



Richard J. Pro, Health Plans Principal in the SAS Health and Life Sciences Global Practice, discusses with *Future Healthcare* how **billions of dollars lost to healthcare fraud each year can be stymied**

Future Healthcare Why is healthcare fraud top-of-mind for many people in the industry right now, and how much does fraud cost the industry each year?

Rick Pro There are a number of reasons why healthcare fraud is top-of-mind. One of those is cost, and it is a major cost. Healthcare fraud costs the American public between \$60 and \$100 billion each year. If you look in other areas around the world, you see similar figures. Estimates are upwards of €30 billion per year across Europe. These numbers, in the United States, come from both the National Healthcare Anti-Fraud Association, which is really the trade organization among fraud investigators for healthcare in the United States, as well as from the FBI. There's an agency similar to that in Europe, too.

What we're finding now is that the combination of widening healthcare costs, where there's been a lot of pressure on payers to contain those costs for at least the last decade, along with the more recent economic crisis, has everyone looking for where costs can be

contained quickly and where they can get big bang for their buck. On the health-payer side, there is a lot of focus on containment of administrative costs. We've seen recently in the news some major payers reducing staff as part of their effort to contain administrative costs. If you're a large health plan and you have perhaps tens of millions or even a \$100 million potentially being lost to fraud, waste and abuse, that's a single target you can really focus on and have a tremendous impact.

FH Historically, what have been the challenges facing the industry in identifying and preventing fraud?

RP The challenges have been that what you're looking for are very subtle behaviors that are masked by enormous amounts of data that pour into payers every day — most of which are for claims that are legitimate and being billed in a legitimate way. You're looking for the needle in a haystack, essentially. When you add all those needles up, it can be quite considerable in terms of dollar value. To identify individual behaviors

can be complicated because of the amount of data health plans work with every day.

The fraud, waste or abuse investigative units are staffed by folks whose expertise tends to come from the legal investigation background. Their forte is understanding the process of legal investigations and understanding from a clinical perspective what is acceptable and what is not. The adoption of more advanced data mining techniques has been slow in those organizations, primarily because their backgrounds don't tend to cause them to look in those directions. What we see now is an interest in taking these types of techniques, and increasingly staff associated with this field are being exposed to the possibilities from a technological standpoint as to what can be done to help them with their investigations. To take them out of the mode which has largely been a manual investigation mode, and allowing them to assist with that, or perhaps do it for them, and then present them with results. The barriers really have been the lack of investigative technology, which has been created for the purpose of investigating healthcare fraud.

FH How do predictive analytics help employers and insurers improve recovery efforts and prevent fraudulent claims in the first place?

RP There are several different ways. The first way addresses what has been the one piece of technology used the longest among people in special investigation staffs. All these staffs investigate claims, they find fraud schemes and they share information with each other into what is called business rules. Those business rules can be translated into computer code, and you can compare your claims that come in against those rules. There could be a claim that comes through with some sort of female-only procedure, but it's for a male patient. Is that claim a result of simply a typo, or is it a result of someone trying to pass through a claim assuming that it won't be looked at that closely and that it will fly through and that some payment will result? It's difficult to tell, but business rules can be created that say that these procedures should never show up for a male, and they can be flagged. The problem is, you have to do an investigation on the back end to know whether this could really be fraud or just a typo. The first place where Predictive Analytics can come into play is to take all of these claims that are flagged for potential investigation and to actually attach a score to those, based on Predictive Analytics, that lets you know how likely this claim is to truly be fraudulent. You're reducing the number of cases you're going to pursue that lead to a dead end, where you're wasting time and wasting resources. So Predictive Analytics can dramatically reduce these false positive rates.

The second thing Predictive Analytics can allow you to do is look into your data and identify potential fraud and abuse that hasn't been seen before. It hasn't been explored and it hasn't been verified and translated into one of these simple business rules. Claims associated with these new schemes are probably flying right through your payment system. Predictive Analytics can help you find those. The way that it does is that Predictive Analytics can take a look at your large mountains of claims data, most of which are perfectly legitimate, normal claims. These predictive models can learn what normal, legitimate behavior looks like. As a result, if it comes across

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a claim that doesn't look like it fits with normal behavior, it can flag it as a suspicious claim. That then gives you some leads to follow as far as finding the emerging schemes early on.

A final important area is that claims are often looked at individually. As a result of that, you can have claims, that don't look suspicious by themselves, but if you could put them together with other claims you would begin to see a pattern of fraud or abuse because there's some kind of collusion going on. Predictive Analytics can be used to build models that can score networks of claims. The models can identify the networks in the first place, and then they can score those networks to tell you how likely the network is really associated with something that is fraudulent or abusive, as opposed to being just unusual but legitimate.

FH Do you have any examples of companies who are effectively using analytics to combat healthcare fraud?

RP Not surprisingly, a lot of companies like to keep their success to themselves because it's part of their competitive advantage, but there are some that have talked publicly about their successes. One is HCSC, which is headquartered in Illinois. There are a Blue Cross Blue Shield plan that covers Oklahoma, Texas, Illinois and New Mexico. They use technology in the way around a business rules engine. They use Predictive Analytics to score those claims so that they can prioritize which ones to investigate first. They need assistance to review potentially

large numbers of suspicious claims to know which ones are most likely to result in a positive finding of fraud if they investigate. You want to stop the fraudulent cases, and you want to find them in the order of greatest potential loss.

A second company that has had a lot of success is Highmark in Pennsylvania. They use technology in a little different way, in that they are doing more of the data mining and anomaly detection, so they're out there looking for the kind of data that a rules engine would not find.

FH What do you think the future holds for preventing fraud?

RP What the future holds is that we're right on the cusp of widespread adoption of these types of technologies within investigation units. We're going to find that the amount of fraud and abuse detected, in dollars covered, is going to rise dramatically. The estimates are that \$60 to \$100 billion is lost in the United States per year, but only about 10 percent of that is currently ever identified. And only about 3 percent is ever recovered. When schemes are identified today, it's typically after the claims have been paid, so you're looking back at your data retroactively and finding those things. The people committing fraud are generally pretty clever. Most of the time, they know they can run a scheme for a certain period of time and then they move on to a different scheme or a different location. They're gone and the money is gone with them. What the future holds is identifying these fraud cases in much higher numbers and much earlier in the process, finding them prior to payment. **FH**



RICHARD J. PRO, MS, FAHM, currently serves as Health Plans Principal in the SAS Health and Life Sciences Global Practice, and is responsible for driving the development of SAS solutions that target key business issues faced by global health payer markets. Mr. Pro joined SAS in 2005 after serving for more than 17 years at Highmark, Inc., the ninth-largest health insurer in the United States and third largest among the “Blue” plans. At SAS, Mr. Pro provides health insurance industry expertise and consultative services to internal and external customers regarding business-solution development and informatics best practices.