The Honorable Nancy L. Johnson  
Chairman, Subcommittee on Health  
Committee on Ways and Means  
House of Representatives  
Washington, DC  20515  

Dear Madam Chairman:

We are pleased to provide you with information from the third and final phase of our review on intravenous immune globulin (IVIG), which presents physicians' perspectives (OEI-03-05-00402). For this phase, we collected data directly from physicians who provided IVIG to Medicare beneficiaries. On June 7, 2006, we provided you with the results from the first phase of our review, which examined IVIG manufacturer data. On September 28, 2006, we provided you with the results from the second phase of our review, which examined IVIG distributor and group purchasing organization (GPO) data.

In addition to this work, we are collecting updated IVIG pricing data from the three largest distributors to determine sales prices to hospitals and physicians for the second and third quarters of calendar year (CY) 2006. This information, which we will share in the near future, will provide more current IVIG pricing information and address recent increases in Medicare physician payment amounts. Medicare physician payment during the third quarter of 2006 is 6 percent higher for liquid IVIG and 12 percent higher for powder IVIG than it was in the first quarter of 2006.

Between May and August 2006, the Office of Inspector General (OIG) collected pricing and supply data from randomly selected physicians who billed Medicare for IVIG. This analysis applies only to responding physicians; we did not make projections to all physicians. Based on the information collected from these physicians, we found that:

- Most responding physicians reported that they could not purchase IVIG at prices below the Medicare physician payment amounts during the first quarter of CY 2006. Eighty-five percent of responding physicians reported that they could not purchase either liquid or powder IVIG products at a price below the Medicare physician payment amounts. Purchase prices and invoices supplied by responding physicians corroborate their claims as approximately 90 percent of respondent purchases were made at prices (including discounts and rebates) that exceeded the Medicare physician payment amounts in the first quarter of 2006.
The majority of responding physicians reported problems with IVIG availability and payment. The majority of responding physicians (57 percent) reported that they were unable to provide patients with adequate amounts of IVIG during the first quarter of 2006. Sixty-one percent of physicians indicated that they had sent patients to hospitals for IVIG treatment because of their inability to acquire adequate amounts of IVIG or problems with Medicare payment. In addition, a small number of responding physicians said that they had stopped providing IVIG to Medicare beneficiaries altogether.

The majority of responding physicians reported that they purchased IVIG through distributors and GPOs. Eighty-four percent of physicians responding to our survey reported that they purchased IVIG products through GPOs and distributors. This is consistent with findings from the first phase of our review, in which we found that manufacturers sold the majority of IVIG products through GPOs and distributors, not directly to providers.

The enclosed document provides further details concerning the results of our review. It is important to note that this review examines a sample of physician data and perspectives only and that we did not verify the purchase invoices submitted by physicians. In the near future, OIG will issue a report that synthesizes our findings from each phase of our review and provides a more comprehensive assessment of the IVIG supply chain.

An identical letter and enclosure are being sent to the Honorable Nathan Deal, who cosigned your request for information. If you have any questions about this response regarding the third phase of our work, please contact me or your staff may call Judy Holtz, Acting Director of External Affairs, at (202) 619-0260.

Sincerely,

Daniel R. Levinson
Inspector General

Enclosure

c:
Leslie Norwalk
Acting Administrator
Centers for Medicare & Medicaid Services

Andrew C. von Eschenbach, M.D.
Acting Commissioner
Food and Drug Administration
INTRODUCTION

Intravenous immune globulin (IVIG) is a collection of antibodies derived from blood plasma. Patients with poorly functioning immune systems receive IVIG to temporarily replace missing antibodies, thus helping protect them against infectious agents that cause various diseases. The factors affecting the availability of IVIG and the adequacy of Medicare payment amounts are complex. Supply and demand, distribution, pricing, and payment all play significant roles.

We are conducting a three-phase review to examine IVIG availability and Medicare payment from the perspectives of (1) manufacturers, (2) distributors and group purchasing organizations (GPOs), and (3) physicians. This third phase examines physician perspectives only. We plan to issue in the near future a report that provides a more comprehensive assessment of the IVIG supply chain and makes any recommendations that are warranted. In addition, we are currently collecting updated IVIG pricing data from the three largest distributors to determine sales prices to hospitals and physicians for the second and third quarters of calendar year (CY) 2006.

BACKGROUND

Intravenous Immune Globulin

IVIG is produced in both powder and liquid form through fractionation of human blood plasma. Fractionation is the process whereby plasma proteins can be separated in a purified and concentrated form. Other products resulting from plasma fractionation are albumin, used as a blood volume expander, and coagulation products, used in the treatment of various blood-clotting disorders. Each IVIG product has a distinct brand name.

The Food and Drug Administration (FDA) has approved IVIG to treat several conditions. One condition is primary immune deficiency disease, a group of disorders in which the immune system fails to produce enough antibodies, thereby predisposing individuals to increased risk of infection. Additional FDA-approved uses for IVIG are acute and chronic idiopathic thrombocytopenia purpura, B cell chronic lymphocytic leukemia, kawasaki syndrome, pediatric HIV, and bone marrow transplantation.

Physicians can prescribe approved medications for uses other than their labeled indications. This practice is known as “off-label” use. Some off-label uses for IVIG include treatment for multiple sclerosis, infections in low-birth-weight newborns, and neurological disorders. The Department of Health and Human Services Advisory Committee on Blood Safety and Availability reported on its Web site that “some providers have reported that the majority of their IVIG use is for off-label indications” and that “off-label use may have increased, contributing to rising demand.”

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2 Ibid.
**Sources of IVIG**

Physicians, hospitals, and other providers can purchase IVIG through distributors and GPOs and directly from manufacturers. As reported in the first phase of our review, manufacturers sold approximately 79 percent of IVIG to distributors and GPO members in 2005.

Manufacturers establish relationships with distributors to sell IVIG to providers. Distributors purchase IVIG from manufacturers and then independently resell it to providers or work in conjunction with GPOs to provide IVIG to GPO members.

GPOs generally provide their members with access to lower cost products by negotiating prices for specific drugs from manufacturers. GPOs do not purchase products themselves; rather, they enter into group purchasing contracts with manufacturers on behalf of their members. The contracts prescribe the prices, conditions, and terms under which GPO members can purchase products. GPO members then purchase products either from distributors or manufacturers at the price set forth in the GPO contracts. Distributors do not determine GPO contract prices; they only provide IVIG to GPO members at the contract price.

**Medicare Payment for IVIG**

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) (Public Law 108-173) changed the basis of payment for most Medicare Part B prescription drugs to the average sales price (ASP), effective January 1, 2005. Prior to 2005, Medicare generally used the average wholesale price (AWP) as the basis for Part B drug payment. However, numerous reports by OIG and the Government Accountability Office, as well as data collected by the Department of Justice, indicated that Medicare’s payment rate was often significantly higher than the prices that drug manufacturers, wholesalers, and similar entities actually charge physicians and suppliers who purchase these drugs. Consequently, the MMA changed the primary basis of payment for Part B prescription drugs from AWPs to ASPs reported by the manufacturers.

Pursuant to section 1847A(c) of the Social Security Act (the Act), the ASP is a manufacturer’s sales of a drug to all purchasers in the United States (with certain exceptions) in a calendar quarter divided by the total number of units of the drug sold by the manufacturer in that same quarter. The ASP is net of any price concessions, such as volume, prompt pay, and cash discounts; free goods contingent on purchase requirements; chargebacks; and rebates other than those obtained through the Medicaid drug rebate program. Certain sales are exempt from the calculation of ASPs, including sales at nominal charges and sales exempt from inclusion in the determination of “best price” under the Medicaid drug rebate program. Currently, Medicare’s Part B payment amount for IVIG (as well as most covered outpatient drugs) is set at 106 percent of the volume-weighted ASP.

A previous OIG review examined the adequacy of Medicare’s new payment methodology among certain specialties (hematology, hematology/oncology, and medical oncology). This review determined that physician practices in these specialties could generally purchase drugs, including IVIG, at less than the MMA-established payment rates. An additional review conducted by the

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Medicare Payment Advisory Commission similarly found that oncologists could purchase most drugs at prices below Medicare's payment amount.4

Although the MMA changed the primary basis of physician payment from AWPs to ASPs in 2005, it did not do the same for hospital outpatient payment. In 2005, the Centers for Medicare & Medicaid Services (CMS) reimbursed hospitals for outpatient drugs at 83 percent of the AWP, a price that is often significantly higher than the prices charged in the marketplace and higher than Medicare's physician payment amount.5 In 2006, CMS began paying for most drugs and biologicals administered in hospital outpatient departments based on 106 percent of the manufacturer's ASP, an amount identical to the physician payment amount.6

Medicare Part B and its beneficiaries paid approximately $161 million for IVIG administered in physicians' offices and home settings in 2005. Medicare paid an additional $217 million for IVIG administered in hospital outpatient settings that year. CMS reimburses different amounts for powder versus liquid IVIG. As a result of the changes to Medicare's payment methodology, physician payment for powder IVIG fell 33 percent from $66 per gram in the fourth quarter of 2004 to $44.44 per gram in the first quarter of 2006. During the same period, physician payment for liquid IVIG fell 14 percent, from $66 per gram to $56.72 per gram.

Concerns Over Medicare Payment and Product Availability
After the MMA changed the basis of prescription drug payment from AWPs to ASPs, patient advocacy groups and physicians expressed concerns over Medicare's reduced payment amount to physicians for IVIG. Their concerns centered on the claim that, under the new payment methodology, the cost for physicians to acquire IVIG would exceed Medicare's payment amount.

In addition to reported problems with pricing, media accounts reported that physicians have had problems acquiring an adequate allocation, or supply, of IVIG. The FDA Center for Biologics Evaluation and Research, which has procedures for determining and reporting a shortage, indicates on its Web site that "along with other HHS agencies, the FDA has received reports from stakeholders, patients, and health care providers regarding difficulty in obtaining [IVIG] products. From discussions with manufacturers, distributors, providers, and consumers, it is clear that availability and treatment patterns have shifted; but we did not find clear evidence that there is currently a shortage. This is a multi-faceted and fluid situation." CMS also held discussions with manufacturers and industry representatives who noted that although inventories may be below previous levels, there is no shortage of the product.

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This is not the first time patient advocacy groups and physicians have expressed concern over IVIG availability. According to a media report, as well as an OIG interview with a manufacturer, there was a shortage of IVIG in the late 1990s after two companies halted production in their factories to make changes in order to meet new quality standards. When the factories came back online, production increased, leading to excess product and reduced prices. At that time, three manufacturers left the business. Other issues with IVIG availability surfaced in 2003 when one manufacturer, while staying in business, closed dozens of plasma collection centers.

Recent Increases in Medicare Payment for IVIG
In response to concerns about beneficiary access to IVIG, CMS established a temporary add-on payment of approximately $70 per day of infusion for CY 2006. This add-on payment covers the additional preadministration-related services required to locate and acquire sufficient IVIG product and schedule an infusion of IVIG. In a press release dated November 2, 2005, CMS stated "that the pricing for IVIG is accurate, and that there is no overall product shortage. However, in the face of such factors as increasing IVIG demand . . . physician office staff has to expend extra resources on locating and obtaining appropriate IVIG products and scheduling patient infusions." CMS went on to state that "for calendar year 2006 only, physicians and hospitals will be permitted to bill this add-on code to compensate for the administrative burdens associated with IVIG administration during this time of some volatility in IVIG product availability." In addition to the temporary add-on payment, the Medicare physician payment amount for IVIG has steadily risen in 2006. Physician payment during the third quarter of 2006 is 6 percent higher for liquid IVIG and 12 percent higher for powder IVIG than it was in the first quarter of 2006.

METHODOLOGY

Data Collection
Sample Selection. We extracted all paid Medicare Part B physician claims for two IVIG procedure codes from CMS's 2005 National Claims History File with dates of service in the third quarter of CY 2005 (the most recent claims data available at the time we selected our sample). We summarized the claims by the physician's Unique Physician Identification Number (UPIN) and profiling identification number. We then selected a simple random sample of 130 physicians for each of the two procedure codes. OIG investigative concerns prevented us from contacting a small number of physicians.
number of physicians; we excluded these physicians from our sample. The final sample contained 129 physicians for procedure code Q9941 and 126 physicians for procedure code Q9943, for a total of 255 physicians.

Physician Survey. In April 2006, we sent written surveys on IVIG pricing and availability to the 255 physicians in our sample. We obtained the physicians' mailing addresses from CMS's UPIN database and made three attempts to contact each physician. We asked physicians how much they paid for IVIG during the first quarter of CY 2006, including all discounts and rebates. We asked physicians to submit invoices to document all IVIG purchases. We also asked physicians about any additional costs associated with providing IVIG (beyond product costs), IVIG access and availability, what happens when they are unable to provide patients with adequate amounts of IVIG, and the source from which they purchase IVIG products. Between May and August 2006, 157 physicians (62 percent) responded to our written survey and 100 physicians (39 percent) provided their acquisition costs for IVIG.\(^{14}\) We did not verify the invoices submitted by physicians. We could not identify fundamental differences between responding and nonresponding physicians. In addition, this analysis applies only to responding physicians; we were unable to make projections because of the response rate.

Data Analysis

Physician Acquisition of IVIG. Based on the information provided by the responding physicians, we calculated the percentage of IVIG purchased by responding physicians at prices above and below the first quarter 2006 Medicare physician payment amounts (which were based on ASPs reflecting manufacturer sales from July through September 2005).\(^{15}\) We then calculated the volume-weighted average purchase price per gram of powder and liquid IVIG for physicians responding to our survey during the first quarter of 2006. We also determined the percentage of IVIG purchased by physicians that was subject to discounts and rebates.

Additional Physician Concerns. We examined physician responses to our survey to identify product availability issues, physician concerns about Medicare payment, the source from which physicians purchase IVIG products, ways in which physicians use IVIG, and any other specified issues.

\(^{14}\) Some respondents reported IVIG purchases and purchase prices for individual physicians in our sample, and others provided IVIG purchases and prices for entire practices. Approximately one-quarter of responding physicians explicitly indicated that they provided data for group practices.

\(^{15}\) For this analysis, we compared physician-reported prices that include discounts and rebates with the Medicare physician payment amounts.
RESULTS

Most responding physicians reported that they could not purchase IVIG at prices below the Medicare physician payment amounts during the first quarter of CY 2006.

Eighty-five percent of responding physicians reported that they could not purchase either liquid or powder IVIG products at a price below the Medicare physician payment amounts. Purchase prices and invoices supplied by responding physicians corroborate their claims as approximately 90 percent of respondent purchases (including discounts and rebates) were made at prices that exceeded the Medicare physician payment amounts in the first quarter of 2006. Furthermore, 60 percent of physician purchases exceeded the Medicare physician payment amounts by more than 5 percent, with about one-third at least 20 percent higher. The table illustrates the distribution of physician purchases at prices above and below the Medicare physician payment amount. In addition, only 21 percent of purchases were subject to discounts or rebates, according to physician-reported information.

<table>
<thead>
<tr>
<th>IVIG Price Range</th>
<th>Physician Purchases (111,138 grams)</th>
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<tbody>
<tr>
<td>Below Medicare physician payment</td>
<td>9.6%</td>
</tr>
<tr>
<td>0.01%-5.00% greater than Medicare physician payment</td>
<td>29.9%</td>
</tr>
<tr>
<td>5.01%-20.00% greater than Medicare physician payment</td>
<td>27.3%</td>
</tr>
<tr>
<td>20.01%-50.00% greater than Medicare physician payment</td>
<td>26.3%</td>
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<tr>
<td>50.01%-100.00% greater than Medicare physician payment</td>
<td>3.1%</td>
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<tr>
<td>More than 100.01% greater than Medicare physician payment</td>
<td>3.8%</td>
</tr>
<tr>
<td><strong>Sales Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
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Source: Responding physicians who provided pricing data.

According to physician data, the volume-weighted average purchase prices for responding physicians in the first quarter of 2006 were $66.47 per gram for liquid IVIG and $52.48 per gram for powder IVIG. At that time, Medicare’s physician payment amounts were $56.72 per gram of liquid IVIG and $44.44 per gram of powder IVIG.

The majority of responding physicians reported problems with IVIG availability and Medicare payment

The majority of responding physicians (57 percent) reported that they were unable to provide patients with adequate amounts of IVIG during the first quarter of 2006. Sixty-one percent of physicians indicated that they had sent patients to hospitals for IVIG treatment because of their inability to acquire adequate amounts of IVIG or problems with Medicare payment. As we stated in findings from the first and second phases of this review, manufacturers and distributors noted a similar pattern of patients moving from physician offices to hospitals for treatment. The most common explanation for the shift to hospitals is Medicare payment, specifically the inability of physicians to purchase IVIG at prices below the Medicare physician payment amounts.

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16 Even if every nonrespondent were able to purchase IVIG at a price below the Medicare physician payment amounts, a majority of physicians in our sample (52 percent) would still have been unable to acquire IVIG at a price below the Medicare physician payment amounts.
In addition, a small number of responding physicians said that they had stopped providing IVIG to Medicare beneficiaries altogether. One responding physician cited supply issues for the inability to treat patients: “due to insufficient supply, we are forced to turn away patients requiring IVIG.” Another stated that payment issues resulted in turning patients away: “The reimbursement from Medicare does not cover the cost of medication. We are unable to provide care for new patients.” Another physician added: “We can no longer treat [Medicare] patients with IVIG due to losing hundreds of dollars each time.”

The majority of responding physicians reported that they purchased IVIG through distributors and GPOs

We asked physicians in our sample to identify all of the sources from which they purchased IVIG products during the first quarter of CY 2006. Eighty-four percent of physicians responding to our survey reported that they purchased IVIG products through GPOs and distributors. This is consistent with findings from the first phase of our review, which found that manufacturers sold the majority of IVIG products through GPOs and distributors, not directly to providers.

CONCLUSION

Based on our analysis of physician-reported data, 90 percent of physician-reported purchases in the first quarter of 2006 were made at prices above the Medicare physician payment amounts, and most IVIG purchases were not subject to discounts or rebates. In addition to reporting problems with Medicare payments, a majority of responding physicians were unable to provide patients with adequate amounts of IVIG.

CMS reimburses physicians for IVIG based on manufacturer-reported ASPs. Certain ASP-related issues could partially explain our findings about physicians’ costs and payment. The ASPs include manufacturer sales to all classes of trade, but physicians cannot necessarily obtain IVIG at the same prices as other types of purchasers. In addition, manufacturer-reported ASPs do not explicitly include distributor markup. These factors could lead to a gap between physician acquisition costs and payment.

This review of physician-reported data provides additional information about an important component in the IVIG marketplace. As our review of physician-reported data illustrates, pricing, supply, and Medicare payment all play a role in determining whether and where patients receive this critical biological product. It is important to note that this review examines a sample of physician data from the first quarter of 2006 only and is part of a broader effort to provide a more complete picture of the IVIG marketplace. On June 7, 2006, we provided you the results of the first phase of this review, which examined manufacturer data from the fourth quarter of 2005. We provided the results of the second phase of this review, which provided distributor and GPO data from the fourth quarter of 2005, on September 28, 2006. In addition, we are collecting IVIG pricing data from the three largest distributors for the second and third quarters of CY 2006, which we will share in the near future. We hope this information will provide historical context as well as the current perspectives necessary for your decision-making process. After we complete our review of updated distributor prices, we will issue a report that provides a more comprehensive assessment of the IVIG supply chain and makes any recommendations that are warranted.