DNA HEPATITIS B	Medicare Non-Facility Rate	\$257.45	\$257.45	100.0%
88104		CYTOPATH FL NONGYN SMEARS	Medicare Non-Facility Rate	\$42.24	\$70.29	60.1%
88104	26	CYTOPATH FL NONGYN SMEARS	Medicare Facility/Non-Facility Rate	\$21.13	\$27.64	76.4%
88104	TC	CYTOPATH FL NONGYN SMEARS	Medicare Non-Facility Rate	\$21.13	\$42.66	49.5%
88108		CYTOPATH CONCENTRATE TECH	Medicare Non-Facility Rate	\$42.24	\$67.59	62.5%
88108	26	CYTOPATH CONCENTRATE TECH	Medicare Facility/Non-Facility Rate	\$25.35	\$22.75	111.4%
88108	TC	CYTOPATH CONCENTRATE TECH	Medicare Non-Facility Rate	\$16.89	\$44.83	37.7%
88112		CYTOPATH CELL ENHANCE TECH	Medicare Facility/Non-Facility Rate	\$82.81	\$69.57	119.0%
88112	26	CYTOPATH CELL ENHANCE TECH	Medicare Facility/Non-Facility Rate	\$44.35	\$28.00	158.4%
88112	TC	CYTOPATH CELL ENHANCE TECH	Medicare Non-Facility Rate	\$38.36	\$41.57	92.3%
88120		CYTP URINE 3-5 PROBES EA SPEC	Medicare Non-Facility Rate	\$371.20	\$657.67	56.4%
88121		CYTP URINE 3-5 PROBES CMPTR	Medicare Non-Facility Rate	\$313.50	\$462.98	67.7%
88121	26	CYTP URINE 3-5 PROBES CMPTR	Medicare Non-Facility Rate	\$37.76	\$48.58	77.7%
88121	TC	CYTP URINE 3-5 PROBES CMPTR	Medicare Non-Facility Rate	\$275.70	\$414.41	66.5%
88141		CYTOPATH C/V INTERPRET	Medicare Facility/Non-Facility Rate	\$15.93	\$23.04	69.1%
88142		CYTOPATH C/V THIN LAYER	Medicare Non-Facility Rate	\$20.26	\$20.26	100.0%
88147		CYTOPATH C/V AUTOMATED	Medicare Non-Facility Rate	\$50.56	\$50.56	100.0%
88160	26	CYTOPATH SMEAR OTHER SOURCE	Medicare Facility Rate	\$21.13	\$25.92	81.5%
88161		CYTOPATH SMEAR OTHER SOURCE	Medicare Non-Facility Rate	\$42.24	\$77.27	54.7%
88161	26	CYTOPATH SMEAR OTHER SOURCE	Medicare Facility Rate	\$21.13	\$25.56	82.7%
88172		CYTP DX EVAL FNA 1ST EA SITE	Medicare Facility/Non-Facility Rate	\$50.03	\$56.32	88.8%
88172	26	CYTP DX EVAL FNA 1ST EA SITE	Medicare Facility/Non-Facility Rate	\$28.57	\$35.76	79.9%



## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
88172	TC	CYTP DX EVAL FNA 1ST EA SITE	Medicare Non-Facility Rate	\$21.13	\$20.56	102.8%
88173		CYTOPATH EVAL FNA REPORT	Medicare Facility/Non-Facility Rate	\$71.48	\$164.04	43.6%
88173	26	CYTOPATH EVAL FNA REPORT	Medicare Facility/Non-Facility Rate	\$52.31	\$70.95	73.7%
88173	TC	CYTOPATH EVAL FNA REPORT	Medicare Non-Facility Rate	\$19.19	\$93.09	20.6%
88175		CYTOPATH C/V AUTO FLUID REDO	Medicare Non-Facility Rate	\$26.61	\$26.61	100.0%
88177		CYTP FNA EVAL EA ADDL	Medicare Facility/Non-Facility Rate	\$22.56	\$29.67	76.0%
88177	26	CYTP FNA EVAL EA ADDL	Medicare Facility/Non-Facility Rate	\$17.40	\$22.06	78.9%
88177	TC	CYTP FNA EVAL EA ADDL	Medicare Non-Facility Rate	\$5.16	\$7.61	67.8%
88182		CELL MARKER STUDY	Medicare Non-Facility Rate	\$97.26	\$154.45	63.0%
88182	26	CELL MARKER STUDY	Medicare Facility Rate	\$34.13	\$38.90	87.7%
88184		FLOWCYTOMETRY/ TC 1 MARKER	Medicare Facility/Non-Facility Rate	\$37.18	\$72.27	51.4%
88185		FLOWCYTOMETRY/TC ADD-ON	Medicare Facility/Non-Facility Rate	\$18.26	\$23.19	78.7%
88187		FLOWCYTOMETRY/READ 2-8	Medicare Facility/Non-Facility Rate	\$50.44	\$36.12	139.6%
88188		FLOWCYTOMETRY/READ 9-15	Medicare Facility/Non-Facility Rate	\$62.95	\$63.26	99.5%
88189		FLOWCYTOMETRY/READ 16 & >	Medicare Facility/Non-Facility Rate	\$82.89	\$84.83	97.7%
88230		TISSUE CULTURE LYMPHOCYTE	Medicare Non-Facility Rate	\$116.49	\$116.49	100.0%
88233		TISSUE CULTURE SKIN/BIOPSY	Medicare Non-Facility Rate	\$140.73	\$140.73	100.0%
88235		TISSUE CULTURE PLACENTA	Medicare Non-Facility Rate	\$150.30	\$150.30	100.0%
88237		TISSUE CULTURE BONE MARROW	Medicare Facility/Non-Facility Rate	\$143.75	\$143.75	100.0%
88239		TISSUE CULTURE TUMOR	Medicare Non-Facility Rate	\$147.52	\$147.52	100.0%
88240		CELL CRYOPRESERVE/STORAGE	Medicare Non-Facility Rate	\$13.07	\$13.07	100.0%
88261		CHROMOSOME ANALYSIS 5	Medicare Non-Facility Rate	\$264.34	\$264.34	100.0%
88262		CHROMOSOME ANALYSIS 15-20	Medicare Non-Facility Rate	\$125.49	\$125.49	100.0%
88264		CHROMOSOME ANALYSIS 20-25	Medicare Facility/Non-Facility Rate	\$144.61	\$144.61	100.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
88267		CHROMOSOME ANALYS PLACENTA	Medicare Non-Facility Rate	\$188.57	\$188.57	100.0%
88269		CHROMOSOME ANALYS AMNIOTIC	Medicare Non-Facility Rate	\$173.66	\$173.66	100.0%
88271		CYTOGENETICS DNA PROBE	Medicare Non-Facility Rate	\$21.42	\$21.42	100.0%
88273		CYTOGENETICS 10-30	Medicare Non-Facility Rate	\$34.81	\$34.81	100.0%
88274		CYTOGENETICS 25-99	Medicare Non-Facility Rate	\$42.38	\$42.38	100.0%
88275		CYTOGENETICS 100-300	Medicare Non-Facility Rate	\$51.19	\$51.19	100.0%
88280		CHROMOSOME KARYOTYPE STUDY	Medicare Non-Facility Rate	\$33.47	\$33.47	100.0%
88285		CHROMOSOME COUNT ADDITIONAL	Medicare Non-Facility Rate	\$26.91	\$26.91	100.0%
88289		CHROMOSOME STUDY ADDITIONAL	Medicare Non-Facility Rate	\$34.43	\$34.43	100.0%
88291		CYTO/MOLECULAR REPORT	Medicare Facility/Non-Facility Rate	\$19.70	\$33.93	58.1%
88300		SURGICAL PATH GROSS	Medicare Facility/Non-Facility Rate	\$15.21	\$15.98	95.2%
88300	26	SURGICAL PATH GROSS	Medicare Facility/Non-Facility Rate	\$4.05	\$4.49	90.2%
88300	TC	SURGICAL PATH GROSS	Medicare Non-Facility Rate	\$10.99	\$11.50	95.6%
88302		TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$34.65	\$33.30	104.1%
88302	26	TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$6.17	\$6.94	88.9%
88302	TC	TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$10.15	\$26.35	38.5%
88304		TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$43.94	\$43.66	100.6%
88304	26	TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$10.39	\$11.51	90.3%
88304	TC	TISSUE EXAM BY PATHOLOGIST	Medicare Non-Facility Rate	\$13.52	\$32.15	42.1%
88305		TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$61.68	\$73.98	83.4%
88305	26	TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$35.83	\$37.84	94.7%
88305	TC	TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$18.59	\$36.14	51.4%
88307		TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$85.34	\$301.05	28.3%
88307	26	TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$60.00	\$83.32	72.0%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
88307	TC	TISSUE EXAM BY PATHOLOGIST	Medicare Non-Facility Rate	\$25.35	\$217.73	11.6%
88309		TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$113.21	\$457.00	24.8%
88309	26	TISSUE EXAM BY PATHOLOGIST	Medicare Facility/Non-Facility Rate	\$79.44	\$146.51	54.2%
88309	TC	TISSUE EXAM BY PATHOLOGIST	Medicare Non-Facility Rate	\$33.80	\$310.49	10.9%
88311		DECALCIFY TISSUE	Medicare Facility/Non-Facility Rate	\$6.77	\$21.53	31.4%
88311	26	DECALCIFY TISSUE	Medicare Facility/Non-Facility Rate	\$1.69	\$12.56	13.5%
88311	TC	DECALCIFY TISSUE	Medicare Facility/Non-Facility Rate	\$5.07	\$8.96	56.6%
88312		SPECIAL STAINS GROUP 1	Medicare Facility/Non-Facility Rate	\$14.37	\$118.88	12.1%
88312	26	SPECIAL STAINS GROUP 1	Medicare Facility/Non-Facility Rate	\$4.23	\$26.58	15.9%
88312	TC	SPECIAL STAINS GROUP 1	Medicare Non-Facility Rate	\$10.15	\$92.30	11.0%
88313		SPECIAL STAINS GROUP 2	Medicare Facility/Non-Facility Rate	\$6.77	\$85.66	7.9%
88313	26	SPECIAL STAINS GROUP 2	Medicare Facility/Non-Facility Rate	\$1.69	\$12.20	13.9%
88313	TC	SPECIAL STAINS GROUP 2	Medicare Facility/Non-Facility Rate	\$5.07	\$73.46	6.9%
88314		HISTOCHEMICAL STAINS ADD-ON	Medicare Non-Facility Rate	\$42.24	\$104.16	40.6%
88314	26	HISTOCHEMICAL STAINS ADD-ON	Medicare Facility Rate	\$10.15	\$21.29	47.7%
88319		ENZYME HISTOCHEMISTRY	Medicare Non-Facility Rate	\$38.04	\$147.78	25.7%
88319	26	ENZYME HISTOCHEMISTRY	Medicare Facility Rate	\$19.44	\$27.32	71.2%
88321		MICROSLIDE CONSULTATION	Medicare Facility Rate	\$51.55	\$84.58	60.9%
88321		MICROSLIDE CONSULTATION	Medicare Non-Facility Rate	\$51.55	\$99.07	52.0%
88323		MICROSLIDE CONSULTATION	Medicare Non-Facility Rate	\$89.75	\$116.36	77.1%
88323	26	MICROSLIDE CONSULTATION	Medicare Facility/Non-Facility Rate	\$53.74	\$87.84	61.2%
88325		COMPREHENSIVE REVIEW OF DATA	Medicare Facility Rate	\$86.18	\$136.33	63.2%
88325		COMPREHENSIVE REVIEW OF DATA	Medicare Non-Facility Rate	\$86.18	\$160.61	53.7%
88329		PATH CONSULT INTROP	Medicare Facility Rate	\$30.61	\$35.87	85.3%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
88329		PATH CONSULT INTROP	Medicare Non-Facility Rate	\$30.61	\$59.42	51.5%
88331		PATH CONSULT INTRAOP 1 BLOC	Medicare Facility/Non-Facility Rate	\$62.12	\$106.15	58.5%
88331	26	PATH CONSULT INTRAOP 1 BLOC	Medicare Facility/Non-Facility Rate	\$47.31	\$62.77	75.4%
88331	TC	PATH CONSULT INTRAOP 1 BLOC	Medicare Non-Facility Rate	\$14.78	\$43.38	34.1%
88332		PATH CONSULT INTRAOP ADDL	Medicare Facility/Non-Facility Rate	\$31.09	\$56.48	55.0%
88332	26	PATH CONSULT INTRAOP ADDL	Medicare Facility/Non-Facility Rate	\$23.67	\$30.85	76.7%
88332	TC	PATH CONSULT INTRAOP ADDL	Medicare Non-Facility Rate	\$7.43	\$25.63	29.0%
88333		INTRAOP CYTO PATH CONSULT 1	Medicare Non-Facility Rate	\$62.43	\$96.71	64.6%
88333	26	INTRAOP CYTO PATH CONSULT 1	Medicare Facility/Non-Facility Rate	\$46.82	\$62.39	75.0%
88333	TC	INTRAOP CYTO PATH CONSULT 1	Medicare Non-Facility Rate	\$15.63	\$34.32	45.5%
88334	26	INTRAOP CYTO PATH CONSULT 2	Medicare Facility Rate	\$22.98	\$37.87	60.7%
88341		IMMUNOHISTO ANTB ADDL SLIDE	Medicare Facility/Non-Facility Rate	\$54.42	\$92.85	58.6%
88341	26	IMMUNOHISTO ANTB ADDL SLIDE	Medicare Facility/Non-Facility Rate	\$44.12	\$28.36	155.6%
88341	TC	IMMUNOHISTO ANTB ADDL SLIDE	Medicare Facility/Non-Facility Rate	\$10.31	\$64.49	16.0%
88342		IMMUNOHISTO ANTB 1ST STAIN	Medicare Facility/Non-Facility Rate	\$56.70	\$105.94	53.5%
88342	26	IMMUNOHISTO ANTB 1ST STAIN	Medicare Facility/Non-Facility Rate	\$32.27	\$35.02	92.1%
88342	TC	IMMUNOHISTO ANTB 1ST STAIN	Medicare Facility/Non-Facility Rate	\$24.43	\$70.92	34.4%
88344		IMMUNOHISTO ANTIBODY SLIDE	Medicare Non-Facility Rate	\$56.70	\$179.74	31.5%
88344	26	IMMUNOHISTO ANTIBODY SLIDE	Medicare Facility/Non-Facility Rate	\$32.27	\$38.53	83.8%
88344	TC	IMMUNOHISTO ANTIBODY SLIDE	Medicare Non-Facility Rate	\$24.43	\$141.21	17.3%
88346		IMMUNOFLUOR ANTB 1ST STAIN	Medicare Facility/Non-Facility Rate	\$56.34	\$161.68	34.8%
88346	26	IMMUNOFLUOR ANTB 1ST STAIN	Medicare Facility/Non-Facility Rate	\$34.47	\$36.41	94.7%
88346	TC	IMMUNOFLUOR ANTB 1ST STAIN	Medicare Non-Facility Rate	\$21.96	\$125.27	17.5%
88348		ELECTRON MICROSCOPY	Medicare Facility/Non-Facility Rate	\$121.59	\$481.59	25.2%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
88348	26	ELECTRON MICROSCOPY	Medicare Facility Rate	\$71.40	\$78.37	91.1%
88350		IMMUNOFLUOR ANTB ADDL STAIN	Medicare Facility/Non-Facility Rate	\$65.74	\$124.59	52.8%
88350	26	IMMUNOFLUOR ANTB ADDL STAIN	Medicare Facility/Non-Facility Rate	\$26.28	\$29.40	89.4%
88350	TC	IMMUNOFLUOR ANTB ADDL STAIN	Medicare Non-Facility Rate	\$39.37	\$95.20	41.4%
88356		ANALYSIS NERVE	Medicare Non-Facility Rate	\$198.74	\$255.55	77.8%
88360		TUMOR IMMUNOHISTOCHEM/MANUAL	Medicare Non-Facility Rate	\$80.36	\$126.72	63.4%
88360	26	TUMOR IMMUNOHISTOCHEM/MANUAL	Medicare Facility/Non-Facility Rate	\$44.87	\$42.03	106.8%
88360	TC	TUMOR IMMUNOHISTOCHEM/MANUAL	Medicare Non-Facility Rate	\$35.49	\$84.69	41.9%
88361		TUMOR IMMUNOHISTOCHEM/COMPUT	Medicare Non-Facility Rate	\$94.38	\$126.20	74.8%
88361	26	TUMOR IMMUNOHISTOCHEM/COMPUT	Medicare Facility/Non-Facility Rate	\$36.77	\$44.04	83.5%
88361	TC	TUMOR IMMUNOHISTOCHEM/COMPUT	Medicare Non-Facility Rate	\$57.63	\$82.15	70.2%
88363		XM ARCHIVE TISSUE MOLEC ANAL	Medicare Facility Rate	\$30.84	\$19.51	158.1%
88363		XM ARCHIVE TISSUE MOLEC ANAL	Medicare Non-Facility Rate	\$30.84	\$23.49	131.3%
88364		INSITU HYBRIDIZATION (FISH)	Medicare Non-Facility Rate	\$77.15	\$145.43	53.0%
88364	26	INSITU HYBRIDIZATION (FISH)	Medicare Facility/Non-Facility Rate	\$21.64	\$34.66	62.4%
88364	TC	INSITU HYBRIDIZATION (FISH)	Medicare Non-Facility Rate	\$56.11	\$110.78	50.6%
88365		INSITU HYBRIDIZATION (FISH)	Medicare Non-Facility Rate	\$93.81	\$189.52	49.5%
88365	26	INSITU HYBRIDIZATION (FISH)	Medicare Facility/Non-Facility Rate	\$38.88	\$44.06	88.2%
88365	TC	INSITU HYBRIDIZATION (FISH)	Medicare Non-Facility Rate	\$54.93	\$145.46	37.8%
88368		INSITU HYBRIDIZATION MANUAL	Medicare Non-Facility Rate	\$138.82	\$142.88	97.2%
88368	26	INSITU HYBRIDIZATION MANUAL	Medicare Facility Rate	\$56.87	\$41.62	136.6%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
88369		M/PHMTRC ALYSISHQUANT/SEMIQ	Medicare Non-Facility Rate	\$58.81	\$121.16	48.5%
88374		M/PHMTRC ALYS ISHQUANT/SEMIQ	Medicare Facility/Non-Facility Rate	\$163.33	\$345.80	47.2%
88374	26	M/PHMTRC ALYS ISHQUANT/SEMIQ	Medicare Facility/Non-Facility Rate	\$35.75	\$43.71	81.8%
88374	TC	M/PHMTRC ALYS ISHQUANT/SEMIQ	Medicare Facility/Non-Facility Rate	\$127.58	\$302.08	42.2%
88377		M/PHMTRC ALYS ISHQUANT/SEMIQ	Medicare Facility/Non-Facility Rate	\$170.60	\$428.55	39.8%
88377	26	M/PHMTRC ALYS ISHQUANT/SEMIQ	Medicare Facility/Non-Facility Rate	\$51.89	\$64.25	80.8%
88377	TC	M/PHMTRC ALYS ISHQUANT/SEMIQ	Medicare Non-Facility Rate	\$118.63	\$364.31	32.6%
88380		MICRODISSECTION LASER	Medicare Non-Facility Rate	\$134.18	\$132.95	100.9%
88381		MICRODISSECTION MANUAL	Medicare Non-Facility Rate	\$141.37	\$222.59	63.5%
88381	26	MICRODISSECTION MANUAL	Medicare Facility/Non-Facility Rate	\$35.16	\$24.06	146.1%
88381	TC	MICRODISSECTION MANUAL	Medicare Non-Facility Rate	\$105.71	\$198.53	53.2%
88720		BILIRUBIN TOTAL TRANSCUT	Medicare Non-Facility Rate	\$5.02	\$5.02	100.0%
88738		HGB QUANT TRANSCUTANEOUS	Medicare Non-Facility Rate	\$5.02	\$5.02	100.0%
89050		BODY FLUID CELL COUNT	Medicare Non-Facility Rate	\$4.72	\$4.72	100.0%
89051		BODY FLUID CELL COUNT	Medicare Facility/Non-Facility Rate	\$5.60	\$5.60	100.0%
89055		LEUKOCYTE ASSESSMENT FECAL	Medicare Non-Facility Rate	\$4.27	\$4.27	100.0%
89060		EXAM SYNOVIAL FLUID CRYSTALS	Medicare Facility/Non-Facility Rate	\$7.33	\$7.33	100.0%
89060	26	EXAM SYNOVIAL FLUID CRYSTALS	Medicare Facility Rate	\$9.62	\$18.42	52.2%
89125		SPECIMEN FAT STAIN	Medicare Non-Facility Rate	\$5.88	\$5.88	100.0%
89160		EXAM FECES FOR MEAT FIBERS	Medicare Non-Facility Rate	\$4.85	\$4.85	100.0%
89320		SEMEN ANAL VOL/COUNT/MOT	Medicare Non-Facility Rate	\$12.31	\$12.31	100.0%
89321		SEMEN ANAL SPERM DETECTION	Medicare Non-Facility Rate	\$12.05	\$12.05	100.0%
89322		SEMEN ANAL STRICT CRITERIA	Medicare Non-Facility Rate	\$15.50	\$15.50	100.0%
99000		SPECIMEN HANDLING OFFICE-LAB	Other States' Average Rate	\$3.10	\$11.78	26.3%

## Appendix C3: Laboratory/Pathology Rate Ratio Results **CBIZ Optumas**

Laboratory/Pathology Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
G0416		PROSTATE BIOPSY, ANY MTHD	Medicare Non-Facility Rate	\$481.80	\$368.57	130.7%
G0416	26	PROSTATE BIOPSY, ANY MTHD	Medicare Facility/Non-Facility Rate	\$144.59	\$179.46	80.6%
G0416	TC	PROSTATE BIOPSY, ANY MTHD	Medicare Non-Facility Rate	\$337.24	\$189.11	178.3%
G0433		ELISA HIV-1/HIV-2 SCREEN	Medicare Non-Facility Rate	\$11.25	\$18.29	61.5%
G0452		MOLECULAR PATHOLOGY INTERPR	Medicare Facility Rate	\$15.31	\$49.49	30.9%
G0452	26	MOLECULAR PATHOLOGY INTERPR	Medicare Facility/Non-Facility Rate	\$15.31	\$46.32	33.1%
P9041		ALBUMIN (HUMAN),5%, 50ML	Other States' Average Rate	\$2.54	\$9.82	25.9%
P9045		ALBUMIN (HUMAN), 5%, 250 ML	Other States' Average Rate	\$9.25	\$49.11	18.8%
P9047		ALBUMIN (HUMAN), 25%, 50ML	Other States' Average Rate	\$13.95	\$49.11	28.4%
P9612		CATHETERIZE FOR URINE SPEC	Medicare Non-Facility Rate	\$3.00	\$3.00	100.0%
P9615		URINE SPECIMEN COLLECT MULT	Medicare Non-Facility Rate	\$3.00	\$3.00	100.0%
Q0091		OBTAINING SCREEN PAP SMEAR	Medicare Non-Facility Rate	\$39.87	\$45.04	88.5%
Q0111		WET MOUNTS/ W PREPARATIONS	Medicare Non-Facility Rate	\$6.07	\$15.92	38.1%
Q0112		POTASSIUM HYDROXIDE PREPS	Medicare Non-Facility Rate	\$5.83	\$5.83	100.0%
Q0114		FERN TEST	Medicare Non-Facility Rate	\$9.74	\$9.74	100.0%
S3620		NEWBORN METABOLIC SCREENING	Other States' Average Rate	\$113.78	\$74.62	152.5%

## Appendix C4: Injections/Miscellaneous J-Codes Rate Ratio Results

These appendices show the rate ratios for all unique combinations of Colorado Medicaid and benchmark comparison rates found in the rate comparison benchmark analysis at a procedure code level. Procedure codes are duplicated to the extent that Medicare's facility/non-facility break-out rates are applied.

The services analyzed in the lab & path rate comparison benchmark analysis is repriced using methodology that incorporates the following data elements:

- Procedure Code
- Modifier 1

Injections/Miscellaneous J-Codes Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
11900		INJECT SKIN LESIONS </W 7	Medicare Non-Facility Rate	\$17.80	\$59.56	29.9%
64612		DESTROY NERVE FACE MUSCLE	Medicare Non-Facility Rate	\$98.32	\$141.06	69.7%
64615		CHEMODENERV MUSC MIGRAINE	Medicare Non-Facility Rate	\$116.50	\$157.55	73.9%
67028		INJECTION EYE DRUG	Medicare Non-Facility Rate	\$165.66	\$116.21	142.6%
11901		INJECT SKIN LESIONS >7	Medicare Non-Facility Rate	\$3.56	\$73.58	4.8%
67345		DESTROY NERVE OF EYE MUSCLE	Medicare Non-Facility Rate	\$106.52	\$248.58	42.9%
67500		INJECT/TREAT EYE SOCKET	Medicare Non-Facility Rate	\$53.43	\$77.69	68.8%
67515		INJECT/TREAT EYE SOCKET	Medicare Non-Facility Rate	\$32.06	\$53.20	60.3%
68200		TREAT EYELID BY INJECTION	Medicare Non-Facility Rate	\$21.38	\$43.04	49.7%
J2805		SINCALIDE INJECTION	Other States' Average Rate	\$104.65	\$123.31	84.9%
Q9950		INJ SULF HEXA LIPID MICROSPH	Other States' Average Rate	\$34.71	\$18.77	184.9%
Q9957		INJ PERFLUTREN LIP MICROS,ML	Other States' Average Rate	\$49.38	\$46.15	107.0%



## Appendix C5: Vision Rate Ratio Results

These appendices show the rate ratios for all unique combinations of Colorado Medicaid and benchmark comparison rates found in the rate comparison benchmark analysis at a procedure code level. Procedure codes are duplicated to the extent that Medicare's rate break-out of facility and non-facility rates are applied.

The services analyzed in the vision rate comparison benchmark analysis is repriced using methodology that incorporates the following data elements:

- Procedure Code
- Modifier 1
- Facility/Non-Facility

Vision Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
70030	26	X-RAY EYE FOR FOREIGN BODY	Medicare Non-Facility PFS Rate	\$9.04	\$8.13	111.2%
70030	26	X-RAY EYE FOR FOREIGN BODY	Medicare Facility PFS Rate	\$8.13	\$9.04	89.9%
70030	TC	X-RAY EYE FOR FOREIGN BODY	Medicare Non-Facility PFS Rate	\$25.63	\$16.26	157.6%
70030		X-RAY EYE FOR FOREIGN BODY	Medicare Non-Facility PFS Rate	\$34.67	\$24.38	142.2%
92002		EYE EXAM NEW PATIENT	Medicare Non-Facility PFS Rate	\$89.88	\$69.75	128.9%
92002		EYE EXAM NEW PATIENT	Medicare Facility PFS Rate	\$69.75	\$47.49	146.9%
92004		EYE EXAM NEW PATIENT	Medicare Non-Facility PFS Rate	\$155.68	\$127.22	122.4%
92004		EYE EXAM NEW PATIENT	Medicare Facility PFS Rate	\$127.22	\$96.98	131.2%
92012		EYE EXAM ESTABLISH PATIENT	Medicare Non-Facility PFS Rate	\$93.08	\$73.48	126.7%
92012		EYE EXAM ESTABLISH PATIENT	Medicare Facility PFS Rate	\$73.48	\$51.77	141.9%
92014		EYE EXAM&TX ESTAB PT 1/>VST	Medicare Non-Facility PFS Rate	\$131.68	\$106.06	124.2%
92014		EYE EXAM&TX ESTAB PT 1/>VST	Medicare Facility PFS Rate	\$106.06	\$78.05	135.9%
92015		DETERMINE REFRACTIVE STATE	Other States' Non-Facility Average Rate	\$10.05	\$19.16	52.4%

## Appendix C5: Vision Rate Ratio Results **CBIZ Optumas**

Vision Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
92015		DETERMINE REFRACTIVE STATE	Other States' Facility Average Rate	\$10.05	\$19.03	52.8%
92018		NEW EYE EXAM & TREATMENT	Medicare Non-Facility PFS Rate	\$140.71	\$120.39	116.9%
92018		NEW EYE EXAM & TREATMENT	Medicare Facility PFS Rate	\$120.39	\$140.71	85.6%
92019		EYE EXAM & TREATMENT	Medicare Non-Facility PFS Rate	\$72.79	\$58.49	124.4%
92019		EYE EXAM & TREATMENT	Medicare Facility PFS Rate	\$58.49	\$72.79	80.4%
92065		ORTHOPTIC/PLEOPTIC TRAINING	Medicare Non-Facility PFS Rate	\$55.38	\$62.13	89.1%
92065		ORTHOPTIC/PLEOPTIC TRAINING	Medicare Facility PFS Rate	\$62.13	\$55.38	112.2%
92071		CONTACT LENS FITTING FOR TX	Medicare Non-Facility PFS Rate	\$37.60	\$30.64	122.7%
92072		FIT CONTAC LENS FOR MANAGMNT	Medicare Non-Facility PFS Rate	\$131.62	\$97.66	134.8%
92072		FIT CONTAC LENS FOR MANAGMNT	Medicare Facility PFS Rate	\$97.66	\$97.20	100.5%
92081	26	VISUAL FIELD EXAMINATION(S)	Medicare Facility PFS Rate	\$13.98	\$16.09	86.9%
92081		VISUAL FIELD EXAMINATION(S)	Medicare Non-Facility PFS Rate	\$34.47	\$26.89	128.2%
92082	26	VISUAL FIELD EXAMINATION(S)	Medicare Facility PFS Rate	\$19.60	\$21.01	93.3%
92082		VISUAL FIELD EXAMINATION(S)	Medicare Non-Facility PFS Rate	\$48.45	\$42.56	113.8%
92083	26	VISUAL FIELD EXAMINATION(S)	Medicare Non-Facility PFS Rate	\$27.37	\$24.37	112.3%
92083	26	VISUAL FIELD EXAMINATION(S)	Medicare Facility PFS Rate	\$24.37	\$27.37	89.0%
92083	TC	VISUAL FIELD EXAMINATION(S)	Medicare Non-Facility PFS Rate	\$38.31	\$14.35	267.0%
92083		VISUAL FIELD EXAMINATION(S)	Medicare Non-Facility PFS Rate	\$65.68	\$42.70	153.8%
92310		CONTACT LENS FITTING	Other States' Non-Facility Average Rate	\$143.51	\$95.44	150.4%
92310		CONTACT LENS FITTING	Other States' Facility Average Rate	\$143.51	\$57.33	250.3%
92311		CONTACT LENS FITTING	Medicare Non-Facility PFS Rate	\$111.50	\$82.06	135.9%
92311		CONTACT LENS FITTING	Medicare Facility PFS Rate	\$82.06	\$53.52	153.3%
92312		CONTACT LENS FITTING	Medicare Non-Facility PFS Rate	\$129.33	\$93.24	138.7%
92313		CONTACT LENS FITTING	Medicare Non-Facility PFS Rate	\$105.69	\$79.01	133.8%

## Appendix C5: Vision Rate Ratio Results **CBIZ Optumas**

Vision Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
92314		PRESCRIPTION OF CONTACT LENS	Other States' Non-Facility Average Rate	\$94.72	\$80.48	117.7%
92325		MODIFICATION OF CONTACT LENS	Medicare Non-Facility PFS Rate	\$49.18	\$13.50	364.3%
92326		REPLACEMENT OF CONTACT LENS	Medicare Non-Facility PFS Rate	\$41.93	\$24.66	170.0%
92340		FIT SPECTACLES MONOFOCAL	Other States' Non-Facility Average Rate	\$17.23	\$33.21	51.9%
92341		FIT SPECTACLES BIFOCAL	Other States' Non-Facility Average Rate	\$21.27	\$37.91	56.1%
92341		FIT SPECTACLES BIFOCAL	Other States' Facility Average Rate	\$21.27	\$23.11	92.0%
92342		FIT SPECTACLES MULTIFOCAL	Other States' Non-Facility Average Rate	\$24.13	\$40.71	59.3%
92354		FIT SPECTACLES SINGLE SYSTEM	Other States' Non-Facility Average Rate	\$25.25	\$13.18	191.6%
92370		REPAIR & ADJUST SPECTACLES	Other States' Non-Facility Average Rate	\$14.35	\$23.43	61.2%
V2020		VISION SVCS FRAMES PURCHASES	Medicare DME Non-Rural Rate	\$36.56	\$77.21	47.4%
V2025		EYEGLASSES DELUX FRAMES	Other States' Non-Facility Average Rate	\$124.22	\$74.23	167.3%
V2100		LENS SPHER SINGLE PLANO 4.00	Medicare DME Non-Rural Rate	\$23.85	\$54.89	43.5%
V2101		SINGLE VISN SPHERE 4.12-7.00	Medicare DME Non-Rural Rate	\$23.85	\$57.84	41.2%
V2102		SINGL VISN SPHERE 7.12-20.00	Medicare DME Non-Rural Rate	\$23.85	\$81.36	29.3%
V2103		SPHEROCYLINDR 4.00D/12-2.00D	Medicare DME Non-Rural Rate	\$23.85	\$44.24	53.9%
V2104		SPHEROCYLINDR 4.00D/2.12-4D	Medicare DME Non-Rural Rate	\$30.02	\$50.44	59.5%
V2105		SPHEROCYLINDER 4.00D/4.25-6D	Medicare DME Non-Rural Rate	\$37.84	\$43.10	87.8%
V2106		SPHEROCYLINDER 4.00D/>6.00D	Medicare DME Non-Rural Rate	\$42.05	\$47.83	87.9%
V2107		SPHEROCYLINDER 4.25D/12-2D	Medicare DME Non-Rural Rate	\$30.02	\$49.06	61.2%
V2108		SPHEROCYLINDER 4.25D/2.12-4D	Medicare DME Non-Rural Rate	\$36.25	\$59.70	60.7%
V2109		SPHEROCYLINDER 4.25D/4.25-6D	Medicare DME Non-Rural Rate	\$42.08	\$52.11	80.8%
V2110		SPHEROCYLINDER 4.25D/OVER 6D	Medicare DME Non-Rural Rate	\$48.20	\$51.42	93.7%
V2111		SPHEROCYLINDR 7.25D/.25-2.25	Medicare DME Non-Rural Rate	\$36.25	\$53.60	67.6%
V2112		SPHEROCYLINDR 7.25D/2.25-4D	Medicare DME Non-Rural Rate	\$42.05	\$58.52	71.9%

## Appendix C5: Vision Rate Ratio Results **CBIZ Optumas**

Vision Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
V2113		SPHEROCYLINDR 7.25D/4.25-6D	Medicare DME Non-Rural Rate	\$48.20	\$66.84	72.1%
V2114		SPHEROCYLINDER OVER 12.00D	Medicare DME Non-Rural Rate	\$54.44	\$87.71	62.1%
V2115		LENS LENTICULAR BIFOCAL	Medicare DME Non-Rural Rate	\$74.78	\$92.68	80.7%
V2118		LENS ANISEIKONIC SINGLE	Medicare DME Non-Rural Rate	\$64.68	\$77.07	83.9%
V2121		LENTICULAR LENS, SINGLE	Medicare DME Non-Rural Rate	\$66.51	\$82.23	80.9%
V2200		LENS SPHER BIFOC PLANO 4.00D	Medicare DME Non-Rural Rate	\$30.17	\$57.74	52.3%
V2201		LENS SPHERE BIFOCAL 4.12-7.0	Medicare DME Non-Rural Rate	\$30.17	\$67.73	44.5%
V2202		LENS SPHERE BIFOCAL 7.12-20.	Medicare DME Non-Rural Rate	\$30.17	\$89.56	33.7%
V2203		LENS SPHCYL BIFOCAL 4.00D/.1	Medicare DME Non-Rural Rate	\$30.17	\$57.64	52.3%
V2204		LENS SPHCY BIFOCAL 4.00D/2.1	Medicare DME Non-Rural Rate	\$34.34	\$59.90	57.3%
V2205		LENS SPHCY BIFOCAL 4.00D/4.2	Medicare DME Non-Rural Rate	\$38.51	\$69.80	55.2%
V2206		LENS SPHCY BIFOCAL 4.00D/OVE	Medicare DME Non-Rural Rate	\$42.39	\$66.01	64.2%
V2207		LENS SPHCY BIFOCAL 4.25-7D/.	Medicare DME Non-Rural Rate	\$34.34	\$67.27	51.0%
V2208		LENS SPHCY BIFOCAL 4.25-7/2.	Medicare DME Non-Rural Rate	\$38.51	\$72.36	53.2%
V2209		LENS SPHCY BIFOCAL 4.25-7/4.	Medicare DME Non-Rural Rate	\$42.39	\$73.32	57.8%
V2210		LENS SPHCY BIFOCAL 4.25-7/OV	Medicare DME Non-Rural Rate	\$46.56	\$78.18	59.6%
V2211		LENS SPHCY BIFO 7.25-12/.25-	Medicare DME Non-Rural Rate	\$38.51	\$103.49	37.2%
V2212		LENS SPHCYL BIFO 7.25-12/2.2	Medicare DME Non-Rural Rate	\$42.39	\$106.86	39.7%
V2213		LENS SPHCYL BIFO 7.25-12/4.2	Medicare DME Non-Rural Rate	\$46.56	\$107.95	43.1%
V2214		LENS SPHCYL BIFOCAL OVER 12.	Medicare DME Non-Rural Rate	\$50.71	\$102.60	49.4%
V2215		LENS LENTICULAR BIFOCAL	Medicare DME Non-Rural Rate	\$76.72	\$91.39	83.9%
V2218		LENS ANISEIKONIC BIFOCAL	Medicare DME Non-Rural Rate	\$89.23	\$106.31	83.9%
V2219		LENS BIFOCAL SEG WIDTH OVER	Medicare DME Non-Rural Rate	\$52.36	\$62.39	83.9%
V2220		LENS BIFOCAL ADD OVER 3.25D	Medicare DME Non-Rural Rate	\$32.93	\$39.25	83.9%

## Appendix C5: Vision Rate Ratio Results **CBIZ Optumas**

Vision Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
V2221		LENTICULAR LENS, BIFOCAL	Medicare DME Non-Rural Rate	\$81.24	\$95.75	84.8%
V2300		LENS SPHERE TRIFOCAL 4.00D	Medicare DME Non-Rural Rate	\$37.90	\$75.96	49.9%
V2301		LENS SPHERE TRIFOCAL 4.12-7.	Medicare DME Non-Rural Rate	\$43.97	\$80.85	54.4%
V2303		LENS SPHCY TRIFOCAL 4.0/.12-	Medicare DME Non-Rural Rate	\$42.06	\$72.32	58.2%
V2304		LENS SPHCY TRIFOCAL 4.0/2.25	Medicare DME Non-Rural Rate	\$44.62	\$77.54	57.5%
V2305		LENS SPHCY TRIFOCAL 4.0/4.25	Medicare DME Non-Rural Rate	\$48.79	\$86.64	56.3%
V2307		LENS SPHCY TRIFOCAL 4.25-7/.	Medicare DME Non-Rural Rate	\$48.18	\$82.58	58.3%
V2308		LENS SPHC TRIFOCAL 4.25-7/2.	Medicare DME Non-Rural Rate	\$52.94	\$85.98	61.6%
V2311		LENS SPHC TRIFO 7.25-12/.25-	Medicare DME Non-Rural Rate	\$52.94	\$93.64	56.5%
V2312		LENS SPHC TRIFO 7.25-12/2.25	Medicare DME Non-Rural Rate	\$56.17	\$94.18	59.6%
V2410		LENS VARIAB ASPHERICITY SING	Medicare DME Non-Rural Rate	\$74.78	\$125.65	59.5%
V2430		LENS VARIABLE ASPHERICITY BI	Medicare DME Non-Rural Rate	\$81.24	\$129.22	62.9%
V2500		CONTACT LENS PMMA SPHERICAL	Medicare DME Non-Rural Rate	\$40.92	\$90.36	45.3%
V2501		CNTCT LENS PMMA-TORIC/PRISM	Medicare DME Non-Rural Rate	\$81.78	\$159.01	51.4%
V2510		CNTCT GAS PERMEABLE SPHERICL	Medicare DME Non-Rural Rate	\$40.92	\$130.18	31.4%
V2511		CNTCT TORIC PRISM BALLAST	Medicare DME Non-Rural Rate	\$140.62	\$167.55	83.9%
V2513		CONTACT LENS EXTENDED WEAR	Medicare DME Non-Rural Rate	\$81.78	\$166.21	49.2%
V2520		CONTACT LENS HYDROPHILIC	Medicare DME Non-Rural Rate	\$40.92	\$109.60	37.3%
V2521		CNTCT LENS HYDROPHILIC TORIC	Medicare DME Non-Rural Rate	\$81.78	\$212.24	38.5%
V2522		CNTCT LENS HYDROPHIL BIFOCL	Medicare DME Non-Rural Rate	\$81.78	\$185.71	44.0%
V2523		CNTCT LENS HYDROPHIL EXTEND	Medicare DME Non-Rural Rate	\$132.84	\$158.26	83.9%
V2530		CONTACT LENS GAS IMPERMEABLE	Medicare DME Non-Rural Rate	\$214.12	\$255.10	83.9%
V2531		CONTACT LENS GAS PERMEABLE	Medicare DME Non-Rural Rate	\$347.32	\$576.82	60.2%
V2700		BALANCE LENS	Medicare DME Non-Rural Rate	\$27.23	\$54.29	50.2%

Vision Rate Ratio Results						
Procedure Code	Modifier	Procedure Description	Benchmark Source	Colorado Rate	Benchmark Rate	Rate Ratio
V2710		GLASS/PLASTIC SLAB OFF PRISM	Medicare DME Non-Rural Rate	\$29.60	\$81.25	36.4%
V2715		PRISM LENS/ES	Medicare DME Non-Rural Rate	\$9.62	\$12.22	78.7%
V2718		FRESNELL PRISM PRESS-ON LENS	Medicare DME Non-Rural Rate	\$9.62	\$30.01	32.1%
V2744		TINT PHOTOCHROMATIC LENS/ES	Medicare DME Non-Rural Rate	\$5.36	\$17.24	31.1%
V2745		TINT, ANY COLOR/SOLID/GRAD	Medicare DME Non-Rural Rate	\$5.36	\$11.04	48.6%
V2750		ANTI-REFLECTIVE COATING	Medicare DME Non-Rural Rate	\$12.08	\$20.06	60.2%
V2755		UV LENS/ES	Medicare DME Non-Rural Rate	\$15.76	\$18.45	85.4%
V2780		OVERSIZE LENS/ES	Medicare DME Non-Rural Rate	\$11.06	\$13.17	84.0%
V2781		PROGRESSIVE LENS PER LENS	Other States' Non-Facility Average Rate	\$62.34	\$67.41	92.5%
V2784		LENS POLYCARB OR EQUAL	Medicare DME Non-Rural Rate	\$7.18	\$50.47	14.2%