

**HOTSPOT areas of fraudulent claims in individual Personal
Accident policies of TATA AIG Health Insurance Company
during April 2021-March 2023.**

Dissertation Submitted to



The IIHMR University, Jaipur
for the partial fulfilment for the award of the degree of
Master of Business Administration (MBA)
in
Hospital and Health Management
By

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Under the Supervision and Guidance of

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Dean and Professor, IIHMR University, Jaipur

2023

DECLARATION BY STUDENT

I hereby declare that this dissertation titled "HOTSPOT areas of fraudulent claims in individual Personal Accident policies of TATA AIG Health Insurance Company during April 2021-March 2023" is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Dr Vaibhav Sandeep Sawant

Date: 22nd May 2023

CERTIFICATE BY INSTITUTION

This is to certify that dissertation titled " HOTSPOT areas of fraudulent claims in individual Personal Accident policies of TATA AIG Health Insurance Company during April 2021-March 2023" is a record of the research work undertaken by Dr Vaibhav Sandeep Sawant in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and his approach to the research study has been sincere, scientific, and analytical.

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PLAGIARISM REPORT

This is to certify that the dissertation project report entitled " HOTSPOT areas of fraudulent claims in individual Personal Accident policies of TATA AIG Health Insurance Company during April 2021-March 2023" submitted by Dr Vaibhav Sandeep Sawant for the partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur, has been evaluated for plagiarism by the university.

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TO WHOMSOEVER IT MAY CONCERN

Sub: Internship Completion of Vaibhav Sawant

This is to certify that **Vaibhav Sawant** from IIHMR has successfully completed his internship with **TATA AIG General Insurance Company Ltd.** His internship period was from **22nd Feb 2023 to 19th May 2023**

During the course of his internship, Vaibhav Sawant was assigned with the project "HOTSPOT areas of fraudulent claims in individual Personal Accident policies of TATA AIG during April 2021-March 2023" was in "Claim – Accident & Travel" department under the guidance of Mr. Milind Ambre. The nature of the assignment was confidential. Vaibhav has successfully completed all the requirements of the project and has delivered an appreciable report.

We wish him the very best in his future endeavors.

TATA AIG

Jitesh Bawa
Chief Human Resource Officer

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Table of Abbreviations:

Sr No	Abbreviation	Meaning
1	AB-PMJAY	Ayushman Bharat- Pradhan Mantri Jan Arogya Yojana
2	ACG	Accident Guard
3	ACGP	Accident Guard Plus
4	AI	Artificial Intelligence
5	AIDS	Acquired Immuno deficiency Syndrome
6	AIG	American International Group
7	AVP	Assistant Vice President
8	CA	Chartered Accountant
9	CGHS	Central Government Health Scheme
10	CRM	Customer relationship Management
11	EMR	Electronic medical records
12	FMD	Fraud Monitoring Department
13	FMR	Fraud Monitoring returns
14	FY	Financial Year
15	HIPAA	Health Insurance Portability and Accountability Act of 1996
16	HIV	Human immunodeficiency virus
17	HOD	Head of Department
18	HR	Human Resource
19	IIHMR	Indian Institute of Health Management and Research
20	IoT	Internet of Things
21	IPA	Individual Personal Accident
22	IRDA	Insurance Regulatory and Development Authority
23	IRDAI	Insurance Regulatory and Development Authority of India
24	MEDEX	Medical Expenses
25	MFB	Management and Finance Bulletin
26	ML	Machine Learning
27	NAFU	National Anti-Fraud Unit
28	NHA	National Health Authority
29	Non-RTA	Non- Road Traffic Accident
30	PPD	Permanent Partial Disability
31	PTD	Permanent Total Disability
32	RPA	Robotic process automation
33	SECC	Socio-Economic and Caste Census
34	SHI	social health insurance
35	SIU	Special investigation unit
36	TAT	Turnaround time
37	TPAs	Third party administration
38	TTD	Total Temporary Disability
39	UHC	universal health coverage
40	WHO	World Health Organisation

1. Acknowledgement

"The exposure and chance I was given at TATA AIG in Mumbai was an amazing piece of serendipity. My experience was filled with learning and fun thanks to the helpful staff and faculty. I am immensely appreciative of the options that have opened up for me as a result of learning what I need to know to be a potential research researcher and becoming knowledgeable about the new approaches and procedures required by my curriculum.

It has been an incredible trip to complete this project with the efforts made. But without the gracious assistance and support of my external mentor Mr. Milind Ambre Sir (AVP Accident and Health Claims), as well as his assisting employees Dr. Nitin Gajre Sir (Chief-Manager-Health Claims), and Miss Prachi Acharekar Ma'am (Senior Manager), it would not have been possible. I want to express my gratitude to each and every one of them for helping me with the project and giving me the fantastic opportunity to join his team.

I want to thank our institution, IIHMR, for allowing us the opportunity to stand by ourselves and for providing us with the guidelines to create this report, as well as my internal faculty mentor, Dr. Goutam Sadhu Sir.

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I owe a huge debt of gratitude to all the faculties for their direction and regular supervision, as well as for giving me the information I needed for the project and helping me to complete it.

I see this opportunity as a crucial turning point in my development as a professional. I'll try my best to utilise the skills and knowledge I've gained as effectively as possible, and I'll keep working on the recommendations to further my professional development.

Dr Vaibhav Sandeep Sawant

2. Abstract

The threat of fraud is pervasive in every industry area, present on a worldwide scale and the insurance industry is not an exception to that. The businesses wind up spending a lot of money detecting and preventing fraud. The service sector, like the insurance sector, provides financial protection for the risks covered; however, the desire for financial gain, whether it takes the form of false claims or greater brokerage fees for intermediaries, serves as an incentive to defraud.

Despite efforts made by experts, industry leaders, and the government in every sector, cheats continue to look for flaws in the system and attempt to take advantage of it for their own personal and professional gain. The scope of fraud is typically high in the insurance sector since there is no tangible product that the insured has purchased and the only thing that matters is the existence of a contract between the insured and the insurer based on the principle of absolute good faith.

This study aims to identify the areas In India, state wise and area-wise in respect to the concentration of the fraudulent cases been detected during the financial year 2021 to 2023.

The article also examines how fraud affects insurers' capacity to make money, including how it drives up policyholder insurance costs and undermines insurers confidence in consumers because of a small number of deliberate frauds. There has also been discussion of the structure provided by the regulator for observing insurance fraud.

The study has the findings that most of the fraudulent claims were from the state of Gujarat, Maharashtra, Rajasthan, Punjab, Madhya Pradesh, and Uttar Pradesh. Though the number of policies were sold in large numbers in the above discussed region, the study findings are consistent with the other fraudulent activities detected across India in Private and Government sponsored health insurance schemes.

Keywords – Fraud, Health Insurance Claims, fraudulent claims, IRDAI, Claim Settlement, Insurance Providers.

3. Introduction

3.1 History

The Indian health insurance market has been around for a long. But the Insurance system has a long history in India, and it can be found in the texts of Manu Smriti, Dharma Shastra, and Arth Shastra. These literary remnants spoke of gathering enormous quantities of supplies that may be utilised during dire situations like floods, plagues, disasters, etc.¹

The 1930s saw the advent of health insurance in the form that we know it today. Prior to that, what we would now refer to as disability income insurance was more commonly used to cover the costs of medical care than "health insurance" did.

A "sickness fund" was an additional early type of health insurance. These funds were either established by banks to cover members' medical bills in cash or, in the case of industrial sickness funds, by employers to compensate workers. Financial institution-arranged illness funds initially appeared (about the 1880s), then industrial sickness funds, which persisted in use throughout the 1920s. The idea of an industrial sickness fund was important to the labour movement and, later, to unionised healthcare.²

In terms of medical coverage, India has made significant progress during the past 50 years. Essential medical care was given importance after liberation and has significantly improved. Employee protection programmes are where India's history of health care coverage began. It was advertised as a general retirement plan endorsed by the government for normal employees.

In 1954, a plan was presented for the Central Government Health Scheme (CGHS). The provision of medical services, in especially for CGHS employees and their families, was part of a contributing scheme. Given their pay scales, the Government of India and the CGHS employees each made a similar monthly contribution, which has proven successful.

General Insurance Corporation issued the first Mediclaim policy in India in 1986 and standardised the terms of health insurance coverage. It was a type of health insurance that paid for hospitalisation expenses with the exception of pre-existing conditions, pregnancy, childbirth, HIV/AIDS, etc. The uses were plainly paid back using outsourced third-party components due to the repayment statement.

Moving on, the insurance industry was privatised in 1991, after the government of India's presentation of a new economic strategy and economic liberalisation.

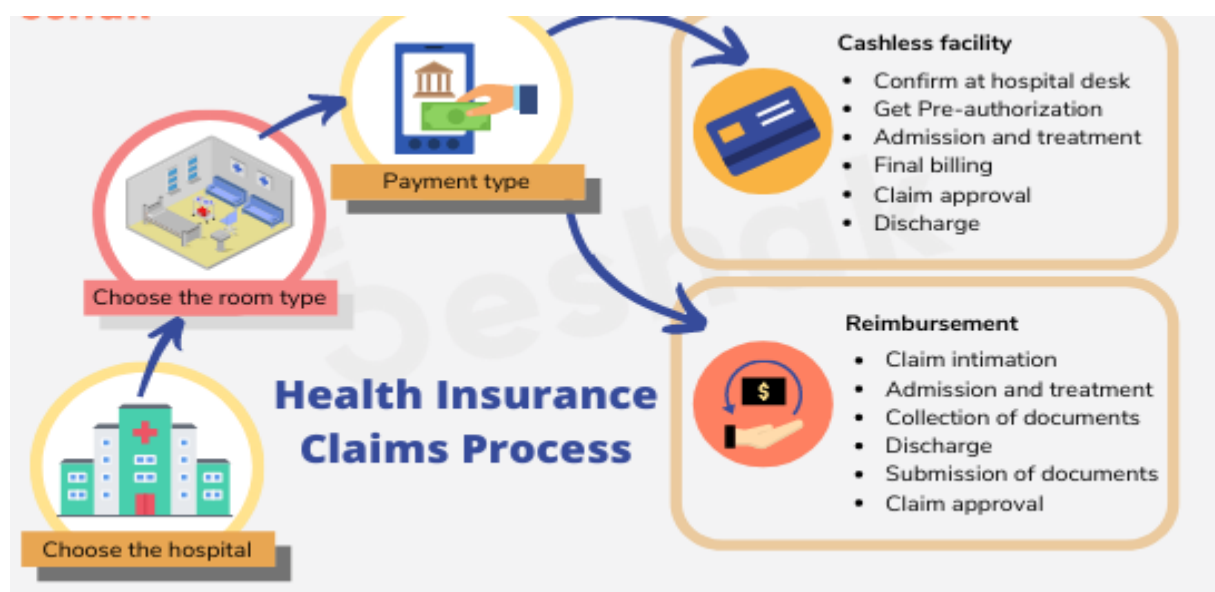
The Indian Parliament approved the Insurance Regulatory and Development Authority (IRDA) Bill. No effort was spared in the creation of health care coverage, and the Indian health insurance industry started to gain popularity and relevance. Medical insurance is one of the emerging areas in India right now. There are many partners in this environment working every day to promote the finest healthcare coverage plan for their policyholders, including private healthcare coverage organisations, TPAs, and numerous stakeholders. Indians have been the most active and involved when it comes to obtaining health insurance for themselves and their families because of increasing modernization.

Living in this fast-paced environment is getting steadily worse and leading to major illnesses, especially among Indians. According to a WHO research, diabetes and heart In India, diseases are the leading causes of death. taking a significant number of lives each year. In addition, there are infections, delivery complications, respiratory ailments, and more. Utilising health care coverage plans is a fantastic way to prepare for such situations. ³

3.2 Health Claims

Compared to other general insurance plans, the health care coverage method is extremely complex. This is due to the extensive wording in a medical insurance policy. As a result, it is common for some policyholders to experience difficulty understanding the exact provisions of their medical coverage plans. Nevertheless, it need not be tough to comprehend a health insurance plan. It would be much simpler to look at each section of the plan separately rather than the overall plan's outline.

Figure 1: Types of health claims



Health insurance claims concede two types of cases. These are:

1. Cashless Claims - This service allows you to travel to a hospital that is part of the network and receive emergency medical care without having to pay for it. Given that the hospital is listed as an insurance provider, if you have a policy with that insurance carrier, they will send your medical bills to them directly and have them pay for your services.
2. Reimbursement claims- are a form of service that allows you to go to any hospital, get the medical care you require, and pay for it out of your own money. If the therapy you had is covered by your coverage plan, you can later refund the money you spent along with the insurance company's supporting paperwork.

3.3 Fraudulent activities in health insurance claims:

Insurance fraud can be defined as: The act of making a statement known to be false and used to induce another party to issue a contract or pay a claim. This act must be wilful and deliberate, involve financial gain, done under false pretences and is illegal.

Healthcare fraud as defined by the National Health Care Anti-Fraud Association (USA): "The deliberate submittal of false claims to private health insurance plans and/or tax-funded public health insurance programs, Intentional deception or misrepresentation that the individual or entity makes, knowing that the misrepresentation could result in some unauthorised benefit to the individual, or the entity, or to another party." ⁴

Health insurance customers frequently commit fraud by:

1. Hiding pre-existing conditions (PEDs) or chronic illnesses,
2. falsifying results of pre-policy health checks, and other offences.
3. duplicate and inflated invoices, impersonation,
4. participating in fraud rings, purchasing numerous policies,
5. fake / created documents to meet insurance terms conditions,
6. Staged accidents and false disability claims,

The agents and brokers are typically involved in fraud that involves:

1. giving customers fake policies and pocketing the premiums,
2. falsifying pre-policy health check-up records,

3. advising customers to conceal PEDs or other material facts in order to obtain coverage or file claims, participating in fraud rings and facilitating policies in fictitious names.
4. channelling customers to dishonest providers.
5. data manipulation in group health insurance⁵

3.3.1 The triangle of fraud

There are three fundamental factors that increase the likelihood of fraud:

- Incentive/Motivation/Pressure: Management or other personnel may be motivated to commit fraud or may be under pressure to do so (for example, due to a need for personal funds, market pressure to achieve certain financial targets, etc.).
- Chance: Situations exist that present a chance to conduct fraud, such as weak or non-existent controls, inadequate oversight, or management's ability to bypass controls. Opportunities for fraud exist across the entire organisation, although they are more prevalent in places with lax internal controls and a lack of task separation.
- Rationalisation/ Attitude: The environment or culture allows management or other workers to legitimise or justify fraud, depending on the individuals involved's attitude or values. that allows them to justify doing something dishonest.⁶

3.3.2 Types of frauds:

Deliberate and Opportunity Fraud –

Deliberate fraud is the intentional presentation of an accident or loss that is protected by the policy. While opportunity fraud is produced by policyholders who overstate a legitimate claim or give false information about pre-existing conditions, etc. in order to influence the underwriting in their favour.

External and Internal Fraud -

A firm may be accused of external fraud by a person or by organisations like policyholders, beneficiaries, medical care providers, or vendors.

Internal fraud, on the other hand, is committed by other personnel such as a manager, executive, or agents against a policyholder or its organisation.

Policyholder's Fraud -

Consumers are becoming more aware of the standards, characteristics, and regulations governing insurance, and they are beginning to profit from participating in frauds. The three types of fraud committed by policyholders are eligibility fraud, claim fraud, and application fraud.

Eligibility Fraud -

The technique typically entails making false statements about the insured's job situation, existing medical conditions, or dependents. If a claim is made on behalf of a dependant or relative who is not insured, for instance, the beneficiary unintentionally obtains reimbursement in this situation.

Another instance is when a part-time worker tries to obtain benefits by falsifying paperwork with HR personnel even though he is ineligible for a health plan that the business provides to full-time workers.

Application Fraud -

It typically occurs in the health insurance industry when a customer intentionally inputs false information on an application that relates to pre-existing conditions, a claim, or significant dates. For example, a policyholder may choose to omit information about any major medical issues or pre-existing diseases in order to obtain comprehensive coverage and hassle-free claim processing. Even now and then, the employer manipulates the employee's joining date by securing insurance company approval for certain items.

Claim Fraud –

Claim fraud occurs when a consumer submits an erroneous claim for which he is not eligible. He has the option to request a fake claim, which is frequently observed under maternity insurance. In such deliberate situations, it appears that the provider and member collude to the physician's advantage. Fraud rings are another name for these kinds of organisations. Another scenario is where a policyholder decides to engage in insurance speculation by secretly purchasing many health insurance plans and receiving claim payments from each one of them. Additionally, the agents or hospitals generate higher medical expenses for hospitalisation, therapy, etc. in order to line their wallets.⁷

3.4 IRDA Guidelines on Fraud

To address the numerous risks that insurance businesses confront, the Authority has taken a variety of actions:

Insurance businesses are required by the Corporate Governance rules to form a Risk Management Committee to develop a Risk Management Strategy.

Management of the insurance company discloses the effectiveness of systems in place to safeguard the assets for preventing and detecting fraud and other irregularities, on an annual basis, as part of the Responsibility Statement that forms part of the Management Report filed

with the Authority under the IRDA (Preparation of Financial Statements and Auditors' Report of Insurance Companies) Regulations, 2002.

The Guidelines require insurance companies to implement fraud detection and mitigation mechanisms as part of their corporate governance framework and to submit periodic reports to the Authority.

3.4.1 Anti-Fraud Policy:

The Anti-Fraud Policy must be always in existence and be officially authorised by the Board for all insurance businesses. The plan must accurately acknowledge and express the proportionality principle.

The nature, scope, complexity, and hazards that particular insurers are exposed to in their line of business. It should consider pertinent elements including organisational structure, supplied insurance products, employed technology, and market conditions, among others. As more than one person can conspire to commit fraud, insurers should take a comprehensive strategy to effectively measure, regulate, and monitor the risk of fraud. As a result, they should establish suitable risk management policies and processes throughout the business.

The anti-fraud policy shall broadly cover the following aspects:

- i. Fraud Monitoring Department: Set-up a Fraud Monitoring Department (FMD) with well-defined procedures to identify, detect, investigate and report the fraud. A Compliance Officer shall be designated for this purpose, having direct access to the Board of the company.
- ii. Potential Areas of Fraud: Identify areas of business and the specific departments of the organisation that are potentially prone to insurance fraud and lay down a detailed area-wise/ department-wise, anti-fraud procedures, risk prevention and mitigation
- iii. Co-ordination with Law Enforcement Agencies: Lay down procedures to coordinate with law enforcement agencies for reporting fraud and follow-up processes thereon.
- iv. Framework for Exchange of Information: Lay down procedures for exchange of necessary information on fraud, amongst all insurers through respective councils.
- v. Due Diligence: Lay down procedures to carry out the due diligence on the personnel (management, officers and staff) before appointment.
- vi. Regular Communication Channels: Generate fraud mitigation communication within the organisation at periodic intervals and lay down appropriate framework for a strong whistle blower policy. The insurer shall formalise the information flow from/amongst the various operating departments to FMD.

3.4.2 Fraud Monitoring Department (FMD) (Role and Functions):

The FMD shall have in place reporting procedures from the various departments like underwriting, claims, information technology, investments, accounts, internal audit and intermediaries departments.

All personnel shall be encouraged to report suspicious instances/ fraud to the FMD. The FMD shall also lay down the policy framework for the training of personnel and intermediaries to sensitize them on prevention, detection, and mitigation of fraud. Suitable clause should be included in the terms of appointment of employees/intermediaries that clarifies the implications of fraud and penal provisions thereon. The head of the FMD shall be responsible for furnishing various reports on fraud to the Authority.

3.4.3 Reports to IRDA:

Statistics on various fraudulent cases and action taken thereon along with a Compliance Certificate duly signed by the Chief Executive Officer/Managing Director shall be filed with the Authority in form FMR 1 and FMR 2 every year within 30 days of close of the financial year.

3.4.4 Preventive mechanism:

The insurer shall inform both potential clients and existing clients about their anti-fraud policies. The insurer shall appropriately include necessary caution in the insurance contracts/ relevant documents, duly highlighting the consequences of submitting a false statement and/or incomplete statement, for the benefit of the policyholder, claimant, and the beneficiary.⁸

3.4.5 Special Investigation Unit (TATA-AIG)

TATA-AIG has set up a fraud monitoring department which has been termed as a special investigation unit. This unit is responsible for monitoring, evaluation and detection of fraud.

It provides expert guidance and detection services and runs hand in hand with Department of claims, Underwriting, operations, and legal services.

They have their sub-units across the country, with regional managers and area managers who investigate and reports the fraudulent activities.

3.4.6 Process Flow of SIU unit at TATA-AIG:

Step 1: The claims intimated to the company are allotted to the claim's officers on daily basis.

Step 2: The claim officer examines the documents submitted and raises query for any more documents required as per the terms and conditions.

Step 3: Based upon the terms and conditions of the policy, recent developments, superior instructions or a suspicion of fraud based on the documents or any other factors responsible.

Step 3: Special investigation unit (SIU) is intimated by the claims officer regarding the claim and is requested to investigate all the aspects of the claim as per the terms and conditions of the policy.

Step 4: The SIU team investigates the claim and submit the report to the claims team within the TAT duration. (21 days)

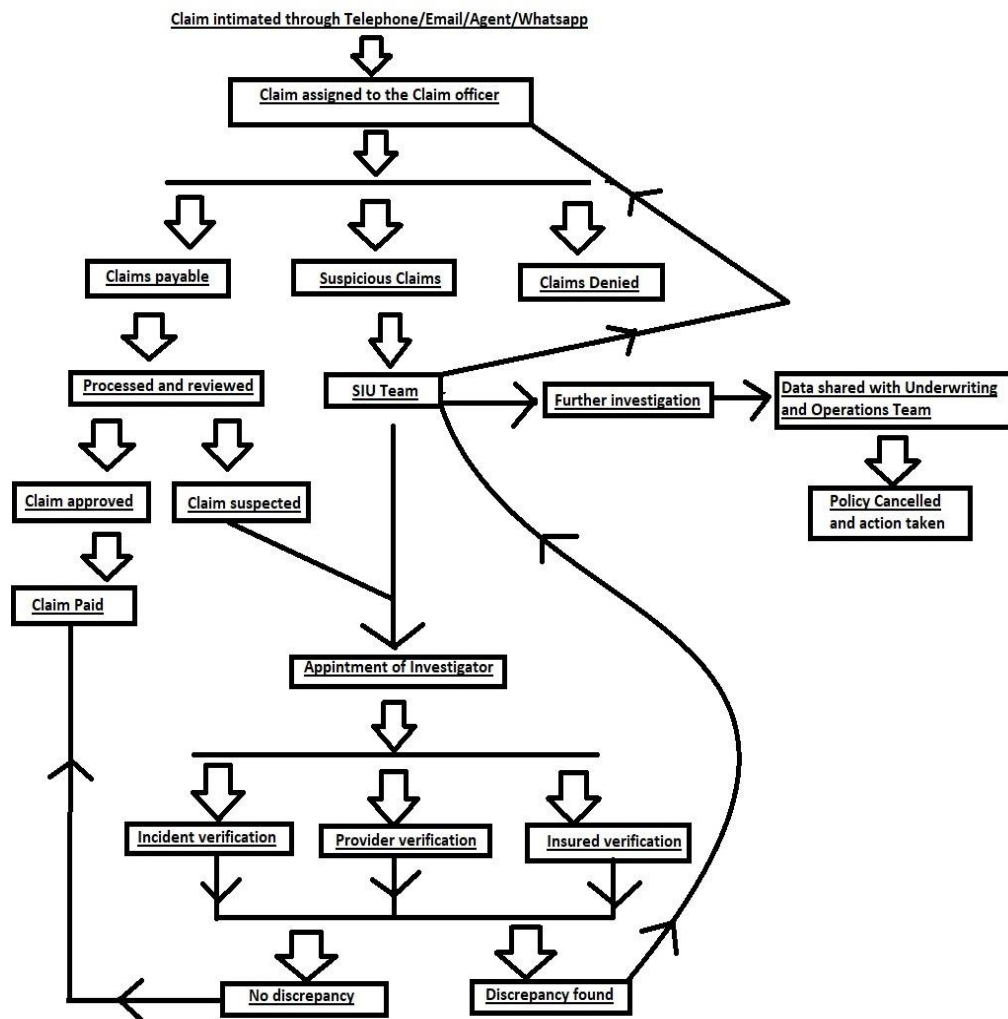
Step 5: The claim team, based on the report, claims document and after considering the terms and conditions of the policy, takes decision regarding paying or denying the claim.

Step 6: In case of a discrepancy detected, the claim team may forward the claim to the underwriter team for a review, who further has the power to cancel a policy based on the fraud/ misrepresentation of facts or non-disclosure of facts.

Step 7: In case of a fraud detection, the claim team and SIU team further makes other claim teams of other policy cautious of the potential fraudsters.

The below illustration describes the process of claim and SIU team:

Figure 2: process of claim and SIU team to detect fraudulent claims.



4. REVIEW OF LITERATURE

This portion of the study is divided into different sections to understand the relevance of the study.

This section will include the following pressing points of the study-

- Health insurance frauds in India
- Insurance fraud and its classification
- Methods to identify and prevent insurance frauds

4.1 Health insurance frauds in India:

4.1.1 Title: Health Insurance in India Opportunities, Challenges and Concerns

Author: Dileep Mavalankar Ramesh Bhat

Key takeaways: Health insurance is not widely used in India. Health insurance will develop quickly in the future since the government has liberalised the insurance sector. The difficulty is recognising how it benefits the weak and the poor by providing better coverage and health services at cheaper costs. without the negative effects of rising expenses and excessive use of processes and technology in the delivery of healthcare. The evidence from other regions suggests that if health insurance is left to the private market, only those with significant financial means will be covered, leaving the poor uninsured and more vulnerable.

India should therefore take proactive steps to create social health insurance that is modelled after the German system, which offers universal coverage, equal access to all, and cost-controlling features including projected per capita payment to providers. The only way to create such social health insurance in India is through co-operatives, organisations, and unions as there aren't enough jobs in the organised sector. To improve their effectiveness and social utility, the current health insurance schemes like ESIS and Mediclaim also require significant adjustments. A similar social health insurance programme should be developed in India with the assistance of the government. Donors and researchers ought to aid in this development.

Source: Health Insurance in India Opportunities, Challenges and Concerns

Dileep Mavalankar Ramesh Bhat

Indian Institute of Management Ahmedabad November 2000

Pg 16⁹

4.1.2 Title: INSURANCE FRAUD - CRIME WITHOUT VICTIMS

Author: CA. Durgesh Pandey Dr. K N Sheth

Key takeaways: Exaggeration of loss, pre-existing illness claims, and staged accident claims are a few examples of minor claims that are frequent or accepted in the insurance sector. Fraud in the insurance industry is a problem that predates the industry itself. According to a 2010 Accenture survey, 68% of respondents believed that fraud is committed because it is exceedingly improbable that it will be discovered. There are a number of fresh and inventive ways to commit frauds. Fraud lowers revenue. Due to fraudulent activities, the victim companies are at a competitive disadvantage. The deadweight of the fraudster is also carried by the policyholders in the form of premium increases.

With an upsurge in fraud, it appears that frauds are only limited by the human mind and imagination. Traditional methods should be combined with cutting-edge, technologically advanced technologies like data mining, predictive analysis, and SNA (Social Network Analysis). However, there isn't a single method for detecting fraud that is impenetrable. The best probability of detecting fraud is when several procedures are used in tandem. The next step is to set up a fraud bureau and educate policyholders. The bureau shall serve as the focal point for the transmission of all information relating to fraud.

Source: INSURANCE FRAUD - CRIME WITHOUT VICTIMS CA. Durgesh Pandey Partner - DKMS & Associates, Chartered Accountants Research Scholar - GTU durgesh.pandey@gmail.com
Dr. K N Sheth Director, Venues International College of Technology Dean, Interdisciplinary Research, GTU director@venusict.org Pg 238-242¹⁰

4.1.3 Title: Prevalence of Fraud in the Health Insurance Sector: An Overview

Author: Raichel Suseel¹, *, Nimisha Rastogi²

Key takeaways: The threat of fraud is pervasive in every industry area and is present on a worldwide scale. The businesses wind up spending a lot of money detecting and preventing fraud. The service sector, like the insurance sector, provides financial protection for the risks covered; however, the desire for financial gain, whether it takes the form of false claims or greater brokerage fees for intermediaries, serves as an incentive to defraud.

Fraud is defined as "an act of or omission intended to gain dishonest or unlawful advantage" by the Insurance Regulatory & Development Authority of India (IRDAI). Insurance fraud is a concern for insurance companies as well as for loyal policyholders.

According to one study, insurance businesses experience a loss of 0% to 15% of their business revenue. According to another survey, the percentage of fictitious health insurance claims has increased to 35% for some insurers. Frauds may be committed by firm executives, middlemen, or policyholders. The fraud triangle states that (1) rationalisation, (2) motivation, and (3) opportunity all

work together to increase the risk of fraud.

Source: Prevalence of Fraud in the Health Insurance Sector: An Overview Raichel Suseel¹, *,
Nimisha Rastogi² 1, 2Student, Birla Institute of Management Technology, Greater Noida, Uttar
Pradesh, India
Management and Finance Bulletin (MFB) September -December, 2022 [Vol.1, Issue 1], pg.17- 31,
www.apricusjournals.com¹¹

4.2 Insurance fraud and its classification

4.2.1 Title: Categorizing and Describing the Types of Fraud in Healthcare

Author: Dallas Thornton^a *, Michel Brinkhuis^b , Chintan Amritb^c , Robin Alyc^d

Key takeaways: Various types of frauds exist, but there are some common frauds are commonly seen in the healthcare industry. Some of them are enumerated below:

- Improper coding
- Phantom billing Kickback schemes Using wrong diagnosis.
- Providing unnecessary care
- Using unauthorized personnel Identity / EMR fraud
- Price manipulation
- Unbundling
- Service maximization and complexization
- Using ghost employees / deceased employees
- Falsifying documents
- Billing twice for the same service provided.
- Misrepresenting eligibility
- Claims for deceased/ineligible members
- Pinging the system
- Waiving patient deductibles Doctor shopping
- Submitting too many claims
- MC fraud
- Off label promotion of drugs False negotiation cases
- Reverse false claim cases.
- Self- referral

Source: Categorizing and Describing the Types of Fraud in Healthcare

Dallas Thornton^a, Michel Brinkhuis^b, Chintan Amritb^c, Robin Alyc^a a Clemson University, 101 Calhoun Dr, Clemson, SC 29634, USA¹²

4.2.2 Title: A Comprehensive Study of Healthcare Fraud Detection based on Machine Learning

Author: Shivani S. Waghade Prof. Aarti M. Karandikar

Key takeaways: People's lives depend on healthcare, which is why it must be reasonably priced. The healthcare sector is a complex system with many moving parts. Rapid growth is being experienced. At the same time, fraud is becoming a serious issue in this sector. Misuse of the medical insurance systems is one of the problems. In the healthcare sector, manual fraud detection is a taxing task. Recently, automated methods for spotting healthcare scams have been developed using machine learning and data mining approaches.

Several accessible studies were examined in the literature work, with a focus on the methods utilised, identifying the key sources, and the characteristics of the healthcare data. This review has led to the conclusion that future research will focus on advanced machine learning techniques and newly discovered sources of healthcare data to reduce healthcare costs, increase the efficiency of healthcare fraud detection, and improve the quality of healthcare systems.

In this paper's analysis of recent studies, machine learning and data mining are used to identify fraud in the healthcare sector. Additional study is required to identify various odd patterns of system abuse by health insurance providers, and results can be enhanced by using more advanced machine learning approaches.

Source: International Journal of Applied Engineering Research ISSN 0973-4562 Volume 13, Number 6 (2018) pp. 4175-4178 ¹³

4.3 Methods to identify and prevent insurance frauds.

4.3.1 Title: Fraud Detection System-for Health Insurance-in Nigeria

Author: Terungwa Simon Yangea*, Oluoha Onyekwareb and Hettie Abimbola Soriyanc

Key takeaways: A fraud detection system using data mining techniques was used. In all the categories of insurance including health insurance, fraud is a major issue. According to the researchers, fraud in health insurance is perpetrated via the intentional deception or misrepresentation of facts for gaining some shady benefit in the form of healthcare expenses. Data mining tools and techniques are used to identify fraudulent activities in large insurance claim datasets.

The system used data from the Nigerian National Health Insurance Scheme (NHIS), which was divided into enrolment, referral, and claim data with several file types including pdf, jpg, png, csv, and excel. Utilising Association Rule Mining, MapReduce Framework, MongoDB, MySQL, and Java Programming Language, the system was developed using UML. Numerous fraudulent actions by providers, insurers, and beneficiaries were caught by the system. These include self-referral, collaboration with service providers, double enrollment, more than four biological children registered, children registered who are over 18, ghost participants, double billing, upcoding, invoicing for services that were not rendered, and identity theft. When NHIS implements this system, it will sanitise the entire scheme.

Fraud in health insurance is perpetrated via the intentional deception or misrepresentation of facts for gaining some shady benefit in the form of healthcare expenses. Data mining tools and techniques are used to identify fraudulent activities in large insurance claim datasets. Based on some identified cases of fraud from a sample dataset, the anomaly detection technique calculates the likelihood or probability of each record to be fraudulent by analysing the past insurance claims. The analysts can then have a closer investigation for the cases that have been marked by data mining software.

Source: A Fraud Detection System for Health Insurance in Nigeria Terungwa Simon Yangea*, Oluoha Onyekwareb and Hettie Abimbola Soriyanc -- Department of Mathematics/Statistics/Computer Science, University of Agriculture, Makurdi, Nigeria¹⁴

4.3.2 Title: Holistic Approach to Fraud Management in Health Insurance

Author: Stefan Furlan Marco Bajee

Key takeaways:

Deterrence

The activity of fraud deterrence is concerned with removing the underlying reasons because of which fraud occurs. AICPA3 constructed a fraud triangle [1], which consists of three conditions that must be present in order for fraud to occur: (1) incentive/pressure, (2) opportunity and (3) rationale.

Prevention

Prevention means detecting fraud before the damage claim has been paid for. From the methods standpoint, there is no distinction between fraud prevention and detection. The difference is in the data available. All relevant data to detect fraud attempts may not be at hand at the time that we are trying to prevent fraud. Therefore, prevention is also referred to as early detection.

Detection

Fraud detection is aimed at detecting known types of fraud, abuse and irregularities, as well as anomalies that cannot be directly connected to fraud. There are, however, three important characteristics we must take into account when constructing effective automatic fraud detection methods (1) data, (2) fraudsters and (3) organization.

Investigation

When a suspicious claim has been brought about, the investigators' task is to investigate it and to decide whether it is in fact fraudulent or not.

Sanction-and-redress:

When we find fraud, sanctioning is of upmost importance for both seeking redress and for raising public awareness against fraud.

Prosecution processes vary from country to country. In Slovenia, for example, insurance fraud is not recognised as an individual criminal offence and is therefore much harder to prosecute. Sadly, such prosecution cannot be effective in insurance fraud cases. In these situations, the insurance company can help by providing prosecution with all the information and share knowledge with them.

Monitoring:

The insurance company management must constantly monitor counter-fraud efforts and performance to see if the ultimate objective – reduced losses due to fraud – is being followed. Management must oversee all the fraud management activities.

Source: Holistic Approach to Fraud Management in Health Insurance Štefan Furlan

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4.3.3 Title: Intelligent Automation in Health Insurance

Author: D. Doss, R. Pawar, & R. Maddireddy

Key takeaways: Robotization has been started in a portion of the centre elements of the medical care industry. Yet, they are not yet wholly mechanized to drive a higher degree of mental or keen computerization. In any case, with the speed increase of the new age advancements like AI and ML, Blockchain, RPA, IoT, etcetera, the whole course of medical services conveyance, right from part enrolment to medical services administrations, including paramedical and subordinate administrations of the medical care environment will turn into a completely computerized in the following 10 years.

Source: Doss, D., Pawar, R., & Maddireddy, R. (2022).

Intelligent Automation in Health Insurance. Bimaquest, 22(1). ¹⁶

4.3.4 Title: Insurance Fraud: Issues and Challenges

Author: Stijn Viaene and Guido Dedene

Key takeaway: The article in question discussed the nature, phenomenology, and financial impact of insurance fraud. They connected the existence of knowledge asymmetries between participants to a transaction and a violation of the core insurance principle of the greatest good faith as the essence of insurance fraud. After that, they presented three frequently found functional classifications of insurance fraud: internal vs. external, underwriting vs. claim, and soft vs. hard. We stated that because insurance fraud is organised as a covert operation and is not well understood, it is still challenging to determine the precise scope and expense of the problem. However, based on current figures, there is no question that the problem of insurance fraud has become widespread and expensive.

They continued by analysing the issue as the result of opportunity and motivation. They expanded the scope of the issue beyond fraud committed by professional criminals and raised severe concerns over a pervasive public mentality that is relatively tolerant of (soft) insurance fraud. It was highlighted that insurance companies have also come under fire for their excessive levels of tolerance and ineffective problem-solving. However, insurers appear to be ready to adopt a harsher stance in the fight against insurance fraud as a result of pressure from growing prices and increased competition. The insurer is still facing a number of obstacles that prevent effective fraud control.

They started by presenting a high-level review of existing anti-fraud activity and how insurers approach prevention and detection. Preventive measures are designed to halt fraud before it starts. Accurate and prompt fraud activity detection is the goal of detection.

A significant deterrence effect is also served by visible and reliable identification as well as a determination to punish fraud perpetrators. Anti-fraud efforts must continuously adapt to changes in their environment in order to be proactive. It was underlined that insurers rely on assistance from various stakeholders in the battle against fraud, and community-level anti-fraud programmes were reviewed. The

following crucial action areas—legislation and regulation, public education, new problems with insurance fraud, public-private partnerships, and measurement of fraud and anti-fraud—were elaborated.

Source:

Insurance Fraud: Issues and Challenges

Stijn Viaene and Guido Dedene

The Geneva Papers on Risk and Insurance Vol. 29 No. 2 (April 2004) 313–333¹⁷

4.3.5 Title: INFLUENCE OF PREDICTIVE ANALYSIS IN HEALTH INSURANCE FRAUD DETECTION

Author: Surya Susan Thomas, Dr. Ananthi Sheshasaayee

Key takeaways: ADVANTAGES OF PREDICTIVE ANALYTICS

Predictive Analytics in fraud detection enhances the power of predictive modelling to diagnose fraudulent involvement as it is being processed. This approach has numerous advantages as :

Employs an adaptive system for pre-payment fraud detection that visualizes the given data precisely.

Suspicious claim settlements are automatically detected using predictive models.

Suggests a better mode of interaction for every settlement.

Drastic reduction in fraud and abuse costs. Settles legitimate and genuine claimants faster and with greater certainty.

Use of efficient investigative mechanisms, thus reducing maintenance cost.

Decrease in expenditure for recovery measures.

Provides stringent investigation against fraudulent cases.

Source: INFLUENCE OF PREDICTIVE ANALYSIS IN HEALTH INSURANCE FRAUD DETECTION

Surya Susan Thomas, Dr. Ananthi Sheshasaayee

International Journal of Engineering Applied Sciences and Technology, 2017 Vol. 2, Issue 7, ISSN No. 2455-2143, Pages 25-27¹⁸

5. Comparison of areas affected by fraudulent activities in PMJAY, other health insurance schemes and private health insurance policies.

Integrity offences are more likely to occur in the health sector. Higher than the global average, more than 50% of Indians said that the health industry was "corrupt" or "very corrupt."

Integrity infractions have consequences for not only finances but also for health. A review of provincial and federal health insurance programmes indicated an annual national average of 15% false claims, which resulted in a considerable loss to the government coffers.

To design a strategy to manage all such malpractices, it is crucial to comprehend the distinctions between fraud, abuse, waste, and error.

According to the current taxonomy of health insurance fraud in both the Indian and global contexts, the stakeholder level at which the fraud happens, such as policyholder/customer fraud, provider fraud, intermediary fraud, and internal fraud, is where the fraud occurs. All stakeholders, including the government, state agencies, network hospitals, insurers, and their intermediaries, as well as the beneficiary population, must be actively involved in the development of a robust and effective fraud reduction strategy. At all levels, there must be a relentless focus on implementing fraud mitigation methods.

5.1 PRADHAN MANTRI JAN AROGYA YOJANA(PMJAY): AYUSHMAN BHARAT

To attain universal health coverage (UHC), the Indian government works with the State governments. One of the many measures the government has adopted to achieve UHC is demand-side financing of healthcare, in which social health insurance (SHI) plays a significant part.

The SHI method delivers unmatched benefits such effective resource pooling and utilisation, ensuring accountability to stakeholders, increased access to healthcare, and financial protection, ultimately enhancing overall health outcomes. But all health insurance programmes, including SHIs, are constantly in danger from a variety of bad habits that, if unchecked, can have unaffordable consequences.

For the purpose of identifying the eligible rural population and choosing eleven occupational criteria for the eligible urban population, PMJAY employs the Socio-Economic and Caste Census (SECC) deprivation criteria.

Nearly 55% to 60% of the population will be covered by the PMJAY and State programmes combined. Due to the mission's architecture as an entitlement-based system, there is no need for

enrolling an eligible beneficiary, and by default, everyone whose name appears in the database is eligible.¹⁹

5.2 Trend of Health insurance frauds across India in PM-JAY and other private insurance:

As per the Business today, dated 06/01/2020, NHA (National Health Authority), Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), the government initiative is administered by the National Health Authority (NHA), which has de-empanelled 171 hospitals owing to unethical behaviour. 46 of them are from Uttar Pradesh while 60 are from Maharashtra.

The National Anti-Fraud Unit (NAFU) of NHA found similar malpractices in additional hospitals in states including Tamil Nadu (21), Jharkhand (21), Uttarakhand (19), and two each in Himachal Pradesh and Chhattisgarh. For engaging in misconduct, the NHA fined these hospitals Rs 4.5 crore.²⁰

As per the Times of India, dated 30/08/2019, a massive 45 lakh claims were intimated worth Rs 2600 crores under PMJAY which was scrutinised with the suspicion of fraud in the state of Rajasthan.²¹

As per the Times of India dated 06/08/2022, 26% of the fraudulent cases of PMJAY hailed from Punjab and Haryana. As per the article, the Union health ministry and state agencies has detected 24152 fraud claims out of which 6161 belongs to Punjab and Haryana alone. Chhattisgarh, Madhya Pradesh, and Punjab are leading the list.²²

As per NDTV dated 04/01/2020, about 20,000 fraudulent names were cancelled from the beneficiary list of PMJAY after it was detected that those fraudsters were not even eligible under the scheme in Gujarat.²³

As per the Economic times, dated 07/10/2016, Gujarat may have gained a reputation as the finest place in the nation to conduct business, but when it comes to insurance policy holder behaviour, it is among the worst due to poor behaviour. As a result, insurers are currently selling no coverage in the state or selling it at a greater cost than in other regions of the nation.

The report further states that, Gujarat's average claims are twice as high as those from other states or the national average. According to estimates from the industry, Gujarat has a claim ratio of roughly 130–140 percent, compared to 60–70 percent for the rest of the nation. Hospital cash, indemnity, and personal accident insurance products are the three categories of insurance where fraud is most common in Gujarat. Hospital cash is a low-ticket product in which agents work with hospitals to produce a variety of bills that are then submitted to insurance carriers as one charge. 50–60 hospitals in Gujarat have been banned by insurers.²⁴

As per the Hindustan Times, 02/03/2017, the state of Gujarat, has become one of the fraud-prone regions with 30% of claims were filed within 30 days of the person becoming insured under this

programme. Since the insured person "died" in most of these situations within a month of purchasing the insurance coverage, corrupt behaviour and fraud were suspected.²⁵

5.3 Why are insurance frauds increasing? —A survey by Deloitte India

According to Deloitte's Insurance Fraud Survey 2023 dated 17/02/2023, About 60 per cent of the respondents believe that there has been a significant rise in fraud, while a further 10 per cent said they experienced a marginal increase in fraud.

According to the survey, some major variables for fraud include increased digitization (34%) and remote working following the pandemic (22% each).

According to the poll, the insurance industry has grown significantly as a result of digitisation. However, the effects of digitization go beyond those that are good.

The data shows that fraudsters are growing more tech savvy and are coming up with novel techniques to commit fraud. According to respondents in their poll, more digitisation and remote working are the main causes of an increase in fraud instances, followed by weaker controls, the survey found.

Top five issues that life and health insurers are now facing, according to the survey:

Issues With Data Protection and Privacy: While data privacy precisely monitors who has access to such data, data protection provides the tools and policies to limit access to data. Data protection and privacy are essential given that the insurance industry is a data-intensive one and contains a significant amount of client-sensitive data. Therefore, data access and/or availability issues may arise due to data protection and privacy policies, which all respondents agreed was one of the main obstacles to effectively reducing the risk of fraud.

Information Exchange Among Insurers: Since there isn't a formal industry-wide fraud database, scammers can take advantage of this gap. Since insurers don't share much information with one another, third parties are discouraged from helping insurers improve their fraud detection and prevention systems.

Data quality issues: For insurers fighting fraud, data design and quality are crucial. The enormous volume of structured and unstructured data stored in a multiplicity of systems—both legacy systems and new applications—is a major structural concern.

Data flaws or omissions, such as missing, inaccurate, or inconsistent data across such systems, further exacerbate this. There are also few widely used definitions, models, and structures for data. The lack of quality data will make analytical tools and models less effective.

Limiting the use of analytical tools: It's critical to be prompt, accurate, and proactive when detecting fraud. The appropriate technological instruments can be used to satisfy each of these requirements. On the other hand, poor use of techniques like fraud detection and predictive analytics/modelling can impede effective risk reduction and fraud detection. This was regarded as a major challenge by 50% of respondents from the life insurance industry.

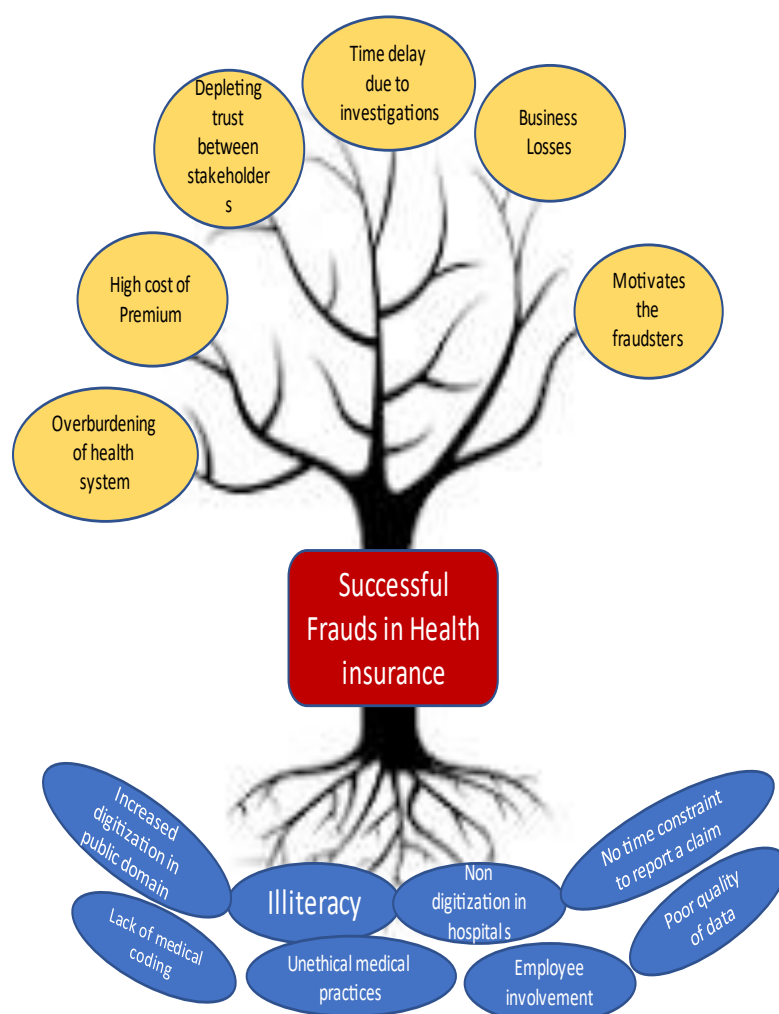
Maintaining Modern Modus Operandi: Technology is enabling fraudsters to devise novel and creative ways to perpetrate fraud in our fast-paced society. Given that 50% of respondents from the life insurance and health insurance industries see this as a concern, it is critical for the industry to stay on top of it.

Fraudulent activities committed within or against the insurance companies can adversely affect its financial soundness and reputation, besides impacting policyholders due to higher claims costs. One important aspect of why fraud occurs is the loophole within the organizational system/controls, which provides the opportunity to commit fraud.

This condition can be principally managed by designing and implementing a controlled environment that prevents, detects, and deters fraudulent behavior, whether from employees, vendors, or intermediaries.²⁶

6. Root cause Analysis of the Fraudulent Health insurance claim:

Figure 3: Root-cause analysis of the fraudulent claims activity in India.



As can be seen in the root cause analysis of the Fraudulent activities, the factors responsible for the health insurance claim frauds are:

Increased digitization in the public domain.

Illiteracy still prevailing among the large population of the country.

Non-digitization of most of the hospitals.

As per the IRDAI guidelines, a claim can be registered if proper reason for late intimation is given.

Lack of medical coding in India.

Unethical practices by some medical practitioners.

Employee involvement.

Poor quality of data.

7. METHODOLOGY

7.1 Aim –

To identify state wise and area, the concentration of the fraudulent cases been detected during the financial year 2021 to 2023 in respect to the Accident guard, Accident Guard plus and Accident shield policies.

7.2 Research Question

- 1) Where were the policies sold and what was the volume?
- 2) How many frauds were detected within the claims during the period?
- 3) Which geographical area has the highest cases of frauds been detected?

7.3 Objectives

- 1) To identify the suspected areas which has larger volume of policies sold.
- 2) To identify the area who has a greater number of claim intimation
- 3) To identify the area which are more prone to fraudulent activities

7.4 Material & Method

7.4.1 Study design:

An Analytical study involving observational process with Cross-sectional study.

7.4.2 Setting:

IPA Claims Section, Corporate office, Tata AIG Health insurance Company, Goregaon East, Mumbai.

7.4.3 Study population:

All the claims' data available with the TATA-AIG for IPA claims of Accident Shield, Accident Guard and Accident Guard Plus Health Insurance from April 2021 to March 2023.

7.4.4 Inclusion criteria:

IPA Health insurance claims of TATA AIG Health insurance for Accident Shield, Accident Guard and Accident Guard Plus Health Insurance policies which has:

- 1) Accidental Death
- 2) PTD
- 3) PPD
- 4) TTD
- 5) MEDEX.

7.4.5 Exclusion criteria:

All the policies which does not come under the context of IPA Health insurance policies of TATA AIG Health insurance.

7.4.6 Study Tools:

Microsoft Office
Genesys Configurator software
Google Scholar
CRM tool for Data

7.4.7 Duration of study:

March 2023 to May 2023

7.4.8 Sample size:

All the IPA claims data for Accident Shield, Accident Guard and Accident Guard Plus Health Insurance for the financial year 2021-22 and 2022-23.

7.4.9 Sampling technique:

Data Provided by the TATA AIG Health Insurance with coded claim number in respect to the claims received is filtered for the policies of for Accident Shield, Accident Guard and Accident Guard Plus Health Insurance for the financial year 2021-22 and 2022-23.

7.4.10 Data collection procedure:

A formal mail was sent to the reporting manager for the data required. Upon scrutiny of the requirement and the objective of the project, the data was made available by raising the ticket and endorsing the same by the HOD of the department.

8. RESULTS

The data provided by the TATA AIG team and the SIU team was analysed to understand the fraudulent activities distribution across India.

The following data indicates the number of policies of Accident Guards, Accident Guard plus and Accident shield sold across India from the Financial year of 2021 to 2023 and the claims that has been intimated amongst them:

Table 1: Total number of ACGP, ACG, AS policies sold across India from April 2021-March 2023 and number of claims received

Total Policy Sold FY.21 to 23			Total Claims Registered FY.21 to 23	
State	Count of Policies sold	% of Total policies	Count of claims intimated	% of claims intimated in India
Gujrat	28812	20%	696	34.47%
Rajasthan	18002	12%	342	16.94%
Maharashtra	25821	18%	268	13.27%
Uttar Pradesh	5733	4%	74	3.67%
Madhya Pradesh	5536	4%	140	6.93%
Haryana	5634	4%	84	4.16%
Tamil Nadu	8421	6%	43	2.13%
Punjab	7689	5%	49	2.43%
West Bengal	6118	4%	124	6.14%
Delhi	5967	4%	32	1.58%
Karnataka	4233	3%	28	1.39%
Telangana	6640	5%	38	1.88%
Chhattisgarh	2554	2%	6	0.30%
Andhra Pradesh	3786	3%	10	0.50%
Bihar	1878	1%	14	0.69%
Jharkhand	1524	1%	24	1.19%
Himachal	993	1%	3	0.15%
Odisha	2564	2%	28	1.39%
Kerala	760	1%	6	0.30%
Assam	940	1%	2	0.10%

Goa	393	0%	3	0.15%
Jammu & Kashmir	235	0%	3	0.15%
Uttarakhand	394	0%	2	0.10%
Grand Total	144627	100%	2019	

The states of Gujrat, Rajasthan and Maharashtra have the highest number of policies sold and hence the highest number of claims received.

The state of Uttar Pradesh, Madhya Pradesh, Haryana, Tamil Nadu, Punjab, West Bengal, Delhi, Karnataka, Telangana has approximately same number of policies been sold during the for FY.21 to 23.

But it is noteworthy to state that the claim intimation is higher from the states of Madhya Pradesh, Haryana and West Bengal.

Table 2: The number of claims that were investigated by the SIU as per the terms and conditions of the policies of ACGP, ACG, AS.

State	Total Claims Registered FY.21 to 23		Investigated by SIU in FY.21 to 23	
	Count of claims	% of Total Claims	Count of claims investigated	% of total claims investigated
Gujarat	696	34.47%	70	24.56%
Rajasthan	342	16.94%	60	21.05%
Maharashtra	268	13.27%	46	16.14%
Uttar Pradesh	74	3.67%	20	7.02%
Madhya Pradesh	140	6.93%	17	5.96%
Haryana	84	4.16%	15	5.26%
Tamil Nadu	43	2.13%	9	3.16%
Punjab	49	2.43%	9	3.16%
West Bengal	124	6.14%	7	2.46%
Delhi	32	1.58%	6	2.11%
Karnataka	28	1.39%	5	1.75%
Telangana	38	1.88%	4	1.40%
Chhattisgarh	6	0.30%	3	1.05%

Andhra Pradesh	10	0.50%	3	1.05%
Bihar	14	0.69%	3	1.05%
Jharkhand	24	1.19%	3	1.05%
Himachal Pradesh	3	0.15%	2	0.70%
Odisha	28	1.39%	2	0.70%
Kerala	6	0.30%	1	0.35%
Assam	2	0.10%	0	0.00%
Goa	3	0.15%	0	0.00%
Jammu & Kashmir	3	0.15%	0	0.00%
Uttarakhand	2	0.10%	0	0.00%
Grand Total	2019		285	

The above data denotes that the highest number of alleged suspected claims were found in the state of Gujrat, Rajasthan, Maharashtra, Uttar Pradesh, Madhya Pradesh and Haryana which were further investigated by the SIU team.

It further co-relates with the fact that this above-mentioned state has high number of policies being sold in the region.

Further among the investigation done by the SIU team, the following number of fraudulent activities were detected:

Table 3: Number of fraudulent claims detected by the SIU team for FY.21 to 23 in ACGP, ACG, AS policies

Frauds detected by SIU in FY.21 to 23			
State	No of investigation	No of frauds	% of frauds detected against the number of investigations done
Gujarat	70	27	30.34%
Rajasthan	60	19	21.35%
Maharashtra	46	9	10.11%
Uttar Pradesh	20	12	13.48%

Madhya Pradesh	17	6	6.74%
Haryana	15	1	1.12%
Tamil Nadu	9	2	2.25%
Punjab	9	4	4.49%
West Bengal	7	1	1.12%
Delhi	6	2	2.25%
Karnataka	5	0	0.00%
Telangana	4	0	0.00%
Chhattisgarh	3	0	0.00%
Andhra Pradesh	3	2	2.25%
Bihar	3	1	1.12%
Jharkhand	3	1	1.12%
Himachal Pradesh	2	1	1.12%
Odisha	2	0	0.00%
Kerala	1	1	1.12%
Assam	0	0	0.00%
Goa	0	0	0.00%
Jammu & Kashmir	0	0	0.00%
Uttarakhand	0	0	0.00%
Grand total	285	89	31%

The above table shows that the state of Gujrat, Maharashtra, Uttar Pradesh, Rajasthan, Madhya Pradesh and Punjab has high tendency of fraudulent activities and high percentage of frauds being detected.

Further the data was analysed in depth to know the exact location within the states to get a deep insight regarding the trend of fraudulent activities. The result is as follows:

Table 4: location of the frauds detected within the states for FY.21 to 23 in ACGP, ACG, AS policies

State_of_Loss	location	Fraud	Investigation Not Done	Loss Minimise	No Adverse Finding	Grand Total
ANDHRA PRADESH	GUNTUR			1		1

	KRISHNA			1		1
	SAMBEPALLY				1	1
ANDHRA PRADESH Total				2	1	3
BIHAR	ARRAH				1	1
	VAISHALI			1	1	2
BIHAR Total				1	2	3
CHANDIGARH	CHANDIGARH			1		1
CHANDIGARH Total				1		1
CHHATTISGARH	BALODA BAZAR				1	1
	DURG				1	1
	KANKER				1	1
CHHATTISGARH Total					3	3
DELHI	DELHI	2			4	6
DELHI Total		2			4	6
GUJARAT	AHMEDABAD	12	1	4	22	39
	BHARUCH	2				2
	DOHAD			1		1
	GANDHINAGAR				1	1
	GONAL				1	1
	GONDAL	1			1	2
	HIMMATNAGAR				1	1
	JAMNAGAR				1	1
	JUNAGADH				1	1
	KACHCHH				1	1
	NOT AVAILABLE	1			2	3
	PATAN			1	2	3
	RAJKOT		1	1	3	5
	SARKHEJ				1	1
	SURAT	3		1	1	5
	TTD				1	1
	VADODARA		1		1	2
GUJARAT Total		19	3	8	40	70

HARYANA	AMBALA				1	1
	BHIWANI				2	2
	CHARKHI DADRI				1	1
	GOHANA				1	1
	GURGAON				1	1
	JHAJJAR				1	1
	JIND				2	2
	KAITHAL				1	1
	KARNAL			1		1
	KURUKSHETRA				1	1
	NARWANA				1	1
	REWARI				1	1
	SONIPAT				1	1
HARYANA Total				1	14	15
HIMACHAL PRADESH	MANDI	1				1
	NOT AVAILABLE		1			1
HIMACHAL PRADESH Total		1	1			2
JHARKHAND	JAMSHEDPUR				1	1
	SINGHBHUM	1			1	2
JHARKHAND Total		1			2	3
KARNATAKA	BAGALKOT				1	1
	BANGALORE				1	1
	BELGAUM				1	1
	RANEBENNUR				1	1
	UTTARA KANNADA				1	1
KARNATAKA Total					5	5
KERALA	TRIVANDRUM	1				1
KERALA Total		1				1
MADHYA PRADESH	ALIRAJPUR				1	1
	BHOPAL				1	1

	DEWAS				1	1
	DHAR				1	1
	HARDA				1	1
	INDORE	4	1	1	4	10
	RAISEN				1	1
	SATNA			1		1
MADHYA PRADESH Total		4	1	2	10	17
MAHARASHTRA	AHMEDNAGAR				1	1
	JALGAON	1			3	4
	MUMBAI	2	1		9	12
	NAGPUR				2	2
	PUNE	3	2		18	23
	RAIGAD			1		1
	SANGLI			1		1
	SOLAPUR				1	1
	THANE	1				1
MAHARASHTRA Total		7	3	2	34	46
PUNJAB	HOSHIARPUR			1		1
	LUDHIANA	2				2
	MOGA				1	1
	MOHALI				1	1
	PATIALA				2	2
	RUPNAGAR				1	1
PUNJAB Total		2		1	5	8
RAJASTHAN	AJMER	1			2	3
	ALWAR	1			1	2
	BARMER				1	1
	BEAWAR	1				1
	BHARATPUR	1				1
	BHILWARA	3			2	5
	BIKANER				1	1
	CHITTORGARH	1				1
	DUNGARPUR				1	1

	JAIPUR	8	7		15	30
	JALORE				1	1
	JODHPUR	2	2		3	7
	KOTHPUTLI				1	1
	PALI				2	2
	RAJSAMAND	1				1
	SIKAR				2	2
RAJASTHAN Total		19	9		32	60
TAMIL NADU	CHENNAI				1	1
	COIMBATORE				2	2
	ERODE	1				1
	LALGUDI			1		1
	MADURAI				1	1
	RAMANATHAPURAM				1	1
	TINDIVANAM				1	1
	VIRDHACHALAM				1	1
TAMIL NADU Total		1		1	7	9
TELANGANA	ADILABAD		1			1
	HYDERABAD				1	1
	NOT AVAILABLE				2	2
TELANGANA Total			1		3	4
UTTAR PRADESH	AGRA	1				1
	BALLIA				1	1
	BAREILLY				1	1
	BULANDSHAHAR	1				1
	DEORIA				1	1
	DORNAKA				1	1
	FIROZABAD	1				1
	GAUTAM BUDDHA NAGAR	1				1
	GHAZIABAD			1		1

	GONDA	1				1
	HARDOI	1		1		2
	KANPUR	1				1
	LUCKNOW				2	2
	MUMBAI	1			1	2
	NOT AVAILABLE	1				1
	SAHARANPUR				1	1
	SRAWASTI	1				1
UTTAR PRADESH Total		10		2	8	20
WEST BENGAL	DURGAPUR				1	1
	HOOGHLY			1	1	2
	JAMURIA				1	1
	KOLKATA				1	1
	NADIA				1	1
	RAINA				1	1
WEST BENGAL Total				1	6	7
ODISHA	BALASORE				1	1
	BHUBANESWAR				1	1
ODISHA Total					2	2
Grand Total		67	18	22	178	285

It is noteworthy to mention that as per the above table, the fraudulent activities detected are seen concentrated in the urban areas like that of Ahmedabad, Surat, Jaipur, Indore, Ludhiana etc.

The study was further continued to understand the grounds on which the claims were denied. The reason for denial were classified and the claims investigated were distributed as per the following table:

Table 5: Various Grounds on which the claim was considered as a fraudulent claim for FY.21 to 23 in ACGP, ACG, AS policies

Reason for fraud	Fraud	Investigation Not Done	Loss Minimise	No Adverse Finding	Grand Total
Fake Documents	1				1

Gross-Negligence			1		1
IMPERSONATION	1				1
Loss Date Manipulation	2				2
Misrepresentation of facts	61	3	18		82
No future loss of income			1		1
No Ground of Defense		15		178	193
Non-Disclosure of PED history with documentary evidence	1				1
Non-Insurable Interest			1		1
Non-RTA	1				1
Self-Negligence			1		1
Grand Total	67	18	22	178	285

The above table illustrate that approximately >90% of the claims were proved to be of fraudulent nature due to the misrepresentation of the facts.

Definition of misrepresentation of the facts:

Getting into a contract with a person or a company on false grounds by making statements that are not in accordance with the facts is known as misrepresentation. In an insurance policy, misrepresentation on the behalf of the insured gives the insurance company a right to terminate the policy.²⁷

An analysis done to identify the amount of cash pool saved in some of the states due to the prompt fraud detection, the results are as follows:

Table 6: Amount of insurance cash pool saved due to fraud detection.

State_of_Loss	No of fraudulent claims	Claim Amount
DELHI	2	742858
GUJARAT	19	5716248
HIMACHAL PRADESH	1	5000000
JHARKHAND	1	5000000
KERALA	1	500000
MADHYA PRADESH	4	2090714
MAHARASHTRA	7	31400000
PUNJAB	2	1025000
RAJASTHAN	19	22941428
TAMIL NADU	1	1000000
TELANGANA		
UTTAR PRADESH	10	14173450
Grand Total	67	89589698

In total Rs 89589698 were saved only in the IPA policies of ACGP, ACG, AS policies during the two financial years, highest being from, Maharashtra, Uttar Pradesh, Rajasthan and Gujrat.

Some claims were found having discrepancies and were not completely proved as a fraudulent claim. Such claims were settled based on the terms and conditions of the policies and a lesser amount was paid to the claimant since the claim did not fulfil the completely required claim criteria.

Table 7: Claims settled with loss minimization during FY.21 to 23 in ACGP, ACG, AS policies

State_of_Loss	Loss Minimisation	
	Count of Claim no	Claim Amount
ANDHRA	2	27500000
PRADESH		
BIHAR	1	2500000
CHANDIGARH	1	485714
GUJARAT	8	4192858
HARYANA	1	2500000
MADHYA	2	6000000
PRADESH		
MAHARASHTRA	2	1400000
PUNJAB	1	1000000
RAJASTHAN		
TAMIL NADU	1	500000
TELANGANA		
UTTAR PRADESH	2	5171429
WEST BENGAL	1	1500000
Grand Total	22	52750001

9. DISCUSSION

Health insurance is growing rapidly in India due to increasing risks of health and increasing awareness regarding the same. The government's recent liberalisation of the insurance industry will cause health insurance to advance quickly in the future. Recognising how it helps the weak and the poor by offering better coverage and health services at lower rates is challenging. avoiding the detrimental impacts of increasing costs and excessive procedural and technological use in the provision of healthcare. If health insurance is left to the private market, only those with great financial resources will be covered, leaving the poor uninsured and more vulnerable, according to evidence from other places.

At the same time, it is essential to design a system that will filter the questionable claims and will lead to scrutiny of the suspected ones.

In the insurance sector, the risk is shared by all the individuals who pay the premium and the cash pool belongs to all the policy holders. In this case, the insurance company shall take precise decisions while paying the amount to the insured, by making legitimate and evidence-based decision.

The amount of cash pool haemorrhaged due to the fraudulent activities by the fraudsters leads to profound business loss which directly influences the loyal and legitimate stakeholders of the insurance industry.

The threat of fraud is present on a global scale and permeates every sector of industry. Businesses wind up shelling out a lot of cash to find and stop fraud. Similar to the insurance industry, the service sector offers financial protection for the risks covered; yet, the desire for financial gain, whether it manifests as inflated claims or higher brokerage fees for intermediaries and serves as a motivation to commit fraud

The loss suffered by the insurance industry must be recovered for the healthy business and strong financial status of the insurance company. Since the cash pool has the primary source of Premium collected from the policy holders, the burden of fraud directly is imposed upon the policy holders.

This study was done in respect to the Accident policies of TATA-AIG General insurance company, and the accident policies are one of the many types of policies which are prone to the fraudulent activities.

The fraudulent activities have their main roots in the various loopholes of the policy design and the organization cultures in respect to the claim processing, underwriting and terms and conditions of the policies.

The fraudsters can seek for the benefits from this uncertain domain, and the process of the same needs to be rationalized.

India lacks an effective insurance fraud law, which is unfortunate given that insurance fraud cost the Indian insurance market Rs 45,000 crore in 2019.

As per the study, in the selected, three different Accident insurance policies, the SIU team was able to detect fraudulent claims worth Rs. 89589698 and many more were scrutinized to minimize the loss amount.

The study has shown similarity with the fraudulent trends across the country with some of the states having high concentration of the fraudulent activities.

It seems like scams are only constrained by the imagination and human mind given the rise in fraud. Modern, cutting-edge technology like data mining, predictive analysis, and SNA (Social Network Analysis) should be coupled with conventional methodologies.

However, there isn't a single method of fraud detection that can't be beaten. Combining numerous techniques increases the likelihood of finding fraud. The following action is to establish a fraud bureau and inform policyholders. The bureau will act as the central hub for the dissemination of all fraud-related information.

Insurance fraud has increased throughout the Covid-19 pandemic, and investigations have mostly moved to internet platforms.

When fraud is discovered, sanctions is crucial for both seeking redress and educating the public about fraud.

From one nation to the next, prosecution procedures differ. For instance, insurance fraud is far more difficult to prosecute in India since it is not classified as a distinct criminal offence and there are no separate sections of law dedicated to the insurance frauds.

Sadly, insurance fraud cases cannot be successfully prosecuted using this strategy. The insurance company might assist in these cases by giving the prosecution all the facts and sharing knowledge with them.

In the recent news headlines, due to the unethical behaviour, the National Health Authority (NHA) has de-empanelled 171 hospitals from the PMJAY. 60 of them are from Maharashtra, and 46 are from Uttar Pradesh.

Results from the current study has highlighted the state of Maharashtra as one of the hotspots of high claim intimation leading to a suspected region and Uttar Pradesh as having high fraudulent activity.

Similar malpractices were discovered in additional hospitals across several states, including Tamil Nadu (21), Jharkhand (21), Uttarakhand (19), and two each in Himachal Pradesh and Chhattisgarh, according to the National Anti-Fraud Unit (NAFU) of the NHA.

The NHA penalised these hospitals Rs. 4.5 crore for their misbehaviour as a method to revert the loss occurred. There might be several other health organisations successfully running the fraudulent nexus extracting the public and private insurance cash pools and are going unnoticed.

Gujarat may have developed a reputation as the best area in the country to conduct business, but when it comes to insurance policy holder behaviour, it is among the worst due to poor behaviour, according to the Economic Times, dated 07/10/2016. As a result, insurers are either not offering coverage in the state at all or offering it at a higher price than in other parts of the country.

The current study has highlighted Gujrat as the hotspot having the highest number of fraudulent claims, with 39% of the claims being fraudulent out of the total investigations done due to a suspicion.

According to the Times of India article from August 6, 2022, 26% of the fake PMJAY cases originated in Punjab and Haryana. According to the newspaper, out of the 24152 fraud claims that have been discovered, 6161 are solely from Punjab and Haryana. Punjab, Madhya Pradesh, and Chhattisgarh are at the top of the list. The similar trend of the fraud has been seen in the current study wherein approximately half of the claims investigated for fraud in the state of Punjab were detected to be fraudulent.

About 60% of respondents, as reported in Deloitte's Insurance Fraud Survey 2023, dated 17/02/2023, felt that there has been a major surge in fraud, while another 10% reported seeing a slight increase in fraud.

The report indicates that remote working after the pandemic (22% each) and increased digitalization (34%) are two important factors for fraud.

The fraudulent activities are seen to be mostly concentrated in the urban areas as per the analysis done in this study which further proves the findings of the Deloitte survey. Increased digitization has led to the access of knowledge and communication across India. Most of the Indians has been literate digitally and are having access to the modern means of communication.

This has further led to creation of modern means of fraud and widespread of fraudulent ideology amongst the tech savvy youngsters and criminal minded population.

The insurance crime is not considered as a serious crime and mostly goes undetected. The insurance companies have not yet adapted to the modern technology of fraud detection using Artificial intelligence and machine learning due to wide variety of factors like that of poor-quality data, lack of digitization in health sector and the cost of specialist manpower.

Some of the private sector insurance companies has identified the hotspots of frauds in respect to their incoming claims and have started acting against the same. The actions include thorough investigation of

all the claims generating in a particular region, not selling policies in the identified region and selling the policies at a higher premium value to cope up with fraudulent activities.

The healthcare industry needs to use data mining and machine learning to spot fraud. The results can be improved by utilising more sophisticated machine learning techniques. Additional research is needed to detect numerous peculiar patterns of system misuse by health insurance companies. Fraud in health insurance is committed through wilful misrepresentation of the truth in order to obtain a dubious benefit in the form of medical costs. In huge insurance claim datasets, fraudulent behaviours are found using data mining tools and methodologies. The anomaly detection technique determines the likelihood or probability of each record being fraudulent by assessing the prior insurance claims, based on some identified incidents of fraud from a sample dataset. The incidents indicated by data mining tools can then be further investigated by the analysts.

In several of the core areas of the health care sector, robotization has already begun. They are still not fully mechanised to support a greater level of mental or acute computerization, nevertheless. However, the delivery of medical services as a whole, from part enrollment to medical services administrations, including paramedical and subordinate administrations of the medical care environment, will become entirely computerised in the next 10 years as the speed of new age advancements like AI and ML, Blockchain, RPA, IoT, etcetera increases.

10. CONCLUSION AND SUGGESTIONS:

Businesses and fraud examiners face substantial obstacles in their efforts to uncover these illegal actions due to the range of frauds and the diverse backgrounds of the fraudsters. The detection and prevention situation has significantly improved with the use of technical instruments, but fraudsters are quickly developing new approaches. A little bit quicker than the development of the deterrent tools.

It is obvious that scams deplete profits and damage the organisation in the marketplace. Additionally, fraudsters profit from the legitimate policyholders, driving up the price of insurance. To get the most out of technology, businesses must make investments in it. Instead of using retrospective analysis, the organisation must integrate fraud detection into ongoing operations. However, retrospective analysis may assist the business in updating the knowledge base.

The study was conducted to identify the following factors:

- 1) To identify the suspected areas which have larger volume of policies sold.
- 2) To identify the area who has a greater number of claims intimation.
- 3) To identify the areas which are more prone to fraudulent activities.

10.1 To identify the suspected areas which have larger volume of policies sold.

As per the analysis done, the Individual personal accident policies of Accident guard plus, Accident Guard and Accident shield were sold across the country with highest number of policies been sold in the State of Gujrat, Rajasthan, Maharashtra, Uttar Pradesh, Madhya Pradesh, Haryana, Tamil Nadu, Punjab, West Bengal, Delhi, Karnataka, Telangana.

Least number of policies were sold in the states of Goa, Jammu and Kashmir, and Uttarakhand.

This further confirms the accepted trend that more policies were sold in the states with high population and vice versa.

In total 144627 IPA policies of Accident guard plus, Accident Guard and Accident shield were sold across the country for the financial years of 2021 to 2023.

Suggestions:

The analysis shall be done to understand the cause of the policies being sold only in a particular area in a large quantity to understand if there is any fraudulent intention of loop hole are identified by the

fraudsters. Further the same shall be corrected and efforts should be taken to have a uniform distribution of the policies across the country.

10.2 To identify the area who has a greater number of claims intimation.

Out of the total number of the policies sold, a total of 2019 claims were intimated, which is 1.40% of the total policies sold. The highest claims were intimated from the states of Gujrat, Rajasthan, Maharashtra, Uttar Pradesh, Madhya Pradesh, Haryana, and West Bengal.

This finding further indicates that the higher number of claims were intimated from the regions where higher number of policies were sold.

Out of the total claims received, 285 claims were investigated with alleged suspicion of frauds.

The highest number of alleged suspected claims were found in the state of Gujrat, Rajasthan, Maharashtra, Uttar Pradesh, Madhya Pradesh and Haryana which were further investigated by the SIU team.

Suggestion:

The trend of the claim intimation should be studied and to understand the pattern of the claim intimation from the areas of the country. The regional offices of the company shall be given advisories from time to time based on the trend analysis. The identified areas should be put under strict scrutiny of each n every claim to be either investigated or verified. Underwriting changes should be accordingly in the areas from where a greater number of claims are been intimated.

10.3 To identify the areas which are more prone to fraudulent activities.

The result of the investigation carried out by the SIU unit of TATA-AIG General insurance company found that the state of Gujrat, Maharashtra, Uttar Pradesh, Rajasthan, Madhya Pradesh and Punjab has high tendency of fraudulent activities and high percentage of frauds being detected.

The state of Maharashtra, Madhya Pradesh, and Punjab has followed the similar trend in fraud detection out of the total number of alleged fraudulent claims but are less.

Further it was noticed that the concentration of the claims was into the urban areas, mostly in the cities of Ahmedabad, Jaipur, Indore, Ludhiana etc. This further points to the fact that increased urbanisation and digitization might have given a suitable thriving environment for the fraudulent activities to increase in recent time.

In terms of financial loss prevented, the state of Maharashtra, Rajasthan and Uttar Pradesh had frauds of high economic volume, whereas the state of Gujarat, Madhya Pradesh had more claims but with lesser economic value. The fraudsters are constantly adapting themselves as per the various steps adopted by the industry to prevent the fraud. Fraudsters are known to raise claims of negligible amount, to avoid coming under the radar of the insurance company, since the claims with significant amount is always under the scrutiny.

Suggestions:

A dedicated cell of SIU should be established in each state and regional office of the identified areas and a strict legal action should be taken to set an example. The motivation to commit a fraud should be discouraged and a proper information should be spread amongst the policy buyers during the sale phase about the impact of frauds.

Loop holes exists along the various steps of health insurance process and are exploited by the fraudsters. The insurance company need to design a dedicated and sophisticated process to prevent the abuse in even the negligible claims, failing to do so, it can act as a motivation for more severe financial offenses.

Some key factors responsible for the health insurance claim frauds are:

Increased digitization in the public domain.

Illiteracy still prevailing among the large population of the country.

non-digitization of records in most of the hospitals.

As per the IRDAI guidelines, a claim can be registered if proper reason for late intimation is given.

Lack of medical coding in India.

Unethical practices by some medical practitioners.

Employee involvement.

Poor quality of data.

11. Additional Suggestions:

The best strategy for combating fraud is to stop system abuse. Due to this, insurers must improve their applicant screening processes, give front-office and claims-handling staff specialised training, invest in specialised investigative skills, increased communication and cooperation within the industry as well as between the industry and prosecution and police authorities, and sponsored fraud bureaux at the state or national level.

Fraudsters constantly appear to come up with new strategies for taking advantage of the inertia of complicated systems, especially when a lot of money is at stake. Therefore, it is crucial that fraudulent behaviour is detected at an early stage.

Finding features that set fraudulent claims apart from legitimate claims is a challenge in identifying, and eventually discouraging, false claims. As a typical tool for claims adjusters to analyse (suspicion of) fraud at claim time, most insurance firms need to utilise lists of fraud indicators or flags, representing a summary of the detection expertise. These lists serve as the foundation for the systematic and regular detection of false claims.

Claims adjusters need to be trained to identify those claims that exhibit a cluster of red flags that, according to experience, are usually indicative of fraudulent claims.

A proactive approach is needed for the claims reported from the fraud hotspot area and must be thoroughly scrutinized with the use of various flags and triggers of frauds.

Caution must be taken while selling the policies to the client from the identified fraud hotspot region with at least a basic background check.

Data of the fraudulent activities and fraudsters needs to be shared with the other insurance agencies to prevent and blacklist the potential fraudsters. Insurance agents and subsidiary organizations from the fraudulent areas must be under constant radar and shall be evaluated for their involvement in any.

When we discover fraud, sanctions are crucial for both obtaining reparation and increasing public awareness of fraud. Different countries have different legal systems in place. For instance, insurance fraud prosecution is far more difficult in Slovenia because the country does not identify it as a distinct criminal offence. Regrettably, such prosecution is ineffective in cases of insurance fraud. In these circumstances, the insurance provider can assist by giving the prosecution all the facts and sharing their knowledge with them.

After studying several studies on healthcare fraud detection, it can be said that there are a variety of peculiar patterns that frauds or misuse in health insurance systems can follow. It will take more

research employing cutting-edge data mining and machine learning approaches along with other traditionally used methods to find these suspicious trends. While taking into account the most minute elements of healthcare data, new ways must be proposed. Correlations between various healthcare data entities can be used to accomplish this.

12. Annexure-A

As per the guidelines of IRDAI towards the fraud detection:

Risk Management Committee:

- a. Whether the risk management function is under the overall guidance and supervision of the Chief Risk Officer
- b. Whether the operating head of the risk management function (CRO) has direct access to the Board.
- c. Whether fraud monitoring policy and framework approved by the Board is in place.
- d. Whether fraud information is exchanged with insurers 61 and compliance with IRDAI guidelines on fraud is reviewed periodically.
- e. Formulation of a Fraud monitoring policy and framework for approval by the Board.
- f. Monitor implementation of Anti-fraud policy for effective deterrence, prevention, detection and mitigation of frauds.
- g. Review compliance with the guidelines on Insurance Fraud Monitoring Framework dt. 21st January 2013, issued by the Authority.

13. ANNEXURE-B

In the US, state or federal laws may be used to pursue health insurance fraud. Health insurance fraud is now a federal offence because to the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

Health care fraud is the execution or attempted execution of a scheme to defraud any health care benefit programme in connection with the provision of or payment for health care benefits, or the acquisition of any property of the health care benefit programme through false representations, by anyone acting knowingly and wilfully.

If the law is broken, the offender could get a fine, 10 years in prison, or both. He could face up to 20 years in prison if the fraud causes harm to a patient.

If death occurs, he could face a life sentence (18 USC 1347). Fraud against public health care programmes and private insurance firms is covered by the statute.

In addition, HIPAA forbids using or creating any false or fraudulent document in connection with the provision of or payment for healthcare benefits or services. This includes lying, exaggerating, or covering up a material fact. According to 47 U.S.C. 1035, anyone who breaks this statute faces fines, up to five years in jail, or both penalties.

14. ANNEXURE – C

Plagiarism Report



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