

Medicare anatomic pathology utilization: 2009 through 2013

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In June 2013, the U.S. Government Accountability Office (GAO) published a report, “Medicare Action Needed to Address Higher Use of Anatomic Pathology Services by Providers Who Self-Refer” (GAO Report), which discussed the utilization of anatomic pathology (AP) services in the fee-for-service (FFS) Medicare program. The GAO Report focused on the growth of AP services between calendar years 2004 through 2010 as well as on the increase in the number of physicians who self-refer AP services. The GAO Report highlighted utilization of AP services, including self-referral of those services, within three primary specialties: dermatology, gastroenterology, and urology.

The Digestive Health Physicians Association (DHPA) has an interest in further understanding the information presented in the GAO Report as it relates to Medicare-covered services performed or referred by gastroenterology specialists. This white paper presents an analysis of a subset of Medicare Part B services in the professional and outpatient hospital settings extracted from the calendar year 2009 through 2013 Medicare 5% sample data files, made available by the Centers for Medicare and Medicaid Services (CMS).

BACKGROUND

The GAO Report was prepared to address questions “about the role of self-referral in Medicare Part B expenditures’ rapid growth. Self-referral occurs when providers refer patients to entities in which they or their family members have a financial interest. Services that can be self-referred under certain circumstances include anatomic pathology – the preparation and examination of tissue samples to diagnose disease.”¹

This white paper has been prepared to assist DHPA and other interested parties in understanding additional information related to Medicare-covered AP services. While we were unable to provide our analysis stratified between self-referred and non-self-referred services, we are able to present information that supplements the GAO Report, including:

- Metrics to normalize for Medicare FFS population growth
- Metrics related to the utilization of biopsies over time
- Calendar year 2011 through 2013 data

- AP services performed in an outpatient hospital setting
- Metrics specific to gastroenterology-related AP services
- Metrics that measure billed specimens per biopsy over time
- Review of growth in gastroenterologists with ownership of AP services in DHPA group practices

We used the Medicare 5% sample claims data for Medicare FFS beneficiaries, published by CMS, for services performed during calendar years 2009 through 2013. We extrapolated the data to represent the full Medicare FFS population based on the sample. We identified Medicare AP services as CPT-4 code 88305, and we utilized ICD-9 diagnosis codes and referring physician specialty to isolate AP services related to gastroenterology. We limited our data to be consistent with the GAO Report’s methodology by including only the technical component or global billed 88305 AP claims and by excluding claims that were billed together with another AP service and a special stain.

SUMMARY

The following highlights the key results identified in our analysis.

- The population frequency of colonoscopies grew from 3.8% in 1999 to 7.4% in 2013, which may partially explain the growth of gastrointestinal (GI) biopsies and AP services following increased outreach to educate the community regarding the importance of screening for colorectal cancer.
- While the GAO Report observed growth of AP services between 2004 and 2010, when we include most recent data currently available for years 2011 through 2013 in the analysis it suggests that utilization trends are declining in more recent years.
- CMS reduced the Medicare physician fee schedule for AP services billed under CPT code 88305 in 2013 by over 50% for the technical component and over 30% for the global billed procedure, for an aggregate fee impact of nearly 37% for this procedure. This change resulted in over \$300 million of reduced reimbursement to pathology providers nationally.
- After normalizing for population growth in Medicare FFS beneficiaries, the average annualized utilization trends over the five year period were 3.5% for GI-related AP services billed from the outpatient hospital setting and 1.2% for GI-related AP services billed from professional settings.
- While the GAO Report observed that the number of self-referred AP services grew at a faster rate than non-self-referred AP services between 2004 and 2010, according to a DHPA survey, the growth in the number of gastroenterologists with pathology labs integrated into their medical practices increased rapidly over the same time period, which may have been a contributing factor to the increase in the number of self-referred AP services.

TREND IN COLONOSCOPIES AND GI BIOPSIES

Medicare began covering screening colonoscopies in 1998. Effective January 1998, persons considered high-risk for colorectal cancer were covered for one screening colonoscopy every two years. In 2001, coverage was extended to non-high-risk Medicare beneficiaries for one screening colonoscopy every 10 years.² The United States Preventive Services Task Force (USPSTF) recommends screening for colorectal cancer beginning at age 50 and continuing through age 75 as a grade A preventive service. The USPSTF's grade A for the service indicates that there is high certainty that the net benefit of the service is substantial.³ In 2011 the Affordable Care Act authorized coverage for screening colonoscopies at no cost to Medicare beneficiaries age 50 and older.⁴ From 1999 to 2013, the number of Medicare FFS beneficiaries receiving a colonoscopy has grown from 3.8%⁵ to approximately 7.4% of the total FFS Medicare population, based on our analysis of recent Medicare data. Concurrently, research has emerged and outreach has increased to educate the community about the risks of colorectal cancer. "Studies have shown that in the majority of colorectal cancers, noncancerous polyps grow slowly for 10 years or longer in the colon in a benign state before becoming

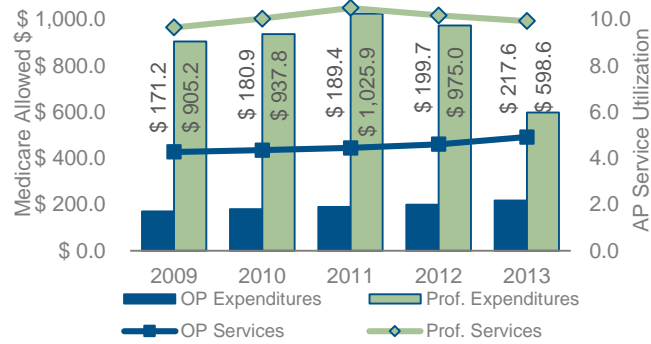
cancerous. Identification and removal of the polyps during that time can prevent colorectal cancer from developing."⁶ As coverage and awareness have increased over time, the percentage of the population receiving colonoscopies has increased. During our five year study period of 2009 through 2013, the growth in GI biopsies has increased marginally⁷, which may indicate that GI-related AP service utilization will experience marginal growth consistent with the growth in biopsy rates.

TREND IN MEDICARE ANATOMIC PATHOLOGY

We have developed trend exhibits for AP services across all referring specialties to review information that was not provided in the GAO Report; specifically, AP services incurred during calendar years 2011 through 2013 as well as AP services provided in an outpatient hospital setting. Claims for AP services are reported by the site of the AP service rather than the site of the underlying biopsy procedure. We stratified results between AP services performed in professional settings (either an independent laboratory or an office) and outpatient hospital settings. We are presenting exhibits for AP services in outpatient hospital settings separately from professional settings to maintain consistency with the GAO Report, while including additional outpatient hospital information that was not included in the GAO Report. We have excluded AP service experience for claims billed from other settings, which accounts for less than 1% of all AP services.

Figure 1 illustrates the total number of FFS Medicare AP services and allowed expenditures for each year. As shown in this chart (reflected on the Y-axis on the left-hand side and in the blue bars), AP services billed from an outpatient hospital setting had an average annualized expenditure trend of 6.2% from 2009 to 2013. Expenditures for AP services billed from a professional setting (measured on the Y-axis on the left-hand side and in the green bars) increased between 2009 and 2012 by an average annualized expenditure trend of 2.5%, followed by a 38.6% decrease in 2013. This decrease in 2013 is the direct result of a 36.8% decrease in the Medicare physician fee schedule for AP services between 2012 and 2013. Throughout the remainder of this paper, we have calculated average annualized expenditure and per member per month (PMPM) trends over the 2009 through 2012 period to illustrate trends prior to the decrease in reimbursement in the 2013 fee schedule. Each of the calculations is marked with an asterisk (*) to indicate this adjusted calculation.

FIGURE 1: TOTAL ANATOMIC PATHOLOGY GROWTH

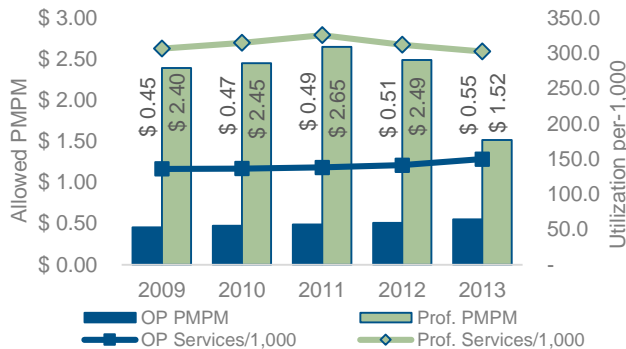


Note: Values are illustrated in millions.

We utilized the information provided in Figure 1 (AP service utilization and allowed expenditures for all specialty referrals) in combination with Medicare FFS membership⁹ to develop trends in utilization and allowed expenditures that are normalized for Medicare FFS population growth during the study period.

Figure 2 illustrates FFS Medicare AP service utilization values on a per-1,000-member basis (shown on the Y-axis on the right-hand side of the chart and on the line graph) and allowed expenditures on a PMPM basis (shown on the Y-axis on the left-hand side of the chart and on the bar graph) to account for population growth.⁹ After normalizing for population growth, the annualized PMPM allowed expenditure trend in the outpatient hospital and professional settings were 5.1% and 1.3%*, respectively.

FIGURE 2: AP SERVICE GROWTH NORMALIZED FOR MEMBERSHIP



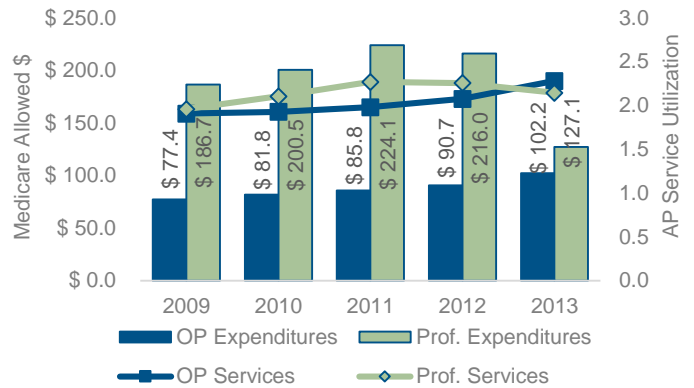
TREND IN AP SERVICES REFERRED BY GI SPECIALISTS

In addition to researching the trends underlying total AP services referred by all specialty physicians, we prepared similar exhibits with a narrower definition – limiting the data to AP services that were referred by a gastroenterologist or claims which included a gastrointestinal primary diagnosis.

Figure 3 illustrates information consistent with that provided in Figure 1 (which showed total AP service growth), except experience in Figure 3 is limited to FFS Medicare AP services which are gastroenterology-related, as defined above. As shown in this chart, the trend in gastroenterology-related AP services billed from an outpatient hospital setting had an annualized

expenditure trend of 7.2% from 2009 to 2013. Gastroenterology-related AP services billed from a professional setting, including both self-referring and non-self-referring physicians, increased on an allowed basis from \$186.7 million in 2009 to \$216.0 million in 2012, then decreased to \$127.1 million in 2013. This is an average annualized expenditure trend for the years 2009 to 2012 of 5.0%*. Again, we can see the influence of the reduction to the Medicare physician fee schedule in 2013 for AP services.

FIGURE 3: GASTROENTEROLOGY-RELATED AP SERVICE GROWTH

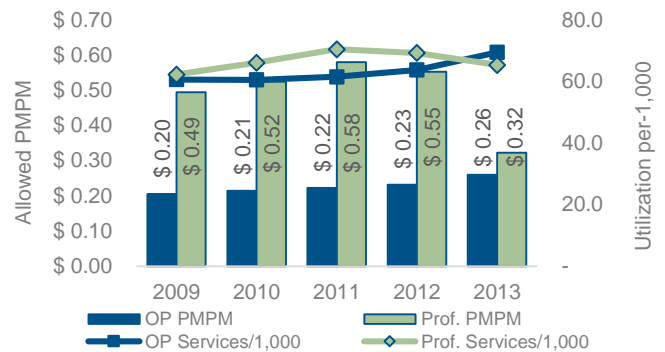


Note: Values are illustrated in millions.

We utilized the information provided in Figure 3 (AP service utilization and allowed expenditures for all gastroenterology-related claims) in combination with Medicare FFS membership⁹ to develop trends in utilization and allowed expenditures that are normalized for Medicare FFS population growth during the study period.

Figure 4 illustrates the FFS Medicare AP service utilization values on a per-1,000-member basis (shown on the Y-axis on the right-hand side of the chart and on the line graph) and allowed expenditures on a PMPM basis (shown on the Y-axis on the left-hand side of the chart and on the bar graph) to account for population growth during the period.⁹ After normalizing for population growth, the annualized PMPM expenditure trend in the outpatient hospital and professional settings were 6.1% and 3.8%*, respectively.

FIGURE 4: GI-AP SERVICE PMPM GROWTH NORMALIZED FOR MEMBERSHIP



The utilization per-1,000 in the outpatient hospital setting grew from 60.6 in 2009 to 69.4 in 2013, or an annualized utilization

per-1,000 trend of 3.5%. Over the same period, the utilization per-1,000 in professional settings grew from 62.2 to 65.3, or an annualized utilization per-1,000 of 1.2%.

GI-RELATED AP SERVICES PER BIOPSY

We reviewed gastroenterology-related AP services per GI biopsy to illustrate one of the underlying components of the utilization trend for AP services.

Figure 5 presents the number of FFS Medicare gastroenterology-related AP specimens billed per biopsy for 2009, 2011, and 2013 by patient diagnosis under both outpatient hospital and professional settings. We identified the most common ICD-9 diagnoses included on AP service claims, and they are presented in order from most common to least common based on 2013 claims experience. The column labeled as “%” provides the percentage of total biopsies (n = 2,044,360) that each diagnosis represented in 2013 claims. The composite services per biopsy in 2009 and 2011 were calculated using actual experience data for those years and are not directly related to the 2013 diagnosis distribution. The data reveals that approximately two specimens are billed per biopsy by diagnosis and service year. In aggregate, AP services per biopsy have increased from 2.00 to 2.21, or 2.5% annually, between 2009 and 2013.

FIGURE 5: GI-RELATED AP SERVICES PER BIOPSY

DIAGNOSIS	%	2009	2011	2013
Benign Neoplasm Lq Bowel (211.3)	44%	2.02	2.11	2.18
Atrph Gastritis W/O Hmrhg (535.10)	7%	1.97	2.11	2.24
Esophageal Reflux (530.81)	5%	1.90	2.06	2.10
Gstr/Ddnts Nos W/O Hmrhg (535.50)	5%	2.00	2.23	2.40
Oth Spf Gstrt W/O Hmrhg (535.40)	5%	1.97	2.10	2.18
Barretts Esophagus (530.85)	4%	2.12	2.24	2.31
Benign Neopl Rectum/Anus (211.4)	3%	1.62	1.72	1.72
Benign Neoplasm Stomach (211.1)	3%	2.32	2.48	2.69
Diarrhea (787.91)	3%	2.13	2.25	2.37
Dysphagia Nos (787.20)	3%	1.71	1.79	1.85
Noninf Gastroenterit Nec (558.9)	2%	2.30	2.30	2.43
Reflux Esophagitis (530.11)	2%	2.18	2.28	2.42
Gastroduodenal Dis Nos (537.9)	2%	2.19	2.20	2.48
Anal & Rectal Polyp (569.0)	2%	1.51	1.64	1.65
Esophagitis, Unspecified (530.10)	2%	1.97	2.07	2.19
Intestinal Disorders Nec (569.89)	1%	1.86	1.98	2.17
Gastroduodenal Dis Nec (537.89)	1%	2.02	2.14	2.18
Duodenitis W/O Hmrhg (535.60)	1%	2.58	2.68	2.93
Acute Gastritis W/O Hmrhg (535.00)	1%	1.95	2.25	2.52
All Other	3%	1.84	2.00	2.09
Composite	100%	2.00	2.11	2.21

TREND IN SELF-REFERRING PROVIDER STATUS

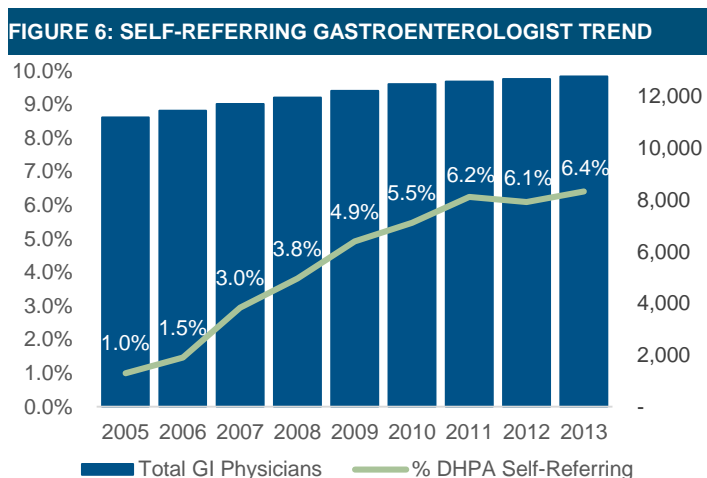
The GAO Report states that the gastroenterology specialty accounted for approximately 21% of self-referred AP services in

calendar year 2010, while it accounted for approximately 7% of self-referred AP services in calendar year 2004.

Additionally, the GAO Report made the statement, “While Medicare allowed expenditures for self-referred and non-self-referred AP services grew from 2004 through 2010, allowed expenditures for the self-referred AP services increased at a faster rate.” According to the GAO Report, total Medicare AP allowed expenditures grew by 164% for self-referred providers, while allowed expenditures grew by 57% for non-self-referred providers.¹ The higher rate of growth in self-referring physicians relative to non-self-referring physicians may have contributed to this difference in expenditure trends.

Although we were unable to identify self-referred AP services in the Medicare 5% sample claims data, DHPA – a trade association representing independent gastroenterology group practices across the country – surveyed their 44 member group practices (over 1,000 specialty physicians) to determine the increase in the number of gastroenterologists with ownership in pathology services within the DHPA group practices (i.e., the number of “self-referring” physicians). Specifically, DHPA asked each of its member groups to identify for each year from 2005 through 2013 for which the group billed for the technical component or globally for AP services furnished in an in-office pathology lab, the number of gastroenterologists who were the members of the group practice as of January 1 of that year. We have relied on DHPA for accuracy of the results of this survey.

Figure 6 illustrates the result of the survey in combination with total estimated gastroenterologists between 2005 and 2013.¹⁰ The line represents the percentage of gastroenterologists who were members of DHPA group practices and had the capability of self-referring for AP services for an entire calendar year relative to total gastroenterologists in that year. During this time period, the total number of gastroenterologists practicing in the Medicare market remained relatively flat, such that an increase in the percentage of self-referring physicians is observed over time. The number of self-referring physicians in DHPA’s member group practices – i.e., physicians with pathology labs integrated into their medical practices – grew from 112 in 2005 to 818 in 2013.



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Mr. Damler and Ms. Gerstorff are members of the American Academy of Actuaries and meet the qualification standards for performing the analyses in this report.

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⁷ Gastrointestinal biopsy utilization per-1,000 from our analysis of the Medicare 5% sample. The average annual trend rate for Medicare AP services per-1,000, as defined in this paper, was 0.2% during the five year study period of 2009 through 2013.

2009	2010	2011	2012	2013
61.8	61.6	62.4	61.9	62.2

⁸ Average monthly fee-for-service Medicare enrollment from our analysis of the Medicare 5% sample. *Values in Millions*

2009	2010	2011	2012	2013
31.5	31.9	32.2	32.6	32.8

⁹ Calculations for normalization of Medicare FFS population growth:

The membership-normalized utilization metric is calculated as:
 $[Total\ services\ provided / average\ monthly\ members] * 1,000$

The PMPM expenditure metric is calculated as:
 $Medicare\ allowed\ dollars / [average\ monthly\ members * 12]$

¹⁰ U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions (2008). The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand.

*Indicates that average annualized expenditure and PMPM trends have been calculated over the 2009 through 2012 period to illustrate trends prior to the fee schedule reduction.

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