Department of Health & Human Services

Centers for Medicare & Medicaid Services

Report to Congress
Fraud Prevention System
Second Implementation Year

June 2014

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Executive Summary

The Fraud Prevention System (FPS) is the state-of-the-art predictive analytics technology required under the Small Business Jobs Act of 2010 (SBJA). Since June 30, 2011, the FPS has run predictive algorithms and other sophisticated analytics nationwide against all Medicare fee-for-service (FFS) claims prior to payment. For the first time in the history of the program, CMS is systematically applying advanced analytics against Medicare FFS claims on a streaming, nationwide basis as part of its comprehensive program integrity strategy.

CMS made significant progress using the FPS to identify bad actors and take administrative action to protect the Medicare Trust Funds. In the second implementation year, which aligned with Fiscal Year 2013, CMS took administrative action against 938 providers and suppliers due to the FPS. For example, the FPS identified an aberrant provider that had a pattern of inappropriate billing. Investigators conducted an unannounced site visit, interviewed beneficiaries, and reviewed medical records. It was discovered that the provider was using unlicensed and unqualified individuals to provide care. CMS revoked the provider from Medicare, preventing future payments and protecting quality of care.

The identified savings, certified by the OIG, associated with these prevention and detection actions due to FPS was $210.7 million, almost double the amount identified during the first year of the program. This resulted in more than a $5 to $1 return on investment, an increase from last year's $3 to $1 return.

This year's Report to Congress introduces the new concept of *adjusted savings*. The *adjusted savings* number is an attempt to estimate the dollars that CMS has already returned, or from a financial auditing perspective, is likely to return to the Treasury in the future from the larger category of *identified savings* based on historical experience with the Medicare program. The concept of *adjusted savings* is important as it relates to a financial audit, and CMS will continue to refine and use a similar methodology next year.

Return on Investment

*The FPS identified or prevented more than **$210.7 million** through administrative actions taken due to the FPS or through investigations corroborated, augmented, or expedited by information in the FPS.*

*The results are a $**5 to $1** return on investment, almost double the value of the FPS in the first implementation year.*

Recovering money, which is one important result of investigating these leads, is contingent on numerous other processes and limitations. CMS's program integrity efforts, including FPS, targets all causes of improper payments, not just those that are easy to recover.

CMS Revokes Provider Due to FPS

FPS identified a group practice for having a high risk of inappropriate billing. A contractor conducted an unannounced site visit, interviewed beneficiaries, and reviewed medical records. The evidence showed that the aides working in the group were not appropriately trained and the provider was billing Medicare for services he did not perform and were in fact performed by unqualified individuals.

The provider was removed from the Medicare program, preventing over $700,000 of inappropriate payments and ensuring that Medicare beneficiaries receive quality care from trained providers.

Any bias towards focusing on easily recoverable amounts could potentially skew program integrity efforts away from stopping some of the most egregious fraud. That is because money is notoriously difficult to recover from serious fraudsters, who often are not operating legitimate businesses at all, and take steps to move and conceal the Medicare dollars they are able to obtain.

For example, FPS-identified providers may be operating a completely false storefront with no real patients and may have offshored ill-gotten gains which are beyond the reach of the law. Other FPS-identified providers may have some percentage of legitimate business but are engaging in upcoding. An over-focus on the adjusted savings number could create incentives for CMS and its program integrity contractors to work the latter type more than the former. This is an undesirable result, given both types of fraud have no place in our program.

The majority of health care providers enrolled in Medicare are honest, reliable business partners. The FPS, as currently implemented, is not designed to flag transactions from this sort of provider; rather, the FPS is geared towards discovering egregiously improper patterns of billing – often amounting to fraud. Historically, we know that “pay and chase” is often more difficult than recovering monies from longstanding businesses billing Medicare that may have made mistakes or common errors.

A better measure that CMS uses to gauge the success of the FPS – in keeping with the design of the system – is how much and how quickly it helps CMS and law enforcement detect payments that may be fraudulent. It is also important to track the amounts of actual recoveries that FPS or any of our program integrity activity returns to the Treasury, and this Report details our efforts in this regard. These efforts will continue to grow and improve.

The true financial impact of the FPS, however, is much harder to measure: once CMS uses the information from an FPS lead to impose a money-stopping administrative action against a crooked provider (such as revoking billing privileges), the benefit to the U.S taxpayer is not limited to monies recovered, but includes any future billings by that provider which were prevented. These

kinds of future costs avoided are difficult to estimate with certainty, and for this reason have not been – until now – systematically measured or audited in either the public or private sectors.

There are also other hard-to-quantify benefits of the FPS activity, such as the sentinel effect it creates, and the highly collaborative environment it has fostered between CMS and law enforcement, as well as between and among CMS and its program integrity contractors. CMS will make decisions on the merit of continuing or expanding FPS based primarily on the identified savings number, which has nearly doubled from the first year Report to Congress.

CMS calculated adjusted savings, defined as those dollars conservatively estimated to be returned to the Trust Funds or prevented from being paid, in accordance with OIG recommendations for adjusting savings to meet financial audit standards.[1]

OIG determined that the methodology and calculation of both identified savings and adjusted savings is reasonable and certified both of these savings amounts as well as well as the program costs.

CMS estimates it has prevented from being paid or returned to the Trust Funds, or from an auditing perspective, is likely to prevent payment or return to the Treasury in the future, $54.2 million in *adjusted savings*.

CMS expects that future activities will substantially increase savings by expanding the use of the innovative technology beyond the initial focus on identifying potential fraud into the areas of waste and abuse. In FY 2013, CMS completed pilot projects to expand the use of FPS. These pilots included providing leads to the Medicare Administrative Contractors (MACs) for medical review and denying claims directly by the FPS that are not supported by Medicare policy. CMS may expand these pilot projects nationally to improve fraud, waste, and abuse prevention and detection. CMS will also evaluate the

Future of the Successful FPS Tool

- *Expand and improve models to identify bad actors more quickly and more effectively*
- *Expand FPS beyond fraud into waste and abuse*
- *Deny claims that are not supported by Medicare policy*
- *Identify leads for early intervention by the Medicare Administrative Contractors*
- *Evaluate the feasibility of expanding predictive analytics to Medicaid*
- *Reduce costs of FPS while applying predictive analytics more effectively and efficiently*
- *Share lessons learned and best practices with federal, state, and private partners*

[1] Centers for Medicare and Medicaid Services, "Report to Congress, Fraud Prevention System, First Implementation Year." See http://www.stopmedicarefraud.gov/fraud-rtc12142012.pdf.

feasibility of expanding predictive analytics technology to Medicaid.

While the SBJA cites the potential for expanding predictive analytics to Medicaid, there are other opportunities for applying sophisticated technology and business processes to program integrity efforts. CMS is a leader in using predictive analytics technology to target program integrity resources and measuring the outcomes of a prevention program. CMS is sharing best practices and lessons learned with federal agency partners and private health care organizations that are in various stages of leveraging similar technology to more accurately identify program integrity vulnerabilities and target scarce resources for investigating or auditing payments.

The administration has made a firm commitment to be a strong steward of taxpayer funds. Today, CMS has more tools than ever before to move beyond a "pay-and-chase" approach and implement strategic changes in preventing and detecting fraud, waste, and abuse. In its second year, the FPS has demonstrated its benefits as a fraud prevention tool, and as business processes evolve in the adoption of the tool for expanded purposes, CMS anticipates FPS will have an even greater impact on our fraud fighting efforts going forward.

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1. Introduction

The Department of Health and Human Services (HHS) and its Centers for Medicare & Medicaid Services (CMS) are in the second year of implementing sophisticated predictive analytics technology to prevent and detect fraud, waste, and abuse in the Medicare Fee-for-Service (FFS) program. Using the anti-fraud authorities provided in the Affordable Care Act[2] and the Small Business Jobs Act (SBJA) of 2010,[3] the Agency is protecting taxpayer dollars while protecting beneficiary access to necessary health care services and reducing the burden on legitimate providers and suppliers.[4]

CMS launched the Fraud Prevention System (FPS) in June 2011 to apply sophisticated analytics to Medicare FFS claims prior to payment to identify aberrant and suspicious billing patterns. During the second year of the FPS, defined in the SBJA as October 1, 2012 through September 30, 2013, CMS realized the following FPS accomplishments:

- CMS identified or prevented $210.7 million in payments due to FPS. The *identified savings,* certified by the HHS Office of Inspector General (OIG), are nearly double the identified savings of $115.4 million achieved during the first year of the program when applying the same methodology. This is more than $5 to $1 return on investment in the second implementation year.
- This year, CMS introduces the new concept of *adjusted savings*. The *adjusted savings* number is an attempt to estimate the dollars that CMS has already returned, or from a financial auditing perspective, is likely to return to the Treasury in the future from the larger category of *identified savings*. For CMS, the success of the FPS is best measured by how much and how fast it helps CMS and law enforcement detect payments that may be fraudulent. Of course, it is always important to track the amounts of actual recoveries that FPS or any of our program integrity activity returns to the Treasury, and this Report details the efforts in this regard, and this effort will grow and improve next year.
- CMS took administrative action against 938 providers based on information from FPS, including revocation of billing privileges, implementation of prepayment review edits, referrals to law enforcement, and suspension of payments.

[2] P.L. 111-148 and P.L. 111-152
[3] P.L. 111-240
[4] For ease of reference, the term “provider(s)” will be used throughout this report to encompass both providers and suppliers enrolled in the Medicare fee-for-service program.

- The FPS generated leads for 469 new investigations by CMS's program integrity contractors and augmented information for 348 existing investigations. Many of these investigations resulted in administrative action taken against multiple providers as the initial leads expanded into networks of providers under investigation.
- CMS estimates it has already prevented from being paid or returned to the Trust Funds, or from an auditing perspective, is likely to prevent from being paid or return to the Trust Funds in the future, $54.2 million in *adjusted savings*. These adjusted savings were certified by the OIG. The program continues to maintain a positive return on investment, even when applying conservative adjusted savings.
- The OIG certified the return on investment methodology (identified savings, adjusted savings, and costs), and calculation of the ROI for the FPS, as required by the SBJA (Appendix A).
- CMS completed pilot projects to expand the use of FPS to identify improper payments. These pilots included providing leads to the Medicare Administrative Contractors for medical review and denying claims directly through the FPS that are not supported by Medicare policy. CMS is currently evaluating expansion of these pilot projects nationally to improve fraud, waste, and abuse prevention and detection.
- CMS identified opportunities to increase savings from the FPS, and made significant progress towards reducing future system-related contractor costs by millions.
- CMS is a leader in using predictive modeling technology (e.g. the FPS) for program integrity efforts and measuring outcomes for prevention-oriented activities. CMS provides a forum for information exchange between federal, state, and private partners.

This section summarizes the SBJA reporting requirements, describes the FPS in terms of the technology and the business process supporting the technology, describes changes to the program during the second year, and clarifies the role of the FPS in CMS's overall program integrity activity. Section 2 of this report summarizes the FPS activity in the second year, including leads, actions, savings, and return on investment. In addition, Section 2 provides examples of leads identified in the FPS and clarifies the system's impact on beneficiaries and providers. Section 3 summarizes the future plans for the FPS, including new activity that is expected to substantially increase savings and reduce costs in the third implementation year.

1.1. SBJA Reporting Requirements

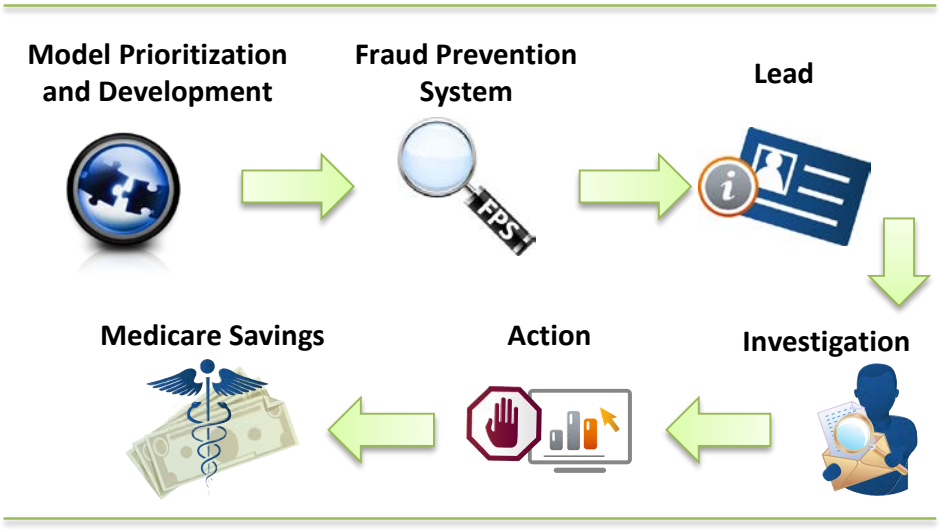
The SBJA requires the Secretary of HHS to submit reports for each of the first three years of FPS implementation. This second implementation year report complies with the second-year reporting requirements outlined in the SBJA. The SBJA also requires the OIG to certify certain components of the report. Appendix A contains the OIG certification, Appendix B provides the SBJA legislation for implementing predictive analytics technology, and Appendix C cross-references the sections of this report to the SBJA reporting requirements for the third implementation year.

1.2. Overview of the Fraud Prevention System

The FPS meets the requirements in the SBJA to provide a comprehensive view of Medicare FFS provider and beneficiary activities in order to identify and analyze provider networks, billing patterns and beneficiary utilization patterns, and detect patterns that represent a high risk of fraudulent activity (Figure 1). The FPS is fully integrated with the Medicare FFS claims processing system and also uses other data sources, including compromised beneficiary Medicare identification numbers and complaints that are made through the 1-800-MEDICARE call center.

The FPS technology is one part of the process of identifying providers for investigation and taking action to protect the Medicare Trust Funds. Activities critical to FPS include the identification and prioritization of models for use in the FPS as well as investigating the leads that are generated by the technology based on the models. FPS success is dependent on a coordinated business process that includes stakeholder collaboration and activity at each step of the process.

Figure 1. Overview of the Process for Fraud Prevention



Model Prioritization and Development

CMS designed the FPS to accommodate a variety of model types that address multiple vulnerabilities and schemes. The four types of models are rules-based, anomaly, predictive, and network analysis. Figure 2 summarizes the model types and provides examples of how these types of models could be used to address specific vulnerabilities. FPS models build on one another in a continuum of sophistication, and CMS has the ability to update and evolve the models from one type to another as CMS collects more information and insights from the FPS and key stakeholders.

To provide effective oversight and input to the FPS, CMS assembled an expert, multidisciplinary team in its Analytics Lab. These social science analysts are economists, statisticians, and programmers who research

Figure 2. Model Examples

Model Type	***Credit Card Example*** *(for illustration only, not actual models)*	***Medicare Example***
Rules-Based Filter fraudulent claims and behaviors with rules	Charge for TV in Florida but the Cardholder lives in California and there are no flights charged to the card	Bill for a Medicare identification number that was previously stolen and used improperly
Anomaly Detect individual and aggregated abnormal patterns versus peer group	Charges for more TVs in a single day than what 99% of cardholders purchase in a single day	A provider that bills for more services in a single day than the number of services that 99% of similar providers bill in a single day
Predictive Assess against known fraud cases	Charges for multiple TVs out of state, on certain days in a certain pattern (based on experience with known bad actors)	A provider that has characteristics similar to those of known bad actors
Network Discover knowledge with associative link analysis	Charge for a TV at an address known to have bad charges using a phone number linked to other bad charges	A provider that is linked to known bad actors through address or phone number

fraud indicators to uncover current and emerging fraud schemes. These experts perform business and statistical analyses of fraud-related data and FPS results, allowing the rapid development of FPS models. Lab analysts lead multi-disciplinary teams that include policy experts, clinicians, field investigators, and data analysts to develop and test models. The teams leverage the CMS Command Center, a collaboration center for program integrity activity, to explore and refine models. Bringing together teams with a variety of skill sets is a best practice in model development – ensuring that the FPS models yield solid, actionable leads.

CMS uses a governance process to ensure that scarce resources for model development and deployment are focused on the highest priority vulnerabilities. The FPS Operations Board meets regularly to discuss vulnerabilities and schemes, review data analysis, and prioritize which models should be developed and which models are ready for deployment. The FPS Change Control Board reviews the models approved by the Operations Board and the improvements requested by FPS users and determines the contents of each new FPS release. Both Boards include senior program integrity leaders in the CMS Center for Program Integrity.

FPS Technology

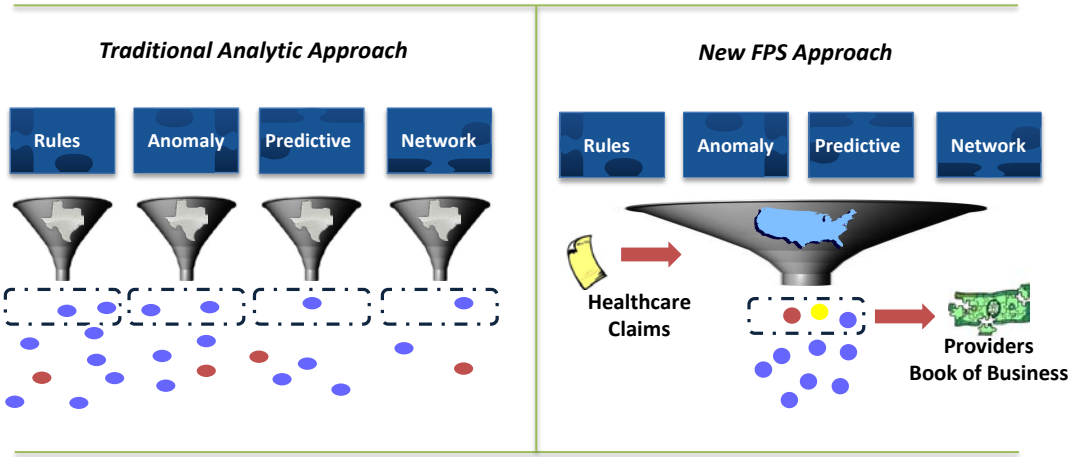
The FPS screens all Medicare Part A and Part B claims prior to payment, running each claim against multiple models as mandated by the SBJA. FPS also uses other external data, including the Compromised Numbers Checklist, the Fraud Investigation Database, and complaints from the 1-800-MEDICARE call line. Alerts are created as each model identifies claims and other data that suggest aberrant billing. The alerts are consolidated on a provider and the FPS adds background information to provide context to the alerts. Leads are then prioritized by potential fraud risk in the system, and Zone Program Integrity Contractors (ZPICs) [5] investigate those within the highest risk tier for fraud.

The technology is different from the traditional approach to program integrity analytics because all models run simultaneously and continuously, with a national focus, and a feedback loop is in place to support model improvements. CMS and its contractors have always leveraged analytics to identify leads for investigation. Previously, each model was run separately on a schedule (every month or quarter) on claims in a specific region and the contractor worked some of the leads generated. As shown in Figure 3, this previous approach could allow bad

[5] For the purposes of this report, references to Zone Program Integrity Contractors include legacy Program Safeguard Contractors.

actors to remain under the radar (the red dots). With the new approach, all models are running concurrently, pushing providers that exhibit multiple aberrant billing behaviors and relationships to the top of the ZPICs' workload.

Figure 3. Comparison of Previous and New Analytics Approach



The FPS analyzes large amounts of billing information prior to payment to identify suspicious patterns. A key resource that supports the FPS in analyzing nationwide claims and building models is the Integrated Data Repository (IDR), an existing and continuously expanding repository of nationwide Medicare claims data. CMS established the IDR in 2006 to provide a comprehensive view of data, including claims, beneficiary data, and Part D drug information. The IDR is currently populated with more than seven years of historical Medicare Part A and Part B claims at three stages (when the claim is received, when the claim is determined to be paid, and when the payment is made) as well as Part D data. Through business intelligence tools, the IDR enables ZPICs and FPS modeling contractors to work effectively, without incurring the expense of building another claims database for analytics. The IDR can also be accessed through the One Program Integrity (One PI) Portal, a centralized, web-based portal that allows in-house CMS specialists, supporting contractors, and law enforcement to leverage sophisticated tools and methodologies to analyze program integrity data. One PI provides investigators access to information critical to their work.

Working FPS Leads

The primary users of the FPS results are currently the CMS ZPICs. Once suspect behavior or billing activity is identified, the ZPICs use FPS leads to perform specific program integrity functions for the Medicare FFS program. The FPS generates a prioritized list of leads for ZPICs to review and investigate and compiles details regarding a provider's behavior in a

consolidated view. This enables the ZPICs to target their resources on suspect claims and providers and take administrative action when warranted. ZPICs investigate the leads through boots-on-the-ground activities such as site visits, beneficiary interviews, and medical chart review. Based on the findings, ZPICs may receive CMS approval to implement appropriate administrative actions, such as prepayment review, revocation, or payment suspension. When warranted, ZPICs also refer cases to law enforcement.

CMS also uses the FPS also to view ZPIC activities and administrative actions at the provider-level, making it a useful management tool. This is the first time CMS has had such a view. Historically, information regarding ZPIC savings was submitted to CMS in aggregate only rather than at the provider level. The FPS includes a feedback loop for field investigators to record in the system the outcomes of each lead. This information is then used to refine and improve models over time.

1.3. Second Implementation Year

CMS made several improvements to the FPS program during the second implementation year, such as completing the integration with the claims processing system, launching pilot projects to explore expansion of the FPS, adding new models, improving existing models, and refining the return on investment methodology.

Improved FPS Models and Integration

At the end of the second implementation year, the FPS had 74 models running simultaneously to monitor fraud, waste, and abuse. During the second implementation year, CMS added 39 new models to the FPS, of which 8 were sophisticated predictive models focused on vulnerable service areas. Predictive models are issue or service area focused; one predictive model includes many indicators that could each have been put into the technology as single models. A single predictive model is often as effective as multiple non-predictive models. The value of the FPS is the successful identification of leads based on a combination of models and model types. In addition, CMS refined 17 existing models based on the feedback received through the FPS and insights from field investigators, policy experts, clinicians, and data analysts.

CMS completed the FPS' integration with the claims processing system to enable claims denials or rejections directly through the FPS in January 2013 and successfully piloted the rejection of certain physician claims. CMS also launched a pilot project with a Medicare Administrative Contractor (MAC) to explore opportunities to leverage other

interventions for resolving leads in the FPS, such as provider education or medical review. Sections 3.1 and 3.2 provide more information on these two FPS pilots.

Addressed OIG Recommendations

CMS revised its methodology for estimating return on investment to incorporate recommendations made by the OIG ((Table 1).[6] Prior to implementation of the FPS, there was no industry accepted standard methodology in the public or private sector for calculating savings for applying predictive analytics technology for program integrity purposes in health care. The SBJA set forth broad savings categories (actual and projected) but did not define these terms. CMS defined these measures in the first implementation year, and refined the methodology in the second year to incorporate OIG's recommendations.

Table 1. OIG Recommendations and Methodology Refinements

OIG Recommendation	Change to the Return on Investment Methodology
1. Require contractors to track recoveries that result from FPS leads	The current systems tracking recoveries do not identify the source of overpayment referral. CMS made the following improvements to address the recommendation: • Developed an adjustment factor to estimate recoveries based on historic experience. • Modified the relevant systems to allow the recoveries to be tracked back to the ZPIC that requested the recovery. The change went into effect in January 2014.
2. Coordinate with law enforcement to enhance reporting of investigative and prosecutorial outcomes in cases predicated on referrals	CMS developed an adjustment factor in coordination with the OIG to estimate the court-ordered recoveries expected based on ZPIC referrals. The adjustment factor uses data from OIG and CMS and leverages GAO findings on the percent of referred cases that are expected to be eventually criminally charged.
3. Revise the methodology used to calculate projected savings with respect to improper payments avoided	CMS revised the methodology to include two adjustment factors. The first factor reduces savings resulting from claims edits to estimate claims that may ultimately be paid upon appeal. The second factor reduces savings resulting from revoking billing privileges to account for portions of revoked providers' services that may be subsequently billed by another provider as a proxy for legitimate claims.

[6] Centers for Medicare & Medicaid Services, "Report to Congress, Fraud Prevention System, First Implementation Year." *See* http://www.stopmedicarefraud.gov/fraud-rtc12142012.pdf.

OIG Recommendation	Change to the Return on Investment Methodology
4. Revise the methodology used to calculate costs avoided from edits and payment suspensions to include verifying that the information is consistent with contractor records	CMS revised the methodology to require ZPICs to submit provider-specific outcomes data. This is a change from the previous year and different from the way in which contractors report outcomes to CMS generally. Contractors generally submit aggregate monthly savings information. By requiring contractors to now submit provider and outcome specific data, CMS is able to conduct more quality control reviews prior to reporting savings.
5. Include all material costs associated with the FPS	CMS clarified the costs that are included in the return on investment calculation to ensure that no material costs were excluded.

In order to arrive at a more precise estimate of savings for this report, CMS applied conservative adjustment factors developed based on experience in the time period prior to implementation of the Fraud Prevention System. It is important to recognize that adjustment factors have inherent limitations because they are estimates based on historic data obtained for purposes other than measurement, such as claims processing and payment.

Addressed GAO Recommendations

The Government Accountability Office (GAO) reviewed CMS's implementation of predictive analytics technology in 2012 and made four recommendations for improving the program.[7] CMS has taken action to address all four of the recommendations, as summarized in Table 2.

Table 2. GAO Recommendations

GAO Recommendation	CMS Action to Address Recommendation
1. Define quantifiable benefits expected as a result of using the Fraud Prevention System, along with mechanisms for measuring them.	The Report to Congress for the first implementation year[8] included quantifiable measures of savings. Based on recommendations from the HHS OIG, the savings measures were refined and are included in Section 2 of this report.

[7] Government Accountability Office Report, "CMS Has Implemented a Predictive Analytics System, but Needs to Define Measures to Determine Its Effectiveness." (GAO-13-04) See http://www.gao.gov/assets/650/649537.pdf.

[8] Centers for Medicare & Medicaid Services, "Report to Congress, Fraud Prevention System, First Implementation Year. See http://www.stopmedicarefraud.gov/fraud-rtc12142012.pdf.

GAO Recommendation	CMS Action to Address Recommendation
2. Describe outcome-based performance targets and milestones that can be measured to gauge improvements to the agency's fraud prevention initiatives attributable to the implementation of FPS.	CMS developed the appropriate measures needed to estimate savings with respect to both improper payments recovered and improper payments avoided through the FPS (see Section 2). Creating performance targets for program integrity work is challenging because it is necessary to balance incentives between developing merit-based efficiencies and achieving a targeted savings outcomes. This is especially important cases that are developed and referred to law enforcement by the ZPICs and PSCs.
3. Develop schedules for completing plans to fully integrate FPS with the claims payment processing systems that identify all resources and activities needed to complete tasks and that consider risks and obstacles to the program.	The schedule for the claims payment processing system implementation includes the change management process for the shared systems, the change management process for the Fraud Prevention System, and business process elements. The schedules were completed and executed. CMS successfully completed the integration of the FPS and the claims processing system during the second implementation year. CMS also successfully completed a proof of concept to ensure that the FPS is integrated with the claims processing system and the FPS is appropriately integrated with the business process for edits to ensure that the provider community has appropriate communication and appeals support.
4. Conduct a post-implementation review of the system to determine whether it is effective in providing the expected financial benefits and supporting CMS's efforts to accomplish the goals of its fraud prevention program.	The post-implementation review, which is a specific requirement of the systems lifecyle procedures, was held with the Technical Review Board (TRB) on November 7, 2012. On November 12, 2012, the team received a letter of "no findings" from the TRB stating that "[i]n the base year of the contract, the NFPP successfully delivered the Fraud Prevention System (FPS) with multiple system enhancements and a range of healthcare fraud models to meet the Center for Program Integrity (CPI)'s objectives."

1.4. FPS is Part of Comprehensive Program Integrity Strategy (Example of Home Health Services in Florida)

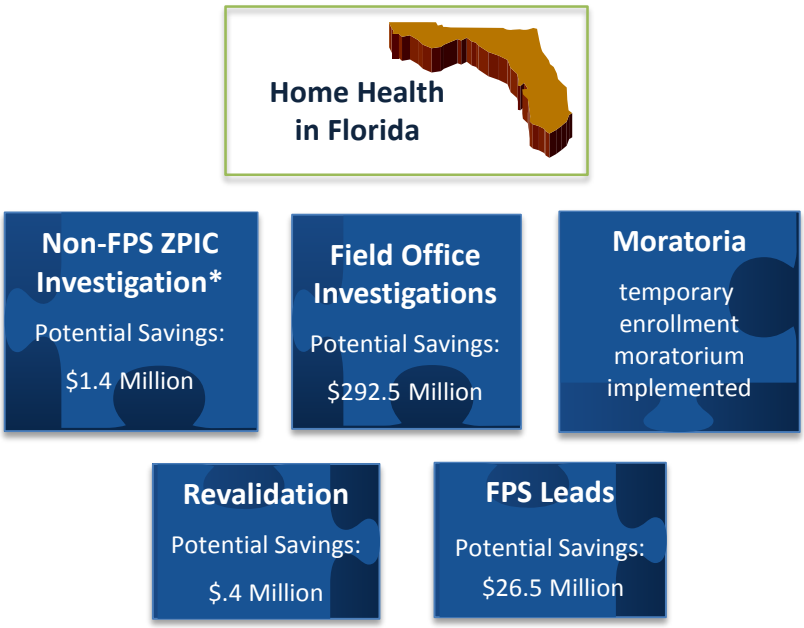
CMS has a comprehensive program integrity strategy that includes multiple tools and interventions that are used individually or in tandem to tackle specific vulnerabilities. FPS supports the strategy by identifying potential fraud quickly and prioritizing a portion of contractor resources to the most egregious providers.

One of the advantages of using FPS is that it supports CMS's broad program to combat fraud, waste, and abuse in the Medicare program.

While FPS is one of the tools leveraged for program integrity work, focusing on only the activity driven by the FPS underestimates the value of coordinated program integrity activities.

For example, FPS is used as part of an agency focus on home health services, particularly in Florida. CMS identified this type of service in South Florida as an area of high risk to our programs.[9] The following examples are ongoing program integrity activities related to home health services (Figure 4).

Figure 4: Program Integrity Activity in Florida Home Health Services



* The non-FPS ZPIC activity shown here are examples and do not represent the full scope of actions taken by ZPICs. CMS currently does not require contractors to submit provider-level activity or savings data for ZPIC activity beyond FPS. CMS will require this level of reporting through a Unified Case Management System in the future.

Revalidation and New Screening Requirements

CMS is revalidating the enrollments of all existing 1.5 million Medicare suppliers and providers by 2015 under the new Affordable Care Act screening requirements. These efforts ensure that only qualified and legitimate providers and suppliers can provide health care items and services to Medicare beneficiaries. As a result of the screening performed as part of revalidation, CMS has moved to revoke or deactivate the billing privileges and enrollment records of thousands of providers and suppliers that do not meet Medicare enrollment requirements.

[9] 76 Fed. Reg. 5862

Revocations have provided information to the FPS to improve detection of fraud. As a result of the new screening requirements and revalidation efforts, CMS doubled the number of revocations in Florida since the passage of the Affordable Care Act. Information discovered during revalidation findings about providers and suppliers is used to develop and refine FPS models.

Moratoria

On July 30, 2013, CMS implemented a temporary enrollment moratorium on new provider billing numbers for home health agencies in the Miami metropolitan area.[10] This was the first time the Secretary exercised the authority under the Affordable Care Act to impose a temporary moratorium on the enrollment of new fee-for-service (FFS) Medicare, Medicaid or CHIP providers and suppliers to prevent or combat fraud, waste, or abuse under these programs.

In imposing the enrollment moratoria, CMS considered both qualitative and quantitative factors suggesting a high risk of fraud, waste, or abuse. CMS relied on its and law enforcement's longstanding experience with ongoing and emerging fraud trends and activities through civil, criminal, and administrative investigations and prosecutions.

The determination of high risk areas of fraud in these provider and supplier types and geographic areas was then confirmed by data analysis. In 2012, there were 662 home health agencies active in Miami-Dade County and analyses indicated that the area is an extreme outlier in factors CMS identified as strong indicators of fraud risk. [11] The moratorium enabled CMS to pause provider entry or re-entry into markets that CMS has determined have a significant potential for fraud, waste or abuse while working with law enforcement and using other tools and authorities to remove bad actors from the program. CMS is monitoring the activity of home health agencies across Florida through the FPS to identify changes in billing patterns and the potential migration of fraud schemes to other parts of the state or nation.

ZPIC FPS Investigations

FPS contains several models that identify both home health agencies and the providers that refer for home health services based on billing patterns and relationships. ZPICs are a critical part of the model development and refinement process. The home health models in the

[10] The temporary enrollment moratoria implemented on July 30, 2013 applied to home health agencies in the metropolitan areas of Miami and Chicago and for ambulances in the Houston area in Medicare, Medicaid, and CHIP.
[11] 78 Fed. Reg. 6475.

FPS have been approved by subject-matter experts at the ZPICs through collaboration sessions and ongoing workgroups.

A ZPIC investigated and revoked four home health agencies that were identified by the FPS as some of the highest risk agencies in the system. The ZPICs were able to leverage the information in the FPS to support their investigations, which ultimately led to the revocation of the billing privileges of these HHAs. The identified savings associated with these revocations is more than $26 million. This avoided billing is included in the identified savings related to FPS (see Section 2). The information about the success of these leads is included in the information used to develop and refine FPS models.

ZPIC Non-FPS Investigation

The FPS is only one source of leads for ZPICs. ZPICs also conduct investigations based on leads from reactive sources (e.g. complaints or law enforcement requests) and unique proactive analyses. The ZPICs have a specific regional focus that is critical to CMS's comprehensive program integrity strategy. Through their own data analysis, ZPICs research local trends in aberrant billing to identify leads. As ZPICs find success with specific algorithms, CMS encourages the contractors to submit the algorithms to the FPS team for inclusion in the FPS. As these algorithms become FPS models, the knowledge and expertise is shared nationally, allowing CMS to better monitor for fraud schemes that migrate from one region to another.

For example, a ZPIC conducted an outlier analysis on a known fraud issue specific to home health services in Florida. Based on the results of the investigation of one provider referring for home health services, the ZPIC put provider-specific edits in place through the Medicare Administrative Contractors to prevent future improper billing. The ZPIC is also conducting post-payment review to identify and refer any overpayments for collection in addition to the preventative measure.

CMS Field Office Investigations

CMS maintains program integrity field offices to provide an on-the-ground presence in high vulnerability areas of the country. The field offices develop special projects to identify local vulnerabilities and coordinate special projects with Medicare contractors and state and local agencies on issues that have a national or regional impact. In FY 2013, the Miami field office took a multipronged approach to address specific home health care schemes that resulted in the revocation of 58 home health agencies. The identified savings associated with these revocations is more than $290 million.

The field office's success with these revocations was based on a new method of identifying solid leads, prioritizing such leads and an innovative investigative approach. The field office is part of the FPS model development teams and is working collaboratively with the FPS team to incorporate field knowledge into the FPS models. The field office investigators shared their experience with the ZPICs during collaborative sessions.

2. Fraud Prevention System Outcomes

The identified savings associated with prevention and detection actions due to FPS was $210.7 million, almost double the amount identified during the first year of the program when applying the same methodology. This resulted in more than a $5 to $1 return on investment.[12]

This report introduces *adjusted savings*, which addresses recommendations made by OIG to meet the standards of an OIG financial audit.[13] This number is an attempt to estimate the dollars that CMS has already returned, or from an auditing perspective, is likely to return to the Treasury in the future from the larger category of *identified savings*.

Full Value of FPS

*The FPS identified or prevented more than **$210.7 million** through administrative actions taken due to the FPS or through investigations corroborated, augmented, or expedited by information in the FPS.*

*The results are a $**5 to $1** return on investment, nearly double the value of the FPS in the first implementation year.*

The measure that CMS uses to gauge the success of the FPS is how much and how fast it helps CMS and law enforcement detect payments that may be fraudulent; that is to say, the best measure of FPS is how much potential fraud it uncovers – not how much CMS recovers. Of course, it is important to track the amounts of actual recoveries that FPS or any of our program integrity activity returns to the Treasury, and this Report details our efforts in this regard, and this effort in this regard.

OIG determined that the methodology and calculation of identified savings, adjusted savings, and program costs for the second implementation year are reasonable and certified the related CMS return on investment calculations.

2.1. Measuring the Value of the FPS

CMS's program integrity efforts, including FPS, target all causes of improper payments, not just those that are easy to recover. Any bias towards focusing on easily recoverable amounts could skew program integrity efforts away from stopping some of the most egregious fraud. That is because money is notoriously difficult to recover from serious

[12] The FPS also corroborated, augmented, and/or expedited existing investigations that resulted in administrative action against an additional 20 providers. These actions resulted in additional identified savings of approximately $39.4 million.

[13] Centers for Medicare & Medicaid Services, "Report to Congress, Fraud Prevention System, First Implementation Year." See http://www.stopmedicarefraud.gov/fraud-rtc12142012.pdf.

fraudsters, who often are not operating legitimate businesses at all, and often take steps to move and conceal the Medicare dollars they are able to obtain.

For example, FPS-identified providers may operate a completely false storefront with no real patients and may have offshored ill-gotten gains which are beyond the reach of the law. Other FPS-identified providers may have some percentage of legitimate business but are engaging in upcoding. An over-focus on the adjusted savings number could create incentives for CMS and its program integrity contractors to focus on the latter type more than the former. This is an undesirable result given both types of fraud have no place in our program. The majority of health care providers enrolled in Medicare are honest, reliable business partners. The FPS is not designed to flag transactions from this sort of provider; rather, the FPS is geared towards discovering egregiously improper patterns of billing – often amounting to fraud. Historically, we know that "pay-and-chase is much more difficult than recovering monies from longstanding businesses billing Medicare that may have made mistakes or common errors.

The true financial impact of the FPS, however, is much harder to measure: once CMS uses the information from an FPS lead to impose a money-stopping administrative action against a crooked provider (such as revoking billing privileges), the benefit to the U.S taxpayer is not limited to monies recovered, but also includes any future billings by that provider that were prevented. These kinds of future costs avoided are difficult to estimate with certainty, and for this reason have not– until now – been systematically measured or audited in either the public or private sectors.

There are also other hard-to-quantify benefits of the FPS activity, such as the sentinel effect it creates (discussed in more detail below), and the highly collaborative environment it has fostered between CMS and law enforcement, as well as between CMS and its program integrity contractors, and between the program integrity contractors themselves. It is for these reasons that CMS will make decisions regarding the management of FPS, including internal evaluations of the merit of continuing or expanding FPS, primarily on the identified savings number, which has nearly doubled from the first year report to congress.

2.2. Changes in Behavior and Sentinel Effect

A critical benefit of the FPS implementation is the positive sentinel effect on deterring and reducing fraudulent behavior across the provider population resulting from the FPS and the increased risk of detection.

Since this type of behavior change is difficult to measure, no dollar value can be assessed in the second year to account for sentinel effect savings. However, CMS will continue to monitor for changes in billing and enrollment as indicators of potential sentinel effect.

Aside from the challenges in trying to measure sentinel effect, it is especially difficult to isolate the sentinel effect attributable solely to the FPS given the scope and breadth of CMS's fraud prevention efforts since 2011. CMS is revalidating all Medicare fee-for-service providers, participating in HEAT Strike Force teams, and our ZPICs and MACs regularly engage in education and program integrity activities. The following are the types of changes in behavior that CMS has observed since our fraud prevention activities have taken effect:

- Providers significantly reduce billing after certain administrative actions are implemented, such as payment suspension or edits.
- Provider types reduce their billing in specific regions where a combination of program integrity activities, such as FPS models, HEAT Strike Force activity, and policy changes occur. For example, coordination between the Strike Force and CMS appears to have contributed to a dramatic decline in payment for DME and home health care in Miami and throughout Florida.[14]
- Providers reduce unnecessary orders and referrals for services.

Although CMS is not currently estimating the dollar-value savings of the sentinel effect, the FPS is a significant part of fraud-fighting efforts that likely deters some who might consider attempting to defraud Medicare. CMS will continue to evaluate the efficacy and accuracy of estimating sentinel effect for future reports.

2.3. Activity

At the end of the second implementation year, the FPS contained 74 unique models that identify providers exhibiting billing behavior and characteristics that suggest potential fraud, waste, or abuse, more than double the number of models in place during the first implementation year.

During the second implementation year, the FPS models generated 817 leads that were included in the ZPIC workload. The leads resulted in 469 new investigations and augmented information for 348 existing investigations (Table 3).

[14] The Department of Health and Human Services and The Department of Justice, "Health Care Fraud and Abuse Control Program Report, Annual Report for Fiscal Year 2013". See http://oig.hhs.gov/publications/docs/hcfac/FY2013-hcfac.pdf.

Table 3. Summary of New FPS Leads Worked by Contractors in Year 2

Process Measure	Number of Leads
Leads Added to the Contractor Workload	**817**
Leads Resulting in a New Investigation	469
Leads Supporting Existing Investigations	348

Source: Fraud Prevention System. This table summarizes the new leads that entered the contractors' workload during the Second Implementation Year. The ZPICs also continued to work leads that were opened during the first implementation year.

Summary of Administrative Actions

Based on FPS leads, CMS took administrative action against **938 providers**. Such actions included revocation of billing privileges, implementation of auto-denial and prepayment review edits, referrals to law enforcement, and suspension of payments. Table 4 summarizes the number of providers, defined as unique National Provider Identification (NPI) numbers, which were subject to administrative action (note that many providers were subject to multiple administrative actions).

Table 4. Summary of Activity Taken Based on FPS Leads

Action	Number of Providers Unduplicated Oct 2012 – Sept 2013
Providers with an Administrative Action	**938**
Providers with Prepayment Review Denials	423
Providers with Denials from Local Auto-Denial Edits	254
Providers on Payment Suspension	35*
Providers with Overpayments Referred to the MAC for Recovery	235
Providers Referred to Law Enforcement	75
Providers Revoked	48

Source: CMS Detailed Data submitted by ZPICs pursuant to Technical Direction Letter. Data were not captured by provider during the first implementation year; therefore, a comparison year to year is not feasible. Providers are defined as unduplicated National Provider Identifiers (NPIs) in each category and contractor for total time period.

* These 35 providers were on active payment suspension as of the last day of the reporting period. An additional 20 providers were on payment suspension during the reporting period but were terminated from payment suspension prior to the end of the reporting period.

Prevention actions dominated the activity, including prepayment and auto-denial edits, revocation, and payment suspension. In a prevention focused strategy, detection and recovery remain critical to ensure that payments made improperly are recovered. Therefore, overpayment recovery will continue to be a critical measurement of savings.

2.4. Savings

CMS prevented or identified $210.7 million in payments, almost twice the dollars prevented or identified during the first year of the program. Based on CMS's actions taken based on FPS information CMS conservatively estimates that $54.2 million was prevented from being paid from or will be returned to the Trust Funds. This section presents the results of the savings calculations.

Savings Measures

The SBJA states that the second implementation year report:

> *specifies the actual and projected savings to the Medicare fee-for-service program as a result of the use of predictive analytics technologies, including estimates of the amounts of such savings with respect to both improper payments recovered and improper payments avoided.*[15]

There are six administrative actions that result in measurable savings, as summarized in Table 5.

Table 5. Administrative Actions Resulting in Measurable Savings

Administrative Action	Definition
Prepayment Edit for Medical Review	An edit that prevents processing of claims pending medical review.
Auto-Denial Edit	An edit that prevents payment for non-covered, incorrectly coded, or inappropriately billed services.
Payment Suspension	Provider-specific action that temporarily suspends Medicare payments pending investigation of credible allegations of fraud or based on reliable evidence of overpayment.
Overpayment Determination	Medicare payments received by a provider determined to be in excess of amounts due and payable and for which a request is submitted to the MAC for collection.
Law Enforcement Referral	Cases of suspected fraud referred to the OIG Office of Investigations.
Revocation	Termination of a provider's billing privileges.

Based on these administrative actions, CMS defined outcome measures that calculate the benefit of taking the action. Table 6 summarizes the six outcome measures and whether they meet the definition of actual or projected savings in the SBJA.

[15] SBJA Section 4241(e)(1)(B)(i)

Table 6. Outcome Measures of Actual and Projected Savings Broadly Defined by the SBJA

Measure	Actual Savings (Recovery)	Projected Savings (Recovery)	Projected Savings (Avoidance)
Amount Denied Based on Prepayment Review	✓		
Amount Denied by Auto-Denial Edits	✓		
Amount of Payments Suspended Expected to Offset Medicare Overpayments	✓		
Amount of Overpayments Expected to be Recovered		✓	
Amount Expected to be Recovered based on Law Enforcement Referrals		✓	
Costs Avoided By Revoking Billing Privileges			✓

Identified Fraud, Waste, and Abuse

The FPS identifies leads that are investigated by the ZPICs through traditional "boots-on-the-ground" activities, such as onsite visits to the provider, interviews with beneficiaries, and review of medical documentation. Based on the results of all information collected, the ZPICs take appropriate administrative action based on regulations guiding those actions.

The administrative actions and associated savings increased substantially in the second implementation year, indicating the FPS is getting better at identifying fraud, waste, and abuse.

For example, the FPS identified an aberrant provider, and based upon the FPS lead and the subsequent investigation, CMS revoked the provider's Medicare billing privileges. The revocation of billing privileges has a monetary benefit in terms of halting direct billing from the providers, and the additional benefit of preventing the revoked individual from ordering certain supplies and services and deterring other individuals from exhibiting the same inappropriate billing behavior. As shown in Table 7, the amount of identified savings for prevention activities increased considerably, especially in terms of cost avoidance due to revoking billing privileges.

CMS Revokes Provider Due to FPS

FPS identified a group practice for having a high risk of inappropriate billing. A contractor conducted an unannounced site visit, interviewed beneficiaries, and reviewed medical records. The evidence showed that the aides working in the group were not appropriately trained and the provider was billing Medicare for services were in fact performed by unqualified individuals.

The provider was removed from the Medicare program, preventing over $700,000 of inappropriate payments and ensuring that Medicare beneficiaries receive quality care from trained providers.

Table 7. Identified Savings from First to Second Year

	Measure	First Implementation Year July 2011 – June 2012 $ (Millions)	Second Implementation Year Oct 2012 – Sept 2013 $ (Millions)
Actual	Amount Denied by Prepayment Edits	11.5	16.8
	Billed Amount Denied by Auto-Denial Edits[1]	4.7	1.6
	Payment Suspensions	1.6	2.3[2]
Projected	Amount of Overpayments Referred for Recovery	4.4	35.6
	Value of Law Enforcement Referrals	68.2	73.2
	Cost Avoidance due to Changes in Behavior	11.1	N/A[3]
	Cost Avoidance from Revoking Provider Billing Privileges	13.9	81.2
	Total	**115.4**	**210.7**

Sources: The First Year data were published in the "Report to Congress – Fraud Prevention System – First Implementation Year" in December 2012.

Notes: The Small Business Jobs Act of 2010 (P.L. 111-240) defines the first implementation year as July 1, 2011 through June 31, 2012 and the second implementation year as October 1, 2012 through September 30, 2013. The purpose of this table is to provide trending information based on unadjusted savings numbers.

[1] The auto-denial edits referenced in this table are those edits that the ZPICs request the MACs to implement based on information in the FPS. Claim denials based on these edits are not directly through the FPS

[2] This the dollar amount in escrow in the last month of the reporting period. 35 providers were on active payment suspension as of the last day of the reporting period. The dollar amount excludes amounts that were in escrow during the year but the payment suspension was terminated prior to the end of the reporting period. These dollars are included in the overpayment measure.

[3] In the first implementation year, a set of national edits were put in place for certain providers. The providers subject to the edit stopped billing; therefore, cost avoidance was calculated. This is not relevant to the second implementation year.

Value of FPS Including Corroborating, Augmenting, and Expediting Investigations

In addition to identifying new leads and new issues, FPS information may corroborate, augment, or expedite (increase the priority) of investigations. The information in FPS may be more recent, use a different time period, add a new related provider, or confirm that an issue remains of concern. Information in the FPS may increase the priority of a lead, pushing certain cases to the top of the ZPIC workload. While the contractor may have eventually taken action, the FPS forced the action sooner. The FPS provides a constant stream of new, actionable information, and thus even if it is not the sole source of a lead or the only tool being used by the investigators, FPS creates a robust environment where cases and investigations can move faster and gain additional evidence to substantiate potential fraud more easily.

While CMS believes that the ability of the FPS to corroborate, augment, and expedite cases is of great value to any investigation, there is a significant challenge to measuring the impact using the standards of a financial audit. Investigations are fluid and dynamic and investigators need to work the case using all available information. If we require our investigators to attribute the role of each piece of information in their decision making, it would severely disrupt the actual work of combatting fraud. It would be extremely time consuming, completely subjective and highly disruptive for the investigator to attribute a portion of a case back to a single source. Therefore, CMS asserts that outcomes resulting from existing investigations that were corroborated, augmented, or expedited by FPS should be counted in the full value of savings.

CMS identified or prevented an additional $39.4 million using information in the FPS to corroborate, augment, or expedite existing investigations. These outcomes are part of the substantial value of the technology in contributing to existing investigations. The following are examples of administrative actions that are part of the $39.4 million in value but for which documentation was insufficient to be included by the OIG in the certified savings:

FPS Expedites Investigation

Another provider had been under minimal oversight since 2011. The FPS flagged the provider with critical new information, prompting CMS to quickly conduct a site visit. CMS found that the provider did not have an office.

The provider was revoked from Medicare and an overpayment collection is underway. CMS prevented over $1 million in inappropriate payments by revoking the provider and identified over $700,000 in overpayments.

- A provider had been under review by the ZPIC since 2011. The FPS flagged the provider, corroborating the initial allegations and prioritizing the investigation. The ZPIC conducted an onsite visit and confirmed that the provider did not have an office. Therefore, the ZPIC revoked the provider and referred an overpayment to the MAC for collection. The activities spanned the implementation years – the provider was revoked in the first implementation year (identified savings of more than $1 million) and the overpayment determined in the second implementation year (identified savings of more than $700,000).
- A provider had been monitored by the ZPIC since 2011. The FPS flagged the provider with additional information. The ZPIC confirmed that a provider interview was conducted based on the new information in the FPS. The case was later referred to law enforcement, and included

information directly from the FPS. The referral identified more than $3 million in potential fraud.

- A physician had previously been under investigation by a ZPIC. The FPS flagged the physician, prompting the ZPIC to expedite the investigation and order a site visit. The ZPIC found an empty office and discovered that the physician's medical license had been revoked in another state. The ZPIC revoked the physician and referred an overpayment for collection.

Adjustment Factors

To meet both the requirements of the SBJA and the OIG's certification, defined as a financial audit, CMS developed adjustment factors and their proportionate impact on recoveries to produce a conservative estimate of actual savings. To our knowledge, this is the first time any agency or organization in the public or private sector has attempted to calculate such factors as they apply to health care fraud detection and prevention activities.

This section describes the assumptions and calculations used to estimate these adjustment factors applied to the identified savings. The development of each adjustment factor and its impact on recoveries is the product of months of analysis and collaboration between CMS and OIG. In general, we adopted a more conservative approach in our first attempt to quantify these factors and estimate actual savings. In some cases, unknown information prevents CMS from determining a precise estimate of projected savings and the cost of collecting that information is prohibitive. In these situations, CMS calculated conservative adjustment factors to estimate the lowest savings related to the administrative actions, recognizing that the estimate is the lower bound of the range of potential savings.

In order to adhere to the audit standards applied to the savings measurement effort, CMS took very conservative approaches to estimating savings. Several of the OIG's recommendations require the alignment of multiple data systems to allow tracking of administrative actions from source to conclusion; these systems changes have been initiated. Once the changes are made, CMS will report actual savings. In the meantime, CMS is applying conservative adjustment factors developed based on experience in the time period prior to FPS implementation to estimate savings. CMS recognizes that adjustment factors have inherent limitations because they are estimates based on historic data obtained for purposes other than measurement.

Paid Amount Adjustment Factor

The Paid Amount Adjustment Factor accounts for the difference between billed amounts and the amounts Medicare pays (Table 8). The ZPICs receive reports from the MACs that summarize the claims that were denied due to auto-denial edits requested by the ZPICs or denied due to prepayment review conducted by the ZPICs. The reports may indicate the billed amount or the allowed amount (e.g. what would have been paid) of the denied claims. In those cases where the ZPIC only has the billed amount from the MAC reports, CMS will apply an adjustment factor to estimate the paid amount. The adjustment factor is based on the ratio of paid amount and billed amount for claims paid in calendar year 2012 by service area.

Table 8. Paid Amount Adjustment Factor

Application	Calculation	Paid Amount Adjustment Factor (As Percentage)
The Paid Amount Adjustment Factor is applied to billed amounts for claims denied due to automatic edits and prepayment review to estimate savings.	Ratio of paid amount and billed amount	Part B Individual: 37% Part B Organization: 75% DME: 51% Outpatient: 47% Hospice: 63% Home Health: 100%

Note: The source of data is the Integrated Data Repository. Ratio calculated using claims in calendar year 2012. Part A is immaterial because there were no savings related to Part A (non-home health) services.

Appeals Adjustment Factor

The Appeals adjustment factor accounts for claims paid after the provider successfully appeals denied claims (Table 9). Providers have the right to appeal denials made as a result of auto-denial edits or prepayment review. In some cases, payment denials may be overturned on appeal.

As a proxy to adjust for claims overturned through the appeals process, the FPS uses the estimated appeals adjustment factor included in a 2012 OIG report on the Comprehensive Error Rate Testing (CERT) program.[16] However, the CERT program does not use the OIG's adjustment factor to estimate appeals activity; rather, CERT tracks and applies actual appeals experience. As there are data limitations that prevent CMS from tracking actual appeals experience related to the FPS, CMS uses the adjustment factor as a conservative proxy.

[16] Office of Inspector General Report, "Review of CERT Errors Overturned Through the Appeals Process for Fiscal Years 2009 and 2010, Appendix A." (A-01-11-00504). See http://oig.hhs.gov/oas/reports/region1/11100504.pdf.

Using this method overestimates the amount of claim dollars that will be overturned due to appeals since the claims used in the OIG method are based on a random sample from the CERT program, whereas the claims used in the FPS ROI calculation are targeted and are at a higher likelihood to be upheld on appeal because they are more likely to be fraudulent. Consequently, this underestimates the savings and results in a conservative ROI calculation. CMS is implementing changes to its data systems to provide a method for tracking claims overturned through the appeals process. This capability will not be available until after the end of the second implementation year.

Table 9. Appeals Adjustment Factor

Application	Calculation	Appeals Adjustment Factor (as percentage)
The Appeals Adjustment Factor is applied to the billed amounts for claims denied due to automatic edits and prepayment review to estimate the impact of successful appeals on the savings.	Average percentage reduction in error rate due to claim payment denials overturned due to appeal	93.3%

Note: The adjustment factor was calculated by averaging the "Percentage of Change in Error Rate" for FY 2009 (7.7%) and FY 2010 (5.7%) in Appendix A of OIG Report A-01-11-00504.

Payment Suspension Adjustment Factor

A payment suspension is an administrative action that temporarily withholds all or a portion of the payments to a provider. When a payment suspension is terminated and an overpayment is determined, any funds withheld are applied to recoup overpayments and outstanding Federal debts. When the payments are released, the amount due to the provider or supplier is first applied to reduce or eliminate any outstanding overpayments that have been referred to the MAC for recovery.

Historically, 96.3 percent of the dollars held during a payment suspension are subsequently recouped and returned to the Medicare Trust Fund. Therefore, the amount held in payment suspension at the end of the second implementation year is multiplied by 96.3 percent to estimate the amount of projected savings (Table 10).

Table 10. Payment Suspension Adjustment Factor

Application	Calculation	Paid Amount Adjustment Factor (as percentage)
The Payment Suspension Adjustment Factor is applied to amounts in escrow for providers on payment suspension on the last day of the reporting period to estimate the amount that will be used to offset overpayments referred to the MAC for recovery.	The ratio of the total amount of payments in escrow used to offset overpayments referred for recovery and the total amount in escrow prior to the payment suspension terminations.	96.3%

Notes: The source of data is the Fraud Investigation Database (amount in escrow prior to termination and amount of overpayment referred for recovery). Ratio calculated using suspensions terminated from July 2009 to June 2012.

Overpayments are Medicare payments a provider or supplier has received in excess of amounts due and payable under statute and regulations. Once an overpayment amount is determined, the ZPIC refers the overpayment to the MAC for recovery. The MAC has the authority to issue a demand letter to the provider and collect the dollars owed to the government through collections against accounts receivable. Based on past experience, the MAC does not recover the full amount of each overpayment referred by the ZPIC. On average, the percent of the identified overpayments that are collected differs by ZPIC zone, ranging from 9 percent to 40 percent with an overall average of 18.5 percent.

Overpayments referred to the MAC for recovery were adjusted by the percent applicable to the zone in which the overpayment was identified (Table 11). For longstanding Medicare providers who owe overpayments, CMS has a high recovery rate because future payments are offset to recoup overpayments. However, with potentially fraudulent providers, the recovery rate is lower because they are less likely to comply with the demand for payment. The recoupment may not be as easy when dealing with these types of providers, since they often close up shop without notice and stop using the billing number at issue prior to initiation of collection efforts.

Table 11. Overpayment Adjustment Factor

Application	Calculation	Overpayment Adjustment Factors (as percentages)
The Overpayment Adjustment Factor is applied to overpayment amounts referred to the MAC for recovery to estimate the amount expected to be collected.	The ratio of the total amount of overpayments recovered by the MAC to the total amount of overpayments referred to the MAC for recovery; calculated separately for each contractor.	Zone 1: 14% Zone 2 18.5% Zone 3: 18.5% Zone 4: 17% Zone 5: 19% Zone 7: 9% PSCs: 22%, 40%*

Note: The sources of data are CMSARTS (field A9) and monthly reports provided by the Medicare Administrative Contractors (MACs) to the ZPICs that document overpayment recoveries. The time period is July 2011 through June 2012. The amounts include all ZPIC/PSC providers on overpayment recovery and are not limited to those overpayment recoveries that are FPS specific.

* The three Program Safeguard Contractors in Zone 6 have an adjustment factor of 40%. The Program Safeguard Contractor focused only on durable medical equipment issues has an adjustment factor of 22%.

Law Enforcement Adjustment Factor

CMS and its contractors refer cases of suspected fraud to law enforcement for consideration as potential criminal matters. A number of factors can reduce the amount of actual dollars recovered from cases referred for criminal law enforcement. These include the fact that criminal fraud investigators and prosecutors have limited resources, so some cases cannot be pursued all the way to criminal charges. In addition, healthcare fraudsters in most cases do not retain 100 percent of their ill-gotten gains.

Another factor is that recoveries from criminal cases are necessarily limited to the dollars that investigators and prosecutors can show stemmed from the fraud and can actually trace, often through a number of transactions or bank accounts specifically designed to conceal the final destination of ill-gotten gains. However, perhaps the most important factor is that criminal conduct must be proven to the highest possible level of proof – beyond a reasonable doubt. This means that investigators and prosecutors build their cases around the strongest facts in a given case, and it is therefore often necessary to limit the final court charges or plea agreement to the most egregious and best-supported aspects of a much larger case.

The GAO audited the OIG's internal tracking system data in 2012[17] and found that 11.8 percent of the cases referred to the OIG involved defendants that were charged and found guilty or pled guilty or no contest. CMS identified cases that were referred to OIG by the ZPICs and the defendants were found guilty or pled guilty or no contest. Based on the information in the Fraud Investigation Database and the OIG's internal tracking system, 49.7 percent of the estimated value of the case (estimated by the ZPICs) was ordered by the court to be recovered through restitutions, judgments, fines, and settlements. Therefore, for those cases that were referred to OIG, CMS estimates that 5.9 percent of the value (i.e., 49.7 percent of 11.8 percent) would be recovered over time if the cases referred due to the FPS follow the same pattern as the cases concluded over the past several years (Table 12).

Table 12. Law Enforcement Adjustment Factor

Application	Calculation	Law Enforcement Adjustment Factor (as percentage)
The Law Enforcement Adjustment Factor is applied to the value of law enforcement referrals to estimate the expected savings.	The ratio of court ordered restitutions, judgments, fines, and settlements and the original amount at risk identified by the ZPIC	5.9%

The sources of information include the GAO Report GAO-12-820, OIG's IRIS system (accepted cases where the original source was a ZPIC/PSC there were closed by the OIG Office of Investigations) and the Fraud Investigation Database (estimated value of referral). The time period is July 2009 to June 2012.

Revocation of Billing Privileges

A revoked provider's historic billing may contain both proper and improper claims. It is impractical to confirm with certainty whether individual beneficiary claims were illegitimate as it would require intensive investigative resources to conduct the needed medical record reviews, provider and beneficiary interviews to make a determination. The issue of estimating the proportion of claims that are legitimate will continue to be a challenge. To meet the requirements of the OIG's financial audit, CMS developed an adjustment factor to estimate the proportion of illegitimate claims a revoked provider may have submitted by examining the change in utilization by beneficiaries affected by the revocation action (Table 13).

[17] Government Accountability Office Report, "Types of Providers Involved in Medicare, Medicaid, and the Children's Health Insurance Program Cases." (GAO-12-820). See http://www.gao.gov/products/GAO-12-820.

Table 13. Cost Avoidance Adjustment Factors

Application	Calculation	Cost Avoidance Adjustment Factor (as percentage)
This factor is applied to the value of costs avoided to estimate the portion of claims by a revoked provider that will continue to be billed by enrolled provider, using this as a proxy for legitimate claims	The ratio of billing for beneficiaries prior to revocation and billing for the same beneficiaries for similar services with different providers after revocation	Part B: 52% HHA: 24%

Note: The source of data is the Integrated Data Repository. BETOS categories are used to analyze Medicare costs to identify similar services. All Health Care Financing Administration Common Procedure Coding System (HCPCS) procedure codes are assigned to a BETOS category. BETOS codes are clinical categories. There are seven high-level BETOS categories: Evaluation and Management, Procedures, Imaging, Tests, Durable Medical Equipment, Other, Exceptions/Unclassified

This approach assumes that, after a revocation action, when the revoked provider's beneficiary receives "similar" services from a non-revoked provider(s), the historic services being billed for by the revoked provider for that same beneficiary are presumed to be legitimate. We know that under various fraudulent schemes, such as list billing (submitting claims for services not rendered), that the assumption is likely to overestimate the "legitimate" claims a revoked provider submitted historically.

Adjusted Savings

While the identified savings amount represents the amount of fraud, waste, and abuse the FPS identified, the adjustment factors apply a reduction to represent the inherent challenges, both in process and resource constraints, of successfully recovering payments and preventing fraudulent schemes from quickly migrating. Based on the conservative adjustments, CMS estimates that $54.2 million of identified savings will be returned to the Trust Funds or prevented from being paid (Table 14).

2.5. Return on Investment

The SBJA requires that return on investment for the FPS be calculated as the actual and projected savings compared to the costs expended to achieve these savings.

Actual and Projected Savings

As detailed above in Section 2.3, FPS benefits and savings included in the ROI calculation result from revocation of billing privileges, edits, payment suspensions, overpayment determinations, and referrals to law enforcement.

Table 14. Adjusted Savings

	Measure	Second Implementation Year Oct 2012-Sept 2013 $ (Millions)
Actual	Amount Denied Based on Prepayment Review [a]	11.5
	Amount Denied by Auto-Denial Edits [a]	1.2
	Amount of Payments Suspended Expected to Offset Future Medicare Overpayments [b]	2.2
Projected	Amount of Overpayments Expected to be Recovered [c]	5.8
	Amount Expected to be Recovered based on Law Enforcement Referrals [d]	4.3
	Cost Avoidance due to Changes in Behavior [e]	N/A
	Costs Avoided By Revoking Billing Privileges [f]	29.2
	Total	**54.2**

Notes: The measures listed in this table are defined in the Fraud Prevention System Return on Investment Methodology in Appendix E. The savings for the second implementation year are the unadjusted savings (Table 8) adjusted based on the Fraud Prevention System Return on Investment Methodology.

a The unadjusted savings that were submitted by the contractors as billed amounts were multiplied by an adjustment factor of 37% to 100% depending on the service type to estimate paid amounts. The estimated paid amount was then multiplied by an adjustment factor of 93.3% to estimate paid amounts after appeals.

b The unadjusted amount in payment suspension accounts at the end of the reporting period was multiplied by 96.3% to estimate the amount that will be recovered to offset future overpayments.

c The portion of unadjusted overpayments referred to the MAC for recovery were multiplied by 9% to 40% depending on the contractor to estimate actual recoveries.

d The unadjusted law enforcement referral value was multiplied by 5.9% to estimate the expected court ordered recoveries.

e In the first implementation year, a set of national edits were put in place for certain providers. The providers subject to the edit stopped billing; therefore, cost avoidance was calculated. This is not relevant to the second implementation year.

f The unadjusted cost avoidance value was multiplied by 24% for home health agencies and 52% for Part B providers to estimate shifting of similar services from revoked providers to existing providers.

As discussed, savings are calculated in two categories: actual savings and projected savings. The total savings attributed to the FPS analytics technology in the second year of implementation are an estimated $210.7 million identified savings and $54.2 million adjusted savings (Table 15).

Costs

Costs incurred in the second year of FPS implementation fall into three primary categories: FPS contractor costs, FPS-related CMS management costs, and ZPIC costs incurred in investigating and acting upon FPS-generated leads.

Table 15. Summary of Estimated FPS Savings

Savings	Actual Savings $ (Millions)	Projected Savings $ (Millions)	Total Savings $ (Millions)
Identified	20.7	190.0	**210.7**
Adjusted	14.9	39.3	**54.2**

- **FPS contractor costs**
  Contract costs for the Development Contractor and the Modeling Contractor cover the period from October 1, 2012 to September 1, 2013. Costs included in the calculation are amounts paid during the year.
- **CMS management costs**
  Management costs cover CMS staff supporting the FPS during its first implementation year. These costs include the estimated salaries and benefits for 15.25 full-time equivalents (FTE) at $130,065 per FTE, along with an associated overhead factor of 15 percent representing office expenses, training, travel, and other expenditures, for a total of $149,575 per FTE. The total CMS management costs are an estimated $2.3 million, or $149,575 each times 15.25 FTEs.
- **Investigation costs**
  An estimated portion of the ZPIC costs is included since a portion of their time is spent acting upon FPS leads. These costs are estimated by calculating the percentage of total ZPIC investigations created from FPS leads (including new leads in the second year, new leads in the first year that were also worked in the second year, and existing investigations where administrative action was taken due to FPS) and multiplying that percentage by their total investigator costs.[18] The MACs' workload of processing FPS-generated edits and revocations is fairly minimal and part of their existing workload. It is considered immaterial and therefore not included in the costs.

Total costs associated with the FPS in the second implementation year are an estimated $40.5 million, as shown in Table 16.

[18] The category "Investigation Costs" is an estimate of FPS-related investigative costs for ZPICs. ZPICs continued to work FPS leads through the FPS second implementation year as part of their investigative workload and did not report costs directly related to leads generated by this system.

Table 16. Estimated FPS Costs

Category	$ (Millions)
FPS Contractor Costs	
Development Contractor Costs	30.4
Modeling Contractor Costs	3.8
CMS Management Costs	
Salaries (Government FTE) with Benefits and Other Indirect Costs, Including Training and Travel	2.3
Investigation Costs	4.0
Total Estimated Costs	**$40.5**

ROI Calculation

In accordance with the SBJA, the FPS's return on investment is calculated as the actual and projected savings compared to the costs expended to achieve the savings. An ROI greater than 1 indicates that benefits or savings outweigh the costs—for example, $30/$15 is an ROI of 2 to 1, or $2 saved for every $1 expended. Typically, the ROI in the early years of a system's implementation is expected to be lower than in future years due to the inherent up-front costs that normally outweigh the realized benefits whenever a new system such as the FPS is implemented.

A better measure of the success of the FPS – in keeping with the design of the program – is how much and how quickly it helps CMS and law enforcement detect payments that may be fraudulent, relative to claims being generated and submitted.

The identified savings associated with these prevention and detection actions due to FPS was $210.7 million, almost double the amount identified during the first year of the program. This resulted in more than a $5 to $1 return on investment.

In terms of decisions regarding the management of FPS, including internal evaluations of the merit of continuing or expanding FPS, CMS will continue to focus primarily on the full value of identified savings. Based on the positive growth of the program (savings doubled in the second implementation year) and the success of the FPS in identifying bad actors quickly, CMS will continue initiatives to maintain, improve, and expand the FPS in future years.

2.6. Impact on Medicare Beneficiaries and Providers

CMS is committed to providing quality health care services to beneficiaries while reducing fraud to protect taxpayer dollars. CMS is also

committed to reducing administrative and compliance burdens on legitimate providers. The FPS governance process ensures that the system's predictive models and other sophisticated analytics minimize the impact on beneficiaries and legitimate providers and do not adversely affect the quality of health care.

Fraud's Negative Impact on Beneficiaries

CMS revoked 48 providers from Medicare and referred 75 providers to law enforcement for potential investigation for criminal activity. These efforts to prevent fraud have a positive impact on beneficiaries. Reducing fraud contributes to ensuring that beneficiaries have access to quality health care. Fraud can inflict real harm on Medicare patients. When fraudulent providers render unnecessary or substandard care, Medicare beneficiaries do not receive the quality health care they deserve. When fraudulent providers prescribe dangerous drugs without thorough examinations or medical necessity, Medicare beneficiaries are at risk. When fraudulent providers perform medically unnecessary diagnostic tests, treatments, procedures, or surgeries, Medicare beneficiaries suffer real, tangible harm. While not all cases of fraud cause direct harm to beneficiaries, when harm occurs, there are direct human costs.

Medical identity theft cases illustrate how the FPS safeguards Medicare beneficiaries from the potential harm fraudulent providers may inflict. When fraudulent providers steal a beneficiary's identity and bill for services or goods never received, the beneficiary may later have difficulty accessing needed and legitimate care. The FPS directly addresses one form of medical identity theft by monitoring billing patterns for Medicare identification numbers known to be compromised. Combined with other indicators of potential fraud, providers are identified for further investigation and action.

Focusing on Fraudulent Providers

CMS is committed to ensuring that fraud prevention efforts do not place unnecessary administrative and compliance burdens on legitimate providers nor interfere with their business operations. The FPS functions within the congressionally mandated Medicare payment window of 14 to 30 days, preventing payment delays to legitimate practitioners.

3. Beyond the Second Year: Expanding Improper Payment Monitoring and System Efficiencies

The primary focus of the Fraud Prevention System during the first two implementation years was identifying providers with the most egregious behavior for investigation by the ZPICs. The ZPICs have traditionally prioritized the identification of potential fraud and coordination with law enforcement partners to develop case referrals and support ongoing investigations. The ZPICs also implement administrative actions to prevent inappropriate payments. The capability in the FPS currently supports ZPIC work by focusing primarily on behaviors and patterns at the level of the provider and provider networks.

Future of the Successful FPS Tool

- *Expand and improve models to identify bad actors more quickly and more effectively*
- *Deny claims that are not supported by Medicare policy*
- *Identify leads for early intervention by the Medicare Administrative Contractors*
- *Evaluate the feasibility of expanding predictive analytics to Medicaid*
- *Reduce costs of FPS while applying predictive analytics more effectively and efficiently*
- *Share lessons learned and best practices with federal, state, and private partners*

FPS is fully integrated with the Medicare FFS payment system, allowing CMS to review claims prior to payment to understand risk. Because the system is integrated with claims processing, it also has the capability to alert the claims processing system to deny individual claims based on Medicare policy. Through this enhanced integration, CMS can deny certain improper claims, such as those that are medically unbelievable.

The FPS technology has the capability to monitor for any behavior of interest at either the provider or the claim level. CMS is expanding the use of the FPS to support MAC improper payment activities, denying claims that are not supported by Medicare policy, support prepayment review done by the Recovery Audit Contractors, and evaluate the expansion of predictive analytics to Medicaid.

3.1. Identifying Improper Payments for MAC Early Intervention

CMS initiated a pilot project with one MAC to determine whether the providers identified in the FPS that were not currently in the workload of the ZPICs were submitting a high number of likely improper payments

and therefore, appropriate targets for a medical review and education intervention. The first phase of the pilot was completed during the second implementation year with positive results. During the third implementation year, CMS will explore giving all of the MACs access to the FPS to identify leads for medical review or education.

The FPS already contains several models that monitor for billing patterns in service areas that contribute to Medicare's improper payment rate. The FPS includes information on all providers that are flagged by the models; the providers in the top tier, with the highest risk, are then investigated by the ZPICs. There is significant opportunity to address the next tier of FPS-identified providers and determine which of these are engaged in improper billing.

The Comprehensive Error Rate Testing (CERT) program measures improper payments in the Medicare Fee-for-Service (FFS) program. CERT is designed to comply with the Improper Payments Information Act (IPIA) of 2002, as amended by the Improper Payments Elimination and Recovery Act (IPERA) of 2010 and Improper Payments Elimination and Recovery Improvement Act (IPERIA) of 2012. In 2012, drivers of the improper payment rate included home health agencies, skilled nursing facilities, durable medical equipment, and evaluation and management services.[19]

MACs conduct medical review to ensure that payment is made only for services that meet all Medicare coverage, coding, and medical necessity requirements. Medical review activities are directed toward areas where data analysis, CERT and OIG/GAO findings as well as Recovery Auditor vulnerabilities indicate questionable billing patterns. Many of the focus areas that are part of the MACs' medical review strategy are already targeted in the FPS.

Pilot Overview

A Command Center mission was held to bring together CMS experts, the MAC and ZPIC that cover the same geographic area, and the FPS team to collaborate. The mission identified eight providers that were not in the ZPIC workload but were flagged by FPS models that suggested improper billing. The MAC implemented a two-phase intervention for those providers with the goal of quick action. First, the MAC contacted individual providers to discuss their billing data. If the provider did not have a satisfactory explanation for their aberrant billing pattern or did not change their billing, the provider's claims were placed on prepayment

[19] Centers for Medicare & Medicaid Services, "Medicare Fee-for-Service 2012 Improper Payments Report." See http://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/CERT/Downloads/MedicareFeeforService2012ImproperPaymentsReport.pdf.

review. Prepayment review involves collection of information and clinical review of medical records prior to payment is made but after the service was rendered.

Four of the eight providers that the MAC contacted changed their billing within one month, which the MAC was able to confirm in the billing data. The providers cited mistakes and not interpreting the policy correctly (see example below). The FPS continues to monitor the billing pattern and will flag the providers again should the improper billing resume.

Two other providers were instructed to complete a self-audit and the results are pending. The two remaining providers did not change their billing patterns. One of those providers is now on prepayment review, meaning that their claims will not be paid until medical records are produced that support payment. Those records will be reviewed and a decision made regarding the accuracy of the claim. The other provider is subject to a review of previously paid claims to determine whether the issue warrants additional action.

MAC Intervention Example

The FPS flagged a chiropractor for billing in a pattern that is inconsistent with Medicare policy. The MAC contacted the provider by mail and telephone to discuss the Medicare policy and the provider's billing trends.

The provider changed their billing the next month, with an anticipated savings of over $135,200 this year. The FPS continues to monitor the provider and will create an alert should the improper billing resume.

Another value of expanding the use of the FPS tool is that the MAC and ZPIC may be able to better coordinate audit activity on a specific provider in the same system, reducing burden on the provider and providing a forum for collaboration between contractors. During the second phase of the pilot, when the MAC receives access to the FPS, both contractors would be able to add notes and see what is happening with the provider in the same system. CMS is also exploring enhancements to the FPS such that the MAC could seamlessly transfer any provider that warrants investigation as a potential fraud situation to the ZPIC.

The MAC cited the speed with which the billing behavior was changed and the low cost of the intervention as positive outcomes of the pilot. The time-to-action was reduced due to the FPS flagging claims in real time and the MAC discussing very recently submitted claims and real time billing patterns with the providers. The cost of the intervention was reduced because there were no additional costs for the analysis (the FPS is in place and includes models consistent with MAC medical review focus areas) and several providers changed behaviors based on a conversation rather than the traditional approach of reviewing medical records first.

The MAC reported that the cost for conducting the accelerated intervention was less than a traditional medical review for those providers that changed behavior quickly. The cost of the intervention leveraging FPS data was less than $350 for providers that changed their behavior after the first education phone call. The MAC reported that the cost for conducting the accelerated intervention was significantly less than a traditional medical review for those providers that changed behavior quickly.[20]

CMS will explore expanding access to the FPS for the MACs during the Third Implementation Year and incorporate new models into the FPS that have an improper payment focus to identify targets for medical review. Rapid identification of likely improper billing through the FPS, quick intervention, continuous monitoring, and MAC/ZPIC coordination has significant potential for Medicare savings.

3.2. Leveraging Technology to Deny Claims

One of the most important advances FPS brings to CMS's fraud identification capabilities is that the FPS is uniquely capable of evaluating claims for episodes of care that span multiple legacy claims processing systems as well as those that span multiple visits over a period of time. What this means is that FPS can identify billing patterns and claim aberrancies that would be undetectable or difficult to detect by CMS's current claim edit modules or a single contractor reviewing on a claim by claim basis.

In addition, FPS now has the capability to stop payment of certain improper and non-payable claims by communicating a denial message to the claims payment system. As recommended by the GAO, CMS successfully enhanced the integration of the FPS and the claims processing system during the second implementation year.[21]

Proof of Concept

CMS launched an Ambulatory Surgical Center edit in one state as a proof of concept to test the functionality of rejecting claims directly through the FPS. An edit was in the process of being coded into the claims processing system; CMS implemented the edit in the FPS two months sooner to test whether the integration accurately rejected the improper claims. The edit rejected physician claims that had an inappropriate

[20] National Government Services (NGS).

[21] Government Accountability Office Report, "CMS Has Implemented a Predictive Analytics System, but Needs to Define Measures to Determine Its Effectiveness." (GAO-13-104) See http://www.gao.gov/assets/650/649537.pdf.

place-of-service (POS) submitted. The POS was inappropriate because the service was performed in an Ambulatory Surgical Center; however, the physician indicated the service was conducted in the physician's office in order to receive higher payment.

CMS successfully rejected 125 claims for 52 providers during the proof of concept, totaling over $40,000. While the savings may be small for this single edit in one state, the project confirmed that the FPS is successfully integrated with the claims processing system and the FPS is appropriately integrated with the business process for edits to ensure that the provider community has appropriate communication and appeals support.

CMS intends to expand the number of edits in the third implementation year. Collaboration is underway with CMS partners to select additional edits for inclusion in the FPS.

3.3. Exploring Predictive Analytics in Medicaid

Under the SBJA, CMS is required to evaluate the cost-effectiveness and feasibility of expanding predictive analytics technology to Medicaid and the Children's Health Insurance Program (CHIP) during the third implementation year of the FPS. Based on this analysis, the law requires CMS to determine whether to expand predictive analytics to Medicaid and CHIP by April 1, 2015. Although Medicaid is administered and organized in a distinctly different way than Medicare, CMS anticipates that there are opportunities to transfer the knowledge and lessons learned about Medicare through the FPS to states for uses applicable to Medicaid.

However, there are challenges to expanding predictive analytics to Medicaid. The SBJA requires Medicare fee-for-service analytics to be done using prepayment information to identify fraud, waste, and abuse. States administer the Medicaid program and prepayment data on Medicaid fee-for-service claims is maintained at the State level. Data provided to CMS on Medicaid payments are post-payment; therefore, any analytics conducted by CMS would be after payments are made. In addition, many States are expanding their managed care programs, reducing the enrollment of Medicaid recipients in fee-for-service coverage. States may or may not have access to prepayment managed care encounter data that mirrors that fee-for-service information. Due to these challenges, prepayment predictive analytics may be best implemented by States.

Several State Medicaid programs are already in the process of implementing predictive analytics technology as part of their program integrity efforts. CMS may approve enhanced Federal Financial

Participation for predictive analytics technologies that are integrated with State Medicaid Management Information Systems (MMIS) based on the statutory authority in §1903(a)(3). CMS approved enhanced funding for five states to implement predictive analytics.

As part of the evaluation of expanding predictive analytics to Medicaid, CMS is engaging in several activities during the third implementation year:

- Providing general technical assistance packages for States that are considering procuring predictive analytics technology.
- Providing targeted technical assistance to States implementing predictive analytics technology, including holding Command Center missions with these States to provide a forum for sharing lessons learned and best practices.
- Sharing Medicare revocations generated from FPS leads with State Medicaid Agencies. Medicaid is required, per the Affordable Care Act, to terminate providers revoked from Medicare for cause after appeal rights are exhausted.
- Evaluating the feasibility and procedures for exchanging algorithms between CMS and States.
- Participating in training sessions at the Medicaid Integrity Institute (MII), which trains State program integrity staff. Established through an interagency agreement with the U.S. Department of Justice, the MII is located within DOJ's National Advocacy Center, in Columbia, SC. As the first national Medicaid program integrity training program, the MII provides a unique opportunity for CMS to offer substantive training, technical assistance, and collaboration among states in a structured learning environment. Training sessions at the MII include a Data Experts Symposium where attendees participate in a combination of lectures, demonstrations, breakout group discussions, and computer workshop exercises designed to identify new approaches, and develop best practices. Course topics include sampling and extrapolation, assignment of risk, integrating various data sources, predictive analytics, linkage software, and developing and working with algorithms.
- Holding focus groups with States to explore opportunities and challenges for expanding predictive analytics based on the requirements in the SBJA.
- Exploring opportunities to include post-payment provider information and claims information in the FPS to support the Medicaid Integrity Program and the Medicare-Medicaid Data Match Program (Medi-Medi). Through Medi-Medi, the ZPICs collaborate with State Medicaid Agencies

to jointly investigate potential fraud and abuse. Adding Medicaid information in the FPS could enhance the collaboration and outcomes.

3.4. Leader in Applying Predictive Analytics Technology

CMS has emerged as a leader in using predictive analytics technology to target program integrity resources and measuring the outcomes of a prevention program. In July 2013, the GAO, Council of the Inspectors General on Integrity and Efficiency, and Recovery Accountability and Transparency Board convened a forum on Data Analytics for Oversight & Law Enforcement. The GAO published the highlights of the forum, citing the benefits of using predictive analytics to move from a "pay-and-chase" to a prevention model of fraud detection.[22] The report highlights the CMS's FPS as the example of a data analytics system designed to detect and prevent fraud.

The return-on-investment methodology developed by CMS for the first implementation year was cited by the Partnership for Public Service, which found that CMS's fraud prevention system is "the largest predictive analytics-based program of its kind in government," and that CMS's continual refinement of the methodology to measure ROI is critical as "predictive analytics is just now being adopted more widely in government".[23]

CMS explored comparisons of the FPS's value to the value attributable to other technologies used to prevent and detect fraud, waste, or abuse. Applying predictive analytics remains a new, innovative way for federal agencies to move program integrity towards prevention. Therefore, direct comparisons with similar technology are difficult to identify. As similar programs mature, CMS will compare the success of the FPS with other technology being used in the federal space.

Many federal agency partners and private health care organizations are in various stages of leveraging similar technology to more accurately identify program integrity vulnerabilities and target scarce resources for investigating or auditing payments. These partners and organizations have met with CMS to gain a better understanding of the agency's experience with FPS.

[22] Government Accountability Office, "Highlights of a Forum: Data Analytics for Oversight and Law Enforcement." (GAO-13-680SP) See http://www.gao.gov/products/GAO-13-680SP.
[23] Partnership for Public Services, "From Data to Decisions III, Lessons from Early Analytics Programs." See http://ourpublicservice.org/OPS/publications/viewcontentdetails.php?id=233.

CMS convenes workgroups with federal agency partners that are in various stages of implementing predictive analytics technologies. CMS has met with federal partners from the Social Security Administration, the Department of Education Office of Inspector General, the US Postal Service Office of Inspector General, the Department of Agriculture, the General Services Administration, and the Treasury's Do Not Pay Business Center. Through these collaborations, staff has a forum to share best practices, identify challenges and potential solutions, discuss information technology infrastructure ideas, collaborate on business processes critical for supporting the technology, and share knowledge for measuring the success of a prevention program. Some of the key points from the working groups are summarized in the box below.

Implementing Predictive Analytics Technology for Program Integrity

- *Develop a robust process for incorporating field intelligence, policy knowledge, and clinical expertise (or other expertise relevant to the industry) into the development of predictive or other sophisticated algorithms to ensure that the results of the technology are actionable.*
- *Develop a method for tracking, measuring, and evaluating the actions taken based on the information produced by the technology. The technology is a tool to provide more accurate leads more quickly; in order to achieve savings the information must be then used appropriately to take action.*
- *Incorporate cost savings into the return on investment methodology to ensure that the expenditures that are prevented are part of the savings. Because there is not an audit trail for prevented payments, as there is for recoveries, engage actuarial expertise in the methodology development.*
- *Develop an analytic environment for data exploration that includes historic information necessary for predictive modeling and an operational environment that quickly displays results and visualization (graphics, maps) that assists the end user in taking action.*

Appendix A. Inspector General of the Department of Health & Human Services: Certification of the *Report to Congress: Fraud Prevention System – Second Implementation Year*

DEPARTMENT OF HEALTH AND HUMAN SERVICES

OFFICE OF INSPECTOR GENERAL

WASHINGTON, DC 20201

JUN 13 2014

TO: Marilyn Tavenner
Administrator
Centers for Medicare & Medicaid Services

FROM: Daniel R. Levinson
Inspector General Daniel R. Levinson

SUBJECT: The Fraud Prevention System Identified Millions in Medicare Savings, but the Department Could Strengthen Savings Data by Improving Its Procedures (A-01-13-00510)

The attached final report provides the results of our review of the Department of Health and Human Services' (the Department) use of predictive modeling and other analytics technologies. The Small Business Jobs Act of 2010 requires the Inspector General of the Department to certify the actual and projected improper payments recovered and avoided and the return on investment related to the Department's use of predictive analytics technologies in the Medicare fee-for-service program.

Section 8L of the Inspector General Act, 5 U.S.C. App., requires that the Office of Inspector General (OIG) post its publicly available reports on the OIG Web site. Accordingly, this report will be posted at https://oig.hhs.gov.

If you have any questions or comments about this report, please do not hesitate to call me, or your staff may contact Kay L. Daly, Assistant Inspector General for Audit Services, at (202) 619-1157 or through email at Kay.Daly@oig.hhs.gov. Please refer to report number A-01-13-00510 in all correspondence.

Attachment

Department of Health and Human Services

OFFICE OF INSPECTOR GENERAL

THE FRAUD PREVENTION SYSTEM IDENTIFIED MILLIONS IN MEDICARE SAVINGS, BUT THE DEPARTMENT COULD STRENGTHEN SAVINGS DATA BY IMPROVING ITS PROCEDURES

Inquiries about this report may be addressed to the Office of Public Affairs at Public.Affairs@oig.hhs.gov.

Daniel R. Levinson
Inspector General

June 2014
A-01-13-00510

Office of Inspector General

https://oig.hhs.gov

The mission of the Office of Inspector General (OIG), as mandated by Public Law 95-452, as amended, is to protect the integrity of the Department of Health and Human Services (HHS) programs, as well as the health and welfare of beneficiaries served by those programs. This statutory mission is carried out through a nationwide network of audits, investigations, and inspections conducted by the following operating components:

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OFFICE OF AUDIT SERVICES FINDINGS AND OPINIONS

The designation of financial or management practices as questionable, a recommendation for the disallowance of costs incurred or claimed, and any other conclusions and recommendations in this report represent the findings and opinions of OAS. Authorized officials of the HHS operating divisions will make final determination on these matters.

EXECUTIVE SUMMARY

In the second implementation year of the Fraud Prevention System, we certify $54.2 million of actual and projected savings in the Medicare fee-for-service program and a return on investment of $1.34 for every dollar spent on the Fraud Prevention System. We also certify the $210.7 million in unadjusted savings that the Fraud Prevention System identified.

WHY WE DID THIS REVIEW

The Small Business Jobs Act of 2010 (the Act) requires the Department of Health of Human Services (the Department) to use predictive modeling and other analytics technologies (predictive analytics technologies) to identify improper Medicare fee-for-service claims that providers submit for reimbursement and to prevent the payment of such claims. The Act also requires the Department's Office of Inspector General (OIG) to certify the actual and projected savings with respect to improper payments recovered and avoided and the return on investment related to the Department's use of the Fraud Prevention System (FPS) for each of its first 3 implementation years. In addition, the Act requires OIG to determine whether the Department should continue, expand, or modify its predictive analytics technologies. This report fulfills our responsibilities for the second implementation year.

The objectives of this review were to determine whether the Department (1) complied with the requirements of the Act for reporting actual and projected savings in the Medicare fee-for-service program, the return on investment from the use of predictive analytics technologies, and the return on investment compared to other strategies or technologies; and (2) should continue, expand, or modify its use of the FPS to increase savings or mitigate any adverse impact on Medicare beneficiaries or providers.

BACKGROUND

To fulfill the Act's requirement to use predictive analytics technologies, on June 30, 2011, the Department's Centers for Medicare & Medicaid Services (CMS), through its Center for Program Integrity, established the FPS to identify and prevent fraud, waste, and abuse in the Medicare fee-for-service program nationwide. The Department identifies both questionable billing patterns and aberrancies using the FPS and provides this information through Alert Summary Reports (referred to as "leads" in this report) to Zone Program Integrity Contractors and Program Safeguard Contractors for investigations of potential fraud.

The Act requires that the Secretary submit to Congress and make publicly available a report that includes information about the Department's use of predictive analytics technologies for each of the first 3 years of the FPS and that OIG certify specific aspects of this effort for each of the 3 years and recommend whether the Department should continue, expand, or modify its use of predictive analytics technologies.

In our report to Congress for the first implementation year, we noted that the Department implemented predictive analytics technologies, but it did not fully comply with the requirements for reporting actual and projected savings in the Medicare fee-for-service program and the return

on investment related to its use of predictive analytics technologies. We made five recommendations in the first implementation year report, and the Department stated that it was committed to working with us to incorporate our recommendations. As of September 30, 2013, the Department implemented four of the five recommendations, including revising its methodologies to incorporate adjustment factors to estimate FPS savings more accurately.

WHAT WE FOUND

In the second implementation year of the FPS, the Department has complied with the requirements of the Act for reporting actual and projected savings in the Medicare fee-for-service program and the return on investment from the use of predictive analytics technologies. Specifically, we certify that the Department's use of its FPS resulted in $54.2 million of actual and projected savings to the Medicare fee-for-service program and a return on investment of $1.34 for every dollar spent on the FPS. We also certify the $210.7 million in unadjusted savings that the FPS identified.

This year, the Department developed adjustment factors to estimate FPS savings more precisely. The $54.2 million in certified actual and projected savings was calculated by applying the adjustment factors to the $210.7 million in certified unadjusted savings that the FPS identified. The Department identified additional savings that we were unable to certify because the documentation did not support that the FPS lead contributed to the administrative action.

The Department's ongoing use of the FPS will strengthen efforts to prevent fraud, waste, and abuse in the Medicare fee-for-service program. The Department's use of the FPS generated a positive return on investment, and the Department continues to refine its fraud detection models using its governance process and applicable OIG recommendations to increase savings. The Department has expanded the use of the FPS nationwide to identify fraud, waste, and abuse in the Medicare fee-for-service program and is evaluating whether to expand the use of the FPS in Medicaid. However, although the Department has made significant progress in addressing the challenges of measuring actual and projected savings, its procedures were not always sufficient to ensure that its contractors provided and maintained reliable data to always support FPS savings.

WHAT WE RECOMMEND

To help increase savings and improve its reporting on savings measures, we recommend that the Department:

- provide contractors with written instructions on how to determine when savings from an administrative action should be attributed to the FPS and

- require contractors to maintain documentation to support how an FPS lead contributes to an administrative action.

CENTERS FOR MEDICARE & MEDICAID SERVICES COMMENTS

In written comments on our draft report, CMS generally concurred with our findings, concurred with our recommendations, and outlined steps for implementing our recommendations.

CMS stated that "the concept of *adjusted savings* is important as it relates to this financial audit, and CMS will continue to refine and use a similar methodology next year [emphasis in original]." However, CMS stated that for a variety of reasons it "will continue to make decisions on expanding the FPS based primarily on the identified savings."

CMS stated that even though it provided documentation for an additional $39 million in savings, we did not certify the savings or provide an explanation for our decision. In this regard, CMS cited an example of disallowed savings for which it provided documentation. In addition, CMS stated that it feels that this sentence in our report is inaccurate: "[T]he Department could not ensure that its contractors provided and maintained reliable data to support FPS savings."

CMS noted that it had implemented the recommendation from our first-year implementation report to require contractors to track recoveries that result from FPS leads. However, CMS recognized that it implemented the recommendation outside of our current audit period.

CMS took exception to our methodology statement regarding the completeness of savings and costs data provided. CMS stated that it had provided complete costs data and that OIG did not make any recommendations to improve costs data.

OUR RESPONSE

The "concept of adjusted savings" is important not only as it relates to a financial audit, but more significantly as a measure of the savings and the return on investment related to the Department's use of the FPS. Identified savings does not represent a true return on investment because only a portion of those savings are returned to, or prevented from leaving, the Medicare Trust Funds. Therefore, decisions on expanding the FPS should be based primarily on adjusted savings.

We disagree with CMS's statement that we did not provide an explanation about the $39 million in savings that we could not certify. As part of our methodology, we reviewed documentation to determine if savings estimates were supportable. Because documentation could not support that the FPS lead contributed to an administrative action for the reported $39 million in savings, we could not certify these amounts.

As for the example that CMS included in its comments of disallowed savings for which it provided documentation, during our fieldwork we contacted the responsible contractor to determine the impact, if any, that the FPS lead had on the investigation. In its written reply, the contractor stated that it had previously opened an investigation on the provider and that the subsequent FPS lead did not impact the investigation. Therefore, in this example, we concluded the FPS lead did not contribute to the $3 million administrative action.

We have revised the sentence that CMS suggested was inaccurate: "[T]he Department could not ensure that its contractors always provided and maintained reliable data to support FPS savings."

For the misunderstanding about the statement regarding costs in the scope and methodology section, we used this statement to inform the reader that we obtained reasonable assurance that the information provided was sufficient but recognize there could be additional data beyond that provided by CMS.

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INTRODUCTION

WHY WE DID THIS REVIEW

The Small Business Jobs Act of 2010 (the Act) requires the Department of Health of Human Services (the Department) to use predictive modeling and other analytics technologies (predictive analytics technologies) to identify improper Medicare fee-for-service claims that providers submit for reimbursement and to prevent the payment of such claims.[1] The Act also requires the Department's Office of Inspector General (OIG) to certify the actual and projected savings with respect to improper payments recovered and avoided and the return on investment related to the Department's use of the Fraud Prevention System (FPS) for each of its first 3 years (the implementation years).[2] In addition, the Act requires OIG to determine whether the Department should continue, expand, or modify its predictive analytics technologies. This report fulfills our responsibilities for the second implementation year.

OBJECTIVES

Our objectives were to determine whether the Department (1) complied with the requirements of the Act for reporting actual and projected savings in the Medicare fee-for-service program, the return on investment from the use of predictive analytics technologies, and the return on investment compared to other strategies or technologies and (2) should continue, expand, or modify its use of the FPS to increase savings or mitigate any adverse impact on Medicare beneficiaries or providers.

BACKGROUND

Use of Predictive Analytics Technologies in Medicare

The Act requires the Department to use predictive analytics technologies to (1) identify improper Medicare fee-for-service claims that providers submit for reimbursement and (2) prevent the payment of such claims.[3] Congress appropriated $100 million for the Department to carry out the requirements of the Act.[4] The Department reported $34.7 million in costs for the first implementation year and $40.5 million in costs for the second implementation year.

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[1] P.L. No. 111-240 § 4241.

[2] The Act § 4241(e)(1)(B). The Act specifies that the first implementation year was July 1, 2011, to June 30, 2012. The second implementation year was October 1, 2012, to September 30, 2013. The third implementation year is January 1, 2014, to December 31, 2014.

[3] The Act § 4241(a). When the FPS prevents improper payments, the Department reports the savings as improper payments avoided. When the FPS identifies improper payments already made, the Department reports the savings as improper payments recovered.

[4] The Act § 4241(h).

Centers for Medicare & Medicaid Services Fraud Prevention System

To fulfill the Act's requirement to use predictive analytics technologies, on June 30, 2011, the Department's Centers for Medicare & Medicaid Services (CMS), through its Center for Program Integrity, established the FPS to identify and prevent fraud, waste, and abuse in the Medicare fee-for-service program nationwide. The Department identifies both questionable billing patterns and aberrancies using the FPS and provides this information through Alert Summary Reports (referred to as "leads" in this report) to Zone Program Integrity Contractors (ZPICs) and Program Safeguard Contractors (PSCs) for investigation.[5] These investigations can result in the following administrative actions:

- **Payment suspension**—a temporary hold in an escrow account of all or a portion of the payments to a provider. When a payment suspension is terminated, the amounts withheld are first applied to reduce any outstanding overpayments.

- **Law enforcement referrals**—suspected fraud cases that are referred to law enforcement agencies for potential prosecution. Savings may be recovered as part of the resolution of these cases.

- **Overpayment recoveries**—Medicare payments that providers received in excess of amounts due and payable under statute and regulations. Medicare Administrative Contractors (MACs) issue demand letters to the providers and collect the overpayments.

- **Prepayment edits**—computer edits that suspend all or part of claims. Contractors review the claims before determining whether to make payments.

- **Autodenial edits**—computer edits that automatically deny all or part of the claims without making any payments to providers.

- **Provider revocations**—revocation of a provider's Medicare status. This prevents revoked providers from being paid for any billing for claims.

The Department reports as savings the improper payments recovered or avoided as a result of these administrative actions.

Office of Inspector General Certification of Actual and Projected Savings in the Medicare Fee-for-Service Program

The Act requires that the Secretary submit to Congress and make publicly available a report that includes information about the Department's use of predictive analytics technologies for each of the first 3 FPS implementation years.[6] In addition, the Act requires OIG to certify the actual and

[5] In this report, we use the term "contractors" to refer to both ZPICs and PSCs.

[6] The report for the first implementation year is *Report to Congress: Fraud Prevention System First Implementation Year*, September 2012. Available online at http://www.stopmedicarefraud.gov/fraud-rtc12142012.pdf.

projected savings with respect to improper payments recovered and avoided and the return on investment related to the use of predictive analytics technologies in the Medicare fee-for-service program for each of the first 3 implementation years. The Act also requires that OIG recommend whether the Department should continue, expand, or modify its use of predictive analytics technologies.[7]

Office of Inspector General's Certification of the Department's Report to Congress on the First Implementation Year of the Fraud Prevention System

In our report to Congress for the first implementation year,[8] we noted that the Department implemented predictive analytics technologies, but it did not fully comply with the requirements for reporting actual and projected savings in the Medicare fee-for-service program and the return on investment related to its use of predictive analytics technologies. The Department did not report all of the savings required and had inconsistencies in its data. In addition, its methodology for calculating other reported savings included invalid assumptions that may have affected the accuracy of those amounts. In those cases, we could not determine the accuracy of the Department's information, which impeded our ability to quantify the inaccuracies.

We made five recommendations in the first implementation year report, and the Department stated that it was committed to working with us to implement our recommendations. As of September 30, 2013, the Department has implemented four of the five recommendations. Specifically, it revised two of its methodologies by including adjustment factors to estimate FPS savings more accurately,[9] coordinated with law enforcement to enhance the reporting of referrals that resulted from the FPS, and included appropriate costs for calculating return on investment. The Department stated that it continues to work toward implementing the remaining recommendation.[10] Appendix A includes more detail on our recommendations and the actions taken to address them.

The Department's Process for Modifying the Fraud Prevention System

The Department established an FPS governance process in the first implementation year to provide oversight, management, and control of selecting and developing new models, enhancing existing models, and implementing system changes to improve the FPS. This governance process enables the Department to use fraud detection models to address identified

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[7] The Act § 4241(e).

[8] "The Department of Health and Human Services Has Implemented Predictive Analytics Technologies but Can Improve Its Reporting on Related Savings and Return on Investment" (A-17-12-53000), issued December 17, 2012. Available online at http://oig.hhs.gov/oas/reports/region1/171253000.pdf.

[9] The Department also developed adjustment factors for four other savings categories. These factors were not specifically related to our recommendations from our first implementation year report.

[10] CMS stated that on January 1, 2014, after the conclusion of our fieldwork, it implemented a change in the shared systems to require contractors to track recoveries that result from FPS leads.

vulnerabilities, such as those identified in OIG reports and investigations. The resulting models are evaluated for impact and effectiveness before they are incorporated into the FPS.

HOW WE CONDUCTED THIS REVIEW

To satisfy the Act's certification requirement, we conducted a performance audit to certify the Department's reported actual and projected savings to the Medicare fee-for-service program and the Department's return on investment. We define the term "certification" to mean a determination that the Department's reported actual and projected savings and its return on investment were reasonably estimated.

We reviewed the unadjusted savings[11] and cost data that the Department provided to us from October 2012 through September 2013. To evaluate whether the savings that the Department attributed to the FPS were reasonable, we reviewed and discussed the supporting documentation with contractor personnel and analyzed supporting documentation related to selected administrative actions. We reviewed and confirmed that the documentation and historical data used by the Department to establish adjustment factors to estimate FPS savings more accurately were reasonable and supported. To calculate the adjusted savings amount, we applied the Department's various adjustment factors to the unadjusted savings from administrative actions to estimate the FPS savings more accurately.[12] We also reviewed the reported costs for calculating return on investment. We did not verify that the Department provided us with complete savings and costs data.

To achieve our second objective, we reviewed the Department's action plans to expand or modify its use of the FPS to increase savings or mitigate any adverse impact on Medicare beneficiaries or providers.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix B contains the details of our scope and methodology.

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[11] The Department's second implementation year report to Congress refers to unadjusted savings as FPS "identified" savings.

[12] According to the Department, historical data indicate that only a portion of identified improper payments are recovered. The Department uses adjustment factors to determine the amount of identified recoverable savings attributable to the FPS that will actually be collected or avoided. Therefore, the adjusted savings amount provides a more accurate estimate of the dollars that the Department has already returned or is likely to return in the future from the unadjusted savings.

FINDINGS

In the second implementation year of the FPS, the Department complied with the requirements of the Act for reporting actual and projected savings in the Medicare fee-for-service program and the return on investment from the use of predictive analytics technologies. We certify that the Department's use of its FPS resulted in $54.2 million of actual and projected savings to the Medicare fee-for-service program and a return on investment[13] of $1.34 for every dollar spent on the FPS. We also certify the $210.7 million in unadjusted savings that the FPS identified.

This year, the Department developed adjustment factors to estimate FPS savings more precisely. The $54.2 million in certified actual and projected savings was calculated by applying the adjustment factors to the $210.7 million in certified unadjusted savings that the FPS identified. The Department identified additional savings that we were unable to certify because the documentation did not support that the FPS lead contributed to the administrative action.

The Department's continued use of the FPS will enhance its efforts to prevent fraud, waste, and abuse in the Medicare fee-for-service program. The Department's use of the FPS generated a positive return on investment, and the Department continues to refine its fraud detection models. The Department has expanded the use of the FPS nationwide to identify waste, fraud, and abuse in the Medicare fee-for-service program, and the Department is evaluating whether to expand the use of the FPS in Medicaid. In its second year, the Department continued to use its governance process to develop and modify models. Although the Department has made significant progress in addressing the challenges of measuring actual and projected savings, the Department's procedures were not always sufficient to ensure that its contractors provided and maintained reliable data to always support FPS savings.

THE DEPARTMENT COMPLIED WITH REPORTING REQUIREMENTS

The Act requires the Department to report actual and projected savings with respect to improper payments recovered and avoided, actual and projected savings relative to the return on investment, and the return on investment compared to other strategies or technologies.

We certified that the Department's use of the FPS resulted in $54.2 million of actual and projected savings to the Medicare fee-for-service program. This includes savings for which the FPS lead contributed to the administrative action by initiating an investigation or corroborating, augmenting, and/or expediting an existing investigation. The $54.2 million certified amount corresponds to $210.7 million of certified unadjusted savings that the FPS identified before we applied the various adjustment factors to estimate FPS savings more accurately. (See Appendix C.) Through the innovative development of adjustment factors, the Department

[13] The Department determines the FPS's return on investment by comparing the sum of actual and projected savings to the costs expended to achieve the savings. For the second implementation year, the Department calculated the return on investment by dividing the total $54.2 million of actual and projected savings by the $40.5 million of costs.

introduced a new concept to report a more precise estimate of FPS savings. Of the certified actual and projected savings,[14] we found that:

- $10.1 million of projected improper payments were estimated to be recovered from law enforcement referrals and overpayment recoveries;

- $14.9 million of actual improper payments were estimated to be avoided through prepayment edits, autodenial edits, and payment suspensions; and

- $29.2 million of projected improper payments were estimated to be avoided by revoking provider billing privileges.

The Department identified $39.4 million of additional savings that we were unable to certify because documentation did not support that the information in the FPS lead was new or that it contributed to achieving the administrative action. Specifically, contractors' investigation notes and interviews with the contractors and Department officials did not support that the FPS information was new information that contributed to achieving the administrative actions.

We also certified that the Department's use of its predictive analytics technologies resulted in a return on investment of $1.34 for every dollar spent on the FPS. The Department reported $40.5 million in total costs for three categories: (1) $34.2 million for FPS system contractor costs, (2) $2.3 million for Department staff costs, and (3) $4 million for contractor costs.

In the second implementation year, the Department did not compare the FPS to any other similar technologies. The Department stated that direct comparisons with similar technology are difficult to identify. The Department stated that as similar programs mature, it will compare the success of the FPS with other technology being used "in the federal space."

THE DEPARTMENT'S USE OF THE FRAUD PREVENTION SYSTEM

The Act requires that OIG recommend whether the Department should continue, expand, or modify its use of predictive analytics technologies.[15]

The Department's continued use of the FPS will enhance its efforts to prevent fraud, waste, and abuse in the Medicare fee-for-service program. The Department's use of the FPS generated a positive return on investment, and the Department continues to refine its fraud detection models using its governance process. The Department has expanded the use of the FPS nationwide to identify waste, fraud, and abuse in the Medicare fee-for-service program, and the Department is evaluating whether to expand the use of the FPS in Medicaid.

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[14] In the second implementation year, the Department did not identify any actual improper payments recovered. Therefore, we did not certify any actual improper payments recovered.

[15] P.L. No. 111-240 § 4241(e)(1)(B)(iii)

In addition, the Department's modifications of the FPS, which were based on OIG recommendations, will increase savings. For example, the Department established a computer edit designed to reject claims directly through the FPS for those physicians who provided services in their offices but mistakenly billed them as though they had been provided at ambulatory surgical centers.[16]

Although the Department has made significant progress in addressing the challenges of measuring actual and projected savings, the Department did not (1) provide contractors with written instructions on how to determine when savings from an administrative action should be attributed to the FPS and (2) require contractors to maintain documentation to support how an FPS lead contributed to an administrative action. As a result, the Department could not ensure that its contractors provided and maintained reliable data to always support FPS savings.

In some cases, contractors attributed administrative actions to the FPS when the actions taken were not the result of FPS leads and the documentation did not support attributing the actions to the FPS. For example, in one case a contractor opened an investigation in July 2012 on the basis of a beneficiary complaint that the provider was falsifying claims. The FPS had identified the same provider in a lead created in June 2011. However, the contractor did not open an investigation at that time, and the lead was not referenced in the supporting documentation for the investigation. The contractor stated that there was no evidence that the FPS influenced the investigation, despite the existence of an earlier FPS lead. Accordingly, we did not attribute this administrative action to the FPS. Providing better guidance could help ensure that contractors maintain, as appropriate, reliable data supporting attribution of FPS savings.

RECOMMENDATIONS

To help increase savings and improve its reporting on savings measures, we recommend that the Department:

- provide contractors with written instructions on how to determine when savings from an administrative action should be attributed to the FPS and

- require contractors to maintain documentation to support how the FPS lead contributes to an administrative action.

[16] OIG, "Review of Place-of-Service Coding for Physician Services Processed by Medicare Part B Contractors During Calendar Year 2009" (A-01-10-00516), issued September 7, 2011.

CENTERS FOR MEDICARE & MEDICAID SERVICES COMMENTS

In written comments on our draft report, CMS generally concurred with our findings, concurred with our recommendations, and outlined steps for implementing our recommendations.

CMS stated that "the concept of *adjusted savings* is important as it relates to this financial audit, and CMS will continue to refine and use a similar methodology next year [emphasis in original]." However, CMS stated that for a variety of reasons it "will continue to make decisions on expanding the FPS based primarily on the identified savings."

CMS stated that even though it provided documentation for an additional $39 million in savings, we did not certify the savings or provide an explanation for our decision. In this regard, CMS cited an example of disallowed savings for which it provided documentation. In addition, CMS stated that it feels that this sentence in our report is inaccurate: "[T]he Department could not ensure that its contractors provided and maintained reliable data to support FPS savings."

CMS noted that it had implemented the recommendation from our first-year implementation report to require contractors to track recoveries that result from FPS leads. However, CMS recognized that it implemented the recommendation outside of our current audit period.

CMS took exception to our methodology statement regarding the completeness of savings and costs data provided. CMS stated that it had provided complete costs data and that OIG did not make any recommendations to improve costs data.

CMS's comments, excluding one technical comment that we addressed as appropriate, are included as Appendix D.

OFFICE OF INSPECTOR GENERAL RESPONSE

The "concept of adjusted savings" is important not only as it relates to a financial audit, but more significantly as a measure of the savings and the return on investment related to the Department's use of the FPS. Identified savings does not represent a true return on investment because only a portion of those savings are returned to, or prevented from leaving, the Medicare Trust Funds. Therefore, decisions on expanding the FPS should be based primarily on adjusted savings.

We disagree with CMS's statement that we did not provide an explanation about the $39 million in savings that we could not certify. As part of our methodology, we reviewed documentation to determine if savings estimates were supportable. Because documentation could not support that the FPS lead contributed to an administrative action for the reported $39 million in savings, we could not certify these amounts.

As for the example that CMS included in its comments of disallowed savings for which it provided documentation, during our fieldwork we contacted the responsible contractor to determine the impact, if any, that the FPS lead had on the investigation. In its written reply, the contractor stated that it had previously opened an investigation on the provider and that the

subsequent FPS lead did not impact the investigation. Therefore, in this example, we concluded the FPS lead did not contribute to the $3 million administrative action.

We have revised the sentence that CMS suggested was inaccurate: "[T]he Department could not ensure that its contractors always provided and maintained reliable data to support FPS savings."

Regarding CMS's implementation of our prior report's recommendation, after the conclusion of our fieldwork, CMS stated that on January 1, 2014, it implemented a change in the shared systems to require contractors to track recoveries that result from FPS leads. We will review the effectiveness of CMS's change during our third-year implementation audit.

For the misunderstanding about the statement regarding costs in the scope and methodology section, we used this statement to inform the reader that we obtained reasonable assurance that the information provided was sufficient but recognize there could be additional data beyond that provided by CMS.

APPENDIX A: OFFICE OF INSPECTOR GENERAL RECOMMENDATIONS AND DEPARTMENT ACTIONS IN THE FIRST-YEAR IMPLEMENTATION REPORT

Table 1: OIG Recommendations and Department Actions for the First Implementation Year

No.	OIG Recommendation	Department Action	Status
1	Require contractors to track recoveries that result from FPS leads.	Developing a corrective action to track overpayment recoveries with the MACs.	Ongoing[17]
2	Coordinate with law enforcement to enhance the reporting of investigative and prosecutorial outcomes in cases predicated on referrals from the FPS.	Coordinated with OIG's Office of Investigations to enhance the reporting of referrals that resulted from the FPS.	Implemented
3	Revise the methodology used to calculate projected savings with respect to improper payments avoided to recognize that some of the services associated with prior-year claims submitted by a revoked provider may be legitimate and claims denied on the basis of edits may ultimately be paid.	Revised the methodology by including the provider revocation adjustment factor.	Implemented
4	Revise the methodology used to calculate costs avoided from edits and payment suspensions to include verifying that the information in the Department's records is consistent with records maintained by ZPICs and PSCs.	Revised the methodology by including the adjustment factors for edits and payment suspensions.	Implemented
5	Include all costs associated with the FPS, including reporting costs, indirect costs, and projected costs, in its return-on-investment calculation.	Included all appropriate costs in its return-on-investment calculation.	Implemented

[17] After the conclusion of our fieldwork, CMS stated that on January 1, 2014, it implemented a change in the shared systems to require contractors to track recoveries that result from FPS leads.

APPENDIX B: AUDIT SCOPE AND METHODOLOGY

SCOPE

Our audit covered the Department's use of predictive analytics technologies during the second implementation year of the FPS (October 1, 2012, through September 30, 2013). We reviewed the unadjusted savings and cost data provided by the Department for that period. On September 5, 2013, the Department provided us with data on the administrative actions taken during the first 9 months of the implementation year. On November 22, 2013, the Department updated the data to include the entire implementation year, except for the revocations data that was provided on December 3, 2013. For the second implementation year, the Department provided us with data that included a total of $299.2 million in unadjusted savings reported by contractors. In addition, on February 25, 2014, the Department provided us with the final total reported FPS cost data totaling $40.5 million.

To evaluate whether the savings that the Department attributed to the FPS were reasonable, we reviewed and discussed the supporting documentation with contractor personnel, and analyzed supporting documentation related to selected administrative actions. This analysis resulted in reducing unadjusted savings to $210.7 million. We reviewed and confirmed that the documentation and the historical data used by the Department to establish adjustment factors to estimate FPS savings more accurately were reasonable and supported. We reduced the $210.7 million of unadjusted savings by applying the Department's various adjustment factors to the savings from administrative actions to estimate the FPS savings more accurately. As shown in Appendix C, the application of the various adjustment factors to the unadjusted savings resulted in the certified amounts. To assess the return-on-investment calculation, we reviewed supporting documentation for $40.5 million in total reported costs, which included costs from the FPS system contractors and the Department's staff and contractors to calculate return on investment. We did not verify that the Department provided us with complete savings and cost data.

To achieve our second objective, we reviewed the Department's action plans to expand or modify its use of the FPS to increase savings or mitigate any adverse impact on Medicare beneficiaries or providers.

We conducted this performance audit to certify the amounts that the Department reported as actual and projected savings to the Medicare fee-for-service program and the Department's return on investment, as required by the Act. We have defined the term "certification" as a determination that the Department's reported actual and projected savings and return-on-investment figures were reasonably estimated. We did not apportion savings between the FPS and other sources of detection when multiple sources of information led to the administrative action. Our objectives did not require an understanding or assessment of the overall internal control structure of the Department or its contractors.

Our fieldwork consisted of contacting contractors nationwide. We also visited the Department in Baltimore, Maryland, and four contractors, in Hingham, Massachusetts; Camp Hill, Pennsylvania; Nashville, Tennessee; and Dallas, Texas. We conducted our fieldwork from April through December 2013.

METHODOLOGY

To accomplish our objective, we:

- reviewed the Act to gain an understanding of the Department's responsibilities and OIG's responsibilities;
- met with Department officials to learn about the Department's implementation of the FPS;
- reviewed supporting documentation to determine whether the Department's methodologies, dated November 22, 2013, for calculating actual and projected savings, including the various adjustment factors established to reduce unadjusted savings, were reasonable and supportable;
- contacted contractors to learn about their roles related to the FPS and to understand how they attributed administrative actions to the FPS;
- reviewed the supporting documentation for administrative actions designated as being related to the FPS;
- interviewed contractors' management and investigators to assess the impact the FPS supporting documentation had on the investigation;
- reviewed the contractors' notes and supporting documentation to determine whether the FPS information was new information that contributed to achieving the administrative actions;
- met with Department officials to discuss and review the administrative actions that we determined were not related to the FPS to evaluate additional support from the Department;
- applied the Department's methodology to determine whether the savings from selected administrative actions were attributable to the FPS;
- applied the Department's various adjustment factors to the unadjusted savings from administrative actions;
- reviewed invoices and other supporting documentation to determine whether the reported costs from FPS system contractors, the Department's staff, and the Department's contractors for calculating return on investment were reasonable;
- verified that the return on investment was calculated accurately;

- reviewed the Department's action plans to expand or modify its use of the FPS to increase savings or mitigate any adverse impact on Medicare beneficiaries or providers;

- reviewed the Department's report to Congress for the second implementation year; and

- discussed the results of our audit with Department officials.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

APPENDIX C: CERTIFIED FRAUD PREVENTION SYSTEM SAVINGS

Table 2: Certified FPS Savings by Administrative Action

Administrative Action	Unadjusted Savings	Adjustment Factor	Reduction Amount	Certified FPS Savings[18]
Payment Suspensions	$2,260,067	3.0%	$67,802	$2,192,265
Law Enforcement Referrals[19]	73,203,095	94.1%	68,889,938	4,313,157
Overpayment Recoveries	35,615,848	83.8%	29,857,126	5,758,721
Prepayment Edits	16,777,677	31.3%	5,243,642	11,534,036
Autodenial Edits	1,630,629	27.5%	447,965	1,182,663
Provider Revocations	81,239,803	64.0%	52,014,428	29,225,375
Totals	**$210,727,119**	**74.3%**	**$156,520,901**	**$54,206,217**

The Department developed one adjustment factor for payment suspensions and law enforcement referrals. There is a range of adjustment factors for overpayment recoveries, prepayment edits, autodenial edits, and provider revocations. In Table 2, for those administrative actions with a range of adjustment factors, we showed one adjustment factor that is based on a reduction amount divided by the unadjusted savings. However, we applied the actual adjustment factors to the appropriate administrative actions to calculate the certified FPS savings. The adjustment factors for overpayment recoveries depend on each ZPIC's specific collection history and, therefore, vary by ZPIC. The adjustment factors for prepayment edits and autodenial edits vary by provider and service type. The adjustment factors for provider revocations vary by provider type.

[18] Our application of the Department's various adjustment factors reduced the unadjusted savings by $156,520,901 or 74.3 percent. Differences in the Certified FPS Savings column are due to rounding.

[19] In a future audit, we plan to determine why the certified FPS savings (collected amount) are such a small percentage (5.9 percent) of the unadjusted savings (identified amount) from law enforcement referrals.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services

Administrator
Washington, DC 20201

DATE: JUN - 5 2014

TO: Daniel R. Levinson
Inspector General

FROM: Marilyn Tavenner
Administrator

SUBJECT: Office of Inspector General (OIG) Draft Report: "The Fraud Prevention System Identified Millions in Medicare Savings, but the Department Could Strengthen Savings Data by Improving Its Procedures" (A-01-13-00510)

The Centers for Medicare & Medicaid Services (CMS) appreciates the opportunity to review and comment on the above-mentioned OIG draft report. The Small Business Jobs Act of 2010 requires the Secretary of the Department of Health and Human Services to use predictive modeling and other analytics technologies to identify improper claims for reimbursement and to prevent the payment of such claims under the Medicare fee-for-service program. CMS developed the Fraud Prevention System (FPS) in order to implement predictive analytics technologies.

The CMS appreciates OIG's finding that the "ongoing use of the FPS will strengthen efforts to prevent fraud, waste, and abuse in the Medicare fee-for-service program." CMS made significant progress using the FPS to identify suspect providers and take administrative action to protect the Medicare Trust Funds. In the second implementation year, which aligned with fiscal year (FY) 2013, CMS took administrative action against 938 providers and suppliers due to the FPS. The identified savings, certified by OIG, associated with these prevention and detection actions due to FPS was $210.7 million, almost double the amount identified during the first year of the program.

The concept of *adjusted savings* is important as it relates to this financial audit, and CMS will continue to refine and use a similar methodology next year. The FPS is a prevention-oriented tool, identifying providers and suppliers exhibiting aberrant billing behaviors. Recovering money, which is one important result of investigating these leads, is contingent on numerous other processes and limitations. There are also other hard-to-quantify benefits of the FPS activity, such as the sentinel effect it creates, and the highly collaborative environment it has fostered between CMS and law enforcement, as well as between and among CMS and its program integrity contractors. CMS will continue to make decisions on expanding the FPS based primarily on the identified savings.

The OIG states that "the Department could not ensure that its contractors provided and maintained reliable data to support FPS savings" (page 7). We feel that this statement is inaccurate. OIG certified $210.7 million in identified savings and $54.2 million in adjusted savings based on sufficient documentation from CMS. CMS also provided documentation to support an additional $39 million in savings the agency believes is due to the FPS. OIG did not allow the additional savings and did not provide an explanation about the disallowance. The following is an example of disallowed savings for which CMS provided OIG documentation:

> *A provider had been monitored by the ZPIC since 2011. The FPS later flagged the provider with additional information. The ZPIC confirmed that a provider interview was conducted based on the new information in the FPS. The case was later referred to law enforcement, and included information directly from the FPS. The referral identified more than $3 million in potential fraud.*

The OIG states throughout the report that CMS has implemented four of the five OIG recommendations in the First Year Implementation Report. In Appendix A, the status of the first recommendation is, "Developing a corrective action to track overpayment recoveries with the MACs." CMS recognizes that the OIG report is as of the end of the second implementation year. However, it is important to clarify that CMS has successfully implemented this recommendation. On January 1, 2014, a change was implemented in the shared systems to track overpayment recoveries back to the contractor that requested the overpayment. Through this systems change, the contractors received technical direction to start including certain information on overpayment requests for recovery submitted on or after January 1, 2014, to allow for the tracking.

The OIG also states on page 4 that it "did not verify that the Department provided us with complete savings and costs data." CMS provided the Department complete costs data through provision of paid invoices and other documentation. OIG also confirmed that CMS implemented OIG's recommendation that CMS "include all appropriate costs in its return-on-investment calculation." OIG did not make any recommendations to improve costs data.

The CMS expects that future activities will substantially increase savings by expanding the use of the innovative technology beyond the initial focus on identifying potential fraud into the areas of waste and abuse. In FY 2013, CMS completed pilot projects to expand the use of the FPS. These pilots included providing leads to the Medicare Administrative Contractors (MACs) for medical review and denying claims directly by the FPS that are not supported by Medicare policy. CMS may expand these pilot projects nationally to improve fraud, waste, and abuse prevention and detection. CMS will also evaluate the feasibility of expanding predictive analytics technology to Medicaid.

Our response to each of the OIG recommendations follows.

OIG Recommendation

Provide contractors with written instructions on how to determine when savings from an administrative action should be attributed to the FPS.

CMS Response

The CMS concurs with the recommendation. OIG included savings for which "the FPS lead contributed to the administrative action by initiating an investigation or corroborating, augmenting, and/or expediting an existing investigation." CMS will issue a Technical Direction Letter to the Zone Program Integrity Contractors and Program Safeguard Contractors providing written instruction on how to determine whether an investigation initiated a new investigation or corroborated, augmented, and/or expedited an existing investigation.

OIG Recommendation

Require contractors to maintain documentation to support how the FPS lead contributes to an administrative action.

CMS Response

The CMS concurs with the recommendation. CMS will issue a Technical Direction Letter to the Zone Program Integrity Contractors and Program Safeguard Contractors providing written instructions on maintaining documentation when an FPS lead initiated a new investigation or corroborated, augmented, and/or expedited an existing investigation.

Again, we appreciate the opportunity to comment on this draft report and look forward to working with OIG on this and other issues.

Appendix B. SBJA Section 4241. Use of Predictive Modeling and Other Analytics Technologies to Identify and Prevent Waste, Fraud, and Abuse in the Medicare Fee-for-Service Program (P.L. 111-240 §4241(b); 42 U.S.C. §1320a-7m(b))

SEC. 4241 [42 U.S.C. 1320a-7m]. Use of Predictive Modeling and Other Analytics Technologies to Identify and Prevent Waste, Fraud, and Abuse in the Medicare Fee-for-Service Program.

(a) Use in the Medicare Fee-for-Service Program. The Secretary shall use predictive modeling and other analytics technologies (in this section referred to as "predictive analytics technologies") to identify improper claims for reimbursement and to prevent the payment of such claims under the Medicare fee-for-service program.

(b) Predictive Analytics Technologies Requirements. The predictive analytics technologies used by the Secretary shall—

(1) capture Medicare provider and Medicare beneficiary activities across the Medicare fee-for-service program to provide a comprehensive view across all providers, beneficiaries, and geographies within such program in order to—

(A) identify and analyze Medicare provider networks, provider billing patterns, and beneficiary utilization patterns; and

(B) identify and detect any such patterns and networks that represent a high risk of fraudulent activity;

(2) be integrated into the existing Medicare fee-for-service program claims flow with minimal effort and maximum efficiency;

(3) be able to—

(A) analyze large data sets for unusual or suspicious patterns or anomalies or contain other factors that are linked to the occurrence of waste, fraud, or abuse;

(B) undertake such analysis before payment is made; and

(C) prioritize such identified transactions for additional review before payment is made in terms of the likelihood of potential waste, fraud, and abuse to more efficiently utilize investigative resources;

(4) capture outcome information on adjudicated claims for reimbursement to allow for refinement and enhancement of the predictive analytics technologies on the basis of such outcome information, including post-payment information about the eventual status of a claim; and

(5) prevent the payment of claims for reimbursement that have been identified as potentially wasteful, fraudulent, or abusive until such time as the claims have been verified as valid.

(c) Implementation Requirements.

(1) Request for Proposals. Not later than January 1, 2011, the Secretary shall issue a request for proposals to carry out this section during the first year of implementation. To the extent the Secretary determines appropriate—

(A) the initial request for proposals may include subsequent implementation years; and

(B) the Secretary may issue additional requests for proposals with respect to subsequent implementation years.

(2) First Implementation Year. The initial request for proposals issued under paragraph (1) shall require the contractors selected to commence using predictive analytics technologies on July 1, 2011, in the 10 States identified by the Secretary as having the highest risk of waste, fraud, or abuse in the Medicare fee-for-service program.

(3) Second Implementation Year. Based on the results of the report and recommendation required under subsection (e)(1)(B), the Secretary shall expand the use of predictive analytics technologies on October 1, 2012, to apply to an additional 10 States identified by the Secretary as having the highest risk of waste, fraud, or abuse in the Medicare fee-for-service program, after the States identified under paragraph (2).

(4) Third Implementation Year. Based on the results of the report and recommendation required under subsection (e)(2), the Secretary shall expand the use of predictive analytics technologies on January 1, 2014, to apply to the Medicare fee-for-service program in any State not identified under paragraph (2) or (3) and the commonwealths and territories.

(5) Fourth Implementation Year. Based on the results of the report and recommendation required under subsection (e)(3), the Secretary shall expand the use of predictive analytics technologies, beginning April 1, 2015, to apply to Medicaid and CHIP. To the extent the Secretary determines appropriate, such expansion may be made on a phased-in basis.

(6) Option for Refinement and Evaluation. If, with respect to the first, second, or third implementation year, the Inspector General of the Department of Health and Human Services certifies as part of the report required under subsection (e) for that year no or only nominal actual savings to the Medicare fee-for-service program, the Secretary may impose a moratorium, not to exceed 12 months, on the expansion of the use of predictive analytics technologies under this section for the succeeding year in order to refine the use of predictive analytics technologies to achieve more than nominal savings before further expansion. If a moratorium is imposed in accordance with this paragraph,

the implementation dates applicable for the succeeding year or years shall be adjusted to reflect the length of the moratorium period.

(d) Contractor Selection, Qualifications, and Data Access Requirements.

(1) Selection.

(A) In General. The Secretary shall select contractors to carry out this section using competitive procedures as provided for in the Federal Acquisition Regulation.

(B) Number of Contractors. The Secretary shall select at least 2 contractors to carry out this section with respect to any year.

(2) Qualifications.

(A) In General. The Secretary shall enter into a contract under this section with an entity only if the entity—

(i) has leadership and staff who—

(I) have the appropriate clinical knowledge of, and experience with, the payment rules and regulations under the Medicare fee-for-service program; and

(II) have direct management experience and proficiency utilizing predictive analytics technologies necessary to carry out the requirements under subsection (b); or

(ii) has a contract, or will enter into a contract, with another entity that has leadership and staff meeting the criteria described in clause (i).

(B) Conflict of Interest. The Secretary may only enter into a contract under this section with an entity to the extent that the entity complies with such conflict of interest standards as are generally applicable to Federal acquisition and procurement.

(3) Data Access. The Secretary shall provide entities with a contract under this section with appropriate access to data necessary for the entity to use predictive analytics technologies in accordance with the contract.

(e) Reporting Requirements.

(1) First Implementation Year Report. Not later than 3 months after the completion of the first implementation year under this section, the Secretary shall submit to the appropriate committees of Congress and make available to the public a report that includes the following:

(A) A description of the implementation of the use of predictive analytics technologies during the year.

(B) A certification of the Inspector General of the Department of Health and Human Services that—

(i) specifies the actual and projected savings to the Medicare fee-for-service program as a result of the use of predictive analytics technologies,

including estimates of the amounts of such savings with respect to both improper payments recovered and improper payments avoided;

(ii) the actual and projected savings to the Medicare fee-for-service program as a result of such use of predictive analytics technologies relative to the return on investment for the use of such technologies and in comparison to other strategies or technologies used to prevent and detect fraud, waste, and abuse in the Medicare fee-for-service program; and

(iii) includes recommendations regarding—

(I) whether the Secretary should continue to use predictive analytics technologies;

(II) whether the use of such technologies should be expanded in accordance with the requirements of subsection (c); and

(III) any modifications or refinements that should be made to increase the amount of actual or projected savings or mitigate any adverse impact on Medicare beneficiaries or providers.

(C) An analysis of the extent to which the use of predictive analytics technologies successfully prevented and detected waste, fraud, or abuse in the Medicare fee-for-service program.

(D) A review of whether the predictive analytics technologies affected access to, or the quality of, items and services furnished to Medicare beneficiaries.

(E) A review of what effect, if any, the use of predictive analytics technologies had on Medicare providers.

(F) Any other items determined appropriate by the Secretary.

(2) Second Year Implementation Report. Not later than 3 months after the completion of the second implementation year under this section, the Secretary shall submit to the appropriate committees of Congress and make available to the public a report that includes, with respect to such year, the items required under paragraph (1) as well as any other additional items determined appropriate by the Secretary with respect to the report for such year.

(3) Third Year Implementation Report. Not later than 3 months after the completion of the third implementation year under this section, the Secretary shall submit to the appropriate committees of Congress, and make available to the public, a report that includes with respect to such year, the items required under paragraph (1), as well as any other additional items determined appropriate by the Secretary with respect to the report for such year, and the following:

(A) An analysis of the cost-effectiveness and feasibility of expanding the use of predictive analytics technologies to Medicaid and CHIP.

(B) An analysis of the effect, if any, the application of predictive analytics technologies to claims under Medicaid and CHIP would have on States and the commonwealths and territories.

(C) Recommendations regarding the extent to which technical assistance may be necessary to expand the application of predictive analytics technologies to claims under Medicaid and CHIP, and the type of any such assistance.

(f) Independent Evaluation and Report.

(1) Evaluation. Upon completion of the first year in which predictive analytics technologies are used with respect to claims under Medicaid and CHIP, the Secretary shall, by grant, contract, or interagency agreement, conduct an independent evaluation of the use of predictive analytics technologies under the Medicare fee-for-service program and Medicaid and CHIP. The evaluation shall include an analysis with respect to each such program of the items required for the third year implementation report under subsection (e)(3).

(2) Report. Not later than 18 months after the evaluation required under paragraph (1) is initiated, the Secretary shall submit a report to Congress on the evaluation that shall include the results of the evaluation, the Secretary's response to such results and, to the extent the Secretary determines appropriate, recommendations for legislation or administrative actions.

(g) Waiver Authority. The Secretary may waive such provisions of titles XI, XVIII, XIX, and XXI of the Social Security Act, including applicable prompt payment requirements under titles XVIII and XIX of such Act, as the Secretary determines to be appropriate to carry out this section.

(h) Funding.

(1) Appropriation. Out of any funds in the Treasury not otherwise appropriated, there is appropriated to the Secretary to carry out this section, $100,000,000 for the period beginning January 1, 2011, to remain available until expended.

(A) Independent Evaluation. The Secretary shall reserve not more than 5 percent of the funds appropriated under paragraph (1) for purposes of conducting the independent evaluation required under subsection (f).

(B) Application to Medicaid and CHIP. The Secretary shall reserve such portion of the funds appropriated under paragraph (1) as the Secretary determines appropriate for purposes of providing assistance to States for administrative expenses in the event of the expansion of predictive analytics technologies to claims under Medicaid and CHIP.

(i) Definitions. In this section:

(1) Commonwealths and Territories. The term "commonwealth and territories" includes the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern

Mariana Islands, and any other territory or possession of the United States in which the Medicare fee-for-service program, Medicaid, or CHIP operates.

(2) CHIP. The term "CHIP" means the Children's Health Insurance Program established under title XXI of the Social Security Act (42 U.S.C. 1397aa et seq.).

(3) Medicaid. The term "Medicaid" means the program to provide grants to States for medical assistance programs established under title XIX of the Social Security Act (42 U.S.C. 1396 et seq.).

(4) Medicare Beneficiary. The term "Medicare beneficiary" means an individual enrolled in the Medicare fee-for-service program.

(5) Medicare Fee-for-Service Program. The term "Medicare fee-for-service program" means the original Medicare fee-for- service program under parts A and B of title XVIII of the Social Security Act (42 U.S.C. 1395 et seq.).

(6) Medicare Provider. The term "Medicare provider" means a provider of services (as defined in subsection (u) of section 1861 of the Social Security Act (42 U.S.C. 1395x)) and a supplier (as defined in subsection (d) of such section).

(7) Secretary. The term "Secretary" means the Secretary of Health and Human Services, acting through the Administrator of the Centers for Medicare & Medicaid Services.

(8) State. The term "State" means each of the 50 States and the District of Columbia.

Appendix C. Acronyms and Abbreviations

ACA	Affordable Care Act
APS	Automated Provider Screening System
CHIP	Children's Health Insurance Program
CMS	Centers for Medicare & Medicaid Services
CPI	Center for Program Integrity
DOJ	Department of Justice
FBI	Federal Bureau of Investigation
FFS	Fee-for-Service
FPS	Fraud Prevention System
FTE	Full-Time Equivalent
FY	Fiscal Year
HCFAC	Health Care Fraud and Abuse Control Program
HHS	Department of Health & Human Services
IDR	Integrated Data Repository
IT	Information Technology
MAC	Medicare Administrative Contractor
OIG	Office of Inspector General
One PI	One Program Integrity
PI	Program Integrity
PSC	Program Safeguard Contractor
RAC	Recovery Audit Contractor
ROI	Return on Investment
SBJA	Small Business Jobs Act of 2010
ZPIC	Zone Program Integrity Contractor