Department of Health and Human Services

OFFICE OF INSPECTOR GENERAL

QUESTIONABLE BILLING FOR MEDICARE OPHTHALMOLOGY SERVICES

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EXECUTIVE SUMMARY: QUESTIONABLE BILLING FOR MEDICARE OPHTHALMOLOGY SERVICES
OEI-04-12-00280

WHY WE DID THIS STUDY

In 2012, Medicare paid $6.7 billion to 44,960 providers for ophthalmology services that screen for, diagnose, evaluate, or treat two prominent eye conditions: wet age-related macular degeneration (wet AMD) and cataracts. Since 2010, the Office of Inspector General has investigated over 100 providers of ophthalmology services for fraud. We did this study to determine the extent to which ophthalmology services are vulnerable to fraud, waste, and/or abuse.

HOW WE DID THIS STUDY

We developed measures of questionable billing and used them to identify several different types of possible fraud, waste, and abuse. We examined approximately 34 million paid claims for ophthalmology services from 2012. We identified providers with unusually high billing for procedures that screen for, diagnose, evaluate, or treat wet AMD or cataracts. For providers with questionable billing, we calculated the dollar amount that Medicare paid for services associated with these measures. We also identified the metropolitan areas in which providers with questionable billing were located and the medical specialties of providers billing for ophthalmology services.

WHAT WE FOUND

While most providers did not demonstrate questionable billing on any of our measures in 2012, 4 percent of providers billing Medicare for ophthalmology services demonstrated at least one of our nine measures of questionable billing. Overall, Medicare paid these 1,726 providers $768 million for ophthalmology services in 2012, of which $171 million was for services associated with the measures on which these providers demonstrated questionable billing. In seven metropolitan areas, the percentage of Medicare payments associated with our measures was at least twice as high as it was nationally. Medicare also paid $2 million for ophthalmology services to 821 providers that were not listed as eye care specialists in the Centers for Medicare & Medicaid Services' (CMS) databases.

WHAT WE RECOMMEND

There may be legitimate reasons why some of the providers demonstrated questionable billing on the measures in this report. However, providers with questionable billing warrant further scrutiny. Therefore, we recommend that the CMS (1) increase monitoring of billing for ophthalmology services, including using measures of questionable billing similar to those used in this review and (2) review and take appropriate action regarding providers with questionable billing identified by this evaluation and conveyed by a separate memo. CMS concurred with both of our recommendations.

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OBJECTIVE

To identify and describe providers with questionable billing for ophthalmology services in 2012.

BACKGROUND

Ophthalmology services are those in which providers screen for, diagnose, evaluate, or treat conditions associated with the eye. Medicare Part B covers such services provided by licensed specialists, including ophthalmologists and optometrists.[1] Since 2010, the Office of Inspector General (OIG) has investigated over 100 providers of ophthalmology services for fraud. We did this study to determine the extent to which ophthalmology services are vulnerable to fraud, waste, and/or abuse.

Medicare Requirements for Ophthalmology Services

Medicare Part B covers ophthalmology services that are reasonable and necessary for the diagnosis or treatment of an individual's condition.[2] Medicare uses a combination of national and local requirements to determine whether certain ophthalmology services are covered. National requirements are created at the Federal level and apply to all Medicare beneficiaries and claims processing contractors.[3] In the absence of specific national requirements, claims processing contractors may create their own local coverage determinations (LCDs), which are contractor decisions about whether to cover particular services in their respective jurisdictions.[4]

Medicare covers ophthalmology procedures for many eye conditions. However, the two eye conditions for which Medicare pays the most each year are wet age-related macular degeneration (wet AMD) and cataracts. In 2012, Medicare paid 44,960 providers $6.7 billion for ophthalmology services for these two conditions.[5]

Wet AMD. Medicare paid $2.2 billion to providers in 2012 for services that screen, diagnose, evaluate, or treat wet AMD.[6] This disease is the leading cause of severe vision loss in people over age 65 in the United States.

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[1] Social Security Act, § 1832(a)(1); the Centers for Medicare & Medicaid Services (CMS), *Medicare Benefit Policy Manual*, Pub. No. 100-02, ch. 15 § 30.4.

[2] Social Security Act, § 1862(a)(1)(A).

[3] Social Security Act, §§ 1862(a)(1)(A), 1862(l), 1869(f)(1)(B); CMS, *Medicare National Coverage Determinations Manual*, Pub. No. 100-03, Foreword.

[4] Social Security Act, §§ 1862(a)(1)(A), 1862(l), 1869(f)(2)(B); CMS, *Medicare Program Integrity Manual*, Pub. No. 100-08, ch.13, § 13.1.3.

[5] OIG analysis of 2012 National Claims History (NCH) Part B file, 2014.

[6] OIG analysis of 2012 NCH Part B file, 2014.

Medicare covers several services, including fluorescein angiographies, to diagnose or evaluate wet AMD, but Medicare does not have any national requirements that place specific limits on these services. However, some claims processing contractors have LCDs limiting the number of these diagnostic or evaluation services that a provider may bill per eye annually.[7]

Additionally, Medicare covers several services to treat wet AMD, including laser surgery, biologic injections, and the administration of drugs. In limited circumstances, laser surgery can be the most appropriate treatment for wet AMD. In even fewer circumstances, physicians treat wet AMD with laser surgeries and concurrent biologic injections or drug administration.[8]

One of the biologics most commonly used to treat wet AMD is Lucentis, for which Medicare paid an average of $2,013 per injection in 2012.[9] Medicare does not have a national requirement limiting the frequency at which a provider may bill for this injection; however, six claims processing contractors had LCDs in 2012 specifying that Lucentis injections are not covered more frequently than every 28 days per eye. To support the monthly limit on Lucentis injections, these LCDs cite the FDA-approved dosing guidelines on the biologic's label. These guidelines state that injections should be administered between once every 28 days and once every 3 months.[10]

Cataracts. Medicare paid $3.5 billion in 2012 for services that screen for, diagnose, evaluate, or treat cataracts, the leading cause of blindness in the world.[11] A cataract is a clumping of protein in an eye's lens that causes the lens to become cloudy.

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[7] For example, L27584 (retired) stated that fluorescein angiographies are considered medically necessary no more than nine times per eye annually, so claims that exceed this frequency will be suspended and reviewed for medical necessity. CMS, *Local Coverage Determination (LCD) for Ophthalmic Angiography (Fluorescein and Indocyanine Green) (L27584)*, Palmetto GBA. Under these requirements, additional exams are denied as not reasonable and necessary unless the medical need for the additional exams is fully documented.

[8] Kent, Christopher, "Macular Degeneration: Is Laser Still Relevant?", *Review of Ophthalmology*, August 13, 2009.

[9] The Food and Drug Administration (FDA) approved Lucentis to treat wet AMD in 2006.

[10] FDA, *Lucentis ® (ranibizumab injection) Intravitreal Injection*, Initial US Approval: 2006. US BLA (BL125156) Ranibizumab Injection. For example, CMS, *Local Coverage Determination (LCD) for Ranibizumab (Lucentis)(L29266)*, First Coast Service Options, Inc, June 14, 2011.

[11] OIG analysis of 2012 NCH Part B file, 2014; National Institutes of Health, "Leading Causes of Blindness", *NIH Medline Plus*. Volume 3, Number 3, Summer 2008.

Medicare covers several types of surgeries that treat cataracts by removing the cloudy, natural lens in an eye, and replacing it with a synthetic, crystalline lens. Medicare pays a higher rate for especially difficult cataract surgeries, which are called complex cataract surgeries. In 2012, Medicare paid an average of approximately $900 for each complex cataract surgery and $700 for each regular cataract surgery.

Medicare Global Surgeries and Modifiers

Most eye surgeries, including cataract removal surgeries, are categorized as "global" surgeries. A global surgery is a group of clinically related services that are coded and billed for as a single unit.[12] This includes the surgical services—which are invasive procedures that only physicians with appropriate training should perform—and related preoperative and postoperative services to evaluate the beneficiary. Medicare pays for these services with a single payment—the global surgery fee. CMS bases global surgery fees on the cost of the surgery and the average number of related postoperative services required during the global surgery period.[13]

Medicare will sometimes pay separately for preoperative and postoperative services that are normally covered under the global surgery fee. To do so, Medicare requires certain modifiers on claims. For example, modifiers 24 and 25 indicate that evaluation and management (E&M) services on claims submitted during the global surgery period are unrelated to the global surgery. Similarly, modifier 22 indicates that a global surgery is particularly complex and will require substantially more E&M services than are factored into the cost of the surgery.[14]

Previous OIG Work

OIG has found vulnerabilities in Medicare payments for ophthalmology services. For example, in 2009, OIG found that Medicare paid approximately $97.6 million in 2005 for E&M services that were included in global eye surgery fees but were not provided during the global eye surgery period.[15] Also, a 2014 report found that Medicare paid $22 million

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[12] CMS, *Medicare Claims Processing Manual*, Pub. No. 100-04, ch. 12 § 40; CMS Medicare Learning Network, *Global Surgery Fact Sheet* (March 2015).

[13] Ibid. Global surgery periods are the lengths of time in which related services are covered under the global surgery fee, and they vary depending on the severity of the surgery. Global surgeries can be split into major surgeries, which have a 90-day global period, and minor surgeries, which have a global period of 10 days or fewer.

[14] CMS, *Medicare Claims Processing Manual*, Pub. No. 100-04, ch. 12 §§ 40.2.A.7, 40.2.A.8, and 40.2.A.10.

[15] OIG, *Nationwide Review of Evaluation and Management Services Included in Eye and Ocular Adnexa Global Surgery Fees for Calendar Year 2005*, A-05-07-00077, April 2009.

for ophthalmology claims that were potentially inappropriate based on national and local coverage requirements.[16]

METHODOLOGY

This evaluation is national in scope and is based primarily on paid Medicare Part B claims for 64 different Healthcare Common Procedure Coding System (HCPCS) codes for ophthalmology services.[17] More specifically, our analysis examined approximately 34 million paid claims billed by 44,960 unique providers in 2012. Each Medicare-allowed amount is composed of the Medicare Part B responsibility (80 percent) and the beneficiary's responsibility (20 percent).[18] Throughout this report, when we refer to the dollar amount that Medicare "paid" for each service, we are referencing the Medicare-allowed amount for each service.

For a detailed methodology and a full description of our measures of questionable billing for ophthalmology services, refer to Appendix A.

Identification and Description of Providers With Questionable Billing for Ophthalmology Services

We classified providers into four strata on the basis of the specialty code field on their Medicare claims: ophthalmology, optometry, ambulatory surgery, and all other specialties. We analyzed each specialty group separately because we observed differences in their billing patterns. We identified providers as those having unique national provider identifiers (NPIs).

We developed nine measures of questionable billing for ophthalmology services to capture several different types of possible fraud, waste, and abuse. Our measures of questionable billing are grouped into four categories. These categories covered providers with unusually high billing for (1) procedures to treat wet AMD, (2) complex cataract surgeries, (3) tests to diagnose wet AMD, and (4) ophthalmology claims using modifiers. The FDA approved label for Lucentis was the basis for two measures of questionable billing, both of which were in the first category—unusually high billing for procedures to treat wet AMD. We developed the remaining seven measures on the basis of past OIG work and fraud investigations related to ophthalmology services, as well as input from staff at CMS and the American Academy of Ophthalmology.

[16] OIG, *Medicare Paid $22 Million in 2012 for Potentially Inappropriate Ophthalmology Claims,* OEI-04-12-00281, December, 2014.

[17] Medicare Part B services are classified and paid for using HCPCS codes.

[18] Medicare Part B also required a deductible of $99.90 per month in 2012.

When analyzing each measure of questionable billing, we excluded claims processed by contractors that had any LCDs pertaining to the HCPCS code(s) covered by the measure. Although some of the billing from providers that demonstrated questionable billing on our measures may be legitimate, providers with questionable billing warrant further scrutiny.

For each provider we identified, we calculated the dollar amount that Medicare paid for services associated with each measure on which the provider demonstrated questionable billing. To do so, we summed the amount that Medicare paid for all claims associated with the measure(s) for which the provider demonstrated questionable billing. This was not necessarily the total amount that Medicare paid the provider for ophthalmology services. For example, if a provider demonstrated questionable billing only for Lucentis injections, we summed all Lucentis injections billed by that provider.

We also identified geographic areas that had high rates of Medicare payments associated with questionable billing for ophthalmology services in 2012. We also reviewed multiple data sources to identify providers with listed specialties that appeared unrelated to ophthalmology (i.e., specialties other than ophthalmology, optometry, or ambulatory surgery). Specifically, we reviewed the specialty code field from Medicare claims data; specialty information from the Provider Enrollment, Chain, and Ownership System (PECOS); and specialty information from the National Plan and Provider Enumeration System (NPPES).[19] We report the extent to which providers with specialties thatappeared unrelated to ophthalmology billed for ophthalmology services.

Limitations

We did not conduct a medical record review for any claims associated with the services in this report to determine whether they were inappropriate or fraudulent. Some providers may have legitimate reasons for exceeding certain thresholds on our measures of questionable billing. For example, they may be highly specialized providers that offer unique or complex care for beneficiaries.

Standards

This study was conducted in accordance with the *Quality Standards for Inspection and Evaluation* issued by the Council of the Inspectors General on Integrity and Efficiency.

[19] To establish and maintain Medicare billing privileges, providers supply information about their specific attributes, including medical specialty and license information, to CMS through PECOS and NPPES. For more information about PECOS and NPPES, see Appendix B.

FINDINGS

Four percent of providers billing for ophthalmology services in 2012 demonstrated questionable billing on at least one of our measures; Medicare paid them $171 million for services related to these measures

Of the 44,960 providers that billed Medicare for ophthalmology services in 2012, approximately 4 percent (1,726) exceeded the threshold for at least one of our nine measures of questionable billing.[20] Overall, Medicare paid these 1,726 providers approximately $768 million for ophthalmology services in 2012. Of this $768 million, Medicare paid $171 million for services associated with the measures on which the providers demonstrated questionable billing.[21]

Among the 1,726 providers with questionable billing, 96 percent (1,653) exceeded the threshold for just one measure of questionable billing, and approximately 4 percent (64) exceeded the threshold for two measures of questionable billing. Nine providers exceeded our thresholds for three, four, or five measures of questionable billing. Table 2 indicates the number and percentage of providers by the number of measures of questionable billing for which providers exceeded thresholds. Appendix C has the number and percentage of providers by the number of measures on which they demonstrated questionable billing within each specialty stratum.

Table 2. Number and Percentage of Providers by Number of Measures of Questionable Billing for Which Providers Exceeded Thresholds, 2012

Number of Measures of Questionable Billing for Which Providers Exceeded Thresholds	Number of Providers	Percentage of Providers
1	1,653	95.8%
2	64	3.7%
3	7	0.4%
4	1	<0.1%
5	1	<0.1%
6 or more	0	0%
Total	**1,726**	**100%**

Source: OIG analysis of 2012 NCH Part B file, 2014.

[20] Some claims were processed by contractors that had one or more LCDs in 2012 pertaining to (a) tests that diagnose wet AMD or (b) Lucentis injections to treat wet AMD. We excluded claims for tests to diagnose wet AMD or Lucentis injections to treat wet AMD that were processed by contractors having such LCDs in 2012. The 44,960 providers referenced in the text is the total number of providers that billed for at least one claim that we did not exclude.

[21] Throughout the findings, we will refer to this $171 million figure as the amount that Medicare paid for "services associated with our measures of questionable billing."

For each measure of questionable billing, Table 3 shows the total number of providers that exceeded the threshold for unusually high billing and the total Medicare payments to those providers for services associated with each measure. Our nine measures of questionable billing are grouped into four categories. Appendix D shows the median, the threshold that indicated unusually high billing, the range of unusually high billing, the number of providers with unusually high billing, and the total amount Medicare paid these providers for services associated with each measure within each stratum.

Table 3. Providers With Unusually High Billing by Category and Measure of Questionable Billing, 2012

Category and Measure of Questionable Billing	Number of Providers Exceeding Threshold*	Amount Medicare Paid for Services Associated With Each Measure**
Providers with unusually high billing for procedures to treat wet AMD	261	$91 million
- *Lucentis injections more often than 28 days per eye*	*209*	*$68 million*
- *Lucentis injections beyond the maximum annual dosing recommendation per eye*	*6*	*$22 million*
- *Laser surgeries with concurrent biologic injections or drug administration*	*50*	*$22 million*
Providers with unusually high billing for complex cataract surgeries	580	$39 million
Providers with unusually high billing for tests to diagnose wet AMD	355	$23 million
- *More than three annual fundus photography exams*	*273*	*$12 million*
- *More than five annual ophthalmoscopy exams*	*88*	*$8 million*
- *More than five annual fluorescein angiographies or indocyanine green angiographies*	*19*	*$3 million*
Providers with unusually high billing for ophthalmology claims using modifiers	586	$18 million
- *Modifier 24 or 25*	*566*	*$18 million*
- *Modifiers 22*	*20*	*$0.2 million*
Total	**1,726**	**$171 million**

Source: OIG analysis of 2012 NCH Part B file, 2014.
* Column does not sum to total because some providers were above the threshold on multiple measures of questionable billing.
** Column does not sum to total due to rounding.

Relatively few providers demonstrated questionable billing for procedures to treat wet AMD; however, over half of Medicare payments associated with questionable billing went to such providers for treating wet AMD

Of the 1,726 providers demonstrating questionable billing on any of our measures in 2012, 261 (15 percent) did so on at least one of our three measures for procedures that treat wet AMD. Medicare paid these providers $91 million for procedures that treat wet AMD, including Lucentis injections and laser surgeries. These services represented the majority (53 percent) of Medicare payments associated with our measures of questionable billing. Some contractors have established limitations on

the frequency at which providers may bill for these procedures.[22] In areas without these limitations, providers that bill for these procedures at unusually high levels may be billing for services that are not medically reasonable or necessary.

Lucentis injections more often than 28 days per eye. In 2012, 209 providers—almost all of whom were ophthalmologists (206)—billed for an unusually high percentage of Lucentis injections sooner than 28 days after a prior injection on the same eye. Medicare paid these providers $68 million for Lucentis injections in 2012.

The 206 ophthalmologists demonstrating questionable billing on this measure billed for more than 6 percent of their Lucentis injections within 28 days of a prior injection on the same eye. One provider billed for 56 percent of his Lucentis injections (121 of 216) less than one month after a prior injection on the same eye. In total, Medicare paid this provider $215,153 for Lucentis injections in 2012. This raises questions about the medical necessity of these injections.

Lucentis injections beyond the maximum annual dosing recommendation per eye. Additionally, 6 providers—all ophthalmologists—billed for Lucentis injections beyond the maximum annual dosing recommendation per eye (i.e., more than 12 or 13 injections per eye per year) for an unusually high percentage of beneficiaries.[23] Medicare paid these providers $22 million in 2012 for Lucentis injections.

Overall, only 56 providers billed for more than the maximum annual dosing recommendation per eye for Lucentis injections in 2012. Of these providers, 6 billed for more than 12 or 13 Lucentis injections per eye for at least 9 percent of beneficiaries. One particular provider billed for Lucentis injections beyond the maximum recommended dosing amount for 12 of his 106 beneficiaries. This provider billed for an average of 19 injections for each of these 12 beneficiaries, including billing for 34 injections for 1 beneficiary. Overall, Medicare paid this provider $2 million for Lucentis injections in 2012. This raises questions about whether all of these injections were medically reasonable and necessary.

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[22] For our analysis of providers in areas where contractors have established LCDs limiting procedures that treat wet AMD, see our earlier report: *Medicare Paid $22 Million in 2012 for Potentially Inappropriate Ophthalmology Claims*, OEI-04-12-00281, December 2014.

[23] The FDA-approved Lucentis label states that the biologic may be administered as often as every 28 days to treat wet AMD, for a total of 12 or 13 injections per eye per year, depending on when the first injection was administered, but that it can also be effective if injected as infrequently as once every 3 months.

Laser surgeries with concurrent biologic injections or drug administration. In 2012, 50 providers billed for laser surgery within 28 days of biologic injections or drug administration for an unusually high percentage of beneficiaries. Medicare paid these providers $22 million for procedures to treat wet AMD in 2012.

The vast majority of providers (3,137 of 3,612) that billed for procedures to treat wet AMD in 2012 did not bill for any laser surgeries within 28 days of biologic injections or drug administration in 2012. However, 1 provider billed for laser surgery within 28 days of Lucentis injections or drug administration for 80 percent of his beneficiaries (540 of 673). To treat these 540 beneficiaries' wet AMD, this provider billed for 6,748 Lucentis injections and 2,741 laser surgeries, representing $16 million. This figure includes 21 beneficiaries for whom this provider billed at least 24 Lucentis injections and 13 laser surgeries each. This raises questions about the medical necessity of these procedures.

Five hundred eighty providers demonstrated questionable billing for complex cataract surgery, and Medicare paid these providers $39 million for this procedure

Approximately one-third of the providers demonstrating questionable billing on any of our measures (580 of 1,726) did so for billing an unusually high percentage of their overall claims for cataract surgery as complex cataract surgery. Medicare paid these providers $39 million for complex cataract surgeries. For most providers, complex cataract surgery comprised less than 2 percent of their claims for cataract surgery. However, 1 provider billed for almost all of his cataract surgeries (356 of 369) as complex. Medicare paid this provider over $430,000 for complex cataract surgeries in 2012.

Providers with an unusually high percentage of complex cataract surgeries may have a legitimate reason, such as specializing in complex cases. However, providers also may be billing unnecessarily for the complex surgeries—rather than for standard ones—to increase their Medicare payments. Medicare paid an average of $200 more per complex cataract surgery than per regular cataract surgery in 2012 because complex cataract surgeries require more resources to perform.

Approximately 900 providers demonstrated questionable billing for our remaining 5 measures, and Medicare paid these providers $41 million for services related to these measures

Additionally, approximately 900 providers demonstrated questionable billing on our remaining 5 measures. Specifically, these measures include providers with unusually high billing for tests to diagnose wet AMD and

for ophthalmology claims using modifiers. Medicare paid these 900 providers approximately $41 million in 2012 for exams to diagnose wet AMD and for ophthalmology claims with modifiers 22, 24, or 25. Please see Appendix D for details about questionable billing by measure and provider specialty.

In seven metropolitan areas, the percentage of Medicare payments associated with our measures of questionable billing was at least twice as high as it was nationally

Nationally, 2.6 percent of Medicare payments for ophthalmology services were associated with the measures on which providers demonstrated questionable billing ($171 million of $6.7 billion). These Medicare payments went to providers located in 340 metropolitan areas. However, in each of seven metropolitan areas, Medicare payments for services associated with our measures of questionable billing were an average of at least 7 percent of total Medicare payments for ophthalmology services. This is more than double the rate of Medicare payments for questionable billing nationally. See Table 4 for the percentage of Medicare payments for ophthalmology services associated with questionable billing by metropolitan area in 2012 and the number of providers demonstrating questionable billing in these areas.

Table 4. Percentage of Medicare Payments Associated With Questionable Billing in Areas With High Rates of Questionable Billing, 2012

Metropolitan Area	Percentage of Medicare Payments for Services Associated with Questionable Billing	Medicare Payments Associated With Measures of Questionable Billing	Total Medicare Payments for Ophthalmology Services	Number of Providers Demonstrating Questionable Billing
Huntington, WV	35.3%	$4.2 million	$11.8 million	1
Vineland, NJ	31.4%	$5.0 million	$15.8 million	4
Salisbury, MD	16.5%	$2.9 million	$17.5 million	3
Miami, FL	12.2%	$21.2 million	$173.5 million	52
Grand Rapids, MI	11.6%	$3.4 million	$29.8 million	6
Fresno, CA	10.4%	$2.2 million	$21.4 million	4
Cincinnati, OH	7.4%	$2.0 million	$27.5 million	7
All Other Areas	2.0%	$129.9 million	$6.4 billion	1,649
Total	**2.6%**	**$171 million**	**$6.7 billion**	**1,726**

Source: OIG analysis of 2012 NCH Part B file, 2014.

Even though these seven metropolitan areas account for only 5 percent of all providers with questionable billing (78 of 1,726), the providers in these areas were responsible for nearly one quarter of all Medicare payments associated with questionable billing ($41 million of $171 million). Of this $41 million, most ($34 million) was for Lucentis injections.

Medicare paid $2 million for ophthalmology services to 821 providers that were not listed as eye specialists in CMS databases

Of the 44,960 providers that billed Medicare for ophthalmology services in 2012, 2 percent (821) of providers were not listed as eye specialists (i.e., not ophthalmologists, optometrists, or ambulatory surgery centers) in the Medicare claims data; the Provider Enrollment, Chain, and Ownership System (PECOS); and the National Plan and Provider Enumeration System (NPPES).[24] Medicare paid these 821 providers just over $2 million in 2012 for ophthalmology services, including $57,000 for major surgeries, which are the most invasive eye surgeries.[25] Although the data sources we reviewed indicated that these providers were licensed and certified to practice medicine, these providers were not listed as eye care specialists.[26] Ophthalmology services billed by these providers may be of poor quality or inappropriate if the providers were not properly trained to perform such services.

In total, Medicare paid these providers for 24,069 ophthalmology claims. Two Medicare contractors processed 53 percent of these claims (12,688), though their share of all Medicare claims for ophthalmology services was less than 30 percent in 2012.

Additionally, another 131 providers did not have specialty codes on their Medicare claims noting that they were eye specialists. However, their information in PECOS and/or NPPES noted that they were eye specialists. Therefore, the specialty codes on the Medicare claims differed from those in PECOS and/or NPPES for these providers.[27] Differences in the specialty codes among these databases may indicate that these providers are not reporting and/or updating all specialty information.

[24] The provider specialty code on Medicare claims is automatically populated by PECOS data, but providers may have more than one specialty in PECOS. Additionally, upon enrollment, providers are required to submit identifying information, such as name and specialty, to NPPES.

[25] Major surgeries provide a 90-day global surgery period, the longest of any global surgery period in Medicare.

[26] Providers do not have to be listed as eye care specialists to perform eye procedures. For example, a provider could be listed as a general surgeon in PECOS while also licensed and certified as an ophthalmologist.

[27] Contractors are required to verify providers' information during enrollment and revalidation. See Appendix B for information on how providers enroll and revalidate in Medicare using PECOS and NPPES.

CONCLUSION AND RECOMMENDATIONS

In 2012, Medicare paid $6.7 billion to 44,960 providers for services that screened for, diagnosed, evaluated, and treated wet AMD or cataracts. Recent investigations and prior OIG work have found that these ophthalmology services are vulnerable to fraud, waste, and abuse.

In 2012, approximately 4 percent of providers (1,726) demonstrated questionable billing on at least one of our nine measures. Medicare paid these providers $768 million for all ophthalmology services in 2012, of which $171 million was for services associated with the measures on which these providers demonstrated questionable billing. While there may be legitimate reasons for some of this billing, these providers warrant further scrutiny. Additionally, in seven metropolitan areas the percentage of Medicare payments associated with our measures of questionable billing was twice as high as it was nationally.

Further, most providers billing for ophthalmology services, and those demonstrating questionable billing, were listed as eye specialists (i.e., ophthalmologists, optometrists, or ambulatory surgical centers) in CMS databases. However, Medicare paid $2 million for ophthalmology services to 821 providers that were *not* listed as eye specialists.

We recommend that CMS:

Increase monitoring of billing for ophthalmology services

CMS should increase its monitoring of billing for ophthalmology services. CMS could use many different methods to increase its monitoring of these services; these methods include but are not limited to:

- Increasing its oversight of providers that demonstrated questionable billing on their use of Lucentis. Injections of Lucentis represent a substantial financial vulnerability if billed inappropriately or fraudulently.
- Instructing its contractors to use measures similar to those we incorporated into this study when monitoring billing for services that diagnose and treat wet AMD and cataracts. CMS could develop thresholds for these measures and instruct its contractors to conduct additional reviews of providers that exceed them. These contractors could also focus their efforts in the metropolitan areas with the highest percentages of questionable billing.
- Including the measures of questionable billing used in this report in its fraud-prevention system.
- Reviewing local policies (i.e., LCDs) regarding ophthalmology services used by its claims processing contractors. For those with

specific criteria and uniform thresholds (e.g., in line with FDA label requirements), CMS could create national policies to align with these criteria. Additionally, CMS could instruct its claims processing contractors to review and consider implementing local policies used by other contractors to ensure that ophthalmology services are billed for appropriately.

- Reviewing payments for ophthalmology services that are inconsistent with providers' reported specialties.

Review providers with questionable billing for ophthalmology services identified by this evaluation and take appropriate action

In a separate memorandum, we will refer to CMS the providers with questionable billing for ophthalmology services in 2012. We will also refer the providers that were not listed as eye specialists but that billed for major surgeries. CMS and/or its contractors should assess the claims from these providers and, if warranted, review medical records, review billing patterns, and/or perform unannounced site visits. After this assessment, CMS should determine and take an appropriate course of action. Appropriate actions may include, but are not limited to, (1) referring to law enforcement for criminal investigation, (2) suspending payments, (3) revoking Medicare privileges, (4) recouping overpayments, (5) educating providers on how to properly bill for ophthalmology services and report all specialties in which they may bill, or (6) taking no action.

AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

CMS concurred with both of our recommendations.

CMS concurred with our recommendation to increase monitoring of billing for ophthalmology services. CMS stated that it will review the options that OIG included for how to implement this recommendation to determine which methods will be most effective. CMS further noted that it is committed to protecting the Medicare Trust Funds by combatting fraud, waste, and abuse.

CMS also concurred with our recommendation to review providers with questionable billing for ophthalmology services identified by this evaluation and take appropriate action. CMS explained that it will conduct a preliminary analysis of the claims referred by OIG. CMS stated that on the basis of this analysis, it will determine an appropriate number of claims on which to conduct medical review and take appropriate action

For the full text of CMS's comments, see Appendix E.

APPENDIX A

Detailed Methodology

Scope

We analyzed paid Medicare Part B claims for 64 different HCPCS codes for ophthalmology services from the NCH File. This included approximately 34 million paid claims billed by 44,960 unique providers in 2012.

Identifying Providers With Questionable Billing for Ophthalmology Services

To ensure that each provider's billing was compared to the provider's peers, we classified each provider into one of four strata on the basis of the provider's specialty, as noted in the specialty code field on the provider's Medicare claim: ophthalmology, optometry, ambulatory surgery, and all other specialties.[28] We analyzed each specialty group separately. See Table A-1 for the total number of providers and dollar amount that Medicare paid for ophthalmology services in each of these four strata in 2012.

Table A-1. Number of Providers and Dollar Amount Medicare Paid for Ophthalmology Services by Specialty Strata, 2012

Specialty Strata	Number of Providers in Strata	Dollar Amount That Medicare Paid Providers in Strata
Ophthalmologists	17,270	$5.0 billion
Optometrists	24,737	$0.4 billion
Ambulatory Surgical Centers	2,001	$1.3 billion
All Other Providers*	952	<$0.1 billion
Total	**44,960**	**$6.7 billion**

* There were 38 provider specialty types included in this specialty group.
Source: OIG analysis of 2012 NCH Part B file, 2014.

We developed nine measures of questionable billing for ophthalmology services to capture several different types of possible fraud, waste, and abuse. We grouped these nine measures of questionable billing into four categories. We developed two measures in the first category—unusually high billing for procedures to treat wet AMD—on the basis of the FDA-approved labelling for Lucentis. We developed the remaining seven measures on the basis of past OIG work and fraud investigations related to ophthalmology services, as well as input from staff at CMS and the

[28] Some providers had two specialty codes in their Medicare claims data. We classified these providers as eye specialists (i.e., ophthalmology, optometry, or ambulatory surgery) if one of their specialty codes indicated such a specialty. For providers with more than one specialty code not for eye specialists, we classified them according to the specialty code under which they billed for the greatest number of ophthalmology claims.

American Academy of Ophthalmology. See Table A-2 for the measures of questionable billing.

Table A-2: Measures of Questionable Billing

Category	Measure of Questionable Billing
Providers with unusually high billing for procedures to treat wet AMD	Lucentis injections more often than 28 days per eye*
	Lucentis injections beyond maximum annual dosing recommendation per eye*
	Laser surgeries with concurrent biologic injections or drug administration
Providers with unusually high billing for complex cataract surgeries	High percentage of claims for complex cataract surgery
Providers with unusually high billing for tests to diagnose wet AMD	High number of fundus photography exams per beneficiary annually*
	High number of ophthalmoscopy exams per beneficiary annually*
	High number of fluorescein angiographies or indocyanine green angiographies per beneficiary annually*
Providers with unusually high billing for ophthalmology claims using modifiers	High percentage of claims with modifiers 24 or 25
	High percentage of claims with modifier 22

Source: OIG analysis of 2012 NCH Part B file, 2014.
* Some contractors have LCDs establishing limitations on these services. In this report, we only applied this measure to providers with claims processing contractors not having such LCDs. We included a comparable analysis for providers with claims processing contractors having LCDs that established limitations on these services in a companion report, *Medicare Paid $22 Million in 2012 for Potentially Inappropriate Ophthalmology Claims*, OEI-04-12-00281, December 2014.

When analyzing each measure, we excluded claims submitted to claims processing contractors that had an LCD pertaining to the HCPCS codes related to the measure. We also excluded providers that did not bill at least one claim with the HCPCS code or modifier related to the measure. Further, for each measure of questionable billing, we report only providers for which Medicare paid at least five ophthalmology claims associated with the measure in 2012.

Using the Tukey method, we considered a provider's billing to be unusually high, or questionable, on any of the nine measures if it was greater than the 75th percentile plus 1.5 times the interquartile range.[29] However, for some measures of questionable billing, our use of this methodology resulted in an outlier threshold that was the same as the higher bound of the interquartile range. For these measures of questionable billing, as noted below, we performed a "serial Tukey." That is, we performed the Tukey method again on only those providers that exceeded the first outlier threshold.

Additionally, we calculated the dollar amount that Medicare paid each provider for services associated with the measures on which they demonstrated questionable billing. To do so, we summed the amount that Medicare paid for all claims having HCPCS codes and/or modifiers

[29] This is a standard exploratory method for identifying members of a population with unusually high values on a given statistic compared to the rest of the population when no established benchmarks exist. See J.W. Tukey, *Exploratory Data Analysis*, Addison-Wesley, 1977.

related to the measure(s) on which these providers demonstrated questionable billing. For example, if a provider demonstrated questionable billing only for Lucentis injections, then we summed all claims for Lucentis injections billed by that provider. However, for this calculation we did not sum the amount that Medicare paid the provider for any other ophthalmology services.

Below are the four categories of questionable billing, including their associated nine measures.

A. *Providers with unusually high billing for procedures to treat wet AMD*. We reviewed claims for certain procedures that treat wet AMD to analyze three measures of questionable billing. These are:

1. Lucentis injections more often than 28 days per eye. This measure represents the percentage—out of all Lucentis injections for the provider billed—of Lucentis injections that a provider billed less than 28 days after a prior injection on the same eye.

   Providers billing for an unusually high percentage of Lucentis injections sooner than 28 days after another injection on the same eye may be overutilizing Lucentis and/or billing Medicare for unused Lucentis. According to the FDA-approved dosing guidelines on Lucentis's label, the most frequently one eye should receive an injection is every 28 days. However, the dosing guidelines also indicate that Lucentis remains effective if dosed as infrequently as every 3 months per eye.

2. Lucentis injections beyond the maximum annual dosing recommendation per eye. This measure represents the percentage—out of all beneficiaries for whom the provider billed for Lucentis injections—of beneficiaries for whom a provider billed for Lucentis injections beyond the maximum annual dosing recommendations per eye. We performed a serial Tukey to identify outliers on this measure.

   Providers exhibiting this measure may be overutilizing Lucentis and/or billing Medicare for unused Lucentis. Medicare paid an average of $2,000 for each dose of the biologic, which is injected directly into the eye. According to the FDA-approved dosing guidelines on Lucentis's label, an eye should receive a maximum of 12 or 13 injections per year (depending on when the first injection occurs). However, the dosing guidelines also indicate that Lucentis remains effective if dosed as infrequently as every 3 months per eye.

3. Laser surgeries with concurrent biologic injections or drug administration. This measure represents the percentage—out of all beneficiaries for whom the provider billed for procedures to treat wet

AMD—of beneficiaries for whom a provider billed for laser surgeries to treat wet AMD within 28 days of Lucentis injections or drug administration to treat wet AMD on the same eye. We performed a serial Tukey to identify outliers on this measure.

Laser surgery is appropriate to treat wet AMD in only limited circumstances, and most physicians do not treat wet AMD with concurrent laser surgery and biologic injections or drug administration. Specifically, providers may be billing Medicare for financial gain or potentially harming their patients if they bill for and/or provide laser surgeries with biologic injections or drug administration to treat wet AMD.

B. *Providers with unusually high billing for complex cataract surgeries*. This category has only one measure of questionable billing, which is:

   4. High percentage of claims for complex cataract surgeries. This measure represents the percentage of each providers' overall claims for cataract surgery claims that were for complex cataract surgery. Medicare pays providers a higher rate for complex cataract surgeries than for standard cataract surgeries. Providers with an unusually high percentage of claims for complex cataract surgery may be billing for services that are not medically reasonable or necessary.

C. *Providers with unusually high billing for tests to diagnose wet AMD*. Billing for an unusually high number of tests per eye for an unusually high percentage of beneficiaries may indicate that providers are billing for services that are not medically reasonable or necessary. Additionally, these diagnostic exams cause blurred vision, which forces patients to require temporary care, and can harm beneficiaries if the tests are not needed. We reviewed claims for three types of tests that diagnose wet AMD. These three types of tests are the basis of our three measures of questionable billing, which are:

   5. High number of fundus photography exams per beneficiary annually. Providers billing for an unusually high number of fundus photography exams for an unusually high percentage of beneficiaries may be billing for services that are not medically reasonable and necessary. Overall, approximately 2 million beneficiaries had fundus photography exams in 2012. We identified the total number of these exams that each provider billed for each beneficiary.

      Some contractors have LCDs that establish limits on the number of annual fundus photography exams that are appropriate for providers within their jurisdiction, and these limits vary across LCDs. Therefore, for providers in our analysis (i.e., those in jurisdictions

without LCDs), we used the Tukey methodology to determine a threshold for an unusually high number of exams per eye annually. The resulting threshold was two exams per eye, annually.

We then used the Tukey methodology to identify providers that billed for more than three fundus photography exams per eye annually on an unusually high percentage of their beneficiaries receiving these exams in 2012. We performed a serial Tukey to identify outliers on this measure.

6. High number of ophthalmoscopy exams per beneficiary annually. Providers billing for an unusually high number of ophthalmoscopy exams for an unusually high percentage of beneficiaries may be billing for services that are not medically reasonable and necessary. Overall, approximately 800,000 beneficiaries had ophthalmoscopy exams in 2012. We identified the total number of these exams that each provider billed for each beneficiary.

   Some contractors have LCDs that establish limits on the number of annual ophthalmoscopy exams that are appropriate for providers within their jurisdiction, and these limits vary across LCDs. Therefore, for providers in our analysis (i.e., those in jurisdictions without LCDs), we used the Tukey methodology to determine a threshold for an unusually high number of exams per eye annually. The resulting threshold was five exams per eye, annually.

   We then used the Tukey methodology to identify providers that billed for more than five ophthalmoscopy exams per eye annually on an unusually high percentage of their beneficiaries receiving these exams in 2012. We performed a serial Tukey to identify outliers on this measure.

7. High number of fluorescein angiographies or indocyanine green angiographies per beneficiary annually. Providers billing for an unusually high number of fluorescein angiographies or indocyanine green angiographies for an unusually high percentage of beneficiaries may be billing for services that are not medically reasonable and necessary. Overall, approximately 350,000 beneficiaries had fluorescein angiographies or indocyanine green angiographies in 2012. We identified the total number of these exams that each provider billed for each beneficiary.

   Some contractors have LCDs that establish limits on the number of annual fluorescein angiographies or indocyanine green angiographies that are appropriate for providers within their jurisdiction, and these limits vary across LCDs. Therefore, for providers in our analysis (i.e.,

those in jurisdictions without LCDs), we used the Tukey methodology to determine a threshold for an unusually high number of exams per eye annually. The resulting threshold was five exams per eye, annually.

We then used the Tukey methodology to identify providers that billed for more than five fluorescein angiographies or indocyanine green angiographies per eye annually on an unusually high percentage of their beneficiaries receiving these exams in 2012. We performed a serial Tukey to identify outliers on this measure.

D. *Providers with unusually high billing for ophthalmology claims using modifiers*. Past OIG work has found that some providers inappropriately used modifiers to increase Medicare payments.[30] We reviewed claims for the presence of modifiers that cause Medicare to cover E&M services that it otherwise would not. This category has two measures of questionable billing. These are:

8. High percentage of claims with modifiers 24 or 25. This measure represents the percentage of each provider's claims that contained modifiers 24 or 25. These modifiers indicate that E&M services provided during global surgery periods are separately payable because they are not related to the concurrent global surgery. However, providers that submit an unusually high percentage of claims with modifiers 24 or 25 may be using the modifiers to inappropriately receive payment for these services.

9. High percentage of claims with modifier 22. This measure represents the percentage of each provider's claims that contained modifier 22. This modifier causes Medicare to separately pay for E&M visits provided during global surgery periods because beneficiaries had particularly complicated surgeries that would require additional E&M visits beyond what is covered in the global surgery period. Providers that submit an unusually high percentage of claims with this modifier may be using it to inappropriately receive payment for E&M services.

Describing Providers With Questionable Billing for Ophthalmology Services

To describe providers with questionable billing for ophthalmology services, we analyzed the geographic locations of the questionable billing providers.

We identified each provider's Core Base Statistical Area (CBSA) by using the zip code listed on the provider's ophthalmology claims. A CBSA is a

[30] For example, see OIG, *Use of Modifier 25*, OEI-07-03-00470. November 2005.

region around an urban center that has at least 10,000 people. For each CBSA, we determined the total dollar amount that Medicare paid to providers that demonstrated questionable billing for services associated with our measures of questionable billing. We also determined, for each CBSA, the dollar amount that Medicare paid in total for ophthalmology services. In the body of the report, we refer to CBSAs as "metropolitan areas."

After identifying the dollar amount Medicare paid for services associated with the measures on which providers demonstrated questionable billing, we identified CBSAs with high rates of Medicare payments for services associated with our measures of questionable billing out of total Medicare payments for ophthalmology services in 2012. We limited our analysis to only CBSAs with at least three providers billing for a total of at least $2 million for ophthalmology services in 2012. In the findings, we report CBSAs with percentages of Medicare payments for services associated with our measures of questionable billing that were at least twice the national average (2.6 percent). We also determined the measures of questionable billing exhibited by providers in these CBSAs.

Analyzing the Specialty Information of Providers Billing for Ophthalmology Services

We identified each provider's medical specialty based on the specialty code listed on the provider's ophthalmology claims. This information is supplied directly by the PECOS database for each provider. We then determined, by specialty, the total amount that Medicare paid for all ophthalmology services in 2012. We identified providers that had specialty codes indicating that they were not eye specialists (i.e., not ophthalmologists, optometrists, or ambulatory surgical centers). Subsequently, we compared these providers' specialty codes on their Medicare claims with specialty information from PECOS and NPPES to identify those that were not listed as eye specialists in any data source. We also determined which claims processing contractors processed claims for these providers.

APPENDIX B

Provider Enrollment Data and Claims Processing

Before enrolling in Medicare, providers must first obtain a National Provider Identifier (NPI) through NPPES.[31] To do so, providers are required to submit identifying information to NPPES, such as name, professional license number, specialty type, and practice location.

Claims processing contractors then enroll providers in Medicare using PECOS. Providers submit an enrollment application that claims processing contractors review, validate, and submit into PECOS. This application includes provider license or certification information, specialty type, practice address location, and other identifying information.[32]

Once providers are enrolled, CMS and its contractors oversee the providers by using the information in PECOS. Providers must report any changes in their information to claims processing contractors within 90 days.[33] Claims processing contractors may deactivate the billing privileges of providers that do not maintain accurate enrollment information.[34] Additionally, providers must revalidate their enrollment information every 5 years by resubmitting enrollment applications and supporting documentation to claims processing contractors for review and validation.[35]

Contractors use data from PECOS to process and pay Medicare claims. For example, providers' specialty types and practice addresses on Medicare claims come directly from PECOS.

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[31] 42 CFR § 424.506(b); CMS *Medicare Program Integrity Manual*, Pub. No. 100-08, ch. 15, § 15.3.

[32] CGI Federal, *PECOS 6.0.0 Required Fields*, Doc ID: PECOS-6.0.0-REQ-67792-v0.10, April 2009. Providers must list a primary specialty when enrolling in Medicare using PECOS. Providers have the option of reporting a secondary specialty in PECOS, but they cannot list any other specialties on the same enrollment application.

[33] 42 CFR § 424.516(d)(2).

[34] 42 CFR § 424.540(a)(2); CMS, *Medicare Program Integrity Manual*, Pub. No. 100-08, ch. 15, § 15.27.1.

[35] 42 CFR § 424.515. Ambulances and suppliers of durable medical equipment have different timeframes for revalidation.

APPENDIX C

Providers That Exceeded Thresholds for Questionable Billing, by Specialty Strata and Number of Measures, 2012

Specialty Strata	Number of Measures for Which Providers Exceeded Thresholds of Questionable Billing	Number of Providers
Ophthalmologists	1	1,120
	2	60
	3	7
	4	1
	5	1
	6 or more	0
	Total	1,189
Optometrists	1	423
	2	2
	3 or more	0
	Total	425
Ambulatory Surgical Centers	1	98
	2	2
	3 or more	0
	Total	100
Other Provider Specialties	1	12
	2 or more	0
	Total	12

Source: OIG analysis of 2012 NCH Part B file, 2014.

APPENDIX D

Providers With Unusually High Billing by Each Measure of Questionable Billing, 2012

Table D-1. Ophthalmologists With Unusually High Billing by Each Measure of Questionable Billing, 2012

Measure of Questionable Billing	Number of Providers	Lower and Upper Quartiles*	Providers with Unusually High Billing			
			Threshold	Range	Medicare Payments for Services Associated With Each Measure**	Number of Providers Exceeding Threshold***
Providers with unusually high billing for procedures to treat wet AMD					$90 million	249
- Lucentis injections more often than 28 days per eye	*2,186*	*0.0% to 2.5%*	*6.3%*	*6.3% to 56.0%*	*$68 million*	*206*
- Lucentis injections beyond the maximum annual dosing recommendation per eye†	*2,186*	*0.0% to 0.0%*	*8.5%*	*9.1% to 11.8%*	*$22 million*	*6*
- Laser surgeries with concurrent biologic injections or drug administration†	*3,361*	*0.0% to 0.0%*	*6.8%*	*7.1% to 80.2%*	*$22 million*	*41*
Providers with unusually high billing for complex cataract surgeries	11,327	1.5% to 15.4%	36.3%	36.4% to 100%	$24 million	460
Providers with unusually high billing for procedures to treat wet AMD					$23 million	271
- More than three annual fundus photography exams†	*10,393*	*0.0% to 0.0%*	*10.2%*	*10.3% to 57.1%*	*$11 million*	*201*
- More than five annual ophthalmoscopy exams†	*7,436*	*0.0% to 0.0%*	*19.5%*	*19.5% to 59.4%*	*$8 million*	*76*
- More than five annual fluorescein angiographies or indocyanine green angiographies†	*4,366*	*0.0% to 0.0%*	*16.3%*	*16.7% to 50.0%*	*$3 million*	*19*
Providers with unusually high billing for ophthalmology claims using modifiers					$12 million	261
- Modifiers 24 or 25	*13,898*	*0.8% to 11.1%*	*41.9%*	*41.9% to 100%*	*$12 million*	*242*
- Modifier 22	*241*	*<0.1% to 0.2%*	*0.8%*	*0.8% to 4.9%*	*$0.2 million*	*19*
Total**					**$150 million**	**1,189**

* The lower quartile is the value for the 25th percentile; the upper quartile is the value for the 75th percentile, and their difference is the interquartile range.
** Column may not sum to total because of rounding.
*** Sum of column exceeds total because some providers were above the threshold on multiple measures of questionable billing.
† For this measure, we performed a serial Tukey to identify outliers. For more information, see Appendix A.
Source: OIG analysis of 2012 NCH Part B file, 2014.

APPENDIX D (CONTINUED)

Providers With Unusually High Billing by Each Measure of Questionable Billing, 2012

Table D-2. Optometrists With Unusually High Billing by Each Measure of Questionable Billing, 2012

Measure of Questionable Billing	Number of Providers	Lower and Upper Quartiles*	Providers with Unusually High Billing			
			Threshold	Range	Medicare Payments for Services Associated With Each Measure**	Number of Providers Exceeding Threshold***
Providers with unusually high billing for procedures to treat wet AMD					$0	0
- Lucentis injections more often than 28 days per eye	*4*	*0.0% to 0.0%*	*0.0%*	*0.0%*	*$0*	*0*
- Lucentis injections beyond the maximum annual dosing recommendation per eye	*4*	*0.0% to 0.0%*	*0.0%*	*0.0%*	*$0*	*0*
- Laser surgeries with concurrent biologic injections or drug administration	*8*	*0.0% to 0.0%*	*0.0%*	*0.0%*	*$0*	*0*
Providers with unusually high billing for complex cataract surgeries	12,439	0.0% to 0.0%	40.9%	41.7% to 100%	<$0.1 million	26
Providers with unusually high billing for tests to diagnose wet AMD					$1 million	76
- More than three annual fundus photography exams†	*15,675*	*0.0% to 0.0%*	*8.2%*	*8.3% to 53.7%*	*$0.6 million*	*64*
- More than five annual ophthalmoscopy exams†	*4,637*	*0.0% to 0.0%*	*5.3%*	*6.3% to 30%*	*<$0.1 million*	*12*
- More than five annual fluorescein angiographies or indocyanine green angiographies	*124*	*0.0% to 0.0%*	*0.0%*	*0.0%*	*$0*	*0*
Providers with unusually high billing for ophthalmology claims using modifiers					$5 million	325
- Modifiers 24 or 25	*7,029*	*0.8% to 11.1%*	*42.0%*	*42.1% to 90.9%*	*$5 million*	*324*
- Modifier 22	*14*	*0.2% to 1.4%*	*4.7%*	*9.8% to 9.8%*	*<$0.1 million*	*1*
Total**					**$6 million**	**425**

* The lower quartile is the value for the 25th percentile; the upper quartile is the value for the 75th percentile, and their difference is the interquartile range.
** Column may not sum to total because of rounding.
*** Sum of column exceeds total because some providers were above the threshold on multiple measures of questionable billing.
† For this measure, we performed a serial Tukey to identify outliers. For more information, see Appendix A.
Source: OIG analysis of 2012 NCH Part B file, 2014.

APPENDIX D (CONTINUED)

Providers With Unusually High Billing by Each Measure of Questionable Billing, 2012

Table D-3. Ambulatory Surgical Centers With Unusually High Billing by Each Measure of Questionable Billing, 2012

Measure of Questionable Billing	Number of Providers	Lower and Upper Quartiles*	Providers with Unusually High Billing			
			Threshold	Range	Medicare Payments for Services Associated With Each Measure**	Number of Providers Exceeding Threshold***
Providers with unusually high billing for procedures to treat wet AMD					$1 million	12
- Lucentis injections more often than 28 days per eye	*31*	*0.0% to 2.1%*	*5.3%*	*5.8% to 10.6%*	*$0.5 million*	*3*
- Lucentis injections beyond the maximum annual dosing recommendation per eye	*31*	*0.0% to 0.0%*	*0.0%*	*0.0%*	*$0*	*0*
- Laser surgeries with concurrent biologic injections or drug administration†	*235*	*0.0% to 0.0%*	*15.0%*	*16.7% to 46.7%*	*<$0.1 million*	*9*
Providers with unusually high billing for complex cataract surgeries	1,968	1.7% to 9.8%	21.9%	22.0% to 86.3%	$14 million	90
Providers with unusually high billing for tests to diagnose wet AMD					$0	0
- More than three annual fundus photography exams	*0*	*0.0%*	*0.0%*	*0.0%*	*$0*	*0*
- More than five annual ophthalmoscopy exams	*0*	*0.0%*	*0.0%*	*0.0%*	*$0*	*0*
- More than five annual fluorescein angiographies or indocyanine green angiographies	*0*	*0.0%*	*0.0%*	*0.0%*	*$0*	*0*
Providers with unusually high billing for ophthalmology claims using modifiers					$0	0
- Modifiers 24 or 25	*0*	*0.0%*	*0.0%*	*0.0%*	*$0*	*0*
- Modifier 22	*11*	*<0.1% to 0.8%*	*3.0%*	*0.0%*	*$0*	*0*
Total**					**$15 million**	**100**

* The lower quartile is the value for the 25th percentile; the upper quartile is the value for the 75th percentile, and their difference is the interquartile range.
** Column may not sum to total because of rounding.
*** Sum of column exceeds total because some providers were above the threshold on multiple measures of questionable billing.
† For this measure, we performed a serial Tukey to identify outliers. For more information, see Appendix A.
Source: OIG analysis of 2012 NCH Part B file, 2014.

APPENDIX D (CONTINUED)

Providers With Unusually High Billing by Each Measure of Questionable Billing, 2012

Table D-4. Providers in Other Specialties With Unusually High Billing by Each Measure of Questionable Billing, 2012

Measure of Questionable Billing	Number of Providers	Lower and Upper Quartiles*	Providers with Unusually High Billing			
			Threshold	Range	Medicare Payments for Services Associated With Each Measure**	Number of Providers Exceeding Threshold
Providers with unusually high billing for procedures to treat wet AMD					$0	0
- Lucentis injections more often than 28 days per eye	*4*	*0.0% to 3.2%*	*7.0%*	*0.0%*	*$0*	*0*
- Lucentis injections beyond the maximum annual dosing recommendation per eye	*4*	*0.0% to 0.0%*	*0.0%*	*0.0%*	*$0*	*0*
- Laser surgeries with concurrent biologic injections or drug administration	*8*	*0.0% to 0.0%*	*0.0%*	*0.0%*	*$0*	*0*
Providers with unusually high billing for complex cataract surgeries	58	0.0% to 0.0%	25.0%	26.9% to 80.0%	$0.1 million	4
Providers with unusually high billing for tests to diagnose wet AMD					<$0.1 million	8
- More than three annual fundus photography exams†	*165*	*0.0% to 0.0%*	*6.0%*	*7.7% to 16.7%*	*<$0.1 million*	*8*
- More than five annual ophthalmoscopy exams	*51*	*0.0% to 0.0%*	*4.0%*	*0.0%*	*$0*	*0*
- More than five annual fluorescein angiographies or indocyanine green angiographies	*23*	*0.0% to 0.0%*	*0.0%*	*0.0%*	*$0*	*0*
Providers with unusually high billing for ophthalmology claims using modifiers					$0	0
- Modifiers 24 or 25	*331*	*17.3% to 75.0%*	*NA‡*	*NA*	*NA*	*NA*
- Modifier 22	*0*	*0.0%*	*0.0%*	*0.0%*	*$0*	*0*
Total**					**$0.1 million**	**12**

* The lower quartile is the value for the 25th percentile; the upper quartile is the value for the 75th percentile, and their difference is the interquartile range.
** Column may not sum to total because of rounding.
† For this measure, we performed a serial Tukey to identify outliers. For more information, see Appendix A.
‡ The threshold for questionable billing was above 100 percent; therefore, there were no outliers on this measure in this specialty stratum.
Source: OIG analysis of 2012 NCH Part B file, 2014.

APPENDIX E

Agency Comments

DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services

200 Independence Avenue SW
Washington, DC 20201

TO: Daniel R. Levinson
Inspector General

FROM: Andrew M. Slavitt /S/
Acting Administrator

SUBJECT: Office of Inspector General (OIG) Draft Report: "Questionable Billing for Medicare Ophthalmology Services" (OEI-04-12-00280)

The Centers for Medicare & Medicaid Services (CMS) appreciates the opportunity to review and comment on the Office of Inspector General's (OIG) draft report. CMS is committed to protecting the Medicare Trust Funds by combatting fraud, waste, and abuse.

To combat fraud, waste, and abuse in Medicare, CMS is using a comprehensive program integrity strategy to educate providers, recoup improper payments, and protect taxpayer dollars. Specific to ophthalmology claims, CMS released educational materials in July 2014 on ophthalmological benefits to educate physicians and other providers on the coverage and billing requirements for ophthalmological services.[1] The materials provide guidance on the billing requirements for cataract surgeries, tests to diagnose wet age-related macular degeneration (AMD), and procedures to treat wet AMD. Another educational tool for providers is the Comparative Billing Report (CBR). CBRs are an educational tool designed to assist providers by providing high level data that allows them to compare their billing patterns to their state and national peers. In April 2015, CMS sent out 10,000 CBRs to providers who submitted claims for extracapsular cataract removals, general ophthalmological services, and evaluation and management (E/M) services. OIG found that most providers that billed Medicare for ophthalmology services did not demonstrate questionable billing on any of OIG's measures in 2012.

In addition to prevention and education efforts, CMS is working to recover improper payments for ophthalmology claims. OIG's recently issued report on potential improper payments for ophthalmology claims identified claims that may have inappropriately billed for certain services, including services that diagnose or treat cataracts or wet AMD.[2] CMS is currently working to determine the validity of claims that OIG identified as potentially inappropriate in that report and will take appropriate action with respect to those claims.

To identify providers with questionable billing, CMS has implemented the Fraud Prevention System, (FPS) which applies predictive analytic technology on claims prior to payment to identify aberrant and suspicious billing patterns. The FPS runs predictive algorithms and other

[1] *Medicare Vision Services*, Medicare Learning Network, ICN 907165, July 2014
[2] *Medicare Paid $22 Million in 2012 for Potentially Inappropriate Ophthalmology Claims*, OEI-04-12-00281

sophisticated analytics nationwide against all Medicare fee-for-service (FFS) claims, including ophthalmology claims. CMS uses the FPS to target investigative resources to suspicious claims and providers and swiftly impose administrative action if warranted. Since CMS implemented the technology in June 2011, the FPS has identified or prevented $820 million in inappropriate payments.

As improvements are made to FPS modeling and its algorithms, CMS will use this technology to shorten the time between the incidence of fraud, waste, and abuse and its eventual detection. Finally, through collaboration with our stakeholders, CMS developed a process to identify opportunities for the FPS to standardize editing across all MACs for certain billing scenarios. For example, if multiple MACs have similar Local Coverage Determinations (LCDs), the FPS can be used to implement a single edit on a nationwide basis, in lieu of having each MAC implement a local edit. The first such edit is planned for implementation in 2015.

To target health care fraud "hot spots"—areas with high levels of fraudulent billing—CMS participates in the Medicare Fraud Strike Force (Strike Force). The Strike Force is comprised of interagency teams made up of investigators and prosecutors that focus on the worst offenders engaged in fraud in the highest intensity regions, and Medicare payment trends demonstrate the positive impact of Strike Force enforcement and prevention efforts. For example, Medicare payments for home health care increased from 2006 until 2010. In Miami, payments for HHAs decreased by $100 million per quarter since the peak in 2009; in Dallas and McAllen, Texas, payments for HHAs are down by $30 million per quarter; while in Detroit, payments for HHAs decreased by $25 million per quarter since peak in 2009. This may suggest that the home health fraud convictions not only eliminated some of the "bad actors" but also deterred other fraudsters from exploiting the outlier coverage policy.

OIG's recommendations and CMS' responses are below.

OIG Recommendation
Increase monitoring of billing for ophthalmology services.

CMS Response
CMS concurs with OIG's recommendation. CMS appreciates OIG's suggestions for how to increase monitoring of billing for ophthalmology services. We will review the options for how to implement this recommendation to determine which methods will be most effective and have the largest impact on improper payments. Currently, the FPS includes models that analyze payment factors such as the number of procedures a provider performs in a particular time period, the size and frequency of payments to providers, and other indicators of anomalous behavior to determine if CMS should take additional action with respect to a providers' claims.

OIG Recommendation
Review providers with questionable billing for ophthalmology services identified by this evaluation and take appropriate action.

CMS Response
CMS concurs with this recommendation. CMS will coordinate with OIG to review claims from providers identified as having questionable billing patterns for ophthalmology services.

CMS will conduct a preliminary analysis of the claims referred by OIG. Based on the analysis, CMS will determine an appropriate number of claims on which to conduct medical review and take appropriate action.

CMS thanks OIG for their efforts on this issue and looks forward to working with OIG on this and other issues in the future.

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