



Business Impact

“With SAS, we are adding multiple pillars of analytics – including predictive modeling and social network analysis – to our existing rule base, which will give us the flexibility to create new rules pretty quickly whenever we need them, without having to wait for some vendor to incorporate a new rule into its next release.”

Mike Occhipinti, Director, Informatics, Business Intelligence and Data Management, Horizon BCBSNJ

Challenges

- **Growth in organized fraud.** Organized crime rings are drawn to the low-risk, high-return nature of health care fraud, and it can take years to spot links among discrete episodes of fraud, waste and abuse.
- **Limited investigative resources.** There aren't enough expert investigators to detect and examine all suspicious activity, so the key is to make investigators more efficient.
- **Ad hoc investigations.** Automated suspicious lead generation is limited, and cases are prioritized manually.
- **Outdated systems.** Current systems, which rely on easily manipulated and frequently outdated rules, generate too many false positives and may be too unwieldy to update.
- **Scattered data.** It's hard to get relevant information from all the systems that have structured and unstructured health care and claims data.
- **Pay-and-chase approaches.** It is a lot harder to recover funds once claims have been paid, particularly in the case of true fraud and organized crime.

How can we best detect, prevent and combat fraudulent activity in health care?

YOUR GOAL: Prevent losses, lower false positives and increase efficiency

The National Health Care Anti-Fraud Association and the Federal Bureau of Investigation estimate that approximately 3 percent to 10 percent of total US health care spending – or \$70 billion to \$260 billion – is lost to health care fraud in the US each year. In the EU the figures are similar – 5.6 percent of national health care budgets, or \$30 billion to \$100 billion each year. As staggering as these figures are, they only include true fraud (where intentional deception is proven). Factoring in waste and abuse, the numbers approach 40 percent of total health care spending. Plus, it is estimated that historical fraud detection methods only uncover 10 percent of losses. And because of the post-payment nature of such methods and the resulting “pay-and-chase” recovery process, less than 5 percent of losses detected are ever recovered.

Fueled by technology advancements that have made crimes such as identity theft and multiparty fraud schemes both easy to commit and hard to detect, health care fraud continues to grow. It holds particular appeal for organized crime syndicates, which account for a growing proportion of health care fraud, waste and abuse.

OUR APPROACH

Improvements in prepayment fraud detection could mean up to hundreds of millions of dollars in savings. SAS takes an enterprise approach to fraud, waste and abuse detection and prevention by providing a hybrid software solution that enables you to:

- **Transform vast amounts of data (including text-based data) into a meaningful format**, and restructure and group data into categories for easier analysis using comprehensive data management capabilities that ensure accurate, reliable data.
- **Detect fraud and improper payments before claims are paid** with a hybrid approach to fraud detection that combines business rules, anomaly detection, predictive modeling and network analytics to analyze seemingly isolated events to spot hidden connections, patterns and anomalies – often years ahead of traditional methods.
- **Quickly uncover organized fraud rings and go beyond linking associated entities to identify targets** with a high likelihood of leading to emerging or migrating schemes.
 - Social network analysis exposes previously hidden relationships among entities.
 - A unique visualization interface lets you actually see connections between discrete episodes of fraud, waste and abuse.
 - Predictive modeling techniques on prior cases of known fraud enable you to build fraud propensity scores on new events.
- **Improve investigator efficiency** by using predictive modeling techniques (such as decision trees and neural networks) to build fraud propensity scores, and prioritization methods to assign suspicious activity alerts and route potentially fraudulent claims to the right resource based on type, skill set, experience and workload.

Pre-packaged, ready-to-use heuristic rules and analytic models enable you to get up and running quickly. Plus, the SAS solution is flexible and customizable, so you can modify models and rules to meet your specific needs.



THE SAS® DIFFERENCE: A hybrid approach to stopping health insurance fraud

No single approach to fraud detection will work in every circumstance. That's why SAS takes a hybrid approach that combines four key analytic methods – business rules, anomaly detection, predictive models and network analytics – into a single solution. Only SAS delivers this hybrid approach to fraud detection, along with best practices, enabling you to develop a cohesive strategy for combating health care fraud, waste and abuse with comprehensive:

- **Pre-payment fraud detection and alert generation.** Uncover suspicious activity using multiple analytic techniques, and automatically route suspicious cases for review.
- **Alert management.** Automatically assemble alerts from multiple monitoring systems, associate them with common individuals or entities, and automatically prioritize and route potentially fraudulent cases to appropriate team members.
- **Social network analysis.** Identify targets for investigation by analyzing all related activities and relationships at a network dimension, so you can detect previously hidden linkages and uncover organized fraud rings.
- **Case management.** Available as a separate solution, case management capabilities let you systematically facilitate investigations, and capture and display all information pertinent to a case without corrupting the system with duplicate data entry.
- **Advanced text analytics and data mining.** Analyze both structured and unstructured text data to reveal fraudulent activities that would otherwise go unnoticed.

SAS lets you significantly reduce costs by implementing a single solution to address fraud, waste and abuse across multiple areas. This single-entity view of fraud perpetrators results in improved pre-payment fraud detection and enhanced investigator efficiency. And because you can customize and modify rules and models as needed, your investment is enhanced.

CASE STUDY: Horizon Blue Cross Blue Shield of New Jersey (BCBSNJ)

Situation

The company's existing rules-based fraud detection methods lacked the sophistication needed to properly identify today's complicated fraud schemes. Data from multiple systems was difficult to integrate. Many leads came in by word-of-mouth, but there was rarely enough information to go on. As a result, successful investigations were too rare, and the number of false positive alerts was high.

Solution

SAS delivered a hybrid anti-fraud solution that included:

- Predictive modeling capabilities.
- Social network analysis.
- The ability to integrate with the company's existing SAS tools.

Result

The solution was up and running quickly, and it has already produced some early successes by identifying spikes and trends faster than was previously possible.

What if you could ...

Detect fraud more quickly

What if you could uncover hidden connections that may lead to organized fraud rings and emerging fraudulent schemes years before traditional fraud detection methods would allow?

Make full use of both structured and unstructured data

What if you could extract all your text-based health care data and combine it with your structured data to analyze for potential fraudulent activities?

Perform anomaly detection and profiling

What if you could compare behavior against a group of peers to recognize deviation from the norm?

Monitor model effectiveness

What if you could monitor the effectiveness of your models to determine when they are outdated and need updating or replacing?

You can. SAS gives you THE POWER TO KNOW®

SAS FACTS

- More than 1,000 insurance companies worldwide are SAS customers.
- SAS has more than three decades of experience working with insurance companies across the globe.
- SAS customers make up 90 of the top 100 companies on the 2011 Fortune Global 500®.

Learn more about SAS software and services for health insurers:
sas.com/healthinsurance

Scan this QR code or visit sas.com/hcfraud to watch a video on preventing health insurance fraud before claims are paid.



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