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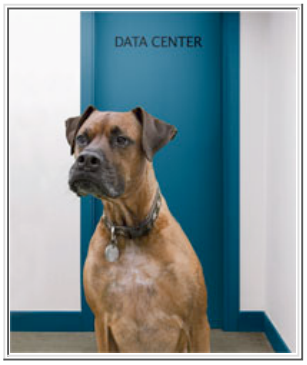
Guarding against Medicare and Medicaid fraud

The right technology—and the right mind-set—can go a long way toward fighting fraud, waste and abuse at CMS.

by Karen D. Schwartz

With so many high-profile cases of improper financial activities making the news over the past few years, organizations of all types have become acutely aware of the potential for fraud, waste and abuse within their own organizations and across their industries. Executives know too well how simple it is for contractors, individuals and other companies to take advantage of the system by submitting false invoices or claiming to provide services that were not rendered.



Government agencies, especially, feel the pressure of illegal or unethical activities. After all, the government is held to the highest standards by its taxpaying citizens. To combat the issue, the U.S. government instituted the Medicare Integrity Program at the Centers for Medicare and Medicaid Services (CMS), a federal agency under the Department of Health and Human Services. As an administrator of the Medicare and Medicaid programs and the State Children's Health Insurance Program, CMS annually disseminates more data than any other federal agency or private-sector company to researchers, policy groups, associations, medical groups and private citizens. The agency processes and retains the largest volume of healthcare-related data in the world. This data includes:

- Part A claims (primarily in-patient, hospital claims)
- Part B claims (such as physician office claims, laboratory claims and durable medical equipment)
- Beneficiary data
- Data about service providers
- National Drug Council data
- The new Medicare Part D claims data for prescription drugs

Under the rules of the Medicare Integrity Program, CMS must do everything possible to protect and safeguard its funds against fraud, waste and abuse. In large part, that means taking all possible steps to ensure that providers are submitting proper claims.

"It's about battling fraud, waste and abuse of Medicare and Medicaid," explains John Winkelman, Teradata program manager for the new data repository at CMS. The repository is designed to consolidate data, thereby enabling its users to meet these goals. "It is necessary to make sure that providers are not claiming they saw 200 patients a day, or are not separating claims that should be combined into a single claim for financial gain."

Changing the prescription for success

These pressures—plus the desire to provide Americans the best possible return on investment (ROI)—have spurred CMS to take decisive action, such as shoring up practices and IT systems to ensure that all critical and sensitive data is completely safe and that all claims are fully monitored.

Currently, CMS hires contractors from around the country to analyze regional Part A and B claims to determine whether they are legitimate and accurate for the services provided. Although the process had been working well, internal personnel recognized the potential data security risk—not to mention the redundancy—of replicated claims data from the overlapping efforts of these contractors. Keeping the data closer to home would lower the costs of ensuring the integrity of the claims process while allowing a national view into the data. It would also serve to secure sensitive patient data because fewer entities would have access to the data.

Taking into consideration security issues and excessive cost, as well as the inclusion of Part D data, CMS decided to reduce the risk to patient data while also removing redundant data costs by funneling all claims into one integrated environment. In concert with the Office of Information Services at CMS, the team chose to move to a single, integrated data repository that could handle large volumes of data—as much as 180TB by 2009, CMS predicts—while helping the organization more effectively manage activities of fraud, waste and abuse.

Call in a specialist

In May 2005, CMS officials evaluated their options and selected the Teradata Warehouse. The Integrated Data Repository (IDR), located in CMS headquarters, enables CMS to better organize its data by beneficiary and by provider into one repository instead of separate regional systems. Because CMS and its contractors can now evaluate data nationally instead of just regionally, it provides better opportunities for

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identifying fraudulent claims and abuse.

The IDR is part of the CMS move to a three-tier architecture that creates a firewall of several layers between the users and the organization's data, Winkelman says. With this system, all information can be accessed by any standard analytical tool, with Teradata supplying views of the data to users and applications running within a service-oriented architecture.

Under the new system, CMS has retained its outside contractors (known as program integrity contractors), but instead of manually receiving regional data, the contractors will need to access the IDR through a secure portal. All of the data necessary to identify fraudulent behavior will be stored in one place and remain accessible through this secure portal, eliminating the need for dozens of individual projects dedicated to separate program integrity efforts, Winkelman notes.

"Government regulations require a certain amount of safeguarding, and having all of your data assets in a single repository clearly supports better management of personal health information because you aren't dealing with siloed databases," he says.

In addition to helping eliminate activities of fraud, waste and abuse, the Teradata Warehouse offers CMS a host of other benefits, including the ability to:

- Quickly add new data and applications
- Easily accommodate new requirements
- Address additional Health Insurance Portability and Accountability Act (HIPAA) data protections
- Perform in-depth analysis such as medical and pharmaceutical trend analysis, accurate actuarial and underwriting analysis, predictive analysis and chronic care improvement analysis

The systems integration project is moving along smoothly, Winkelman says, with Part D data and the reference files necessary to support payment reconciliation already in production on the IDR. Officials expect to have Part B claims fully integrated by the spring followed by Part A claims in the summer.

Prevention is the best medicine
By taking these steps to integrate its data assets, CMS is on the cutting edge of fighting fraud, waste and abuse, says Gary Christoph, chief informatics officer for Teradata Government Systems and former CIO of CMS.

"Organizations that are willing to exercise thought leadership at an executive level and invest in a centralized, enterprise-class intelligence environment have shown they benefit in the mega-millions of dollars—not only in return on investment but also in lower total cost of ownership," Christoph says.

The integrated system reduces the overall cost of identifying potential fraud, waste and abuse while preparing CMS to meet its future data needs—needs that are expected to grow exponentially over time.

"By taking these actions, CMS has clearly positioned itself to meet the future head-on, without worrying about their capacity to manage all their data assets," Winkelman says. "They did what they had to do, and it's already paying off." T

Behind the solution: Centers for Medicare and Medicaid Services	
Database:	Teradata Database V2R6.0
Server:	**Production System**—12-node Teradata 5400/5450 Server **Test/Development System**—4-node Teradata 5400 Server
Operating System:	UNIX MP-RAS
Storage:	**Production System**—Total Disk: 43.3TB, User Disk: 19.9TB **Test/Development System**—Total Disk: 14TB, User Disk: 6.4TB
Teradata Utilities:	MultiLoad, FastLoad, FastExport, Teradata TPump—network and mainframe, Teradata Manager, Teradata Utility Pack, Teradata Analyst Pack, Teradata Dynamic Workload Manager
Tools/Applications:	Products from Business Objects, Cognos, Informatica, MicroStrategy and SAS

Karen D. Schwartz is a writer based in Washington, D.C., where she specializes in business and technology issues.

Teradata Magazine-September 2007

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