

> Protect Your Programs

Increase your success rate in identifying and investigating fraud, waste, and abuse.

Government agencies today face the challenge of delivering expanded services with limited resources. As a result, it's increasingly important to minimize the amount of money lost to fraud, waste, and abuse. Unfortunately, because of the scope and complexity of many government programs, it's all too easy for fraud, waste, and abuse to go undetected.

Predictive analytics can help improve your agency's success rate and your efficiency in combating these problems. Predictive analytics technologies enable you to "connect the dots" faster, to anticipate and even prevent instances of fraud, waste, and abuse. Your agency's investigators gain insight that enables them to prioritize investigations and dedicate staff resources to the cases most likely to lead to significant fines or recovery of funds. In the end, this makes more money available for essential programs and services.

SPSS predictive analytics solutions analyze massive amounts of data with powerful techniques that uncover subtle patterns and associations and identify anomalies. In contrast to rule-based detection approaches, SPSS predictive solutions "learn" from the data, building models that consider all the data elements and significant relationships. Such models remain useful, even as patterns in the data change. You can also incorporate textual information from e-mails, call center notes, agent reports, and other sources. The result? More comprehensive and current models that detect which cases are most worth investigating.



A powerful weapon in combating fraud, waste, and abuse

Predictive analytics is used by agencies worldwide involved in administering healthcare services, tax collection, public welfare, public safety, defense, and many other services. By using predictive analytics, investigators at such agencies can efficiently:

- Fight fraud in government-funded healthcare programs such as Medicare and Medicaid by targeting potential over-billing, double-billing, up-coding, use of stolen recipient IDs, and other suspect provider practices
- Optimize payments in government-funded prescription drug programs by forecasting the usage and cost of specific prescription medicines
- Identify participants in healthcare, public aid, educational assistance, and other programs who are most likely to commit fraud and abuse
- Put public health funds to maximum use by discovering cost-efficient disease management practices
- Maximize tax revenue adjustments by targeting for audit those returns liable to produce the largest adjustments
- Detect errors and improper payments in the administration of military pay and pensions
- Uncover abuse of agency purchase card programs
- Minimize waste by improved monitoring of contractor performance
- Streamline agency performance by uncovering opportunities for greater process or cost efficiencies

For decades, SPSS has provided analytical tools to support the work of government agencies. We serve customers in local, state, provincial, and federal government offices and agencies worldwide. Our customers use SPSS software for a wide range of purposes and have found it particularly effective at uncovering patterns that point to fraud, waste, and abuse.

Healthcare agency saves millions

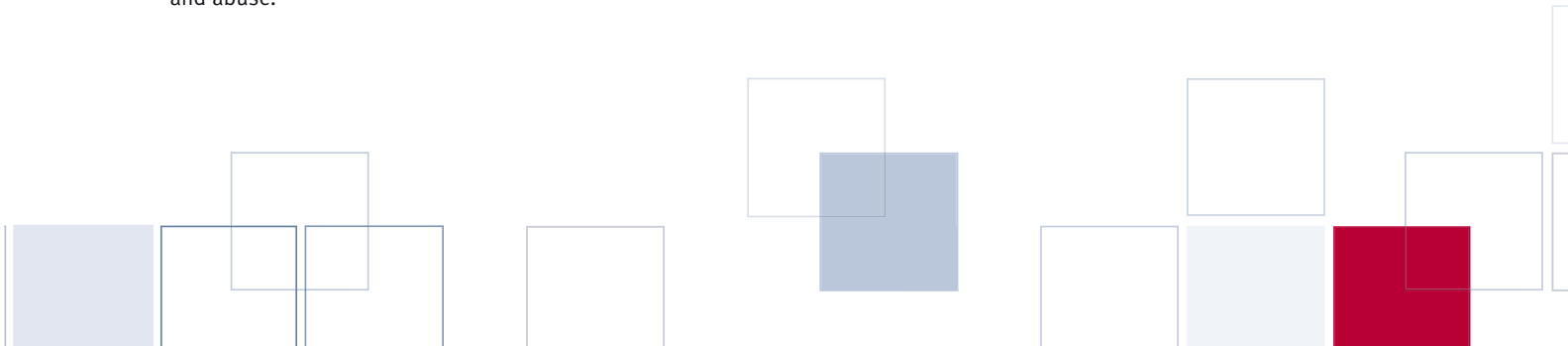
Recently, a state agency that oversees the delivery of a variety of healthcare services to several million people every year used predictive analytics in conjunction with its new, enterprise-wide data warehouse.

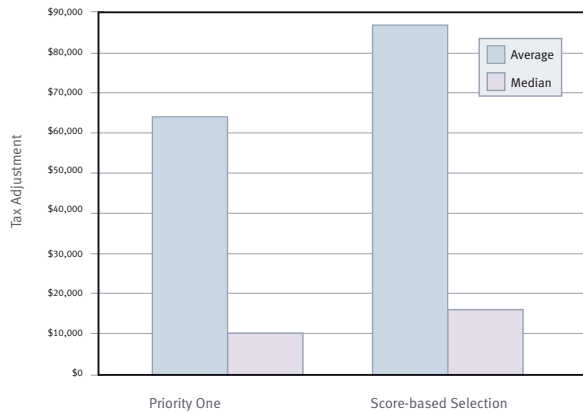
In its first 18 months in operation, this data warehouse and predictive analytics solution enabled the agency to save more than \$85 million of state funds—and an even greater amount of federal funds—partly by detecting erroneous or fraudulent claims and also by making key license edits affecting how service providers are paid. The agency expects to save additional millions of dollars in years to come. As an added benefit, the system can track the cost benefits of these policy decisions on a weekly basis.

In addition, one office within this agency learned that just 12 percent of its clients account for 52 percent of its costs. By analyzing expenditures for this group, this office expects to better identify ways to control costs.

Revenue agency boosts collections

Predictive analytics also uncovers more efficient ways to collect money owed to government agencies. One state revenue agency, for example, traditionally selected businesses for tax audits based on the size of the company, prior successful audits, or violation of one or more tax compliance rules. When the agency audited a list of target companies generated by an SPSS predictive analytics solution, it increased the median tax adjustment obtained by more than 50 percent, with no increase in staff size or costs. Predictive analytics identified a more comprehensive list of targets by taking into account additional characteristics and data elements, going beyond the rules that had been previously established.





A state revenue department classifies its larger business taxpayers as Priority One, auditing each of them approximately once every four years. By taking into account other factors in addition to total tax revenues, predictive analytics solutions generated scores that identified additional audit candidates, increasing both the average and the median amounts collected.

The SPSS advantage

To accurately detect fraud, waste, or abuse, your agency may need to access data from many different databases or applications. Because SPSS predictive analytics solutions use an open, standards-based architecture, they enable you to do this easily and efficiently. With SPSS solutions, you can incorporate data derived from both numeric records or “structured” databases and data derived from textual or “unstructured” records.

You can use SPSS solutions to build models based on advanced statistical techniques and your own knowledge and agency best practices. You can validate and fine-tune the models by running them against test data, so that when the optimal model is run against your full dataset—perhaps millions of rows of data—it returns reliable, accurate, and meaningful results.

By using predictive analytics from SPSS, your agency can:

- Spot possible instances of fraud, waste, and abuse more quickly with models that flag cases that fall outside the expected range
- Investigate the cases that offer the greatest potential payback
- Automate the identification of fraud, waste, and abuse by embedding predictive models in your operational systems
- Deploy results to operational systems to automate detection processes, or deploy results and entire models to investigators in the field

Patterns of fraud, waste, and abuse are continually changing. So you must periodically test the reliability of your models by applying them to new data. Because they incorporate advanced statistical techniques, models developed with SPSS solutions “learn” from the data and evolve as patterns in the data change. This ensures that your approach to spotting potential trouble spots remains current and effective.

Keep up the good work

When your agency investigators have easy access to timely information about potential fraud, waste, and abuse, you can take action sooner and with a greater likelihood of success. To protect the financial health of the essential government programs and services your agency delivers, rely on predictive analytics from the leader in the field, SPSS Inc. Contact one of our sales representatives today for additional information about how our solutions can help protect your agency’s financial resources.

Net Millions—Or More

Government agencies using SPSS solutions have gained millions—even billions—of dollars by using SPSS predictive analytics solutions. You don't need internal expertise in statistics or data mining to benefit from these solutions. Consultants from SPSS or one of our business partners can assess your data and processes, and then develop comprehensive solutions, as needed. Your staff can then implement these solutions. We work with leading systems integrators—companies with a depth of experience not only in SPSS products but also in applying them to meet particular agency challenges.

For example, one U.S. federal agency turned to Booz Allen Hamilton when it faced an increasing backlog of collections. Booz Allen developed predictive models using Clementine®, SPSS' data mining workbench. These models enabled the agency to prioritize collections in a way that optimized the agency's resources and aligned its operations with its strategic goals.

The project resulted in an estimated \$1.8 billion in additional revenue, representing a 600:1 first-year return on investment for the agency.

"Government agencies constantly have to make intelligent choices in order to fulfill their mission. This requires them to apply limited resources to increasing workloads while increasing customer service levels," said Booz Allen Hamilton analyst Jill McCracken, PhD. "Our work with SPSS has demonstrated that predictive analytics can be an effective method of providing clients with an immediate improvement in business results, even in legacy system environments."



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