

OFFICE OF INSPECTOR GENERAL

Railroad Medicare Fraud Detection Contracts: Lessons Learned

April 7, 2011



RAILROAD RETIREMENT BOARD

Railroad Medicare Fraud Detection Contracts: Lessons Learned

Abstract

After touring the Recovery Accountability and Transparency Board's Operations Center and observing their fraud detection and prevention methods, we decided to explore fraud detection and prevention possibilities in the form of two limited scope Railroad Medicare fraud detection contracts. Both contracts provided a valuable learning experience. This paper describes these contracts and the lessons learned.

Medicare: High-Risk Area

Since 1990, the U.S. Government Accountability Office (GAO) has designated Medicare as a high-risk area due to its size and complexity, as well as its susceptibility to mismanagement and improper payments.¹ GAO's February 2011 high-risk update reiterates that "[t]he Medicare program remains on a path that is fiscally unsustainable over the long term. This fiscal pressure heightens the need for CMS [Centers for Medicare and Medicaid Services] to improve Medicare's payment methods to achieve efficiency and savings, and its management, program integrity, and oversight of patient care and safety."²

GAO further stated that "[i]n 2010, Medicare covered 47 million elderly and disabled beneficiaries had estimated outlays of \$509 billion. Medicare had estimated improper payments of almost \$48 billion in fiscal year 2010. However, this improper payment estimate did not include all of the program's risk, since it did not include improper payments in its prescription drug benefit, for which the agency has not yet estimated a total amount."³ Improper payments of this magnitude are unacceptable and innovative prevention and detection tools must be used to reduce their occurrence.

Railroad Retirement Board and the Railroad Medicare Program

The Railroad Retirement Board (RRB) is an independent agency in the executive branch of the Federal government. The RRB administers comprehensive disability, retirement-survivor, and unemployment-sickness insurance benefit programs for the nation's railroad workers and their families.

The RRB also has administrative responsibilities for certain benefit payments under the Social Security Act, including the administration of Medicare benefits for qualifying railroad workers and dependents. Pursuant to statutory authority, the RRB, in

¹ See GAO, *High-Risk Series: An Update*, GAO-11-278 (Washington, D.C.: 2011).

² Id.

³ Id.

Railroad Medicare Fraud Detection Contracts: Lessons Learned

consultation with CMS, selects and monitors the single nationwide Medicare Part B Carrier contract. During fiscal year (FY) 2010, the Railroad Medicare contractor processed more than 10 million Railroad Medicare Part B claims worth over \$869 million in paid medical insurance benefits on behalf of more than 468,000 Railroad Medicare beneficiaries.

Office of Inspector General and Railroad Medicare Program Oversight

The Inspector General for the RRB is a Presidential Appointee, with Senate confirmation, who serves as an independent and objective voice to both the RRB Board Members and the Congress. The Office of Inspector General (OIG) conducts independent investigations, audits, and management reviews of the programs and operations of the RRB.

Starting in FY 1997 and continuing for a period of approximately 12 years, language inserted into our appropriations law prohibited the OIG from conducting oversight of the Railroad Medicare program. Our ability to conduct Railroad Medicare oversight was restored on December 26, 2007.⁴

Medicare Fraud Detection

Once our renewed authority permitted us to conduct Railroad Medicare oversight in earnest, we quickly discovered that the “pay and chase” methodology of fighting Medicare fraud is antiquated and ineffective. To be more successful in the fight against Medicare fraud, waste, and abuse, we must incorporate innovative oversight and proactive predictive modeling methods successfully utilized in other settings.⁵

For instance, the Recovery Accountability and Transparency Board offers an excellent example of innovative oversight. Their “operations center uses sophisticated screening and analysis of high-risk recipients to develop risk-based resource tools for the oversight community. The analytical tools have been designed to intercept fraud closer to the front end of the fraud continuum.”⁶

Additionally, the credit card industry has been highly successful utilizing real-time analysis to prevent and detect fraud. *Visa Inc. Corporate Overview* reports that “VisaNet is an information processing network, facilitating the transfer of value and information among our financial institution clients, consumers, merchants, businesses and

⁴ Consolidated Appropriations Act, 2008, Pub. L. No. 110-161, 121 Stat. 2205 (2008).

⁵ Medicare claims are subject to pre-payment edits; however, given the current volume of improper payments more must be done.

⁶ See Recovery Accountability and Transparency Board, *2010 Annual Report* (Washington, D.C. 2010).

Railroad Medicare Fraud Detection Contracts: Lessons Learned

governments....Today, VisaNet's centralized, integrated architecture enables Visa to provide our clients with secure, reliable, scalable processing (authorization, clearing and settlement)...." They further state that "[m]ore than 100 billion transactions (authorization, clearing and settlement transactions) were processed through VisaNet in calendar year 2009...[and they] estimate that VisaNet is capable of processing more than 20,000 transaction messages per second....[b]ecause of VisaNet's centralized architecture, Visa is able to 'see' every Visa transaction that flows through the network. This enables Visa to risk-score transactions in real time with services such as Advanced Authorizations, potentially stopping fraud at the most important point – before it happens."⁷ These examples illustrate the type of innovative fraud detection and prevention tools needed to successfully fight Medicare fraud, waste, and abuse.

Starting in 2008, we began contacting a number of Congressional members and Administration officials to express our support for a number of innovative proactive Medicare fraud prevention and detection legislation. Specifically, we contacted numerous Congressional offices regarding the *Seniors and Taxpayers Obligation Protection Act of 2009*⁸, the *Prevent Health Care Fraud Act of 2009*⁹, and the *Fighting Fraud with Innovative Technology Act*¹⁰ to respectfully request that each bill be amended to include the Railroad Medicare program to ensure comprehensive Medicare fraud prevention and detection. This issue continues to garner Congressional attention and has been the subject of recent Congressional hearings. We understand that there are plans to implement "a number of measures that will shift [CMS'] enforcement and administrative actions from a 'pay and chase' mode to the prevention of fraudulent and other improper payments."¹¹ Additionally, they are presented "with a valuable opportunity to partner with the private sector and collaborate on fraud detection efforts based on tools and methods that are already succeeding in other sectors."¹² We fully support these efforts and hope that Railroad Medicare is included in their plans.

Railroad Medicare Fraud Detection Contracts

The successes enjoyed by the Recovery Accountability and Transparency Board coupled with our concerns regarding improper payments in the Railroad Medicare program, led us

⁷ Visa Inc. Corporate Overview may be located at <http://corporate.visa.com/media/visa-corporate-overview.pdf> (accessed March 28, 2011).

⁸ Seniors and Taxpayers Obligation Protection Act of 2009, S. 975, 111th Cong. (2009).

⁹ Prevent Health Care Fraud Act of 2009, H.R. 4222, 111th Cong. (2009) and related bill Prevent Health Care Fraud Act of 2009, S. 2128, 111th Cong. (2009).

¹⁰ Fighting Fraud with Innovative Technology Act, H.R. 5546, 111th Cong. (2010).

¹¹ *Fighting Fraud and Waste in Medicare and Medicaid*: Hearing before the Subcommittee on Labor, Health and Human Services, Education and Related Agencies of the U.S. Senate Committee on Appropriations, 112th Cong. (2011) (Testimony of Peter Budetti, M.D., J.D.).

¹² Id.

Railroad Medicare Fraud Detection Contracts: Lessons Learned

into two limited scope contracts for Railroad Medicare Part B¹³ claims data analysis. Since we do not have access to live claims data, we were limited to post-payment review. The parameters for both contracts were also narrowed by funding limitations.

Both contractors were quickly able to import and model data, including large volumes of Railroad Medicare claims information. Based upon our limited experience, we believe that these types of data platforms are useful for conducting searches, testing fraud hypotheses, and providing audit or investigative leads. We believe that they may be beneficial for pre-payment analysis and predictive modeling to help stop improper payments before they go out the door. A brief description of each contract and the lessons learned from this experience are described below.

Thomson Reuters

To identify potentially fraudulent Railroad Medicare claims, we entered into a competitively bid, limited scope contract with Thomson Reuters to review and analyze three years worth of Railroad Medicare Part B claims. We selected four algorithms to analyze the more than 66 million records contained in Railroad Medicare Part B claims data from calendar years 2007, 2008, and 2009. The following briefly describes the four algorithms along with preliminary results.¹⁴

1. *Objective:* To determine whether any Railroad Medicare providers fraudulently billed for services not provided.
Algorithm: Identify Railroad Medicare claims for services incurred 60 or more days after the beneficiaries' recorded dates of death as reported on the Social Security Administration's Death Master File (DMF).
Preliminary results: There were 41 beneficiaries identified with Railroad Medicare Part B services incurred 60 or more days after their dates of death (as identified by the DMF).

2. *Objective:* To determine whether any Railroad Medicare providers fraudulently billed for emergency transportation to routine dialysis or physical therapy appointments.
Algorithm: Identify instances of emergency transportation when the patients received non-emergency dialysis-related services or physical therapy on the same day of the transport.

¹³ We did not include Durable Medical Equipment, prosthetics, orthotics, or supply claims because they are not processed by the Railroad Medicare Part B contractor.

¹⁴ All results are considered preliminary because they require additional investigation, including medical review, to validate the results.

Railroad Medicare Fraud Detection Contracts: Lessons Learned

Preliminary Results: There were 939 unique patients who had either dialysis-related services or physical therapy on the same day as an emergency transportation trip.

3. *Objective:* To identify potential upcoding by Railroad Medicare providers.
Algorithm: Analysis of the 100 oldest Railroad Medicare beneficiaries with claims.

Preliminary Results: There were 4,028 claim lines associated with the 100 oldest beneficiaries with paid claims. On average these patients had 13.67 claims for medical care during the three year period.

4. *Objective:* To identify improper payments.

Algorithm: Identify providers who have submitted claims for services after they were officially sanctioned/excluded from Government programs per the Office of Inspector General for the Department of Health and Human Services' List of Excluded Individuals/Entities (LEIE).

Preliminary Results: This algorithm identified 29 Unique Provider Identification Numbers (UPIN) from the LEIE that had Railroad Medicare professional claims after their sanctioned date.

Palantir Technologies

We had the opportunity to visit the Recovery Accountability and Transparency Board's Operations Center and observe the functionality of Palantir Technologies' (Palantir) data analysis platform. In order to gain a better understanding of how this analytical tool may be utilized for fraud detection in the Railroad Medicare program, we entered into a two month data analysis pilot project.

Since we do not have access to live claims data, Palantir analyzed the more than 66 million records contained in Railroad Medicare Part B claims data from calendar years 2007, 2008, and 2009. Their platform utilized data fusion to quickly integrate a variety of information sources including coding patterns that OIG had identified in previous fraud cases. Palantir was able to fuse this information to identify non-obvious relationships and patterns in the claims data. They were also able to present a graphic display of the Railroad Medicare claims data, illustrating provider billing patterns, timelines reflecting questionable treatment frequencies, and improbable geospatial connections between providers and beneficiaries.

Railroad Medicare Fraud Detection Contracts: Lessons Learned

Lessons Learned

Data analysis results are only as reliable as the original data sources utilized.

Our recent Railroad Medicare fraud detection experience highlighted the fact that results are only as reliable as the original data sources utilized. During the course of these contracts, we used a variety of Railroad Medicare and RRB data files, the publically available DMF, and the publically available LEIE. Unfortunately, we became aware of data integrity issues, such as inaccurate or incomplete data, with each of these sources. Inaccurate or incomplete data increases the likelihood of false positives in both predictive modeling and data analytics, thereby requiring extensive investigation before funds may be recouped.

The compartmentalization of Medicare claims processing by geographic region or by class of beneficiary, as is unique to the Railroad Medicare program, makes it difficult, if not impossible, to see the “big picture” and has a negative impact on efforts to identify erroneous or fraudulent claims.

The results of our recent contracts illustrated that it is extremely difficult to detect national fraud trends or significant aberrances based solely on Railroad Medicare data. Medicare fraud is a national problem and the compartmentalization of claims data across geographic zones or class of beneficiary makes it difficult to fully analyze fraud trends. Our experience highlights the necessity for the Integrated Data Repository (IDR). The IDR, which is required by the Patient Protection and Affordable Care Act as amended by the Health Care and Education Reconciliation Act of 2010,¹⁵ is designed to support an integrated data warehouse containing health care related data across all benefit categories. In particular, the IDR will include national claims and payment information from Medicare parts A, B, C, and D, Medicaid, the Children’s Health Insurance Program, and health related programs by the Department of Veterans Affairs, the Department of Defense, the Social Security Administration, and the Indian Health Service. To adequately address health care fraud in the Railroad Medicare program, it is imperative that Railroad Medicare Part B claims data is included in both the IDR and any predictive modeling or proactive fraud detection activities using IDR data.

In addition to the IDR, Medicare claims processing should be consolidated into one national processor. Currently, Medicare claims processing is divided into zones; however, Medicare fraud does not stop at geographic zone. Under the current system, sophisticated criminals may simply relocate to another zone once their billings fall under increased scrutiny. A single Medicare processor offers a “centralized architecture” that

¹⁵ Pub. L. No. 111-148, 124 Stat. 119 (2010) and Pub. L. No. 111-152, 124 Stat. 1029. (2010).

Railroad Medicare Fraud Detection Contracts: Lessons Learned

would be ideal for predictive modeling fraud prevention and detection. This technology would bring greater transparency to the Medicare program and would be a vast improvement on the current system of “pay and chase.”

Data analysis reveals aberrances which may be used as audit or investigative leads; however, any leads developed will require substantial amounts of audit or investigative work to confirm that the claim(s) should not have been paid.

Data analysis and the application of algorithms have the capacity to produce false positives and must be thoroughly investigated before any funds may be recovered. Additionally, the cost of the investigation, including any medical reviews, must be weighed against the potential recoupment value.

Our recent experience illustrated that cost analysis is especially poignant in the Railroad Medicare program. Since Railroad Medicare beneficiaries are spread across the United States, the aberrances represented small dollar amounts and, without complete Medicare claims data, it is difficult to determine whether the Railroad Medicare aberrance is a minor instance or part of a larger fraud scheme. This combined with the potential for inaccurate data makes recoupment impossible without a thorough investigation.

The “pay and chase” methodology of fighting Medicare fraud, even with the use of powerful software tools, is ineffective and work intensive. Medicare must institute better controls on the front-end to prevent the disbursement of improper payments.

As stated previously, the Recovery Accountability and Transparency Board offers an excellent example of innovative oversight. Their “operations center uses sophisticated screening and analysis of high-risk recipients to develop risk-based resource tools for the oversight community. The analytical tools have been designed to intercept fraud closer to the front end of the fraud continuum.”¹⁶

It is imperative that resources are focused on preventing improper payments including the utilization of enhanced provider screening and technologically advanced Medicare cards. Paper Medicare cards have outlived their usefulness and are susceptible to identity theft. Technologically advanced Medicare cards, such as Common Access cards being used by the Department of Defense or chip technology utilized by Visa Inc., not only offer the opportunity to track Medicare spending at the place of service, aid in the prevention of improper Medicare payments and identity theft but may also increase claims processing speed. In fact, Visa Inc. states that “[c]hip cards have a small, powerful, embedded microprocessor that can provide enhanced security and increased

¹⁶ See Recovery Accountability and Transparency Board, *2010 Annual Report* (Washington, DC. 2010).

Railroad Medicare Fraud Detection Contracts: Lessons Learned

transaction speed.”¹⁷ Since the vast majority of Medicare providers are required to submit electronic Medicare claim forms, a technologically advanced Medicare card may help to ensure accuracy by reducing the amount of data input required for claims submission.

In addition, consideration should be given to utilizing a single national Medicare processor. A single Medicare processor would offer a “centralized architecture” and would be ideal for predictive modeling fraud prevention and detection technology. This new technology would bring greater transparency to the Medicare program and would be a vast improvement on the current system of “pay and chase.”

We must concentrate on preventing improper payments by continuing to explore enhanced provider screening and the possibilities of utilizing technologically advanced Medicare cards. This technological advancement will aid in both the prevention and detection of fraud, waste, and abuse in the Medicare program. However, it must be noted that data integrity is the key to proper prevention and detection. Inaccurate or incomplete data increases the likelihood of false positives in both predictive modeling and data analytics, thereby requiring extensive investigation before funds may be recouped.

Conclusion

Medicare fraud is a pervasive, multifaceted problem which often involves elaborate schemes. In order to release the fiscal pressures on the Medicare program and to increase the likelihood of sustainability, we must incorporate innovative oversight techniques successfully utilized in other settings. Analyzing data in a segmented manner based upon either a particular geographic zone or type of Medicare claim may allow fraud to remain undetected. Our Railroad Medicare fraud detection project demonstrated that the optimum manner to analyze data is on a nationwide basis including all Medicare Carriers and types of Medicare claims. In addition, we must concentrate on stopping Medicare fraud before it happens including utilizing technologically advanced Medicare cards, enhancing provider screening, and focusing on predictive modeling. While we recognize that numerous prepayment edits are already in place, a vast amount of fraud occurs despite these edits. An open dialogue regarding Medicare oversight is imperative to ensuring the integrity of the program.

¹⁷ Visa Inc. Corporate Overview may be located at http://corporate.visa.com/_media/visa-corporate-overview.pdf (accessed March 28, 2011).