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Medicare Part B Drug and Biologicals Competitive Acquisition Program: Survey Analysis Comparing Satisfaction of Participating and Nonparticipating Physicians

Report

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MEDICARE PART B DRUG AND BIOLOGICALS COMPETITIVE ACQUISITION PROGRAM: SURVEY ANALYSIS COMPARING SATISFACTION OF PARTICIPATING AND NONPARTICIPATING PHYSICIANS

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EXECUTIVE SUMMARY

Section 303(d) of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA; Pub. L. 108-173) introduced a Competitive Acquisition Program (CAP) for selected outpatient drugs and biologicals covered under Medicare Part B. Under this program, Medicare chooses drug supply vendors through a competitive bidding process. Physicians may elect to participate in the program annually, in which case they purchase selected Part B drugs through a CAP vendor. In late 2005, the Centers for Medicare & Medicaid Services (CMS) conducted the first round of bidding for approved CAP vendors. Physicians were first able to acquire drugs through the CAP on July 1, 2006.

Physician participation in the CAP is voluntary. Physicians who elect to participate in the CAP must generally, with some allowable exceptions, acquire drugs covered by the CAP from a vendor selected by the CMS through the competitive bidding program. Under this method, participating physicians submit an order to the vendor, and the vendor then ships the drug to the physician. By statute, the vendor, not the physician, bills Medicare for the drug (the physician continues to bill Medicare for the drug administration fee). For drugs not included in the CAP, physicians must continue to "buy and bill" using the normal Part B fee-for-service procedures for payment under the applicable methodology, usually Average Sales Price (ASP). One of the potential benefits of the CAP to participating physicians is that they will not need to collect drug cost sharing amounts owed by beneficiaries, thus reducing their risk of bad debt.

One of the potential benefits of the CAP is that participating physicians do not need to bill Medicare for drugs or collect drug cost sharing amounts owed by beneficiaries. However, RTI's previous work to provide technical support for CMS under CAP required consultations with physician groups. From those consultations, we learned that physician associations had some significant concerns about the CAP. They expressed concerns about the ability of the CAP vendors to deliver necessary drugs to physicians on a timely basis, that the CAP would increase the administrative burden for practices, and that there might be an increase in drug wastage. They also expressed concern that Medicare patients might be adversely impacted.

Although further implementation of the CAP program has been postponed as of December 31, 2008, long-term viability of the CAP when reinstated may be influenced by physicians' satisfaction with the program. If physicians are dissatisfied with the program, they may not elect to continue to participate in the program, and future rounds of bidding for CAP vendors may fail to attract bidders. Furthermore, Congress presumably mandated the program to improve physicians' satisfaction with the Medicare program, so understanding whether the CAP indeed improves satisfaction is important.

In this report, we discuss our findings of the CAP physician surveys. The CAP-electing physician survey included 25 questions on practices' reasons for electing to participate in the CAP; their overall satisfaction with the program and the CAP vendor BioScrip; their satisfaction with acquiring drugs under the CAP, including through the use of the Furnish as Written (FAW) and Emergency Restocking processes; specific problems encountered by physicians and their patients under the CAP system; and physician characteristics and typical drugs administered.

We also discuss results from a related survey, the non–CAP-electing physician survey, sent to a subset of the physicians in practices who chose not to participate in the CAP program, but to continue to buy and bill for Medicare Part B drugs and biologicals under the ASP system. The non–CAP-electing physician survey included nine questions on practices' reasons for deciding not to participate in the CAP, their satisfaction with their current Medicare Part B drug supplier, and physician characteristics.

The surveys were first mailed in January 2008. To maximize response rates, physicians were offered several options to respond to the survey, including via a mailed questionnaire, through a Web site, by computer-assisted telephone interviewing, and by fax. Physicians who did not answer the survey after the first mailing were mailed up to three more surveys.

We weighted actual responses to control for the sampling methodology and nonresponses. Our findings from the CAP and non-CAP physician surveys can be summarized as follows:[1]

- In general, participating physicians were satisfied with the CAP. More than 82 percent reported that they were either very satisfied or somewhat satisfied with the CAP. This rate is typical of many satisfaction surveys.

- CAP physicians stated that the most important factor (47.7 percent) that influenced their decision to join the CAP was the decreased administrative burden from not having to acquire and bill under the CAP.

- Non-CAP physicians stated that the most important factors that influenced their decision not to join the CAP were that they did not administer many CAP drugs, that they were satisfied with the current supplier, and that they believed the CAP would increase their administrative burden.

- Eighty percent of CAP physicians felt that the administrative burden of the CAP was less than or no different than from the standard buy-and-bill system.

- Eighty six percent of CAP physicians said that they were somewhat or very satisfied with the sole CAP vendor, BioScrip.

- Eighty eight percent of CAP physicians reported being satisfied with the selection of CAP drugs available to order.

- Eighty six percent of CAP physicians reported being satisfied with the drug-ordering process.

- Ninety three percent of CAP physicians reported being satisfied with the quality of CAP drugs received.

[1] The numbers presented here are all weighted responses. Actual, unweighted responses can be found in the tables in Section 3.

- Eighty seven percent of CAP physicians reported being satisfied with the timeliness of delivery of CAP drugs.

- Less than 7 percent of CAP physicians said that they experienced a problem with the Emergency Restocking process; but, for those that did, the most common problems were that BioScrip did not replace the emergency drug in a timely manner or that they were denied payment by their local carrier.

- Less than 3 percent of CAP physicians reported problems with the FAW process; but, for those that did, the most common problem was that they were denied payment by their local carrier.

- Less than 10 percent of CAP physicians felt that their Medicare patients had been more inconvenienced when the physician acquired drugs through the CAP than when the physician acquired drugs through the buy-and-bill system. However, for those patients who were inconvenienced, the most common inconvenience was that the drugs were not received for the scheduled patient appointment and/or that treatment had to be postponed because the originally requested products were not available.

- Less than 10 percent of CAP physicians reported that their Medicare patients experienced problems related to co-payment billing by BioScrip; but, for those who did, the most common problem was confusing billing statements.

SECTION 1
INTRODUCTION

1.1 Background

Prescription drugs covered by Medicare Part B generally include drugs administered "incident to" a professional service, drugs administered through durable medical equipment (DME), and certain drugs covered by statute. Medicare Part B covers a variety of drugs, such as: anticancer (chemotherapy) drugs; drugs for diseases such as rheumatoid arthritis and Crohn's disease; nebulized drugs for patients with chronic obstructive pulmonary disease (COPD) and asthma; some vaccines; clotting factors; blood products; and intravenous immunoglobulins for immunocompromised patients. For the subset of drugs that are covered under the "incident to" provision, the cost of the drug must represent a real cost to the physician; a physician generally cannot bill Medicare and the beneficiary for drugs purchased by another entity (e.g., a hospital, a pharmacy, etc). In other words, a physician has to be financially liable for the cost of the drug. Thus the MMA introduced a new type of supplier, CAP vendors, that would be financially liable for the cost of Part B drugs despite not administering drugs to patients.

As required by the MMA, Congress introduced market-based reform for drugs not paid on a cost or prospective basis. Two new payment methodologies were created. Section 303(c) of the MMA, amending Title XVIII of the Social Security Act by adding Section 1847A, required that payment for the vast majority of physician-administered Part B drugs be based on the ASP for each drug, beginning in January 2005. ASPs, reported quarterly by drug manufacturers, are the average prices paid for each Part B drug by all purchasers, net of any discounts.[2] A drug's ASP is based on the manufacturer's average price per unit as represented by the 11-digit National Drug Code (NDC) for all sales excluding certain sales exempted by statute. Exceptions to the ASP-based pricing methodology are possible under MMA if the Office of the Inspector General studies indicate that the widely available market price or average manufacturer price for a drug or biological exceed the ASP for that drug or biological.

Although the conversion to ASP-based pricing was a significant change in Medicare *payment* for these drugs, it did not significantly change the *method* by which physicians acquired drugs. Physicians receiving payment under Section 1847A of the Social Security Act still "buy and bill" for Part B drugs they administer.

1.2 Congressional Mandate for a Competitive Acquisition Program

Another MMA mandated Part B–covered drug payment reform—and the focus of the two physician surveys—is the introduction of physician acquisition of certain Part B drugs through the CAP in July 2006.[3] Section 303(d) of the MMA, which added Section 1847B of the Social

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2 Subsequent CMS regulations have clarified that purchases of Part B drugs by vendors selected to provide drugs under the Competitive Acquisition Program for Part B Drugs are excluded from ASP computations.

3 CAP implementation was originally scheduled for January 1, 2006. However, the ability of physicians to acquire drugs through the CAP was delayed until July 1, 2006, to give CMS additional time to refine the implementing regulations and to ensure that the CAP vendor, Designated Carrier, and electing practices were sufficiently prepared.

Security Act, required the implementation of a competitive acquisition program for Part B drugs (the CAP). Under this program, CAP-participating physicians would submit an order for a drug prior to the patient's visit from a vendor selected by CMS through a competitive acquisition process. After the physician administered the drug, the physician would submit a claim for the drug administration procedure, but not for the drug itself. However, the physician would indicate the drug on the claim, along with the order number. The vendor providing the drug would bill the beneficiary and the Medicare program for the drug.

To begin the process of CAP implementation, CMS issued a Notice of Proposed Rulemaking (NPRM) for the CAP program on March 4, 2005. This NPRM laid out a number of fundamental design decisions for the CAP program for which CMS solicited public comment. Subsequently, further interim final and final rules were released as necessary in response to public comments, legislative changes, and other circumstances.

As outlined in the March 2005 NPRM, CMS proposed that drugs eligible for inclusion in the CAP consist of drugs administered incident to a physician's service and described in Section 1842(o)(1)(C) of the Social Security Act. CMS also specifically proposed to exclude blood products, vaccines, drugs infused through DME, and drugs usually dispensed by pharmacies (e.g., oral immunosuppressive drugs). Further, under the MMA statute, the Secretary has the authority to exclude from the programmatic group any drugs and biologicals whose inclusion is unlikely to result in cost savings or whose inclusion would have an adverse effect on access. Regarding the drugs included in the initial round of CAP bidding, CMS initially selected a set of 169 Part B drug Healthcare Common Procedure Coding System (HCPCS) codes (out of more than 500), representing approximately 85 percent of allowed charges for physicians' Part B drugs that satisfied a set of criteria. Medicare Part B–covered vaccines, drugs infused through a covered item of durable medical equipment, and blood and blood products were excluded due to statutory restriction. Further, several other classes of drugs were excluded using statutory authority: erythropoietin administered to end-stage renal disease (ESRD) patients; intravenous immune globulins; oral antiemetic and anticancer drugs; controlled (Schedules II, III, IV, and V) substances; clotting factors; tissue; low-volume drugs (with less than $1 million in allowed charges in office settings in 2004 or $250,000 for anti-infectives, antidotes, and cardiovascular agents); and unclassified/not otherwise classified (NOC) drugs.[4] Certain other specific drugs, including specific forms of leuprolide, were also excluded.

The final set of drug HCPCS codes for initial bidding was drawn from the set of drugs remaining after the above exclusions were applied. First, drugs determined to be most often administered by oncology specialties (hematology, hematology/oncology, medical oncology, surgical oncology, urology, and gynecology/oncology)—oncolytics, chemotherapy adjuncts, antiemetics, and hematologics—were included in an interim list. In addition, drugs used relatively often (appearing on at least 1 percent of Part B drug-containing claims) by ophthalmologists, psychiatrists (including addiction medicine and neuropsychiatry), and rheumatologists, were also included.[5] A total of 169 HCPCS codes were identified using this

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4 NOC drugs could be added later to the CAP on a case-by-case basis. They were excluded from bidding because of the lack of claims data necessary for computing bidding weights.

5 A discussion of the targeting of drugs used by these specific specialties can be found at 70 F.R. 39029-31.

procedure, and bidding weights were computed based on relative volume. These drug HCPCS codes are the "weighted drugs." At the time, under the assumption that CAP payment amounts for these drugs would equal 106 percent of ASP, about 38 percent of CAP payments would be for cancer chemotherapy; 35 percent for hematologics, mostly for the hematopoietic drugs epoetin alfa and darbepoetin alfa; and 8 percent for immunomodulators, mostly for infliximab (used for rheumatoid arthritis, Crohn's disease, ulcerative colitis, and plaque psoriasis).

In addition to the weighted drug list, CMS added a set of drugs with HCPCS codes assigned in 2005; these drugs' HCPCS had no Medicare volume in 2004 (used in the CAP drug selection criteria described previously). After adding these new drugs and making other adjustments for changes in HCPCS coding for 2006, a total of 182 Part B drugs were included in the CAP to be provided by the CAP vendor.

Physician participation in the CAP is voluntary. Physicians who elect to participate in the CAP must generally, with some allowable exceptions, acquire drugs covered by the CAP from a vendor selected by the CMS through the competitive bidding program. Under this method, participating physicians submit an order to the vendor, and the vendor then ships the drug to the physician. By statute, the vendor, not the physician, bills Medicare for the drug (the physician continues to bill Medicare for the drug administration fee). For drugs not included in the CAP, physicians must continue to buy and bill using the normal Part B fee for service procedures for payment under the applicable methodology, usually ASP. One of the potential benefits of the CAP to participating physicians is that they will not need to collect drug cost sharing amounts owed by beneficiaries, thus reducing their risk of bad debt. The importance of this component to physicians will be addressed in the physician survey that will assess physician satisfaction with the program.

Medicare physicians are given an opportunity to elect to participate in the program on an annual basis each fall (although additional election periods have also been provided for in certain circumstances). In the case of group practices, the election decision must be made at the group level. Physicians who decide to participate in the CAP are generally able to opt out of the program on an annual basis. However, CMS, in the July 6, 2005, regulations implementing the CAP, identified four reasons why physicians may opt out of the program early: (1) the vendor ceases to participate in the program; (2) the physician leaves a practice participating in the CAP; (3) the physician moves to another competitive acquisition area, a criterion only relevant were there multiple competitive acquisition areas; (4) "other exigent circumstances defined by CMS," including if the vendor refuses to ship or otherwise provide an ordered drug. In subsequent regulations, CMS also allowed participating physicians to submit a written request to withdraw from the program within the first 60 days of the effective election date if the CAP proved to be an undue burden to the practice and after the first 60 days if an unexpected circumstance (e.g., change in practice personnel) arose.

Drugs supplied under the CAP are billed to Medicare by the approved CAP vendor through a specialized Medicare carrier (called the Designated Carrier), and the vendor in turn bills the beneficiary (and supplementary insurer) for any applicable co-insurance or deductible. Under an FAW exception described in the NPRM, if the physician needs a specific formulation of a drug product in a HCPCS code on the CAP drug list within the physician-selected category but that specific formulation is not supplied by the physician's chosen vendor, the physician

obtains the drug privately and bills Medicare using the ASP methodology. In other words, the FAW provision provides the flexibility for a physician to obtain a specific formulation of a drug within a HCPCS code that is furnished under the CAP without requiring the vendor to stock every available drug product at the NDC level within a given HCPCS code.

Also, in emergency situations defined in the statute and regulation text, the physician is allowed to administer a CAP drug to a Medicare beneficiary from the physician's own inventory and replace the drug by ordering from the vendor. An emergency situation may arise, for example, with cancer chemotherapy drugs; for these drugs, deviations from expected dates of drug administration are not unusual. For antibiotics and other anti-infectives, a patient's need for such a drug is generally unanticipated, and an order for the proper drug, dosage, and amount may not be able to be placed and processed a week or so in advance. To use this provision, the physician must be able to demonstrate the drug administration met certain emergency criteria. The vendor would then bill Medicare per the normal procedure.

Under the MMA statute for the CAP, the Secretary was permitted to limit the number of approved vendors in an area to no less than two. CMS also had the option of phasing in the CAP and having multiple geographic bidding areas. CMS implemented a single national competitive acquisition area because the current distribution network for Part B drugs is dominated by national distributors that ship their products through national overnight shippers (e.g., FedEx, UPS). In addition, CMS decided against phasing in the program by geographic areas or specialty. CMS concluded that there are no natural subnational regions and that artificially defining them would result in inefficiencies in bidding and the potential for some areas of the country not being served by a sufficient number of vendors. Ultimately, CMS selected only one bidder, BioScrip, as the sole vendor for the CAP program through 2008.

CMS solicited bids for CAP vendors for the 2009 calendar year CAP program and received several qualified vendor bids. Subsequently, CMS announced on September 10, 2008, that it would postpone further implementation the CAP as of December 31, 2008. As of the end of calendar year 2008, availability of drugs through an approved CAP vendor will be suspended until the CAP is reinstated (CMS Competitive Acquisition Program Announcement, September 10, 2008). CMS intends to seek comment and feedback on the CAP program from participating physicians, potential vendors, and other interested parties.

Although further implementation of the CAP program has been postponed as of December 31, 2008, long-term viability of the CAP when reinstated may be influenced by physicians' satisfaction with the program. If physicians are dissatisfied with the program, they may not elect to continue to participate in the program, and future rounds of bidding for CAP vendors may fail to attract bidders. Furthermore, Congress presumably mandated the program to improve physicians' satisfaction with the Medicare program, so understanding whether the CAP indeed improves satisfaction is important.

1.3 Purpose of This Report

CMS asked RTI to assess physician satisfaction with the CAP and how it compared to the traditional ASP buy-and-bill system for procuring Part B drugs and biologicals. To accomplish this goal, RTI conducted two surveys. The first survey was sent to a sample of physicians in

practices that had elected to participate in the CAP in 2006. The second survey was sent to a sample of physicians in practices that did not choose to participate in the CAP and had administered at least 25 Part B drugs and biologicals under the traditional ASP buy-and-bill method in 2006.

1.4 Organization of This Report

This report is organized as follows. Chapter 2 discusses the samples used in the two surveys and how the sample weights were calculated. Chapter 3 presents the results of the two surveys, and some basic statistical analyses of the survey results. Chapter 4 summarizes the survey findings and concludes the report.

SECTION 2
METHODS

In this section, we describe the sample frames, sample methodology, and calculation of sample weights for the two physician surveys. We first discuss the CAP physician survey that was sent to a subset of physicians in practices electing to participate in the CAP program. We then discuss the non-CAP physician survey that was sent to a subset of physicians in practices that administer Part B drugs but chose *not* to participate in the CAP.

2.1 CAP Physician Survey

2.1.1 Sample Frame

The sample frame for the first survey, the CAP physician survey, consisted of all physicians in practices who had elected to participate in the CAP in either 2006 or 2007, for a total of 2,634 unique physicians and nonphysician practitioners (NPPs[6,7]). From this sample frame, we selected 1,201[8,9] physicians and NPPs (i.e., providers) for the survey.

2.1.2 Sample Selection

To create our sample, we first stratified all CAP-electing providers into three groups:

- Group 1—oncology, consisting of hematology, hematology/oncology, medical oncology, radiation oncology, and urology
- Group 2—other targeted specialties, consisting of rheumatology, ophthalmology, psychiatry, and infectious disease
- Group 3—all other specialties, consisting of all other physician specialties and NPPs

Then we used the following procedure to arrive at our final sample. We first selected all physicians who had administered a Medicare Part B drug or biological under the CAP in 2006, based on Medicare claims data. This resulted in 150 providers.

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6 The number of physicians and NPPs included in the survey sample frame differs from the total number of providers reported in the Report to Congress (U.S. Department of Health and Human Services, 2009) because the sample frame was constructed before the updated CAP election file with information on the providers enrolling in August 2007 was available.

7 Practitioners are identified in claims data by their UPIN and PIN. A physician's UPIN does not vary if the physician practices in more than one location or is a member of more than one practice. However, the PIN may vary.

8 The RTI workplan called for the survey to be sent to 1,200 providers participating in the CAP and to 1,200 providers not participating in the CAP.

9 Actually, we mailed 1,203 surveys, but two non-CAP physicians answered the CAP physician survey. We deemed these two providers as ineligibles.

In the next step, we randomly selected at least one provider from each CAP-electing practice that had not already been included in the sample from the first step. This step resulted in all providers in solo practices being selected for the survey.

We then divided the remaining CAP-electing providers (those who had not administered a CAP drug in 2006 or had been the one selected from each participating practice) into one of the three specialty groups described previously. We randomly selected providers from each of the three specialty groups to aim for a total of 400 from each group. However, Groups 1 and 2 had fewer than 400 providers, so we ultimately selected all providers in Groups 1 and 2, and the remainder of the providers in the sample consisted of providers in Group 3.

Our final sample for the CAP physician survey consisted of 47 providers from Group 1, 163 from Group 2, and 993 from Group 3. For a variety of reasons, including dying, no longer practicing medicine, and moving to a new practice, 230 physicians were deemed ineligible. Table 1 presents the distribution of providers in the sample by specialty group, and Table 2 gives the distribution by practice size.

Table 1
Distribution of providers in the CAP survey sample, by specialty group

Specialty group	Description	Number	Eligible
1	Oncology, hematology, hematology/oncology, medical oncology, radiation oncology, and urology	47	40
2	Rheumatology, ophthalmology, psychiatry, and infectious disease	163	123
3	All other physician specialties and NPPs	993	810

NOTE: Specialty group is based on the provider's specialty, as reported in the Medicare claims.

SOURCE: RTI International analysis of claims, UPIN registry, and CAP physician survey responses.

Table 2
Distribution of providers in the CAP survey sample, by practice size

Practice size	Number	Eligible
1	458	418
2-5	285	242
6-13	179	127
14 or more	281	186

SOURCE: RTI International analysis of claims, UPIN registry, and CAP physician survey responses.

2.1.3 Base Weights

We calculated base weights for the sample as the inverse of a provider's probability of selection. As shown in Table 3, based on the sample frame and sample methodology, all providers in Groups 1 or 2 or in a solo practice were automatically in the sample and received a base weight of 1. For providers in Group 3, their probability of selection was proportional to the number of providers in the group. Table 3 also shows the probability of selection and base probabilities for different subsets of the sample frame.

Table 3
Probabilities of selection and base weights

Provider group	Probability of selection	Base weight
Providers who administered a CAP drug	1	1
Providers in solo practices	1	1
Providers in Group 1	1	1
Providers in Group 2	1	1
Providers in Group 3	$\frac{1}{N_3 - x_3}$	$N_3 - x_3$

NOTES:

N_3 = number of providers in Group 3 in the sample frame.
x_3 = number of providers in Group 3 who administered a CAP drug or were in a solo practice.

2.1.4 Treatment of Duplicates

Several providers practiced in more than one location and were therefore in the sample more than once. To control for this duplication, we performed a poststratification adjustment on the additional providers selected in Group 3. After the poststratification adjustment, the base weights for the additional providers in Group 3 were

$$w_3^{\mathrm{PSA}} = w_3 \times \frac{(N_3 - D_3)}{N_3} \ ,$$

where D_3 is the number of duplicate providers.

2.1.5 Treatment of Ineligibles

We deleted the base weights for ineligible providers.[10] We assumed that the ineligibles in the sample were in the same proportion as the sample frame. Therefore, by removing the

[10] Two additional providers were deemed ineligible. They were selected for the non-CAP survey but answered the CAP survey.

ineligibles (and their weights) from the sample, we also removed the corresponding ineligibles from the sample frame.

2.1.6 Nonresponse Adjustments

We received 528 completed CAP surveys from eligible providers, for a 54.2 percent response rate.[11] The response rate was not random, but varied by specialty group and practice size. The response rate was higher for providers in the CAP-targeted groups (Groups 1 and 2) than for those in Group 3, as well as for providers in smaller practices. One reason for this could be that, if more than one provider in a practice was mailed a survey, only one may have responded. However, the response rates at the practice level were still higher for smaller practices. Tables 4 and 5 show response rates by specialty group and practice size.

Table 4
Provider response rate, by specialty group
(percentage of eligible sample)

Specialty group	Description	Number	Response rate (percent)
1	Oncology, hematology, hematology/oncology, medical oncology, radiation oncology, and urology	26	65.0%
2	Rheumatology, ophthalmology, psychiatry, and infectious disease	79	64.2
3	All other physician specialties and NPPs	423	52.2

SOURCE: RTI International analysis of claims, UPIN registry, and CAP physician survey responses.

Table 5
Provider response rate, by practice size
(percentage of eligible sample)

Practice size	Number	Response rate (percent)
1	269	64.4%
2-5	132	54.1
6-13	63	49.6
14 or more	64	34.4

SOURCE: RTI International analysis of CAP Physician survey responses.

[11] However, not all surveys were fully complete. One survey was returned with all questions incomplete, so we did not count that survey as complete.

We adjusted the base weights for nonresponses using a weight class adjustment (WCA)[12] methodology. The WCA divides the sample by variables that are known for both respondents and nonrespondents and that are believed to be correlated with the likelihood of response. The weighting classes do not have to be the same as the variables used to divide the population into the sampling stratum.

For the CAP physician survey, our weight classes were based on practice size and specialty group. We investigated other potential factors that could have impacted response rates, including whether providers had administered a drug under the CAP, but we did not find any significant correlation with response rate.

In the WCA, the nonresponse adjustment for each person in weight class k is the same. It is the inverse of the weighted response rate. The weighted response rates are the ratio of the base weights of the responding members of the class to the base weight of all members of the class (respondents and nonrespondents).

For class k, the weighted response rate is

$$RR_{wk} = \frac{\sum_{responders}^{n_k} w_{ki}}{\sum_{i=1} w_{ki}},$$

where n_k is the number of members in cell k.

The nonresponse WCA for cell k is then $(RR_{wk})^{-1}$.

2.1.7 Final Survey Weights

We calculated the final survey weights for each provider as the multiple of the provider's base weight, poststratification adjustment, and nonresponse adjustments.

2.2 Non-CAP Physician Survey

2.2.1 Sample Frame

The non-CAP survey sample from providers in practices who had elected not to participate in the CAP in either 2006 or 2007 and who had at least 25 Medicare Part B drug or drug administration claims. From this sample frame, we selected 1,200 physicians and NPPs (i.e., providers) for the survey.

2.2.2 Sample Selection

In order to arrive at our final sample, we first divided providers into the three specialty groups described in Section 2.1.2. Table 6 gives the distribution of providers in the non-CAP sample frame (from which the sample was drawn), by specialty group.

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[12] See the *International Handbook of Survey Methodology* (De Leeux, Hox, and Dillman, 2008).

Table 6
Distribution of providers in the non-CAP sample frame, by specialty group

Specialty group	Description	Number
1	Oncology, hematology, hematology/oncology, medical oncology, radiation oncology, and urology	1,543
2	Rheumatology, ophthalmology, psychiatry, and infectious disease	634
3	All other physician specialties and NPPs	12,246

SOURCE: RTI International analysis of claims, UPIN registry, and non-CAP physician survey responses.

After dividing the sample frame into the three specialty groups, we selected the sample as follows:[13]

1. Step 1: 400 providers were randomly selected from Group 2.
2. Step 2: 400 providers were randomly selected from Group 1, excluding those in practices with providers selected in Step 1.
3. Step 3: 400 providers were randomly selected from Group 3, excluding those in practices with providers selected in either Steps 1 or 2.
4. Step 4: 1 additional provider was randomly selected from Group 1, excluding those in practices with providers selected in Steps 1, 2, or 3.
5. Step 5: 7 additional providers were randomly selected from Group 2, excluding those in practices with providers selected in Steps 1, 2, or 3.
6. Step 6: 1 additional provider was randomly selected from Group 3, excluding those in practices with providers selected in Steps 1, 2, or 3.

For a variety of reasons including dying, no longer practicing medicine, and moving to a new practice, 109 of the 1,200[14] surveys initially mailed were deemed ineligible.[15] In addition, in some cases another provider (other than the one selected for the sample) answered the survey. Table 7 gives the distribution of providers in the final non-CAP sample (at the end of Step 6) by specialty group, and Table 8 gives this distribution by practice size.

[13] In a second round, 9 additional providers were selected as alternates. We ultimately used 8 in the sample.

[14] We mailed 1,201 surveys, but 2 were sent to the same provider.

[15] Two non-CAP providers answered the CAP survey and were therefore counted as ineligible for both surveys.

Table 7
Distribution of providers in the non-CAP survey sample, by specialty group

Specialty group	Description	Number	Eligible
1	Oncology, hematology, hematology/oncology, medical oncology, radiation oncology, and urology	399	367
2	Rheumatology, ophthalmology, psychiatry, and infectious disease	400	363
3	All other physician specialties and NPPs	401	361

NOTE: Specialty group is based on the physician's specialty, as reported in the Medicare claims.

SOURCE: RTI International analysis of claims, UPIN registry, and non-CAP physician survey responses.

Table 8
Distribution of providers in the non-CAP survey sample, by practice size

Practice size	Number	Eligible
1	179	158
2-5	535	494
6-13	296	264
14 or more	190	175

NOTE: Practice size is based on UPINs with the same tax ID number, used to approximate the number of unique provider numbers in a practice.

SOURCE: RTI International analysis of non-CAP physician survey responses.

2.2.3 Base Weights

We calculated base weights for the sample as the inverse of a provider's probability of selection. The additional providers selected in Steps 4, 5, and 6 came from the same sample frame as those selected in Steps 1, 2, and 3, and their probability of selection takes into account the probability of not being selected in Steps 1, 2, or 3. Table 9 shows the probabilities and calculation of base weights for the different provider groups and steps.

Table 9
Probabilities of selection and base weights

Provider group	Probability of selection	Base weight
Group 1: original 400 (Step 2)	$P_{i1}=\left(\frac{400}{N_1}\right)\left(\frac{[N_2-400]P_{prac_{i2}}}{N_2 P_{prac_{i2}}}\right)$	$\frac{1}{p_{i1}}$
Group 2: original 400 (Step 1)	$P_2=\left(\frac{400}{N_2}\right)$	$\frac{1}{p_2}$
Group 3: original 400 (Step 3)	$P_{i3}=\left(\frac{400}{N_3}\right)\left[\left(\frac{[N2-400]P_{prac_{i2}}}{N2 P_{prac_{i2}}}\right)\left(\frac{[N1-400]P_{prac_{i1}}}{N1 P_{prac_{i1}}}\right)\right]$	$\frac{1}{p_{i3}}$
1 additional from Group 1 (Step 4)	$p_{1b}=p_1+(1-p_1)\left(\frac{1}{1007}\right)$	$\frac{1}{p_{1b}}$
7 additional from Group 2 (Step 5)	$p_{2b}=p_2+(1-p_2)\left(\frac{7}{213}\right)$	$\frac{1}{p_{2b}}$
1 additional from Group 3 (Step 6)	$p_{3b}=p_3+(1-p_3)\left(\frac{1}{10833}\right)$	$\frac{1}{p_{3b}}$

NOTES:

N_i = number of providers in specialty group i.
$Prac_{ij}$ = number of providers with the same tax ID number (practice) i in specialty group j.
${}_kP_n$ = the number of permutations of n elements chosen from a set of size k.

2.2.4 Treatment of Ineligibles

We deleted the base weights for ineligible providers.[16] We assumed that the ineligibles in the sample were in the same proportion as the sample frame. Therefore, by removing the ineligibles (and their weights) from the sample, we also removed the corresponding ineligibles from the sample frame.

2.2.5 Nonresponse Adjustments

We received 656 completed non-CAP surveys from eligible providers, for a 60 percent response rate.[17] The response rate was not random, but varied by specialty group and practice size. The response rate was higher for providers in the non–CAP-targeted groups (Groups 1 and

[16] Two additional providers were deemed ineligible. They were selected for the non-CAP survey but answered the CAP survey.

[17] However, not all surveys were fully complete. One survey was returned with all questions incomplete, so we did not count that survey as complete.

2) than for those in Group 3. Providers in smaller practices also tended to have higher response rates than those in larger practices. One reason for this could be that, if more than one provider in a practice was mailed a survey, only one may have responded. However, the response rates at the practice level were still higher for smaller practices. Tables 10 and 11 show response rates by specialty group and practice size.

Table 10
Provider response rate, by specialty group
(percentage of eligible sample)

Specialty group	Description	Number	Response rate (percent)
1	Oncology, hematology, hematology/oncology, medical oncology, radiation oncology, and urology	367	62.9%
2	Rheumatology, ophthalmology, psychiatry, and infectious disease	363	62.9
3	All other physician specialties and NPPs	361	54.6

SOURCE: RTI International analysis of claims, UPIN registry, and non-CAP physician survey responses.

Table 11
Provider response rate, by practice size
(percentage of eligible sample)

Practice size	Number	Response rate (percent)
1	158	60.1%
2-5	494	64.8
6-13	264	59.1
14 or more	175	48.6

SOURCE: RTI International analysis of non-CAP physician survey responses.

We adjusted the base weights for nonresponses using a WCA methodology. For the non-CAP physician survey, our weight classes were based on practice size and specialty group. Because the response rates varied little between the solo practices and those with two to five physicians, we included both in the same weight class.

2.2.6 Final Survey Weights

We calculated the final survey weights for each provider as the multiple of the provider's base weight, poststratification adjustment, and nonresponse adjustments.

2.3 Statistical Analysis

In our statistical analysis, we took into account the stratified sample design when estimating frequencies, means, and regression models. This allowed us to control for any potential biases in the sample selection and to estimate appropriate standard errors. However, we present the responses to the CAP physician survey as both actual unadjusted frequencies and adjusted/weighted estimates.

We conducted numerous tests of significance on CAP physician survey responses. All of our analyses were performed using the SAS survey procedures (1) PROC SURVEYFREQ, (2) PROC SURVEYREG, and (3) PROC SURVEYMEANS. In each of these procedures, nonresponse-adjusted weights were used and missing item responses were controlled for by the SAS procedures. Standard errors were calculated by the procedures based on the three specialty group strata.

2.3.1 Test 1: Test of No Difference in Responses

We first analyzed whether there was any difference in the responses within a question using a chi-square test in the SURVEYFREQ procedure. This analysis showed that, for all questions, the hypothesis that all responses were equal was false.

2.3.2 Test 2: Tests of Satisfaction

Based on our preliminary chi-square tests, we decided to test whether satisfaction with the CAP or elements of the CAP was greater than 75 percent. Our first step was to aggregate the responses to the satisfaction questions. Practitioners who responded that they were either "Very Satisfied" or "Somewhat Satisfied" were counted as satisfied, and those who responded that they were either "Not Very Satisfied" or "Not at All Satisfied" were counted as not satisfied. We conducted these tests using the SURVEYMEANS procedure. The results are presented in Section 3.5.

2.3.3 Test 3: Test for Perceived Problems with the CAP

We also tested the degree to which providers reported perceived problems in their early feedback with the CAP. We tested whether problems with the Emergency Restocking and FAW processes occurred less than 15 percent of the time. We also tested whether problems with patient co-payment billing and patient inconvenience were equally small.

For this question, we excluded all providers who responded "Not Applicable" when asked whether they had a problem with either provision. We conducted these tests using the SURVEYMEANS procedure. The results are presented in Section 3.8.

2.3.4 Test 4: Test for Differences in Level of Satisfaction and Patient Problems between Specialty Groups

Because different specialties use different drugs and are dealing with different types of patients, we analyzed whether there was a difference in satisfaction rate across specialty groups. In particular, we looked at overall satisfaction and satisfaction with the vendor BioScrip. As in the overall satisfaction analysis, we first aggregated the responses to the satisfaction questions. Practitioners who responded that they were either "Very Satisfied" or "Somewhat Satisfied" were counted as satisfied and those who responded that they were either "Not Very Satisfied" or "Not at All Satisfied" were counted as not satisfied.

We tested the difference across specialty groups using the CONTRAST option in PROC SURVEYREG.

SECTION 3
SURVEY RESULTS

In general, the CAP-participating providers were satisfied with BioScrip and the CAP. Most CAP participants did not feel that the selection of drugs or the quality of drugs was lower under the CAP, nor did CAP-participating providers report any significant problems with the FAW and Emergency Restocking provisions. Most survey respondents also did not think that their patients were more inconvenienced under the CAP, although when they were, the most common complaint was that billing statements were confusing.

In general, non-CAP providers were satisfied with their Medicare Part B drug supplier, although they were equally likely to be satisfied or not satisfied with the standard buy-and-bill for Part B drugs and biologicals.

In this section, we go through the basic survey results for CAP and non-CAP providers. We first present some basic demographics for each group. We then look at satisfaction levels with different aspects of the CAP and any perceived problems that providers had with the CAP. When appropriate, we also look at any differences among specialty groups and between CAP participating and non–CAP-participating suppliers. The basic analysis tables are presented in this section. In Section 3.5, Statistical Analysis, we show test results on the level of satisfaction with different aspects of the CAP (Table 30), the traditional buy-and-bill system (Table 31), and between CAP and non-CAP providers (Table 32). In Sections 3.6 and 3.7, we present the early feedback on the CAP, including perceptions of patient feedback. Finally, in Section 3.8, we show some statistical analyses on the early feedback of the CAP program.

3.1 Characteristics of Respondents

3.1.1 CAP Providers

The typical CAP participant was in a solo practice, had practiced for more than 20 years, and conducted less than 25 percent of his or her business with Medicare. Participants most frequently prescribed drugs for allergy and asthma, medications for endocrine disorders, and influenza and pneumonia vaccines. Tables 12 through 15 summarize the characteristics of survey respondents.

Table 12
CAP providers: years practicing medicine

Years practicing medicine	Percentage of providers	Weighted percentage of providers
More than 20	48.84%	47.30%
11-20	27.33	26.70
5-10	12.02	13.36
Less than 5	11.82	12.65
No response	2.09	2.38

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

Table 13
CAP providers: number of providers in practice

Number of providers in practice	Percentage of providers	Weighted percentage of providers
1	50.19%	46.27%
2-4	32.43	34.19
5-9	10.62	12.27
10-99	6.76	7.27
100 or more	0.00	0.00
No response	1.71	2.54

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

Table 14
CAP providers: percentage of patients receiving physician-administered Medicare drugs

Percentage of patients receiving physician-administered drugs	Percentage of providers	Weighted percentage of providers
Less than 25	49.71%	54.07%
25-50	20.00	18.10
51-75	13.01	11.51
More than 75	11.07	9.78
Don't know	6.21	6.55
No response	2.28	2.95

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

Table 15
CAP providers: type of drug most frequently administered for all patients

Drug type	Percentage of providers	Weighted percentage of providers
Oncology related	9.82%	7.84%
Rheumatological	9.82	5.90
Ophthalmological	7.82	3.41
Hematopoietic (not chemotherapy related)	4.61	5.87
Cardiovascular	1.00	1.23
Anti-infectives (e.g., antibiotics, antivirals, antifungals)	4.21	4.14
Parenteral pain medication	0.60	0.65
Influenza or pneumococcal pneumonia vaccine	10.62	12.18
Other vaccine	4.81	5.31
Other drug	46.69	53.46
No response	5.31	6.23

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

3.1.2 Non-CAP Providers

The typical non-CAP provider was in a practice with two to four physicians and had been practicing for more than 20 years but had a slightly higher percentage of Medicare patients (25 to 50 percent) than the typical CAP provider. The most frequently prescribed drugs differed slightly for non-CAP providers and included anti-infectives; drugs for cardiovascular, rheumatological, and influenza problems; and pneumonia vaccines. Tables 16 through 19 summarize characteristics of non-CAP survey respondents.

Table 16
Non-CAP providers: years practicing medicine

Years practicing medicine	Percentage of providers	Weighted percentage of providers
More than 20	71.94%	60.87%
11-20	20.16	26.45
5-10	6.51	10.40
Less than 5	1.40	2.28
No response	1.68	2.95

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

Table 17
Non-CAP providers: number of providers in practice

Number of providers in practice	Percentage of providers	Weighted percentage of providers
1	28.02%	33.44%
2-4	45.36	42.27
5-9	20.43	17.30
10-99	5.57	5.79
100 or more	0.62	1.21
No response	1.52	1.79

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

Table 18
Non-CAP providers: percentage of patients receiving physician-administered Medicare drugs

Percentage of patients receiving physician-administered drugs	Percentage of providers	Weighted percentage of providers
Less than 25	20.45%	34.75%
25-50	31.15	27.65
51-75	29.23	19.31
More than 75	13.42	6.17
Don't know	5.75	12.12
No response	4.57	7.79

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

Table 19
Non-CAP providers: type of drug most frequently administered for all patients

Drug type	Percentage of providers	Weighted percentage of providers
Oncology related	32.19%	10.76%
Rheumatological	20.31	11.48
Ophthalmological	14.84	1.88
Hematopoietic (not chemotherapy related)	2.03	5.48
Cardiovascular	4.69	13.22
Anti-infectives (e.g., antibiotics, antivirals, antifungals)	8.44	16.01
Parenteral pain medication	1.72	4.08
Influenza or pneumococcal pneumonia vaccine	6.25	16.29
Other vaccine	1.09	2.74
Other drug	8.44	18.06
No response	2.44	4.02

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

3.2 Reasons for Electing or Not Electing to Participate in the CAP

One of the perceived advantages of the CAP for physicians before implementation was that they would no longer be responsible for buying Part B drugs and then billing the Medicare beneficiary for the cost of acquiring the drugs. In fact, this was the most common reason that influenced practices to participate in the CAP, with 47.7 percent of providers indicating that this was their practice's primary reason for electing to participate in the CAP. An additional 23.5 percent of providers said their primary reason for joining the CAP was that they thought it would be less costly to obtain Medicare Part B drugs under the CAP. The reason for joining the CAP did not vary significantly between specialties or by practice size. Table 20 summarizes the most common reasons providers gave for electing the CAP.

Table 20
What was the single most important factor that influenced your practice's decision to participate in the CAP?

Most important factor	Percentage of providers	Weighted percentage of providers
It was less costly to obtain Medicare Part B drugs under the CAP.	24.47%	23.53%
There was no burden of "acquiring and billing" under the CAP.	49.52	47.67
I/we often administer at least one of the drugs available under the CAP.	14.45	16.14
I/we were already acquiring Medicare Part B drugs from BioScrip.	2.50	2.72
Other reason	9.06	9.95
No response	1.52	1.66

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

Approximately 10 percent of providers wrote in their reason for electing to participate in the CAP. Several providers said that they joined the CAP to acquire one specific drug; Thyrogen was mentioned more than once. Six other providers wrote in that they thought they were required to join the CAP either by CMS, their distributors or wholesalers, or another organization with whom they did business. One provider thought he was signing up for a program with a similar acronym. Other providers did not know why their practice joined the CAP, because they did not make the decision. Finally, a couple of providers did not even know that their practices were participating in the CAP.

The most common reasons providers gave for not electing the CAP were that (1) they preferred their existing supplier, (2) they rarely administered drugs covered under the CAP, and (3) the CAP involved administrative burden. Very few expressed concern about problems with drug selection or delivery of the drugs. Several providers cited other reasons. Among these, the most common reasons were that they did not think the CAP would be cost-effective (or would result in lost profits), the CAP had no track record, and they did not know about or felt that they did not fully understand the program. In Table 21, we present the most common reasons providers gave for not electing the CAP.

Table 21
What was the single most important factor that influenced your practice's decision not to participate in the CAP?

Most important factor	Percentage of providers	Weighted percentage of providers
It was more costly to obtain Medicare Part B drugs under the CAP.	9.23%	5.12%
I/we preferred to use our existing carrier/supplier(s) for Medicare Part B drugs.	30.46	24.93
I was/we were concerned about the CAP vendor's timeliness and accuracy in filling orders.	10.77	7.13
I/we rarely administer any of the drugs available under the CAP.	17.69	28.07
I was/we were concerned about the availability of specific formulations or brands of drugs, even though they are available under the CAP.	4.31	7.20
Other reason	27.54	27.54
No response	0.91	1.30

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

Most providers found that the information provided about the CAP and the election process prior to election was satisfactory. However, providers both in practices electing the CAP and in practices not electing the CAP expressed some confusion about the CAP. Most of these concerns were expressed in the write-in question for electing/not electing the CAP. As discussed previously, some providers said they did not know about the program; some said they did not know enough; while others seemed unclear about all the provisions of the CAP, including which drugs would be covered.

3.3 Experiences with CAP Participation

3.3.1 Overall Satisfaction

We found that 82.5 percent of CAP providers were either somewhat satisfied or very satisfied with the CAP. This is much higher than the 51 percent of non-CAP providers who were satisfied with the alternate buy-and-bill system. In addition, only 6.4 percent said they were not at all satisfied, while 21.8 percent of non-CAP providers were not at all satisfied. This difference is large and significant as shown in Table 32 in Section 3.5, Statistical Analysis.

Among CAP providers, there was variation among specialties. Only 69 percent of oncology specialists (Group 1) said that they were satisfied with the CAP, compared with 83 percent of nontargeted specialties (Group 3). Moreover, for many of these practitioners, their level of satisfaction with the Medicare Part B Drug and Biological Program was no different than before the CAP, although 31.3 percent did say that they had become more satisfied under the CAP. Tables 22 and 22A present CAP providers' satisfaction levels since electing to participate in the CAP. In Table 22A, we see that the difference in levels of satisfaction between Groups 1 and 3 are statistically significant, while the difference between Groups 1 and 2 is not. Table 23 shows non-CAP participating provider satisfaction levels with the buy-and-bill method for procuring Medicare Part B drugs and biologicals.

Table 22
Overall satisfaction with the CAP since electing to participate

Level of satisfaction	Overall percentage	Overall weighted percentage	Group 1 (oncology)	Group 2 (other targeted specialties)	Group 3 (all other specialties)
Very satisfied	37.28%	37.64%	14.3%	37.2%	38.1%
Somewhat satisfied	43.69	44.90	54.5	37.8	45.2
Not very satisfied	12.43	11.11	26.2	19.9	10.3
Not at all satisfied	6.60	6.35	5.0	5.2	6.5
No response	2.30	2.50	0.0	0.0	2.7

Table 22A
Specialty group comparison: overall satisfaction with the CAP since electing to participate

Comparison of level of satisfaction	Difference	F(1,512)	*p*-value
Group 1 vs. Group 2	6.1	0.85	0.3558
Group 1 vs. Group 3	14.5	5.80	0.0164
Group 2 vs. Group 3	8.4	6.36	0.0120

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

Table 23
Overall satisfaction with the standard buy-and-bill method for Medicare Part B drugs (ASP+6% payments)

Level of satisfaction	Unadjusted percent	Weighted percent
Very satisfied	9.76%	7.30%
Somewhat satisfied	35.45	43.75
Not very satisfied	29.11	27.19
Not at all satisfied	25.68	21.76
Non Response Rate	10.98	18.58

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

3.3.2 Perceptions of Administrative Burden under the CAP

One reason for the high level of satisfaction with the CAP may be that more than one-half of the practitioners said that the administrative burden under the CAP was less than the buy-and-bill system. Only approximately 20 percent felt that the administrative burden under the CAP was greater. Table 24 presents CAP providers' perceptions of the administrative burden of the CAP.

Table 24
Perceived administrative burden of the CAP relative to the buy-and-bill system

Perceived burden	Percentage of providers	Weighted percentage of providers
Much less burdensome	27.88%	28.90%
Somewhat less burdensome	29.49	32.03
Equally burdensome	18.99	19.22
Somewhat more burdensome	11.92	10.52
Much more burdensome	11.72	9.33
No response	6.07	6.85

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

3.4 Satisfaction with the CAP Vendor BioScrip

BioScrip was the only CAP vendor. Tables 25 and 25A present provider satisfaction with BioScrip by specialty group. A total of 86 percent of CAP providers were satisfied with BioScrip. Only 4.7 percent indicated that they were not satisfied at all with BioScrip. However, satisfaction with BioScrip was slightly lower for oncology specialists (Group 1) than providers in Groups 2 and 3. The difference between Groups 1 and 2 (17 percent) and Groups 1 and 3 (13 percent) is statistically significant at the 5 percent level. At the same time, more than 80 percent of CAP participants were either somewhat satisfied or very satisfied with BioScrip's quality of drugs, selection of drugs, drug-ordering process, and timeliness of drug delivery.

Table 25
Satisfaction with BioScrip, the single CAP vendor, by specialty group

Level of satisfaction	Unadjusted percentage	Weighted percentage	Group 1 (oncology)	Group 2 (other targeted specialties)	Group 3 (all other specialties)
Very satisfied	44.07%	42.45%	37.1%	44.9%	42.4%
Somewhat satisfied	41.30	44.14	36.8	45.9	44.2
Not very satisfied	9.68	8.67	18.4	6.1	8.6
Not at all satisfied	4.94	4.74	7.8	3.2	4.8
No response	3.98	4.34	0.0	2.8	4.5

Table 25A
Specialty group comparison: satisfaction with BioScrip, the single CAP vendor

Comparison of level of satisfaction	Difference	$F(1,503)$	p-value
Group 1 vs. Group 2	17.0	8.48	0.0038
Group 1 vs. Group 3	12.8	5.18	0.0232
Group 2 vs. Group 3	4.2	3.28	0.0708

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

3.4.1 Drug Quality

With only one CAP vendor, there may have been a concern about quality due to lack of competition. Table 26 presents provider opinions on the quality of drugs received from BioScrip or, for non-CAP providers, their Medicare Part B supplier. More than 93 percent of CAP providers were satisfied with the quality of CAP drugs provided by BioScrip. Less than 3 percent were not at all satisfied. Interestingly, the level of dissatisfaction with BioScrip among CAP

providers was if not slightly lower, than the level of satisfaction non-CAP providers had with their supplier of Medicare Part B drugs. In Table 32, we show that this difference is barely statistically significant with a *p*-value of .06.

Table 26
Rate the following experience: quality of the CAP drugs received

Level of satisfaction	BioScrip (CAP providers) percentage of providers	BioScrip (CAP providers) weighted percentage of providers	Primary Medicare Part B supplier (non-CAP providers) percentage of providers	Primary Medicare Part B supplier (non-CAP providers) weighted percentage of providers
Very satisfied	72.06%	69.51%	67.24%	47.63%
Somewhat satisfied	22.67	24.32	26.48	43.08
Not very satisfied	3.24	3.89	3.24	5.43
Not at all satisfied	2.02	2.28	3.05	3.85
No response	6.26	6.83	19.97	27.70

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

3.4.2 Drug Selection

For any drug or biological, there may be many different sizes and formulations to select from. Table 27 presents the level of satisfaction among CAP-participating providers and non-CAP providers with the selection of Part B drugs available to order. Eighty-eight percent of CAP providers were satisfied with the selection of Part B drugs and biologicals that BioScrip provided under the CAP. Non-CAP providers were less satisfied with the selection of Part B drugs provided by their Medicare Part B drug supplier, with almost 25 percent reporting some level of dissatisfaction.

3.4.3 Ordering Process

A cumbersome drug-ordering process could increase provider administrative costs and decrease overall satisfaction with the CAP. Table 28 shows the degree of satisfaction CAP-participating providers had with the drug-ordering process through BioScrip compared with non-CAP providers through their Medicare Part B drug supplier. Eighty-six percent of CAP providers were satisfied with BioScrip's ordering process under the CAP. In contrast, only 78 percent of non-CAP providers were satisfied with their Medicare Part B drug supplier's ordering process. As Table 32 shows, this difference is statistically significant.

Table 27
Rate the following experience: selection of specific CAP/Part B drugs available to order

Level of satisfaction	BioScrip (CAP providers) percentage of providers	BioScrip (CAP providers) weighted percentage of providers	Primary Medicare Part B supplier (non-CAP providers) percentage of providers	Primary Medicare Part B supplier (non-CAP providers) weighted percentage of providers
Very satisfied	48.50%	47.22%	55.58%	36.21%
Somewhat satisfied	40.68	41.70	29.11	39.06
Not very satisfied	7.62	7.90	10.21	18.86
Not at all satisfied	3.21	3.17	5.10	5.88
No response	5.31	5.85	19.36	27.21

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

Table 28
Rate the following experience: CAP/Part B drug-ordering process

Level of satisfaction	BioScrip (CAP providers) percentage of providers	BioScrip (CAP providers) weighted percentage of providers	Primary Medicare Part B supplier (non-CAP providers) percentage of providers	Primary Medicare Part B supplier (non-CAP providers) weighted percentage of providers
Very satisfied	43.35%	42.25%	53.01%	36.70%
Somewhat satisfied	41.73	44.17	31.39	41.94
Not very satisfied	10.28	9.45	9.96	15.42
Not at all satisfied	4.64	4.13	5.64	5.94
No response	5.88	6.43	18.90	26.95

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

3.4.4 Timeliness of Delivery

CAP and non-CAP providers were equally satisfied with the timeliness of delivery of drugs included in the CAP (regardless of whether acquired under the CAP). In Table 29, we show the level of satisfaction among CAP and non-CAP providers with the timeliness of delivery for CAP/Part B drugs. Eighty-eight percent of CAP providers were satisfied with the timeliness of delivery of CAP drugs obtained through BioScrip, while 85 percent of non-CAP providers were satisfied with the timeliness of delivery of drugs through their primary Part B drug supplier. However, as Table 32 shows, this difference is not statistically significant.

Table 29
Rate the following experience: timeliness of delivery for CAP/Part B drugs

Level of satisfaction	BioScrip (CAP providers) percentage of providers	BioScrip (CAP providers) weighted percentage of providers	Primary Medicare Part B supplier (non-CAP providers) percentage of providers	Primary Medicare Part B supplier (non-CAP providers) weighted percentage of providers
Very satisfied	53.55%	52.85%	61.76%	44.74%
Somewhat satisfied	33.87	34.84	27.92	40.91
Not very satisfied	7.71	7.66	6.12	9.68
Not at all satisfied	4.87	4.65	4.21	4.67
No response	6.45	7.13	20.27	28.89

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

3.5 Statistical Analysis: Satisfaction with CAP and BioScrip

As part of our analysis, we tested whether satisfaction with the CAP and the traditional method of buying and billing for Medicare Part B drugs and biologicals was greater than 75 percent. Our first step was to aggregate the responses to the satisfaction questions. Practitioners who responded that they were either "very satisfied" or "somewhat satisfied" were counted as satisfied, and those who responded that they were either "not very satisfied" or "not at all satisfied" were counted as not satisfied. We then tested the following hypothesis for the satisfaction questions:

$$H_o: \text{satisfaction} \leq 0.75$$

$$H_a: \text{satisfaction} > 0.75$$

Tables 30 and 31 present the results of these statistical tests of satisfaction for CAP and non-CAP providers respectively. In Table 32, we compare the responses, when appropriate, of CAP participating and non-CAP participating providers. Here, we find that the difference in overall satisfaction is statistically significant between CAP and non-CAP providers, with 31 percent more CAP providers expressing satisfaction with their method of procuring Part B drugs.

Table 30
Statistical analysis: satisfaction with the CAP and BioScrip

Question	DF	Mean	Standard error	t ($\mu > 0.75$)	p-value
Overall satisfaction with the CAP	512	82.5	1.2	6.160	<0.0001
Overall satisfaction with payment system before CAP participation	502	55.4	1.7	-11.696	0.9999
Satisfaction with the information available about the CAP election process prior to the CAP election deadline	511	75.9	1.4	0.612	0.2704
Satisfaction with BioScrip, the single CAP vendor	503	86.6	1.1	10.626	<0.0001
Rate the following experiences with the CAP and BioScrip					
Materials provided about co-payment billing	483	78.1	1.4	2.133	0.0167
CAP drug-ordering process	493	86.4	1.1	10.169	<0.0001
Quality of the CAP drugs received	491	93.8	0.9	21.427	<0.0001
Selection of specific CAP drugs available to order	496	88.9	1.1	12.968	<0.0001
Information provided about the CAP drug-ordering process	498	83.1	1.3	6.200	<0.0001
Timeliness of delivery for CAP drugs obtained through BioScrip	490	87.7	1.1	11.455	<0.0001

SOURCE: RTI International tabulation of survey responses.

Table 31
Statistical analysis: satisfaction with the non-CAP Medicare Part B supplier

Question	DF	Mean	Standard error	t ($\mu > 0.75$)	p-value
Satisfaction with the standard "buying and billing" method for Medicare part B drugs (ASP+6% payments)	581	0.5105	0.0224	-10.6776	0.9999
Rate the following experiences with your Primary Medicare Part B Drug Supplier					
Timeliness of delivery of drugs	520	0.8564	0.0171	6.2290	< 0.0001
Drug-ordering process	529	0.7864	0.020	1.8155	0.0350
Quality of the drugs received	522	0.9071	0.0140	11.2393	< 0.0001
Selection of specific drugs available to order	526	0.7526	0.0211	0.1250	0.4503

SOURCE: RTI International tabulation of survey responses.

Table 32
Statistical analysis: comparison of satisfaction between CAP and non-CAP participating practitioners

Question	Mean	Standard error	t ($\mu = 0$)	p-value
Satisfaction with Method of Acquiring Medicare Part B Drugs	0.3149	0.0256	12.3234	< 0.0001
Rate the following experiences with your Primary Medicare Part B Drug Supplier				
Timeliness of delivery for CAP drugs obtained through BioScrip	0.0204	0.0204	1.0014	0.31687
Drug-ordering process	0.0778	0.0230	3.3875	< 0.0001
Quality of the CAP drugs received	0.0311	0.0165	1.8852	0.05969
Selection of specific CAP drugs available to order	0.1367	0.0237	5.7766	< 0.0001

SOURCE: RTI International tabulation of survey responses.

3.6 Early Feedback on the CAP

3.6.1 Emergency Restocking and Furnish as Written

The Emergency Restocking and FAW processes were intended to give CAP-participating providers an ability to acquire CAP drugs outside of the CAP system in emergency situations or when a patient requires a specific formulation of a drug not available from the vendor. Only 12 percent of CAP providers who used the Emergency Restocking provision reported problems with the process. For those that did report problems, the most common complaint was that BioScrip did not replace the emergency drug in a timely manner. Only 5 percent of CAP providers using the FAW process reported problems.

3.6.2 Wasted Drugs

One concern prior to the implementation of the CAP was that, because drugs under the CAP were ordered for specific individuals, the CAP might result in an increase in unused and wasted drugs. While physicians did not report what their drug wastage was prior to the CAP, they did report that they seldom wasted drugs under the CAP. Table 33 presents the degree of wastage experienced by CAP providers.

Table 33
Experienced wastage of at least one-quarter of a package for CAP drug orders

Experienced wastage	Percentage of providers	Weighted percentage of providers
Seldom—less than 1 out of every 10 drug administrations	81.24%	82.38%
Sometimes—1 or 2 out of every 10 drug administrations	14.23	14.27
Often—between 3 and 5 out of every 10 drug administrations	2.27	1.70
Very often—more than 5 out of every 10 drug administrations	2.27	1.65
No response	7.97	8.50

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

3.7 Patient Feedback

3.7.1 Patient Copayment Billing Problems

Prior to implementation of the CAP, physicians and physician professional associations voiced several concerns about how the CAP might affect their Medicare patients. Under the CAP, Medicare patients receive bills for co-payments from BioScrip rather than from their physician on their Explanation of Medicare Benefits (EOMB). Some providers thought that Medicare patients might be confused about the EOMBs or that BioScrip might be more

aggressive at collecting co-payments and less forgiving of nonpayment. Tables 34 and 34A show the degree to which Medicare patients reported problems related to BioScrip co-payment billing. In the CAP survey, only 8.8 percent of practitioners had Medicare patients who reported problems related to co-payment billing by BioScrip. For providers whose patients reported problems, confusing billing statements was the most frequently reported problem. Very few reported that BioScrip engaged in overly aggressive co-payment collection. However, oncology specialists (Group 1) did report that their patients experienced problems at twice the rate experienced by the nontargeted specialties (Group 3): 16.2 percent compared with 8.3 percent. Although large, this difference was statistically significant at the 10 percent level.

Table 34
Have Medicare patients reported problems related to co-payment billing by BioScrip?

Reported problems	Overall percentage	Overall weighted percentage	Group 1 (oncology)	Group 2 (other targeted specialties)	Group 3 (all other specialties)
Yes	10.16%	8.75%	16.2%	13.7%	8.3%
No	89.84	91.25	83.8	82.3	92.7
No response	4.70	5.30	0.0	3.8	5.5

Table 34A
Specialty group comparison: have Medicare patients reported problems related to co-payment billing by BioScrip?

Comparison of reported problems	Difference	$F(1,499)$	p-value
Group 1 vs. Group 2	2.5	0.24	0.6237
Group 1 vs. Group 3	7.9	3.24	0.0725
Group 2 vs. Group 3	5.4	3.82	0.0514

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

3.7.2 Perceptions of Patient Inconvenience

Finally, there was a concern that Medicare patients may experience more inconvenience under the CAP. Some providers voiced concern that a patient may be inconvenienced if a drug does not arrive on time or if the patient shows up and laboratory work shows a different drug or dosage is needed than that which was ordered, necessitating a second appointment. Consistent with the fact that providers experienced few problems with the emergency drug administration provision of the CAP, less than 8 percent of CAP providers felt that their Medicare patients were more inconvenienced under the CAP. The one exception was physicians in Group 1, in which almost 30 percent felt that their Medicare patients were more inconvenienced under the CAP.

The increased level of inconvenience was statistically significant at the 1 percent level between Group 1 and Groups 2 and 3. Tables 35 and 35A present the percentage of reported inconveniences by patients since providers began participating in the CAP.

Table 35
Have Medicare patients reported any greater inconveniences since your practice began participation in CAP?

Reported inconveniences	Overall percentage	Overall weighted percentage	Group 1 (oncology)	Group 2 (other targeted specialties)	Group 3 (all other specialties)
Yes	10.26%	8.47%	29.9%	11.3%	7.8%
No	89.74	91.53	70.1	88.7	92.2
No response	5.70	6.10	0.0	5.8	6.2

Table 35A
Specialty group comparison: have Medicare patients reported any greater inconveniences since your practice began participation in CAP?

Comparison of reported inconveniences	Difference	$F(1,494)$	p-value
Group 1 vs. Group 2	18.7	7.95	0.0050
Group 1 vs. Group 3	22.1	12.47	0.0005
Group 2 vs. Group 3	3.5	1.84	0.1757

NOTE: Percentage of providers is based on responses and sums to 100%. No response is the unit nonresponse rate for the survey question and is excluded.

SOURCE: RTI International tabulation of survey responses.

3.8 Statistical Analysis of Early Feedback on the CAP

We also tested the degree to which providers perceived problems with the CAP. We tested whether problems with the Emergency Restocking and FAW processes occurred less than 15 percent of the time. For this question, we excluded all providers who responded "Not Applicable" when asked whether they had a problem with either provision.

We also tested whether problems with patient co-payment billing, as well as patient inconvenience, were equally small,

We used the PROC SURVEYMEANS to test the following hypothesis:

H_o: problem or inconvenience ≥ 0.15

H_a: problem or inconvenience < 0.15

As shown in Table 36, we found that problems with the Emergency Restocking provisions, FAW process, co-payment billing by BioScrip, and increased patient inconvenience all occurred less than 15 percent of the time and were statistically significant at the 98 percent level or higher.

Table 36
Statistical analysis: test for problems with the CAP

Variable	DF	Mean	Standard error	t ($\mu < 0.15$)	p-value
Encountered any problems with the Emergency Restocking process?	286	12.1	1.4	-2.147	0.0163
Encountered any problems with the FAW process?	249	5.2	1.0	-9.945	< 0.0001
Have Medicare patients reported problems related to co-payment billing by BioScrip?	499	8.7	0.9	-6.960	< 0.0001
Have Medicare patients reported any greater inconveniences since practice began participation in CAP?	494	8.5	0.9	-7.491	< 0.0001

SOURCE: RTI International tabulation of survey responses.

SECTION 4
CONCLUSIONS

The results of the CAP surveys show that overall satisfaction with the CAP was high. There are several possible reasons for this finding. First, the majority of CAP providers felt that the administrative burden was either no higher or was lower under the CAP compared with the alternative buy-and-bill system.

Second, overall satisfaction was high with BioScrip, despite its being the only CAP vendor. Most felt that the selection and quality of drugs were high and the ordering process was smooth. In fact, CAP providers reported being more satisfied with BioScrip than non-CAP providers with their Medicare Part B drug suppliers.

Third, few of the predicted problems with the CAP were significant. There was little patient inconvenience from rescheduling appointments or confusing billing statements. This may have been attributed to the Emergency Restocking and FAW processes, for which there were few reported problems.

Satisfaction with the CAP also appears to be correlated with the reasons that providers elected to participate in the CAP. The two most common reasons for electing the CAP were that it would decrease the administrative burden and it would make it less costly to acquire Medicare Part B drugs. However, these were also two of the reasons providers cited for not electing the CAP, stating that it would increase their administrative costs and would be more costly. In addition, based on survey responses, there was some confusion about the details of the CAP and this may have impacted participation. This confusion may have occurred because the CAP was a new program or because CMS needs better informational materials about the program.

Finally, although overall satisfaction with the CAP was high, oncology specialists reported being less satisfied than the other providers surveyed. Reasons for this finding may involve the types of drugs that they administered and the types of Medicare beneficiaries that they saw.

REFERENCES

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