

## FIGHTING FRAUD TODAY AND TOMORROW: DATA-DRIVEN DETECTION FOR LIFE INSURANCE



Linhui Dong, PhD, CSPA  
VP, Data Science  
RGA Reinsurance  
St. Louis, MO  
ldong@rgare.com

Preventing insurance fraud will never be easy, and establishing fraud safeguards, no matter how sophisticated, does not mean your company is fully protected. Vigilance must be paramount and consumers agree. According to statistics from the Coalition Against Insurance Fraud, most consumers think insurance companies should do a better job informing people about the cost of fraud (86%), verify information more carefully (84%), investigate claims more rigorously (73%), prosecute more cases of suspected fraud (73%) and require more documentation (61%). Generally speaking, consumers expect insurance companies to have appropriate safeguards in place to prevent fraud. We have an obligation and, in the majority of states in the US, a legal requirement to do exactly that.

### Current State

Many insurers already have anti-fraud units in place, and these units need to be the first line of defense against fraud rather than the sum of fraud-fighting efforts. Strategies such as fostering a zero-tolerance culture for fraud and providing anti-fraud training to employees and agents can also be effective means to identify fraud, both before and after it comes on the books, and mitigate its potential impact. For fraud prevention, underwriters and other teams can play very important roles. It is important the organization delivers a clear message to employees that it is everyone's responsibility for anti-fraud.

Additionally, more frequent reporting and prosecution of fraud could make a significant impact. RGA's Global Claims Fraud Survey indicates less than 2% of identified insurance fraud results in prosecution. Fraudsters are aware that insurers are reluctant to prosecute, due to both the high cost of litigation and the uncertain outcomes. Organized fraud groups make it their business to know which companies have

**Executive Summary** *The third in a series on fraud, this latest article from Reinsurance Group of America examines the future of fighting fraud and how predictive analytics can play a role in protecting insurers and consumers. Hear about how leveraging the latest technologies can provide a strong defense against fraud. Integrating machine learning, predictive analytics and the newest data mining tools into fraud detection efforts is already strengthening fraud detection and mitigation capabilities for early adopters.*

strong fraud teams and are most likely to prosecute. Even though it is expensive, making prosecution a credible threat may ultimately serve as a deterrent.

Beyond these current safeguards, as the insurance industry evolves and adapts, it is important for insurers to be proactive in rooting out gaps and flaws and to prepare for the fraud of the future.

### Explore New Avenues

Insurance companies are working tirelessly to develop technology to enhance the customer journey; all the while fraudsters are looking for ways to exploit these systems. As criminals seek to take advantage of new vulnerabilities among insurance companies, experts within the industry are working to identify innovative tools and approaches for detecting and preventing fraud.

Leveraging the latest technologies can provide a strong defense against fraud. Integrating machine learning, predictive analytics and the newest data mining tools (as well as data scientists) into fraud detection efforts is already strengthening fraud detection and mitigation capabilities for early adopters. Although the proprietary fraud/fraudster databases

maintained by many insurers and reinsurers are a plus, a central information repository for reporting actual or suspected insurance fraud would be a much stronger weapon in the war on fraud. One such example is FraudShare, a database that LIMRA and LOMA worked with fraud prevention experts and developers at member firms to create. The goal of FraudShare is to combat account takeovers and enable carriers to monitor and better understand new fraud challenges by documenting fraudulent activity in a secure database. Such repositories make it easier to identify and stop would-be perpetrators.

Looking toward the future, artificial intelligence and machine learning are currently being applied to fraud detection and mitigation and will be deployed much more broadly. The enormous amounts of data now available, both structured and unstructured, can be sifted to detect patterns indicative of fraud that even a few years ago might have been impossible to see. Algorithms can be trained to identify information applicable to fraud cases and, as data is added, can continually evolve and improve capabilities. This holds out some hope that insurers may soon be able to stay one jump ahead of some of the more ingenious fraudsters.

This kind of algorithm is not science fiction; RGA is currently developing a proprietary algorithm in Asia customizable for individual product portfolios (e.g., life, accident, etc.), and using it to analyze fraudulent claims behavior by product, as well as by company. Although the current focus is on claims, as that is where substantial fraud is known to occur, there is interest in refining the algorithm so it might at some point be able to detect underwriting fraud, as well.

The most important thing to understand is this: There is no one magic tool for combating fraud. We must ensure our fraud prevention tools and technologies are broad and well integrated, and we must be both proactive and willing to adapt nimbly – just like the fraudsters we are pursuing.

#### **About the Author**

Linhui Dong, PhD, CSPA, is Vice President, Data Science, and a member of RGA's Global Research and Data Analytics (GRDA) leadership team. He is responsible for managing the Data Science team in Shanghai and also in St. Louis. Linhui provides strategic direction and leads new data science initiatives to develop and execute data-driven solutions. He joined RGA in 2018 and is based in St. Louis, MO. Prior to coming to RGA, Linhui served as Analytics Lead – Specialty Markets for Munich Re America and as Actuarial Director and Head Modeler of Personal Insurance for AIG. He began his financial services career as a Consultant, then Senior Consultant and Associate of Research & Data Analytics for Travelers. Linhui holds a PhD in Economics and a Certified Specialist in Predictive Analytics (CSPA) designation.

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