

Emerging Technologies in Large Volumes Claims Management and How They Can Be Used for Fraud Detection

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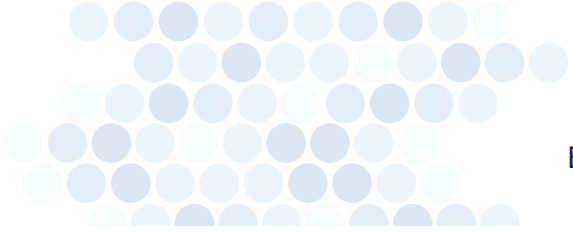


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Objective

This paper seeks to identify new trends in technology that affect the way we process or manage claims with respect to detecting fraud and abuse, and using claims data to manage and predict healthcare trends to shift our focus from fraud detection to fraud prevention. Over the last five years, there has been a spike in technology applications for the claims management industry. These applications offer a variety of improvements, from new advances in hardware processing ability to advanced artificial intelligence in predictive modeling for health trends.

Background

Most claims management systems, whether they are in healthcare, auto, home, disability, or any insurance modality, were developed in the 1970s. These systems used mainframe technologies that were leading edge at the time. Unfortunately, during the period between 1980 and the mid 1990s, there was little research and development investment in these systems. The little amount of R&D that was completed was mostly accomplished through the commercial sector as claim volumes, along with fraud and abuse, began to rise. New systems were developed to combat these trends as customer expectations began to rise with respect to level of service, and as the criminally minded developed more sophisticated means of abusing the legacy system's limitations.

As each commercial entity in the healthcare claims marketplace began to develop new systems, there was a lack of a coordinating entity and a lack of desire to develop a common architecture and a common means of transmitting data. Therefore, the costs to providers and payers to submit, process, and remit claims became an administrative and financial burden, in addition to the impact on the ability to deliver quality care to the recipients in a timely manner.

This increased administrative burden led to the development of a new industry known as Third-Party-Administrators (TPA). With the exception of very large physician practices and multi-system healthcare providers, providers were not able to keep up with the demands of a multi-payer system. Therefore, they contracted billing and claims services to TPAs, so that they could concentrate on providing care. With this,

administrative costs began to soar, draining as much as 31 percent of all healthcare dollars paid by consumers and insurers. This became intolerable and Congress took action.

HIPAA

Among other things, the Health Insurance Portability and Accountability Act (HIPAA) of 1996 was intended to control this administrative burden on the healthcare industry. The Act established standards for the electronic transfer of data, the codes that used in the claims process, the various identifiers of providers, and the security and privacy of health data. The Act dictated that if Congress failed to enact these standards, the Department of Health and Human Services (HHS) must adopt regulations to support the Act. Indeed, Congress did fail to enact the legislation, and, consequently, over the next seven years, HHS proposed, released, re-released, and finally adopted regulations for all of these administrative problems.

As previously mentioned, most innovations in claims management, especially with respect to fraud detection and prevention have taken place in the commercial sector. However, since the Federal Government is the largest healthcare payer in the United States and with the Medicaid program being State-administered, it quickly became evident that the States would have to overhaul their systems to come into compliance with HIPAA. In turn, this situation opened the door for investments in newer technologies.

Below is a list of current trends in the Medicaid market. There is a discussion of ten items; however, this paper will focus on the second one.

Trends

- Identification of exceptional claims must happen quickly. The same pressures to reduce costs and losses will push carriers to find more efficient ways to identify exceptional claims that need management by a skilled adjuster, and find them early in their life cycles so that they can be appropriately managed, losses can be prevented, and additional coverage identified. Examples include those claims that may have high probability for subrogation opportunities, claims that need accurate reserving, and claims that represent potential large losses or litigation that could be mitigated by careful management.
- Economic conditions will increase opportunistic fraud. Experts such as Conning & Conning predict that the growing numbers of out-of-work Americans will turn to opportunistic fraud to replace lost wages in lines such as workers' compensation, auto, and personal property. Businesses, too, may be tempted to offset losses by orchestrating insurance windfalls. The ability to find fraud efficiently, using the manual methods applied today, is dwarfed by the mountains of data that must be analyzed to find patterns indicating potential abuse. To combat potentially fraudulent claims, and the associated payments made on these cases, insurance companies and third party administrators need new tools to assure consistent early detection and elimination of fraud.
- Electronic and Internet processing increases efficiency and potential for losses. The growing number of claims processed electronically and over the Internet will dramatically improve processing efficiency and, eventually, reduce the processing cycle from days and weeks to hours and minutes. As the potential for large sums of money to change hands very quickly grows, so does the exposure for losing large sums of money. Insurers will need the types of systems that are used in other industries with large volumes of electronic transactions (such as credit cards and banking) that can assess the risk of a claim when it is submitted, and before it is paid.

In addition to speed, other characteristics of the Internet, anonymity, global reach, and the ability to make identical multiple submissions at the same

time, will make it easier for fraudsters to commit fraud. For example, an individual can submit a request for coverage on an automobile that does not exist, and collect policy limits when it is allegedly stolen or a total loss.

- Aging legacy systems will be updated with new components, as opposed to being replaced completely. The majority of claim systems currently in use by insurance companies is at least a decade old, and no longer represents the latest technological assistance available for the claim adjuster. However, new component systems incorporating the latest in technological advancements can add "intelligence" to these older systems without the cost or risk of having to replace them. These enhanced components will include automated decision management and workflow tools, which will result in reduced cycle times, improved claim decisions, higher claim disposal rates, and, ultimately, reduced loss payments.
- Advanced science will help insurance executives use data to make critical management decisions. Consequently, advances such as neural networks and context vectors, which can read and interpret both structured and unstructured information, will become even more important for turning mountains of data or free-form text into actionable information. Automation will enable claim processing companies to institutionalize the knowledge of their best workers, which will result in more consistency and improved quality in the claims management process. The quality of the claim review process depends, in large part, on the knowledge and attention each claim receives from an individual adjuster. A number of factors affect the supply and the effectiveness of these skilled professionals, including:
 - Consolidations and downsizing influence the deployment and the employment of claim managers.
 - The workforce is aging. As skilled adjusters retire, who will replace them?
 - Cost-cutting measures have reduced training and mentoring programs; as a result, newer workers

do not have access to the same knowledge resources as their senior counterparts.

- High turnover means that this knowledge base is constantly changing, rather than becoming more seasoned.
- They are tired; a recent survey revealed that the vast majority of adjusters are working significant amounts of overtime to keep up with the reams of paper they are assigned.

As a result of these factors, payers are in danger of losing valuable human capital, especially in claims, where a high degree of expertise and knowledge is vested in individuals. To combat this loss, carriers need to find ways to institutionalize the knowledge of their best workers through rule-based, decision management programs, to reduce the need for overtime through automation, and to create a work environment in which claim managers can derive the value from their jobs that comes from being a skilled professional.

- Systems and policies must be adapted to protect individuals' privacy. The impact of HIPAA guidelines to protect the privacy of medical data is a major issue facing insurance carriers and those who process claims, from the specifics of what will be required from insurers and providers to the cost of complying with these new regulations, to the impact that these privacy regulations will have on the ability to share information to resolve and pay claims appropriately.
- Security of data and systems will assume a higher priority as a newfound sense of vulnerability opens eyes and minds to the potential for cyber-intrusions, viral invasions, and sabotage by internal and external sources to disrupt business, cripple operations, and potentially violate individual privacy if confidential information is inappropriately shared or stolen.
- Application service providers (ASPs) and the Internet are leveling the technological playing field. The growing availability of ASPs and web-enabled software is allowing carriers and managed care companies to select this option over the licensing, installation, and upgrading of software systems in-house. Consequently, companies of any size and

any age can have access to the latest technology without the expense of creating the technological infrastructure to internalize it.

Of the trends that are listed, the remainder of this paper will focus on how just one of these can assist you in improving your available cash for needed services. The one that has the greatest impact with a smaller investment is the ability to use technology to identify, correct, and prevent fraud and abuse of health care insurance services.

Fraud and Abuse

As one of America's largest criminal industries, insurance fraud is growing at an increasing and alarming rate. Conservative estimates reflect \$50 to \$55 billion annually in healthcare fraud. Unfortunately, the establishment of special investigative units (SIU) and red flags in claim files has not kept pace. This is not for lack of effort from the investigators or claim personnel, but more from the lack of investment in automated tools to assist in the identification and investigation of insurance fraud. Insurance personnel are being overwhelmed with information to manually and subjectively sift through and analyze claim files for the detection of fraudulent activities.

Why do we need assistance in identifying and investigating insurance fraud? The answer is in the fact that most (if not all) perpetrators view insurance fraud as a low-risk proposition with potential for high monetary reward. Meaning, that it has always been easy to get away with filing a fraudulent claim and collecting a settlement. Insurance fraud criminals know that a majority of SIUs and claim departments are without fraud detection and investigative automated tools; therefore, it is safer to commit insurance fraud than drug dealing, robbery, or any other crime involving illegally obtaining money...that is, until now.

The advances in software and technology in the past few years have provided a means to detect fraud as soon as a claim is filed. No longer do organizations have to wait for a claim to develop in its life cycle before potential fraud becomes evident. The technology that is now available for the insurance industry has been in use by

banks, credit card companies, international intelligence, and law enforcement agencies. Taking advantage of this technology will be essential to the insurance industry's ability to deal with and address the increasing problem of insurance fraud in not only our national economy but also the global economy.

Automated fraud detection and investigative tools can be described in three general categories:

Predictive Technology

This technology continually monitors a claim for the entire life of the claim. Claims that start out valid and later become fraudulent are identified as suspicious activity patterns emerge. The use of key data elements within a claim administration system assists in the production of detailed characterizations of every claim. The technology automatically reviews claim characteristics and identifies claims that fit historical patterns of fraud, and detects fraud by recognizing differences between valid and fraudulent claims. The system completes processing of inputs and produces fraud-risk scores and explanations, with the higher scores indicating a higher risk that the claim is currently fraudulent.

Similarity Search Technology

This technology uses a similarity search engine that identifies similarities within data structures with multiple characteristics. It applies advanced measures and allocates variable weights to data, resulting in more accurate identification matches. The technology searches through databases and highlights objects that could be related. It assists in identifying those who commit fraud who may use a slight variation of a name, address, telephone number, or other identification. The system is designed to allow refinement and filtering of searches, including scoring and sorting of results based upon a user-defined data model. As no data cleansing or consolidation is needed, searches can be executed across various databases simultaneously.

Visual Link Analysis Technology

This technology consists of multifaceted algorithms that analyze large amounts of data to find significant relationships among what appear to be unrelated or

distinct objects. The ensuing patterns and trends that emerge are then presented in a visual and distinguishing graphical layout. The technology provides the ability to find and interpret relationships among people, places, entities, etc., that, on the surface, may appear to be unrelated. Instead of reviewing claims on an individual basis, the technology allows the ability to see the bigger picture, looking for commonalities, unusual relationships, and trends that often go unnoticed. The technology analyzes large amounts of an organization's own data with the potential to bridge data from outside sources to assist in the identification and investigation of fraudulent activities.

Making a Choice

The key to evaluating and selecting any fraud detection and investigative software is to understand internal and external needs, strengths, weaknesses, opportunities, and threats faced by your organization. Developing a fraud detection and investigative strategy using technology should be based on an assessment of these areas before proceeding with product demonstrations and vendor interviews. This will save you time and effort by allowing you to focus on fraud detection and investigation technology solutions that more closely match your strategic, tactical, and operational objectives.

If the first thing that comes to your mind is cost, then the insurance fraud criminal has already won the battle and will continue to win the battle. Viewing fraud detection and investigative technologies from an organized and objective investment perspective should be the priority and not an afterthought. Understanding who within the organization will be using the technology, the users' technology skills and capabilities, what efficiencies will be gained, and the potential return on investment are some of the factors involved in analyzing the feasibility of inclusion of fraud detection and investigative software.

Once evaluation and selection are complete, a project plan that addresses the implementation of the new technology should be mapped out to address the deployment of the technology in an organized manner that facilitates its transition into the business operations and system environment. The goal here is to ensure

a successful implementation and deployment of the technology, and for the technology to be used in such a manner that benefits can be realized as soon as possible.

The benefits of integrating fraud detection and investigative technologies into claim and special investigation operations include:

- Acting as a deterrent when the organization publicizes its use of advanced technology to fight insurance fraud.
- Eliminating subjective review of claims based on red flags that are encountered during the life of a claim.
- Ensuring the use of a uniform fraud detection approach throughout the organization and business model.
- Providing detection and investigative capabilities that track new trends in fraud and become more accurate over time.
- Eliminating the unnecessary referral of non-fraudulent claims to SIUs.
- Assisting in the identification of claims that are truly special investigative-type claims.
- Allowing investigators to focus their efforts on claims that require additional investigation and attention.
- Empowering SIU management to prioritize and manage investigations in a more organized and objective fashion.
- Providing a competitive advantage in relation to other organizations that use less accurate processes of fraud detection and investigative methods.

The intriguing part of fraud detection and investigative technologies is the ability to pinpoint the real source of insurance fraud that could include various parties associated with fraudulent claim activities (e.g., claimants, service providers, etc.). While we would like to think that the problem of insurance fraud is not that rampant and that people are actually good at heart, the numbers are difficult to ignore and are increasing. The facts of the information and data gathered to date demonstrate that insurance fraud has become a real problem for the insurance industry, and there is a real

need to address this issue in a pro-active manner rather than a re-active manner.

Summary

With the economic downturn, fraudulent claim activity will increase, and insurance fraud will accelerate as the economy continues to struggle. Those organizations that have already implemented fraud detection and investigative technologies will have the upper hand on those organizations that have not yet deployed automated technologies to combat insurance fraud. Bottom-line performance and protection of assets is the name of the game in today's economic environment.

Are you doing everything you can do to enhance your bottom-line performance and protect your organizational and customer assets? Think of it from this perspective: have you ever considered what percentage of your loss ratio is associated with fraudulent insurance claims? If the answer to one or both of these questions is "No," you are probably losing the battle with insurance fraud within your organization.. The billions of dollars involved with this criminal industry and its activities cause a battle for the livelihood of the insurance industry, as well as our national and global economies as a whole.

CNSI, as a systems integrator with a proven track record in helping to build and implement Medicaid Claims Management Systems, including Decision Support Systems can help you to combat these problems. Not only can we help you with the technologies, but we can help you with analyzing your processes and systems to not just identify the fraud and chase the money, but to prevent it in the first place. We believe that this experience along with our ability to guide you in the right direction by knowing the available choices makes CNSI the clear choice to partner with in helping you to process your claims.