Outpatient ancillary trends in the Medicare fee-for-service population: 2008-2012

Prepared for: American Medical Association (AMA)
330 North Wabash Avenue
Chicago, IL 60611

Prepared by: Robert Damler, FSA, MAAA, Principal & Consulting Actuary
Mat DeLillo, MBA, Healthcare Consultant

Chase Center/Circle
111 Monument Circle
Suite 601
Indianapolis, IN 46204 USA

Tel +1 317 639 1000
Fax +1 317 639 1001

milliman.com

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I. INTRODUCTION

Milliman Inc. (Milliman) was retained by the American Medical Association (AMA) to perform a trend analysis of certain Medicare ancillary services. The services include:

- Radiology with a focus on advanced imaging
- Intensity modulated radiation therapy (IMRT)
- Pathology and laboratory
- Physical therapy

This document provides the results of the analysis. It should be noted that we do not recommend or promote any particular policy decisions related to the Medicare program or the provision of these specific services.

The services provided for this project were performed under the signed consultant agreement between Milliman, Inc. and the American Medical Association dated August 25, 2014. The project was funded solely by the American Medical Association. The work was intended for use by the American Medical Association. Milliman does not intend to benefit any third-party recipient of its work product, even if Milliman consents to the release of its work product to such third party. Any third-party recipient of this work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs. Any release of this report to a third party should be in its entirety.

In performing this analysis, we relied on data and other information obtained from public data sources. We have not audited or verified this data and other information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

Guidelines issued by the American Academy of Actuaries require actuaries to include their professional qualifications in all actuarial communications. Robert M. Damler is a member of the American Academy of Actuaries and meets the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of his knowledge and belief, this information is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices.

II. EXECUTIVE SUMMARY

Medicare is the federal health insurance program for elderly people age 65 and older, people with disabilities, and people with end-stage renal disease (ESRD). Medicare benefits are structured and administered through four different packages:

- Part A covers inpatient hospital, skilled nursing facility, home health, and hospice services.
- Part B covers physician services and other outpatient care.
- Part C is the Medicare Advantage (MA) program, which is an optional managed care service delivery system for Medicare enrollees. Enrollees can receive Part A and Part B benefits through Medicare Advantage.
- Part D is the outpatient prescription drug benefit.

The scope of services examined in this paper is a subset of services provided in the outpatient setting under Medicare Part B. The chart in Figure 1 illustrates each of our areas of focus as a percentage of total Part A and Part B allowed amounts. In total, the areas of analysis represent 10.9% of combined Part A and Part B fee-for-service allowed charges in calendar year 2012.

The report reviews each service area below at a composite level and by site of service. The underlying metrics that describe medical trend will be also reviewed. These metrics include the average monthly allowed charges per beneficiary (AMPB), utilization per 1,000 members, allowed charges per unit, and the percentage of beneficiaries receiving the service.

Figure 1: Report Study Items as a Percentage of Medicare Part A and Part B Allowed Charges

American Medical Association Medicare 5% Sample Fee-for-Service Population				
	Total Allowed Charges (CY 2012)*	Percentage of Total Medicare Part A/B Allowed Amount	Allowed AMPB (CY 2012)	Percentage Receiving
Total Medicare Part A/B	$ 408,902.1	100%	$ 1,056.79	n/a
Advanced Imaging	$ 7,886.4	1.9%	$ 20.38	1.2%
Other Radiology	$ 8,707.8	2.1%	$ 22.50	59.2%
Pathology and Lab	$ 11,777.3	2.9%	$ 30.44	80.0%
Physical Therapy	$ 14,582.5	3.6%	$ 37.69	20.7%
IMRT	$ 1,438.3	0.4%	$ 3.72	0.3%
All Other Services	$ 364,509.8	89.1%	$ 942.06	n/a

***Notes**

- Total expenditures in millions extrapolated to 100% fee-for-service population.
- Assumes approximately 32,250,000 Medicare fee-for-service enrollees in 2012.

III. METHODOLOGY

We utilized the Medicare 5% Sample file from calendar years 2008 through 2012 to perform the analysis. The 5% Sample contains de-identified publicly available data for the Medicare fee-for-service (FFS) population. It contains information for every 20th Medicare FFS enrollee, and we extrapolated our results to the entire Medicare FFS population by multiplying by a factor of 20. The results of our analysis exclude any services performed while a Medicare beneficiary was enrolled in a Medicare Advantage plan. The scope of our analysis is limited to Medicare Part B services.

We included members enrolled only in both Medicare Part A and Part B. Members with ESRD were excluded from the analysis.

Medical trend is driven by the cost of the service (fee), the number of people receiving the service, the frequency of the service, and the mix of services provided. The Medicare data was extracted to prepare metrics that depict each trend component. These metrics include the following.

- **Estimated total allowed charges**. Allowed charges are the portion of the total billed charge that Medicare covers or "allows" the provider to collect from all sources.
- **Annualized utilization per 1,000 members**. This is the average number of units of service used by 1,000 enrollees in a year.
- **Allowed charges per unit**. For each of the service areas in this report, unit cost is provided at a composite level. It should be noted that unit cost at this level may be influenced by service mix and thus a comparison of unit cost between site of service and the trend over time may be inappropriate.
- **Average monthly allowed charges per beneficiary (AMPB)**. This metric is calculated as the total allowed charges on the claims divided by the member months for the study population.
- **Percentage of beneficiaries receiving the service (percentage receiving)**. This is calculated as the number of unique beneficiaries receiving the service as a percentage of the average Part B fee-for-service enrollment.

Medicare payments for many of the services in this report have two components. First, there is a technical component, which covers the equipment, supplies, and technical staff. Second, there is a professional component, which covers the physician interpretation of the image or service. In some cases a unit will be counted when there is a technical and professional claim line billed separately. For example, if a person receives an x-ray in a hospital outpatient setting, it is common for a technician to perform the x-ray (technical component) and a physician to read and interpret the image (professional component). In this example, our study would count this single encounter as two distinct units. In other instances or settings, this could be counted as one unit under a global claim line.

We have reviewed the above metrics in total, by site of service, across all specialty referrals, and in some cases by the diagnosis code present on the claim in order to understand the Medicare trends. This research report provides a depiction of the high-level trends observed in the data.

IV. MEDICARE POPULATION TRENDS

The underlying morbidity of a population changes over time for many reasons, including the aging of the population and selection differences caused by varying levels of participation in delivery systems. In the Medicare program, individuals have shifted between the fee-for-service (FFS) and managed care programs.

Medicare utilizes the Centers for Medicare and Medicaid Services-Hierarchical Condition Category (CMS-HCC) risk adjustment methodology to provide higher reimbursement to Medicare Advantage (MA) plans enrolling sicker members, and lower reimbursement to MA plans enrolling healthier members. Risk scores measure individual beneficiaries' relative risk and risk scores are used to adjust payments for each beneficiary's expected expenditures in the Medicare Advantage program.

The CMS-HCC risk score represents the relative level of total expected healthcare costs for an individual and may not be representative of the expected healthcare costs associated with any one specific service. The CMS-HCC risk score does not measure the morbidity relationship of subcomponents without further calibration. Therefore, we have not adjusted the values presented in the report for the CMS-HCC risk score because the values are subcomponents.

We are providing the scores to highlight the potential changes in the morbidity profile of the FFS population, although we have not utilized the factors to adjust any of the values illustrated in this report.

Over the period of 2008 through 2012, the composite risk scores for Medicare FFS beneficiaries increased each year, before normalization. Figures 2 and 3 illustrate the composite CMS-HCC risk score for the Medicare FFS population and the penetration of Medicare Advantage in the overall Medicare population. Readers of this report should be cognizant that over the reported time period the risk scores associated with the FFS population have increased. Note that the risk adjustment process is recalibrated each year to dampen the effect of such trend, and that the process is revised every few years, by adding or deleting conditions and revising the hierarchies, to attempt to smooth out the risk scores over time and to improve the correlation between an individual's risk scores and their costs.

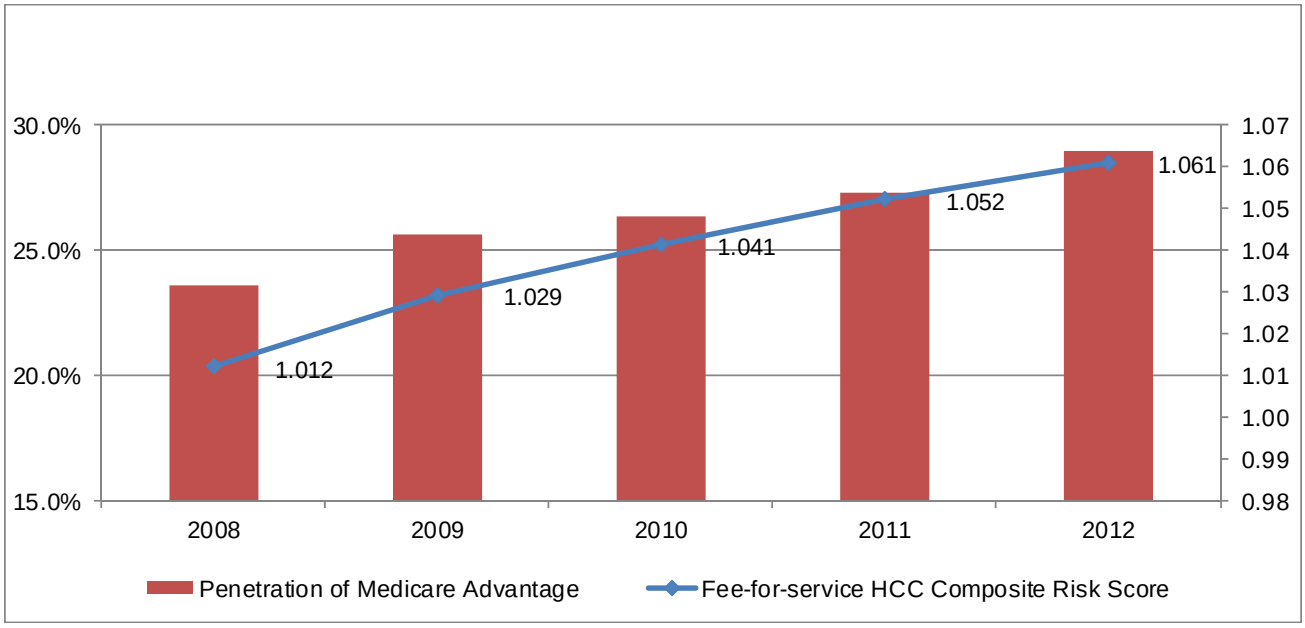
Figure 2: CMS-HCC Risk Score and Medicare Advantage Penetration Trend

American Medical Association Medicare 5% Sample Fee-for-Service Population					
	2008	**2009**	**2010**	**2011**	**2012**
Fee-for-Service HCC Composite Risk Score	1.012	1.029	1.041	1.052	1.061
Penetration of Medicare Advantage	23.6%	25.7%	26.4%	27.3%	29.0%

Notes

- Excludes ESRD beneficiaries.
- Risk scores calculated using the CMS-HCC model for 2014.

Figure 3: CMS-HCC Risk Score and Medicare Advantage Penetration Trend (CY 2008-2012)



V. RADIOLOGY AND ADVANCED IMAGING

Radiology is the broad service category that focuses on diagnosing and treating diseases and injuries using various medical imaging techniques. For the purposes of our analysis, we have separated this broad category into four different subsets. Advanced imaging includes techniques such as computed tomography (CT), positron emission tomography (PET), magnetic resonance imaging (MRI), and intensity-modulated radiation therapy (IMRT). A detailed listing of codes used to identify advanced imaging is included in Appendix 1. The remaining services that fall within the radiology service category are further categorized as other diagnostic radiology and other therapeutic radiology. Appendix 1 also includes a complete listing of the codes used to identify other therapeutic and diagnostic radiology.

Advanced imaging

At a composite level, the observed annualized trend in advanced imaging APMB over the five-year period ("5-year Annualized Trend") is 0.4%. Figure 4 illustrates cost and utilization trend metrics by year as well as the five-year trend rate.

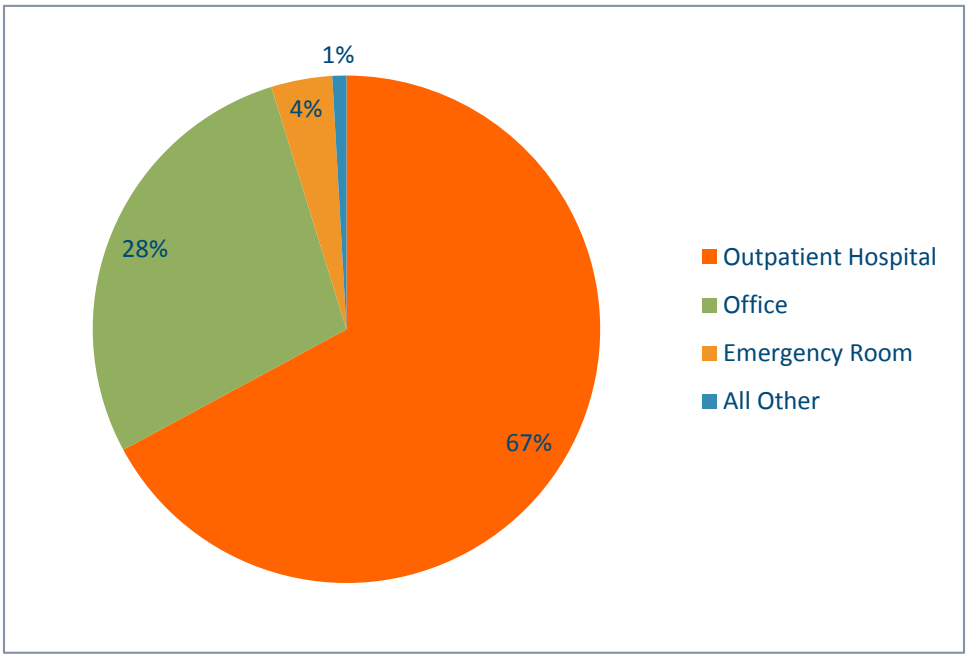
Figure 4: Advanced Imaging Composite Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 20.04	$ 21.39	$ 20.67	$ 19.27	$ 20.38	0.4%
Utilization per 1,000	1,114.0	1,169.4	1,177.1	1,045.5	1,070.9	(1.0%)
Allowed Charges per Unit	$ 215.87	$ 219.50	$ 210.72	$ 221.18	$ 228.37	1.4%
Percentage Receiving	26.39%	27.09%	27.08%	27.42%	27.63%	1.2%
Total Allowed Cost *	$ 7,526.7	$ 7,994.2	$ 7,817.7	$ 7,370.4	$ 7,886.4	1.2%

* Value in millions; extrapolated to 100% of fee-for-service population.

Advanced imaging is primarily delivered in outpatient hospital and office settings. Figure 5 provides the percentage distribution of the 2012 allowed charges by site of service.

Figure 5: Advanced Imaging by Site of Service (CY 2012 % of allowed charges)



Figures 6 and 7 illustrate cost and utilization trend metrics for outpatient hospital and office, respectively. The five-year annualized trend for the AMPB in the outpatient hospital setting is 3.3%. The five-year annualized trend for the AMPB in the office setting is (5.5%).

Figure 6: Advanced Imaging Outpatient Hospital Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 12.00	$ 13.06	$ 12.69	$ 11.97	$ 13.68	3.3%
Utilization per 1,000	699.0	732.9	734.6	648.6	669.7	(1.1%)
Allowed Charges per Unit	$ 206.01	$ 213.84	$ 207.30	$ 221.46	$ 245.12	4.4%
Percentage Receiving	17.99%	18.69%	18.80%	19.21%	19.70%	2.3%
Total Allowed Cost *	$ 4,508.7	$ 4,881.3	$ 4,801.8	$ 4,579.1	$ 5,293.1	4.1%

* Value in millions; extrapolated to 100% of fee-for-service population.

Figure 7: Advanced Imaging Office Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 7.16	$ 7.37	$ 6.95	$ 6.33	$ 5.72	(5.5%)
Utilization per 1,000	262.8	269.8	262.0	233.1	224.8	(3.8%)
Allowed Charges per Unit	$ 326.94	$ 327.80	$ 318.32	$ 325.87	$ 305.34	(1.7%)
Percentage Receiving	10.40%	10.45%	10.09%	9.97%	9.60%	(2.0%)
Total Allowed Cost *	$ 2,691.6	$ 2,755.3	$ 2,629.9	$ 2,419.3	$ 2,214.6	(4.8%)

* Value in millions; extrapolated to 100% of fee-for-service population.

It should be noted that allowed charges per unit as reported in Figures 4, 6, and 7 may be influenced by service mix and the setting where the service was provided. Figure 8 has been developed to facilitate an understanding of the variances that are due to each of these items. Figure 8 illustrates what Medicare allows for a service delivered in the outpatient hospital setting versus the physician office setting and the proportion of the total advanced imaging services within each setting represented by that procedure. The services depicted include the top five services by total allowed charges in calendar year 2012 where the service is paid under the Medicare Physician Fee Schedule and the Outpatient Prospective Payment System.

Figure 8: Top 5 Advanced Imaging Fees by Site of Service

American Medical Association Medicare 5% Sample Fee-for-Service Population					
Service	Code	What Medicare Allows in the Office Setting[1]	Procedures as a Percentage of Total Office Setting[3]	What Medicare Allows in the Hospital Outpatient Setting[2]	Procedures as a Percentage of Total Outpatient Hospital Setting[3]
CT abdomen & pelvis w/contrast	74177	$ 327.42	5%	$ 482.91	9%
CT head/brain w/o dye	70450	$ 125.02	3%	$ 169.46	20%
CT abdomen & pelvis w/o contrast	74176	$ 218.88	4%	$ 330.63	7%
MRI lumbar spine w/o dye	72148	$ 246.10	10%	$ 371.08	4%
MRI brain stem w/o & w/dye	70553	$ 397.27	4%	$ 609.70	3%

Notes

1. 2014 Medicare Physician Fee Schedule non-facility total payment (global).
2. 2014 Outpatient Prospective Payment System and the professional component of the physician fee schedule.
3. Of all advanced imaging in the setting. Values are rounded.

Other diagnostic radiology

At a composite level, other diagnostic radiology has a five-year annualized trend in the AMPB of (1.2%). Figure 9 illustrates cost and utilization trend metrics by year as well as the five-year trend rate.

Figure 9: Other Diagnostic Radiology Composite Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 17.26	$ 17.67	$ 16.82	$ 17.67	$ 16.47	(1.2%)
Utilization per 1,000	3,768.7	3,857.5	3,640.0	3,679.5	3,643.1	(0.8%)
Allowed Charges per Unit	$ 54.96	$ 54.97	$ 55.45	$ 57.63	$ 54.25	(0.3%)
Percentage Receiving	59.96%	60.43%	59.88%	59.79%	59.20%	(0.3%)
Total Allowed Cost *	$ 6,485.7	$ 6,603.8	$ 6,362.2	$ 6,758.8	$ 6,374.0	(0.4%)

It should be noted that allowed charges per unit as reported in Figure 9 may be influenced by service mix and the setting where the service was provided. Figure 10 has been developed to facilitate an understanding of the variances that are due to each of these items. Figure 10 illustrates what Medicare allows for a service delivered in the outpatient hospital setting versus the physician office setting and the proportion of the total diagnostic radiology services within each setting represented by that procedure. The services depicted include the top five services by total allowed charges in calendar year 2012 where the service is paid under the Medicare Physician Fee Schedule and the Outpatient Prospective Payment System.

Figure 10: Top 5 Other Diagnostic Radiology Fees by Site of Service

American Medical Association Medicare 5% Sample Fee-for-Service Population					
Service	Code	What Medicare Allows in the Office Setting [1]	Procedures as a Percentage of Total Office Setting [3]	What Medicare Allows in the Hospital Outpatient Setting [2]	Procedures as a Percentage of Total Outpatient Hospital Setting [3]
Ht muscle image spect mult	78452	$ 486.47	4%	$ 1,233.50	2%
Chest x-ray 2 view frontal & lateral	71020	$ 31.17	10%	$ 68.46	15%
Chest x-ray 1 view frontal	71010	$ 24.00	<1%	$ 66.66	9%
DXA bone density axial	77080	$ 49.44	5%	$ 100.55	3%
Us exam abdom complete	76700	$ 142.93	1%	$ 175.77	1%

Notes:

1. 2014 Medicare physician fee schedule non-facility total payment (global)
2. 2014 outpatient prospective payment system
3. Values are rounded

INTENSITY MODULATED RADIATION THERAPY (IMRT)

Intensity modulated radiation therapy (IMRT) is a form of radiation therapy used to treat tumors, cancerous or benign. IMRT is a newer therapy that has been adopted because the radiation can be focused narrowly to the specific area or tumor requiring intervention.

At a composite level, IMRT services have a five-year annualized trend in the AMPB of 2.5%. Figure 11 illustrates utilization and cost metrics for IMRT from 2008 through 2012.

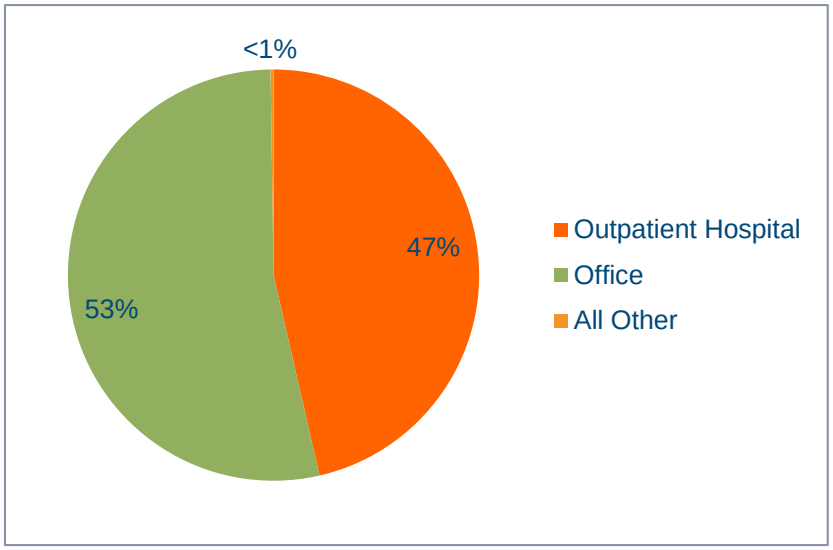
Figure 11: IMRT Composite Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 3.37	$ 3.44	$ 3.71	$ 4.18	$ 3.72	2.5%
Utilization per 1,000	79.7	84.1	91.4	98.3	93.4	4.0%
Allowed Charges per Unit	$ 507.40	$ 490.84	$ 487.09	$ 510.27	$ 477.94	(1.5%)
Percentage Receiving	0.27%	0.29%	0.29%	0.31%	0.31%	3.5%
Total Allowed Cost *	$ 1,264.6	$ 1,284.2	$ 1,403.3	$ 1,598.3	$ 1,438.3	3.3%

* Value in millions; extrapolated to 100% of fee-for-service population.

Figure 12 illustrates the percentage of the 2012 allowed charges by site of service. IMRT is primarily delivered in the office and outpatient hospital settings.

Figure 12: IMRT by Site of Service (CY 2012 % of Allowed Charges)



Figures 13 and 14 illustrate the trend metrics for IMRT by site of service. IMRT in the outpatient hospital setting has a five-year trend in AMPB of approximately 6.6% while the office setting has a (0.3%) trend in AMPB.

Figure 13: IMRT Outpatient Hospital Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 1.34	$ 1.45	$ 1.48	$ 1.77	$ 1.73	6.6%
Utilization per 1,000	41.2	41.7	43.5	48.1	47.3	3.5%
Allowed Charges per Unit	$ 390.29	$ 417.27	$ 408.28	$ 441.58	$ 438.90	3.0%
Percentage Receiving	0.14%	0.15%	0.15%	0.16%	0.16%	3.4%
Total Allowed Cost *	$ 503.5	$ 542.3	$ 558.7	$ 678.7	$ 668.0	7.3%

* Value in millions; extrapolated to 100% of fee-for-service population.

Figure 14: IMRT Office Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 2.00	$ 1.96	$ 2.21	$ 2.39	$ 1.98	(0.3%)
Utilization per 1,000	37.9	41.9	47.5	49.9	45.9	4.9%
Allowed Charges per Unit	$ 633.25	$ 561.34	$ 558.32	$ 574.75	$ 517.65	(4.9%)
Percentage Receiving	0.13%	0.14%	0.16%	0.16%	0.15%	3.6%
Total Allowed Cost *	$ 749.5	$ 734.0	$ 837.9	$ 913.9	$ 768.0	0.6%

* Value in millions; extrapolated to 100% of fee-for-service population.

Other therapeutic radiology

At a composite level, other therapuetic radiology has a five-year annualized trend in the AMPB of 0.5%. Figure 15 illustrates cost and utilization trend metrics by year as well as the five-year trend rate.

Figure 15: Other Therapeutic Radiology Composite Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 5.90	$ 6.07	$ 5.79	$ 6.06	$ 6.03	0.5%
Utilization per 1,000	409.9	399.7	381.0	379.3	373.4	(2.3%)
Allowed Charges per Unit	$ 172.73	$ 182.24	$ 182.36	$ 191.72	$ 193.79	2.9%
Percentage Receiving	2.55%	2.69%	2.88%	3.03%	3.27%	6.4%
Total Allowed Cost *	$ 2,216.9	$ 2,269.1	$ 2,189.8	$ 2,318.1	$ 2,333.8	1.3%

* Value in millions; extrapolated to 100% of fee-for-service population.

It should be noted that allowed charges per unit as reported in Figure 15 may be influenced by service mix and the setting where the service was provided. Figure 16 has been developed to facilitate an understanding of the variances that are due to each of these items. Figure 16 illustrates what Medicare allows for a service delivered in the outpatient hospital setting versus the physician office setting and the proportion of the total services within each setting represented by that procedure. The services depicted include the top five services by total allowed charges in calendar year 2012 where the service is paid under the Medicare Physician Fee Schedule and the Outpatient Prospective Payment System.

Figure 16: Top 5 Other Therapeutic Radiology Fees by Site of Service

American Medical Association Medicare 5% Sample Fee-for-Service Population					
Service	**Code**	**What Medicare Allows in the Office Setting[1]**	**Procedures as a Percentage of Total Office Setting[3]**	**What Medicare Allows in the Hospital Outpatient Setting[2]**	**Procedures as a Percentage of Total Outpatient Hospital Setting[3]**
Radiation treatment delivery	77413	$ 224.25	12%	$ 192.28	17%
Radiation treatment delivery	77414	$ 252.55	10%	$ 192.28	15%
Radiation treatment aid(s)	77334	$ 150.46	4%	$ 277.61	5%
Radiation therapy dose plan	77300	$ 67.35	5%	$ 146.89	5%
Set radiation therapy field	77290	$ 507.25	3%	$ 392.33	3%

Notes

1. 2014 Medicare Physician Fee Schedule non-facility total payment (global).
2. 2014 Outpatient Prospective Payment System and the professional component of the physician fee schedule.
3. Values are rounded.

VI. PHYSICAL THERAPY

Physical therapy is the treatment of disease and injury through physical methods, such as massage and exercise. Appendix 1 includes a full listing of CPT codes used to identify physical therapy services.

The four-year composite AMPB trend for physical therapy services is 1.1%. We used four years of data for our analysis of physical therapy experience, which is due to a data anomoly in 2008. The Medicare 5% Sample did not contain home health agency billings in 2008. Figure 17 illustrates utilization and cost metrics for physical therapy from 2009 through 2012.

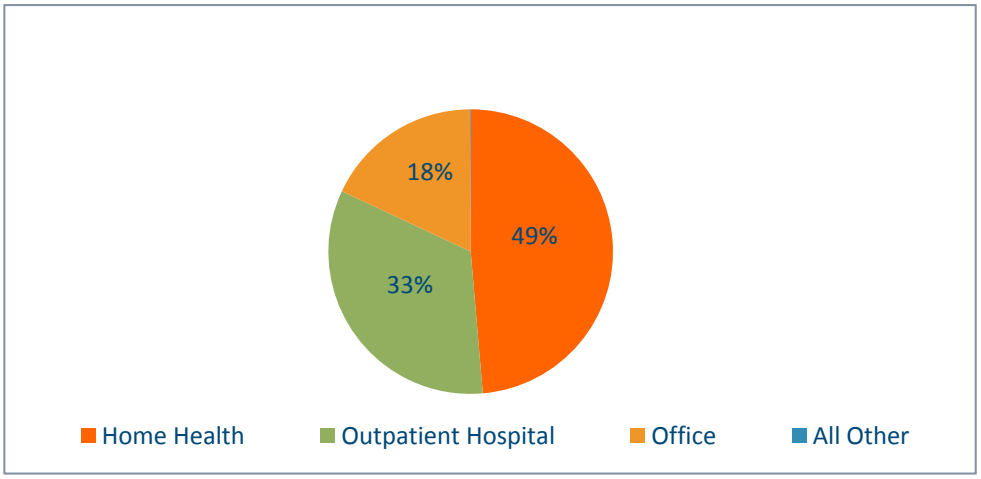
Figure 17: Physical Therapy Composite Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population					
	CY 2009	CY 2010	CY 2011	CY 2012	4-year Annualized Trend
AMPB	$ 36.50	$ 39.04	$ 38.21	$ 37.69	1.1%
Utilization per 1,000	6,535.1	6,483.4	6,697.3	6,729.5	1.0%
Allowed Charges per Unit	$ 67.02	$ 72.26	$ 68.46	$ 67.21	0.1%
Percentage Receiving	19.62%	20.02%	20.29%	20.70%	1.8%
Total Allowed Cost *	$ 13,641.9	$ 14,769.2	$ 14,613.9	$ 14,582.5	2.2%

* Value in millions; extrapolated to 100% of fee-for-service population.

Figure 18 illustrates the percentage of CY 2012 AMPB by site of service. Physical therapy is primarily delivered in the home health, outpatient hospital, and office settings.

Figure 18: Physical Therapy by Site of Service (CY 2012% of allowed charges)



Figures 19, 20, and 21 illustrate the trend metrics for physical therapy by site of service. Physical therapy in the outpatient hospital and office settings have similar four-year trends in AMPB of approximately 2.7% and 2.8%, respectively. The home health setting has a slightly negative trend at (0.5%).

Figure 19: Physical Therapy Home Health Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population					
	CY 2009	CY 2010	CY 2011	CY 2012	4-year Annualized Trend
AMPB	$ 18.63	$ 20.55	$ 19.41	$ 18.33	(0.5%)
Utilization per 1,000	1,144.2	1,228.6	1,212.4	1,190.8	1.3%
Allowed Charges per Unit	$ 195.39	$ 200.72	$ 192.11	$ 184.72	(1.9%)
Percentage Receiving	6.52%	6.84%	6.89%	6.87%	1.8%
Total Allowed Cost *	$ 6,963.8	$ 7,773.1	$ 7,424.7	$ 7,092.2	0.6%

* Value in millions; extrapolated to 100% of fee-for-service population.

Figure 20: Physical Therapy Outpatient Hospital Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population					
	CY 2009	CY 2010	CY 2011	CY 2012	4-year Annualized Trend
AMPB	$ 11.62	$ 11.87	$ 12.10	$ 12.57	2.7%
Utilization per 1,000	3,248.8	3,081.6	3,232.5	3,303.9	0.6%
Allowed Charges per Unit	$ 42.92	$ 46.22	$ 44.92	$ 45.66	2.1%
Percentage Receiving	8.70%	8.73%	8.86%	9.21%	1.9%
Total Allowed Cost *	$ 4,343.3	$ 4,491.0	$ 4,626.9	$ 4,863.2	3.8%

* Value in millions; extrapolated to 100% of fee-for-service population.

Figure 21: Physical Therapy Office Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population					
	CY 2009	CY 2010	CY 2011	CY 2012	4-year Annualized Trend
AMPB	$ 6.22	$ 6.59	$ 6.67	$ 6.76	2.8%
Utilization per 1,000	2,133.3	2,163.9	2,243.3	2,226.1	1.4%
Allowed Charges per Unit	$ 34.99	$ 36.55	$ 35.68	$ 36.44	1.4%
Percentage Receiving	7.12%	7.29%	7.43%	7.66%	2.5%
Total Allowed Cost *	$ 2,324.2	$ 2,492.6	$ 2,550.4	$ 2,615.1	4.0%

* Value in millions; extrapolated to 100% of fee-for-service population.

VII. PATHOLOGY AND LABORATORY

Pathology services primarily focus on analyzing and testing tissue and body fluids to diagnose a disease. Appendix 1 includes a complete listing of the codes used to identify the broad category of laboratory and pathology.

At a composite level, pathology and laboratory has a five-year annualized trend in the AMPB of 5.9%. Figure 22 illustrates cost and utilization trend metrics by year as well as the five-year trend rate.

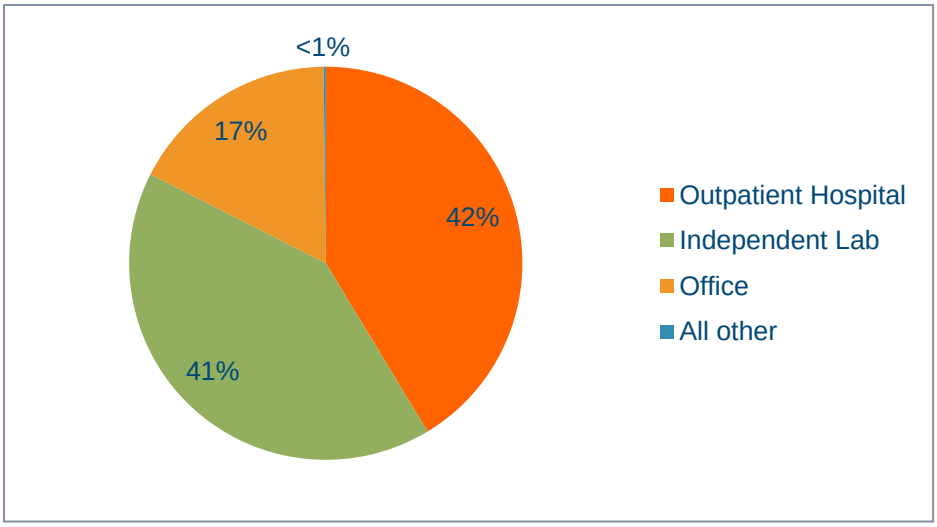
Figure 22: Pathology and Laboratory Composite Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 24.19	$ 27.10	$ 28.21	$ 29.09	$ 30.44	5.9%
Utilization per 1,000	20,126.4	20,950.5	21,425.6	21,688.4	22,001.3	2.3%
Allowed Charges per Unit	$ 14.42	$ 15.52	$ 15.80	$ 16.10	$ 16.60	3.6%
Percentage Receiving	78.93%	79.93%	79.99%	80.02%	79.97%	0.3%
Total Allowed Cost *	$ 9,087.7	$ 10,127.6	$ 10,672.6	$ 11,124.1	$ 11,777.3	6.7%

* Value in millions; extrapolated to 100% of fee-for-service population.

The majority of pathology and laboratory services are delivered by independent labs, physician offices, and outpatient hospital departments. Figure 23 illustrates the percentage of 2012 allowed charges by site of service.

Figure 23: Pathology and Laboratory by Site of Service (CY 2012 % of allowed charges)



Figures 24, 25, and 26 illustrate the trend metrics by each site of service for the pathology and laboratory category. Independent laboratory has the highest five-year annualized AMPB trend at 7.1%. The five-year annualized trend for the AMPB in the outpatient hospital setting is 5.4%. The office setting has the lowest trend for the AMPB at 4.4%

Figure 24: Pathology and Laboratory Outpatient Hospital Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 10.18	$ 11.16	$ 11.53	$ 12.00	$ 12.58	5.4%
Utilization per 1,000	8,516.2	8,911.1	9,158.8	9,380.9	9,567.3	3.0%
Allowed Charges per Unit	$ 14.34	$ 15.03	$ 15.11	$ 15.35	$ 15.78	2.4%
Percentage Receiving	48.72%	49.70%	50.15%	50.63%	51.03%	1.2%
Total Allowed Cost *	$ 3,823.4	$ 4,169.9	$ 4,360.2	$ 4,588.9	$ 4,869.2	6.2%

* Value in millions; extrapolated to 100% of fee-for-service population.

Figure 25: Pathology and Laboratory Independent Lab Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 9.53	$ 10.86	$ 11.46	$ 11.85	$ 12.52	7.1%
Utilization per 1,000	6,734.8	7,079.2	7,361.3	7,504.9	7,766.9	3.6%
Allowed Charges per Unit	$ 16.98	$ 18.41	$ 18.68	$ 18.95	$ 19.34	3.3%
Percentage Receiving	47.49%	48.63%	48.80%	48.81%	48.48%	0.5%
Total Allowed Cost *	$ 3,579.3	$ 4,057.3	$ 4,333.7	$ 4,532.9	$ 4,844.5	7.9%

* Value in millions; extrapolated to 100% of fee-for-service population.

Figure 26: Pathology and Laboratory Office Trends

American Medical Association Medicare 5% Sample Fee-for-Service Population						
	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	5-year Annualized Trend
AMPB	$ 4.44	$ 5.03	$ 5.18	$ 5.19	$ 5.28	4.4%
Utilization per 1,000	4,807.9	4,888.9	4,833.5	4,726.4	4,590.3	(1.2%)
Allowed Charges per Unit	$ 11.08	$ 12.35	$ 12.86	$ 13.18	$ 13.80	5.6%
Percentage Receiving	49.09%	49.66%	49.24%	48.83%	48.27%	(0.4%)
Total Allowed Cost *	$ 1,668.0	$ 1,879.0	$ 1,958.5	$ 1,984.5	$ 2,042.1	5.2%

* Value in millions; extrapolated to 100% of fee-for-service population.

APPENDIX 1: ANALYSIS CODES FOR RESEARCH

American Medical Association

Appendix 1: Analysis Codes for Research

Pathology Procedure Codes

88304
88305
88307
88312
88313
88342
36415
36416
80047 - 81099
81200
81205 - 81229
81240 - 81251
81255 - 81319
81330 - 81408
82000 - 82776
82784 - 86148
86155 - 86431
86481 - 86688
86692 - 86698
86704 - 86710
86713 - 86826
86849 - 87385
87400 - 87533
87539 - 89622
87640 - 87906
87999 - 88302
88309
88311
88314 - 88334
88346 - 88372
88380 - 89240
ATP02 - ATP23
G0027
G0103
G0265
G0266
G0306
G0307
G0328
G0394
G0430
G0431
G0434
G9143
P2028
P2029
P2031
P2033
P2038
P7001
Q0111
Q0112
Q0113
Q0114
Q0115
Q3031
S2120
S3600
S3601
S3618
S3620 - S3630
S3650 - S3890
S9529

Pathology Revenue Codes

0300
0301
0302
0303
0304
0305
0306
0307
0309
0310
0311
0312
0314
0319
0923
0925
0971

American Medical Association

Appendix 1: Analysis Codes for Research

Advanced Imaging Procedure Codes

70450
70551
70553
71250
71260
71275
72141
72148
72158
73221
73721
74176
74177
74178
77014
78815
70336
70460 - 70549
70552
70554 - 70559
71270
71550 - 71555
72125 - 72133
72142 - 72147
72149 - 72157
72159
72191 - 72198
72292
73200 - 73220
73222 - 73225
73700 - 73720
73722 - 73725
74150 - 74175
74181 - 74185
74261 - 74263
75552 - 75574
75635
76070
76071
76093
76094
76355
76360
76362
76370
76380
76390
76393
76394
76400
76497
76498
77011 - 77013
77021 - 77022
77058
77059
77078
77079
77084
78459
78491
78492
78608
78609
78811 - 78816
G0219
G0235
G0252
G0288
S8035
S8037
S8042
S8085
S8092

Advanced Imaging Revenue Codes

0350
0351
0352
0359
0404
0610
0611
0612
0614
0615
0616
0618
0619

American Medical Association

Appendix 1: Analysis Codes for Research

Physical Therapy Procedure Codes	**Physical Therapy Revenue Codes**	**Other Therapeutic Radiology Procedure Codes**
97001 - 97546	0420	77418
G0283	0421	75900 - 75902
92507	0422	75945 - 75954
92508	0423	75960 - 75968
97750 - 97799	0424	75978
98925 - 98929	0429	76936
G0281	0430	76941
G0282	0431	76942
G0295	0432	76946 - 76965
G0329	0433	77261 - 77417
G9041 - G9044	0434	77422 - 77799
S8940	0439	79005 - 79999
S8990	0440	S8030
	0441	S8049
	0442	S8055
	0443	
	0444	
	0449	
	0470	
	0471	
	0472	
	0479	
	0530	
	0531	
	0539	
	0930	
	0931	
	0932	
	0951	
	0952	
	0977	
	0978	
	0979	

American Medical Association

Appendix 1: Analysis Codes for Research

Other Therapeutic Radiology Revenue Codes

0330
0333
0339
0342
0344
0973
0974

Other Diagnostic Radiology Procedure Codes

70010 - 70332
70350 - 70390
71010 - 71130
72010 - 72120
72170
72190
72200 - 72291
72295 - 73140
73500 - 73660
74000 - 74022
74190 - 74260
74270 - 74775
75600 - 75630
75650 - 75898
75940
75956 - 75959
75970
75980 - 75996
75998
75998
76000
76001
76003
76005
76006
76010
76012 - 76066
76075 - 76078
76080
76082 - 76092
76095
76096
76098 - 76377
76496
76499
76506 - 76776
76778
76800 - 76932
76937
76940
76945
76970 - 76977
76986
76998 - 77003
77031 - 77057
77071 - 77077
77080 - 77083
77421
78000 - 78011
78015 - 78070
78075
78099
78102 - 78458
78460 - 78483
78494 - 78740
78760
78761 - 78808
78890 - 78999
G0130
G0202
G0204
G0206
G0275
G0278
G0389
Q0092
R0070
R0075
R0076
S8080
S9024

American Medical Association

Appendix 1: Analysis Codes for Research

Other Diagnostic Radiology Revenue Codes
0320
0321
0322
0323
0324
0329
0340
0341
0343
0349
0400
0401
0402
0403
0409
0972