American Academy of Actuaries

Issue Brief

Insurance Fraud: Impacts on Premiums, Claim Costs, and the Public

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Key Points

- Insurance fraud encompass many different types of schemes, such as claim fraud, premium fraud, third-party fraud, and insider/agent fraud, and targets people from all walks of life—but many are among the most vulnerable.
- Fraud impacts everyone but may affect different groups of people in different ways due to affordability issues, cultural and/or language barriers, and vulnerable or unsuspecting victims.
- Regulatory authorities require insurance companies to submit antifraud plans. Insurance carries use methods and models to identify and report fraud and actuaries have a number of considerations when attempting to quantify the difficult question of, "How much fraud was prevented?"

1850 M Street NW, Suite 300
Washington, DC 20036
202-223-8196 | www.actuary.org

Geralyn Trujillo
Senior Director, Public Policy

Rich Gibson, MAAA, FCAS
Senior Casualty Fellow

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1. Introduction

Insurance fraud is widespread, perpetrated by a broad range of "bad actors," and has significant effects on businesses and the public. These illegal activities, which encompass many different types of schemes, target people from all walks of life, but many are among the most vulnerable. Types of scams range from fake insurance plans and marketing and phony accidents to workers' compensation schemes and overbilling for equipment.

In addition to describing the types and extent of fraud that are committed and its societal and financial impacts, this issue brief discusses regulatory actions to prevent and report fraud and approaches actuaries can take to quantify the damage fraud causes. It also discusses data resources that can be used to define, quantify, prevent and fight fraud.

The intended audience for this issue brief includes risk and insurance professionals including regulators and property/casualty actuaries.

What is insurance fraud?

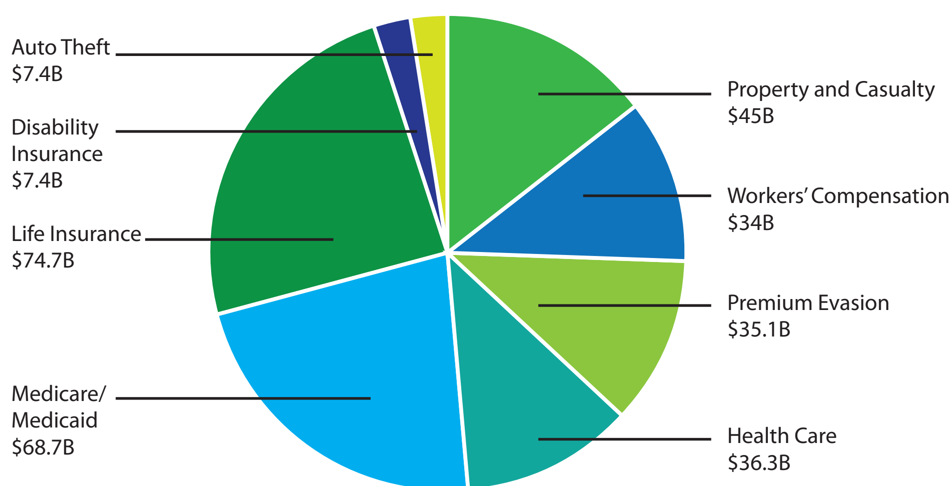
The National Association of Insurance Commissioners (NAIC) Center for Insurance Policy and Research describes insurance fraud as follows:

> *Insurance fraud occurs when an insurance company, agent, adjuster or consumer commits a deliberate deception in order to obtain an illegitimate gain. It can occur during the process of buying, using, selling, or underwriting insurance. Insurance fraud may fall into different categories from individuals committing fraud against*

consumers to individuals committing fraud against insurance companies. Fraud not only inflicts extra costs on insurance companies, but it also financially impacts consumers and businesses.[1]

The NAIC identifies two categories of fraud: hard fraud and soft fraud. Hard fraud occurs when a policyholder deliberately destroys property with the intent of collecting on the insurance policy. Soft fraud, which is more common, occurs when a policyholder exaggerates an otherwise legitimate claim, or intentionally omits or lies about information on an application to obtain a lower premium. Soft fraud is often considered a crime of opportunity.[2]

According to the Coalition Against Insurance Fraud, "insurance fraud steals at least $308.6 billion a year from American consumers,"[3] broken down as follows:[4]



1 "Insurance Fraud"; National Association of Insurance Commissioners website; undated.
2 According to US Legal.com, fraud is "an intentional misrepresentation of material existing fact made by one person to another with knowledge of its falsity and for the purpose of inducing the other person to act, and upon which the other person relies with resulting injury or damage. Fraud may also be made by an omission or purposeful failure to state material facts, which nondisclosure makes other statements misleading."
3 "Fraud Stats"; Coalition Against Insurance Fraud website; undated.
4 "Insurance Fraud Perspectives from the Market, Government, and the Actuarial Profession" (webinar); American Academy of Actuaries; June 28, 2023.

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How does insurance fraud work for the P&C insurance industry?

There are various types of insurance fraud specific to the property and casualty (P&C) insurance industry, such as:

- **Claim Fraud**—making false or exaggerated claims to an insurer
- **Premium Fraud**—intentionally understating exposure to pay lower premium to an insurer
- **Third-Party Fraud**—non-claimants overstating the cost of services provided to resolve the claims, or providing unneeded services and billing the insurer
- **Insider fraud / agent fraud**—An agent or insurance company employees participate in a scheme that defrauds the insurer

See Section 2 for more information on types of P&C insurance fraud.

What is the impact of P&C insurance fraud on different groups?

Individuals and groups may be susceptible to insurance fraud in different ways. See Section 3 for details.

What is the role of the actuary in quantifying P&C insurance fraud?

Actuaries are well-suited to assist with the identification, quantification, and ultimately the prevention of insurance fraud. See Section 4 for details on this topic.

What resources are available related to insurance fraud?

Resources and analysis related to insurance fraud are available from the NAIC Antifraud (D) Task Force[5] and the Coalition Against Insurance Fraud, among others. See Section 5 for a description of certain available data resources.

2. Common Types of Insurance Fraud

One example of property and casualty insurance fraud is staged auto accidents. In this scheme, individuals intentionally cause a collision or exaggerate the extent of damage to their vehicles to file inflated claims. Staged accidents often involve multiple parties who collude to fabricate accidents, leading to illegitimate payouts from insurance companies. A typical staged auto accident is a "sudden stop," where the fraud perpetrators quickly change lanes in moving traffic and then suddenly stop, causing a rear-end collision by an innocent driver. That driver's auto insurance is then billed or overbilled for exaggerated or pre-existing bodily injuries and property damages. In Personal Injury Protection (PIP) states, the stager of the accident is often the insured, and injuries may be exaggerated for financial gain.[6]

5 Antifraud (D) Task Force; National Association of Insurance Commissioners

6 "Individuals in LA-based organized fraud ring sentenced to prison for staging auto collisions to collect insurance money"; California Department of Insurance; Nov. 24, 2021.

Another common type is inflated property claims, where policyholders intentionally overstate the value of lost or damaged property in order to receive larger settlements. This type of fraud is particularly common after natural disasters, taking advantage of the chaos following the catastrophe. In addition, policyholders—even if they had no intention to commit fraud—may be influenced by contractors to exaggerate claims.

Arson-for-profit is another form of property insurance fraud, where policyholders deliberately set fire to their property to collect insurance payouts.

Slip-and-fall scams target businesses, with individuals feigning injuries or being previously injured but uninsured, and alleging business or property owner negligence to demand compensation. These fraudsters create false narratives to exploit liability insurance, burdening businesses with unwarranted claims.

Fraudulent property and casualty claims also extend to workers' compensation (WC) insurance. Employees may exaggerate injuries; claim nonexistent ailments; feign disabilities to secure compensation benefits; or, for those receiving wage-loss benefits, feign continued disability to extend benefits.

Premium fraud is generally the intentional underrepresentation of future insured exposure in order to seek artificially low premiums. This may include misclassifying employees from higher hazard, higher rate classifications into lower hazard, lower rate classifications. Underrepresentation of payroll paid to employees, which is the exposure base in WC insurance, is one driver of the estimated $34 billion in annual WC fraud losses cited earlier, and often involves paying employees "under the table," which is illegal.[7,8]

Third-party fraud is the overstatement of medical or other services, sometimes simply limited to overbilling for these services, while other times providing more treatment or service than is necessary and billing for it. This fraud also occurs when services that were never provided have been billed to the insurance carrier. Third-party fraud can also involve identity theft, where claims are fraudulently filed on behalf of an individual without their knowledge or consent.

Dishonest service providers (medical practitioners, vehicle repair shops, contractors, etc.) may collude with claimants, or in some cases, the claimants have no knowledge of the fraud.[9]

7 "Business owner facing trial for $1.1 million insurance fraud scheme"; Texas Department of Insurance; Jan. 12, 2022.
8 "Husband and wife business owners charged in $4.5 million workers' compensation fraud scheme"; California Department of Insurance, Jan. 27, 2022.
9 "Doctors And Associates Indicted in First Wave of Massive Bribery Scheme"; U.S. Department of Justice; Nov. 10, 2017.

Insider fraud occurs when insurance professionals scheme to defraud their own employer or a company they regularly do business with. In certain cases, fraudulent claim adjusters working for insurance companies file falsified claims for their own financial gain, at the expense of their employer.[10]

While many cases of insurance fraud or abuse are never detected, in cases where the scheme is found out, insurance fraud can result in criminal charges, financial penalties, and denial of coverage for falsified claims.[11]

3. Impact of Fraud on Different Groups

Insurance fraud impacts everyone—simply by paying insurance premiums, consumers are victims of fraud in the higher premiums they pay. For example, according to Federal Bureau of Investigation statistics on non-health care insurance fraud, the average U.S. family pays between $400 and $700 per year in the form of increased premiums due to fraud.[12] Fraud may impact different groups of people in different ways. This section will explore examples of how fraud impacts certain groups.

a. Affordability issues

As mentioned above, all consumers pay higher premiums to cover the costs of fraud. This is especially burdensome for individuals who struggle to pay the high cost of premiums to start with, or those who do not have insurance at all due to the high costs.

Consumers for whom affordability of insurance is a significant issue may be more susceptible to falling victim to scams such as fake insurance plans or bogus marketing. For example, in health care, scammers may enroll consumers in fake benefit plans that have attractive rates. Consumers could either pay premiums to fake companies and receive no policy or could be convinced to provide personal information in pursuit of an attractive policy and end up with stolen identities.

This group may also be more susceptible to "cappers" (also known as runners and steerers), which are terms for the middlemen in a fraud scheme. The NAIC defines these individuals as persons who receive a pecuniary benefit from a practitioner or health care service provider, whether directly or indirectly, to steer people to these practitioners or health care service providers to procure clients or patients to perform or obtain services.[13] Cappers are also used to chase down injury victims and steer them to attorneys in exchange for a fee.

10 "Nine 'Insider Insurance' Conspirators Arrested in California"; *Insurance Journal*, March 30, 2004.
11 "Seven more people charged in New Orleans staged accident scheme"; NOLA; Feb. 9, 2022.
12 "FBI Insurance Fraud Facts"; Federal Bureau of Investigation.
13 *Automobile Insurance Fraud Guidelines*; NAIC Model Laws, Regulations, Guidelines and Other Resources; January 2008.

In December 2022, a personal injury lawyer and an orthopedic surgeon were each sentenced to 10 years in prison for their participation in a massive trip-and-fall fraud scheme between 2013 and 2018 in New York City. A second personal injury lawyer was sentenced to two years.[14] These fraud schemers preyed on the poor drug addicts and the homeless by staging trip-and-fall accidents and filing fraudulent lawsuits related to those staged accidents. The perpetrators often recruited patients from those who are desperate for money and clothing. The patients were instructed to claim that they had tripped and fallen when they in fact had not, or instructed to stage a trip-and-fall at a specified location. The patients were then instructed to meet with the personal injury lawyers who filed fraudulent lawsuits. The patients were further instructed to receive ongoing chiropractic and medical treatment from certain chiropractors and doctors, and in some cases convinced to undergo unnecessary surgeries to continue with the lawsuit.

b. Consumers with cultural and/or language barriers

Communities with cultural and/or language barriers are often targets for unknowingly participating in fraud activity.[15] Many participants are recent arrivals to the U.S. and may be unfamiliar with American culture and what is legal and not legal. They may be convinced by others in the community that this activity is common and accepted. The people perpetrating the fraud know it is illegal, but the participants may not have this awareness.

Residents of these communities may be victims of the fraud activity whether they participate or not, because as a group they may be treated with suspicion by other communities. This suspicion may also extend to fraud detection efforts and models that base predictions on characteristics associated with past fraud schemes.

c. Vulnerable or unsuspecting individuals

Any of us, if we are not alert, can be a party to fraud even if not knowingly participating or targeted as a certain group. Some individuals may be more vulnerable than others.

In an extreme case, an innocent bystander could lose their life at the hands of an insurance scammer. For example, in a case from 2018, a mother hired someone to set fire to her mobile home to receive payment from a $25,000 insurance policy. Unfortunately, when the hired hand set fire to the mobile home, her 12-year-old son was inside, and he perished.[16]

14 "New York Lawyers And Doctor Sentenced For Defrauding New York City-Area Businesses And Their Insurance Companies Of More Than $31 Million Through Massive Trip-And-Fall Fraud Scheme"; U.S. Department of Justice; Apr. 23, 2023.
15 "United We Brand"; Coalition Against Insurance Fraud; December 2006.
16 "Man gets 30 years for deadly arson scam that killed 12-year-old"; *Insurance Business*; Nov. 13, 2028.

A less extreme case[17] involved preying on individuals to play a part in what otherwise seemed like a legitimate business. The case resulted in individuals not getting proper training and rehabilitation following an injury, and the defrauding of workers' compensation carriers and the companies that employed the injured workers. The investigation revealed that two of the charged defendants operated "sham" schools that were primarily funded by workers' compensation vouchers. These vouchers, with values ranging from $6,000 to $10,000, were intended for injured workers to be retrained or to assist them in learning new skills to accommodate their disabilities, enabling them to reenter the workforce. The defendants employed numerous "cappers"[18] to illegally recruit students to the two schools they operated. These "cappers" were paid to sign up as many students as possible to attend the schools, even if the student didn't have the requisite educational background—a high school diploma or equivalent. The priority of the defendants was to make money using various tactics such as overbilling for laptops and tools, collecting lucrative vouchers for students that never or rarely attended the school, faking admission tests, and giving students cash for their vouchers.

4. Role of Actuaries in Quantifying Fraud

Many regulatory authorities require insurance companies to submit anti-fraud plans. The NAIC provides an Anti-Fraud Plan Guideline.[19]

Among other stipulations in the guidelines, Section 4-C-3 states that insurers must provide "An acknowledgment that the insurer has established criteria that will be used for the investigation of internal fraud and suspected fraud related to the different types of insurance offered." Further in Section 4-C-8, it requires:

> A description of the insurer's corporate policies for preventing fraudulent insurance acts committed by first- or third-party claimants, medical or service providers, attorneys, or any other party associated with a claim.
>
> (a) A description of the technology and/or detection procedures the insurer has put in place to identify suspected fraud.
>
> (b) The criteria used to report suspicious claims of insurance fraud for investigation to an insurer's SIU (Special Investigations Unit).

17 "Before the Director of the Department of Consumer Affairs for the Bureau for Private Postsecondary Education State of California"; Attorney General of California; April 24, 2023.
18 "Pitching Workers' Comp: Insurance: 'Cappers' work the streets, trying to get passersby to pursue workers' compensation claims. Authorities say the practice increases fraudulent filings"; *Los Angeles Times*;, April 19, 1992.
19 "Antifraud Plan Guideline"; NAIC Model Laws, Regulations, Guidelines and Other Resources; 2021.

Most insurance carriers use one, or a combination of the following three, methods to identify and report suspicious claims of insurance fraud for investigation:

1) Judgment of claims adjusters: If claims adjusters feel like something is wrong with a case, they make referrals to the SIU.
2) Checklist approach: Data from incoming claims is compared against set criteria. If a criterion (often called "flag") corresponds to the claim, it is referred to the SIU.
3) A computer model, developed internally or externally, creates a fraud score for claims, and claims above a predetermined threshold are referred to the SIU.

Per the NAIC guidelines described above, these methods for identifying fraud should be documented and reported to regulators.

Consistent with their profession's stated objectives (for example, the Casualty Actuarial Society (CAS) has as part of its CAS Envisioned future "CAS members are sought after globally for their insights and ability to apply analytics to solve insurance and risk management problems"), actuaries should be prepared to apply an analytical framework to questions related to SIU referral and ultimately to underlying fraud prevention.

An actuarial team that seeks to quantify SIU-related activity can attempt to answer the first natural question, "What proportion of claims are referred to the SIU and what criteria led to their referral?"

Once the first question is answered, the next question becomes, "What proportion of those claims referred to the SIU resulted in prevention of paying fraudulent claims?" or more broadly, "How much fraud was prevented?" This question is very difficult to answer because there are several obvious candidates for identifying fraud prevention:

A) How many people who committed insurance fraud were successfully prosecuted by government authorities?
B) How many claims were successfully denied for suspected fraud and what was their economic value?
C) How many fraudulent claims were deterred from being made, and what was this economic value?

Many in the industry focus on Option A successful prosecutions, because in this case a third party—the government—has adjudicated that fraud was committed. However, this can lead to the SIU only pursuing claims that a local district attorney would be interested in pursuing and ignoring fraudulent payments.

Option B, “claims denials” is often shunned. Insurance companies must comply with unfair claims practices statutes[20] and also fear liability from bad-faith legal causes of action. Although there is no prohibition against gathering statistics on claims denials, insurance companies fear that an adversary could use the fact that the management was reviewing claims denial data, coupled with other alleged inappropriate actions, to show a pattern of abuse. Insurance company leaders may believe that the potential for harm by a skilled adversary outweighs the benefits of regularly reporting such statistics. This legal calculus of whether to report claim denials will need to be made by the business leaders with appropriate discussion with counsel.

It may be the case that the company maintains records of claims denials for tracking fraud, but it does not want to have it be prominent in team metrics. If this information is in the company database, an actuary may be able to construct statistical models that associate particular claims variables with successful denial of fraudulent claims. If such a model is constructed, it can be used to assist in the process of assigning incoming claims to the SIU and assist in the process of providing economic evaluation of the process of dealing with fraudulent claims. Once one understands which claims are associated with the potential for denial due to fraud, one also can quantify how many claims are not being reviewed that have a higher likelihood of fraud and conversely how many claims are being reviewed that are unlikely to be fraud.

Actuaries should keep in mind that the data feeding the model may not have been evaluated for the risk of producing results that are unacceptable due to bias. As a result, actuaries may wish to question the risks that the model will produce such unacceptable results, perpetuating the bias.

Actuaries can also play a role in the effort to ensure that models do not result in unlawful profiling.

Option C, how many fraudulent claims were deterred, is difficult to measure. How can one determine how many fraudulent acts are not initiated due to the successful implementation by the insurance company of an anti-fraud plan?

If an actuary has constructed a statistical model related to claims denials, as described in Option B, to answer the question according to Option C, the actuary can track how many incoming claims exhibit statistical profiles associated with fraud. If claims handling and/or underwriting adjustments are effective, the number of incoming claims with potentially problematic profiles should drop over time. This decrease in potentially problematic claims, which is likely either a result of fraudsters avoiding targeting said

20 “Unfair Claims Settlement Practices Act”; NAIC Model Laws, Regulations, Guidelines and Other Resources; January 1997.

company or underwriting precluding fraudsters from being insured. Either way, the drop in incoming claims with statistical profile can be measured and quantified. This diminishment in fraudulent activity can be objectively estimated by the change in claim frequency and/or severity.

An important consideration for the actuary is the potential for fraud schemes and the organizers of such schemes to change over time. Fraud schemes will evolve over time in their techniques, focus, or geographic relevance. It is important for anti-fraud efforts to continue to evolve as well as to focus on currently prevalent schemes. It is also important that future computer models are not tied to outdated characteristics associated with past perpetrators of the scheme.

Once question 1, "What proportion of claims are referred to the SIU and what criteria led to their referral?" and question 2, "How much fraud did we prevent?" are addressed, the last question has to do with cost. First, there is an extra expense spent by the company in treating a claim as suspected fraud. Second, there is cost to the consumer of delayed claims. In particular, there may be a disproportionate impact on marginalized communities who see their claims unnecessarily delayed. All savings from fraud prevention must be weighed against cost to the company and any societal cost that may conflict with established laws relating to protected classes.

While all of the above tasks may seem daunting, a well-constructed model can help an insurance company comply with its statutory obligations (if the state has adopted the NAIC's Anti-Fraud Plan Guideline) to describe "the criteria used to report suspicious claims of insurance fraud for investigation to an insurer's SIU." Not only will the insurance company have an explainable objective standard for addressing fraud, but it will have statistics to support why it established its policies and procedures.

5. Anti-Fraud Data Resources

As with almost any area of endeavor, data resources available to fight insurance fraud have grown over time. Broadly, these resources can be categorized into two groupings.

First, there is a group of resources available to help define or quantify the problem. In addition, supporting this are resources or studies that define consumer attitudes toward insurance fraud. Examples of these types of resources include the FBI's reporting on insurance fraud and the Coalition Against Insurance Fraud's consumer survey of attitudes toward insurance fraud.[21]

21 "Fraud Stats"; op. cit.

The second broad category is data aimed at actively fighting or mitigating insurance fraud. Often, this data resource is accompanied by models or methodologies for using this more detailed, or granular, data. In recent years, there has been significant advancement in how data is captured and utilized for anti-fraud purposes. This includes internal company data, such as adjuster notes, and new external sources from third-party data brokers. The use of structured or unstructured data surrounding fraud should align with Actuarial Standard of Practice No. 23, *Data Quality*.

Within the second category to fight or mitigate insurance fraud, internal company data is the most common form of data and is typically confidential and proprietary. External sources are less common and include traditional data aggregators or artificial intelligence (AI)-based platforms.

The types of anti-fraud data used by insurers and investigators varies by organization. Common data elements may include data about the insurance policy (policy issue data, recent coverage changes, etc.), prior claims experience, information about the insured or claimant (criminal history, recent bankruptcies, etc.), background on third parties involved with the claim (medical providers, repair shops or contractors), and any other information that may be relevant to the claim.

6. Conclusion

Insurance fraud is widespread and can have a significant detrimental impact on all consumers. It can also have a disproportionate impact on certain marginalized groups. Actuaries have the skills to assist insurers and regulators in identifying, quantifying, and ultimately reducing the extent to which insurance fraud occurs. Actuaries have a role to play in learning more about insurance fraud and seeking an active role in lessening its impact on consumers.

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