

**Dissertation Training Report**

at



**EXAMINING THE IMPACT OF MEDICARE INSURANCE CLAIM  
PROCESSING EFFICIENCY ON PHYSICIAN REIMBURSEMENT:  
A STUDY ON PRIMA CARE PHYSICIAN GROUP'S CLAIMS  
PROCESS**

by

**Dr. SIMRAN DAS  
(PG/22/121)**

Under the guidance of

**Dr Mukesh Ravi Raushan**

PGDM (Hospital & Health Management)  
2022-24



**International Institute of Health Management Research New  
Delhi**

TO WHOMSOEVER IT MAY CONCERN

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The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific, and analytical.

The Internship is in fulfilment of the course requirements.

I wish him all success in all her future endeavours.

Dr. Sumesh Kumar

Associate Dean, Academic and Student Affairs

IIHMR, New Delhi

Mentor

IIHMR, New Delhi

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The following dissertation titled “**EXAMINING THE IMPACT OF MEDICARE INSURANCE CLAIM PROCESSING EFFICIENCY ON PHYSICIAN REIMBURSEMENT: A STUDY ON PRIMA CARE PHYSICIAN GROUP'S CLAIMS PROCESS**” at “**DOCTOR ALLIANCE**” is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **PGDM (Hospital & Health Management)** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

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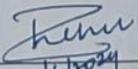
Name

Dr. Puneet Chahal

Dr. Sumant Swain

\_\_\_\_\_

Signature

  
20/6/2024

  
\_\_\_\_\_

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This is to certify that **Dr. Simran Das** a graduate student of the **PGDM (Hospital & Health Management)** has worked under our guidance and supervision. He/ She is submitting this dissertation titled “EXAMINING THE IMPACT OF MEDICARE INSURANCE CLAIM PROCESSING EFFICIENCY ON PHYSICIAN REIMBURSEMENT: A STUDY ON PRIMA CARE PHYSICIAN GROUP’S CLAIMS PROCESS” at “DOCTOR ALLIANCE” in partial fulfilment of the requirements for the award of the **PGDM (Hospital & Health Management)**.

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Afreen Hussain  
Lead Strategist,

Organization

Doctor Alliance

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RESEARCH,  
NEW DELHI**

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This is to certify that the dissertation titled

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and submitted by

**Dr. SIMRAN DAS**

Enrolment No. PG/22/121

under the supervision of

**Dr. Mukesh Ravi Raushan**

for award of PGDM (Hospital & Health Management) of the Institute carried  
out during the period from 2022 to 2024

embodies my original work and has not formed the basis for the award of any  
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**“EXAMINING THE IMPACT OF MEDICARE INSURANCE CLAIM PROCESSING  
EFFICIENCY ON PHYSICIAN REIMBURSEMENT- A STUDY ON PRIMA CARE  
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She comes across as a committed, sincere & diligent person who

has a strong drive & zeal for learning.

We wish him/her all the best for future endeavors.

**Training & Development**



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## ABSTRACT

### Background:

Health insurance is a financial risk-sharing arrangement where a public/private insurance company pays for covered medical expenses incurred by the insured individual/group in exchange of premium payment. Before the 1960s, healthcare was largely a private affair. People paid out of pocket or relied on employer-sponsored plans. The federal government played a minimal role. A turning point came with the passage of the Social Security Act amendments in 1965. This created Medicare, for seniors and some disabled individuals, and Medicaid, for low-income individuals of the US. Denied claims, administrative costs, and delayed reimbursements all chip away at their financial resources. The time commitment required for coding, claim submission, and appeals diverts valuable staff attention away from patient care. Furthermore, dealing with these complexities can lead to frustration and burnout among staff. By addressing these challenges, we can move towards a healthcare system that is less burdensome for physicians and allows them to focus on what matters most: delivering quality care to patients.

### Aim:

This study aims to assess the current landscape of insurance claim processing procedures in healthcare settings, analysing their impact on physician revenue.

### Objectives:

1. To assess the current state of insurance claim processing procedures in healthcare settings and its impact on the revenue.
2. To identify challenges faced by physicians in the insurance claim submission process and their impact on reimbursement.

3. To explore strategies and best practices for optimizing insurance claim processing to improve reimbursement outcomes for physicians.

#### Materials and Methods:

The study utilizes the secondary data analysis approach. Data on 450 geriatric patients with a time range of July- December 2023 (6months) was obtained from the Doctor's Alliance back office and electronic health record (eClinical Works). Various procedures carried out by the care coordinators were observed in order to get the data.

#### Data Analysis Plan:

With the help of programmes like Microsoft Excel, the responses were gathered, filtered, and statistically analysed. Statistical analysis comparing reasons for unsubmitted claims across service categories was conducted using Microsoft Excel

The primary analysis assessed the financial impact of unsubmitted claims on revenue generation. The potential revenue loss associated with unsubmitted claims was calculated and compared to the total revenue generated over the six-month period. Unadjusted claims were categorized based on reasons for denial (rejected, pending, etc.) A comparative assessment to identify variations in denial rates across different service categories, provider specialties, or payer types was performed. Frequencies and percentages will be used to summarize these comparisons. The analysis also focused on identifying opportunities for improvement in the revenue cycle management process based on the findings

#### Results:

The patient base for Prima care physician group is 450 and the average number of claims that are processed every month is 655, out of which the average number of claims submitted are 518 and average number of claims not submitted are 137. The averages have been derived by

taking into consideration the data of six months- July to December 2023. Out of 3933 claims that were processed in the 6-month time period, 20.97% of claims couldn't be billed which resulted in loss of 63,525\$ potential revenue. Comparative assessment of the unadjusted claims across different service categories (Billing codes) revealed most of the claims that could not be submitted had the billing code G0181/G0182 (58.2%). The claims for G0180/G0179 which together constitutes of almost 41.8% were not processed due to the lack of proper documentation or supporting information for the services being provided to the patient.

Out of the 825 claims that could not get submitted, backdated billing was the reason for 453 claims which constitutes 54.9% leading to revenue loss of 63,525\$ of revenue. The other reasons were found out to be insurance eligibility (15.03%), Incorrect documentation- DOS (20.5%) and technical errors (9.56%).

#### Conclusion:

The process of claims processing being followed includes a mix of manual and automatic scrubbing in the EHR. The claims that couldn't be processed manually leads to staggering reduction of revenue ultimately discouraging the access to efficient healthcare services. As the analysis presented reduction in billing of G0181/G0182 claims (58.2%), it highlights the need for improved communication and documentation practices between home health agencies and providers. By addressing these issues, we can streamline reimbursement, increase the revenue and ensure Medicare beneficiaries receive effective and efficient home health services. The findings from the analysis of Prima Care Physician Group's claims processing and revenue cycle management provide valuable insights into the operational efficiency and financial implications of the billing practices by highlighting and identifying key challenges to suggests potential strategies for improvement.

## CHAPTER 1: INTRODUCTION

### **Background:**

Health Insurance in the United States began in the year 1900s and has the highest healthcare expenditures in the world. The establishment of Medicare and Medicaid, the two primary government-backed health insurance programs, in 1965 marked a significant milestone. While these expenditures are covered in a large share by public payers as by Federal institutions, or State and local governments, they can also be covered by private insurance and individual payments. The Centre for Medicare and Medicaid Services (CMS) provide incentive payments to eligible providers (EP) who give care to Medicaid and Medicare patients and who adopt electronic health records (EHR) systems in their practices and healthcare organizations or facilities. The EHRs, however, must meet certain standards set forth by the Health Information Technology for Economic and Clinical Health Care (HITECH) Act under the law enacted in the American Recovery and Reinvestment Act (ARRA). The 1980s saw rapid increases in health insurance premiums, driven by new medical technology and cost-based reimbursement systems used by insurers and the Medicare program (1). Medicare is federal health insurance for anyone age 65 and older, and some people under 65 with certain disabilities or conditions. Medicaid is a joint federal and state program that gives health coverage to some people with limited income and resources (1).

### Medicare Insurance Claim Processing:

Medicare is a government funded insurance which offers near-universal coverage for the US citizens 65 years and older since its establishment (2). The Medicare plan has been divided into four types based on the services and coverage. Medicare is a double step process wherein the beneficiary selects the plan from the options available as per their needs, as supplemental plans may cover additional services. The services that are opted by the beneficiaries should also

qualify the criteria along with the affordability. Later in the year 2003 December Medicare advantage program came into picture under the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA) which included coverage for the prescription medications (1). It allows the beneficiaries to get their prescription coverage included with their health coverage via a single plan.

Table 1: TYPES OF MEDICARE COVERAGES

MEDICARE TYPE	PLAN COVERAGE
MEDICARE PART A	Includes inpatient care in hospitals, critical access hospitals, and skilled nursing facilities (not custodial or long-term care). It also helps cover hospice care and some home health care.
MEDICARE PART B	Includes the cost of medical services like doctors' services, outpatient care, and other medically necessary services that Part A doesn't cover. Part B is optional.
MEDICARE PART C	A Medicare Advantage Plan (like an HMO or PPO) is another Medicare health plan choice as part of Medicare. Medicare Advantage Plans, sometimes called "Part C" or "MA Plans," are offered by private companies approved by Medicare.
MEDICARE PART D	Medicare Part D is Prescription Drug Coverage. Since January 1, 2006, everyone with Medicare, regardless of income, health status, or prescription drug usage has had access to prescription drug coverage.

Medicare Advantage Program:

- Combines hospital coverage (Part A) + medical coverage (Part B) + additional health benefits under one plan
- Often includes prescription drug coverage
- Can include additional health benefits – dental, vision, hearing, fitness
- Provided by private insurance companies with varying benefits, costs and coverage options based on location and provider

Overview of the Process and factors associated with it:

Healthcare claims are the data that are structurally processed to get in the reimbursement for the physicians/providers as per the services provided to the patient (3). It is the patient interactions within the healthcare system which includes the face-to-face patient-physician interactions, treatments given, specialist providers involvement, prescriptions and referrals generated per every patient. All the above-mentioned interactions are processed and updated under the patient's profile in the electronic health records.

After the patient receives the services all the documentation around it is assembled which includes updating old information and reviewing records. The payments are processed and claims are generated for the same by filing documents and submitting patient data to the insurance companies. The insurance companies verify the claims that has been generated and accepts or denies on the basis of eligibility and pre-authorization. In the ever-expanding and evolving landscape of healthcare the claims processing for each country depends upon the plans/coverages which should abide by the rules and compliance of each country. Meeting the regulatory guidelines and adapting the changes is extremely important. As per the US scenario, it is mandatory to follow the HIPAA (Health insurance portability and accountability act) guidelines and the claims are processed if these regulatory standards are met. All the insurance

companies of a country must adhere to a myriad of federal and state regulations and stay compliant.

The revenue cycle management process involves the usage of a medical billing software (Can include the EHR of the physician group) to track the patient's entire episode history from the first interaction to the final payment. It also includes any appointment schedules and prescription referrals. They are collected for administrative purposes and provide information for large number of patients. Eligibility and criteria need to be met to process a claim for the services provided to the patient.

There are certain criteria's for billing a patient in order to get reimbursement for a physician group which includes the following:

- The patient should be covered under a valid insurance (preferably Medicare for the geriatric population) for the claims to be processed at the end of the month
- The patient should be under a valid 485 Cert/Recert (plan of care) and receive care services from the HHA
- The physician/NPP should perform a Face-to-Face at least once in 6 months
- The physician/NPP should provide a minimum of 30 minutes of care to the patient. The care coordination helps in capturing care minutes along with the calls made to the case manager of HHA and progress notes from the EHR.

Table 2: Billing services and charges

<b>Billing Code</b>	<b>Billing Service</b>	<b>Billing Charges</b>
<b>G0180</b>	Certification/Plan of Care	80\$

<b>G0179</b>	Recertification	50\$
<b>G0181</b>	Care plan oversight (HHA)	100\$
<b>G0182</b>	Care plan oversight (Hospice)	100\$

Note: The average revenue generated per claim submission will be 77\$ that gets reimbursed to the physician

#### Current Insurance Landscape in US:

While the introduction of Medicare and Medicaid significantly expanded healthcare access for Americans, it also presented challenges for physicians. In the intricate tapestry of the United States healthcare system, the processing of insurance claims stands as a critical nexus, where the complexities of reimbursement intersect with the provision of medical care. At the heart of this nexus lies the pivotal role of physicians, who not only deliver essential healthcare services but also rely on timely and accurate reimbursement to sustain their practices and livelihoods. However, the landscape of insurance claim processing within the US healthcare system is fraught with challenges, often leading to delays, denials, and administrative burdens that directly impact physician reimbursement. The effectiveness of insurance claim processing has a significant impact on physicians' remuneration (4). To maximise income streams and guarantee on-time compensation for medical services in the complicated US healthcare system, one must comprehend the complexities of claim processing and its effects on reimbursement (5,6).

#### PHYSICIAN GROUP:

The term "physician group" encompasses various healthcare organizations with one or more doctors. These can be either private practices, where a solo doctor is the owner and manager,

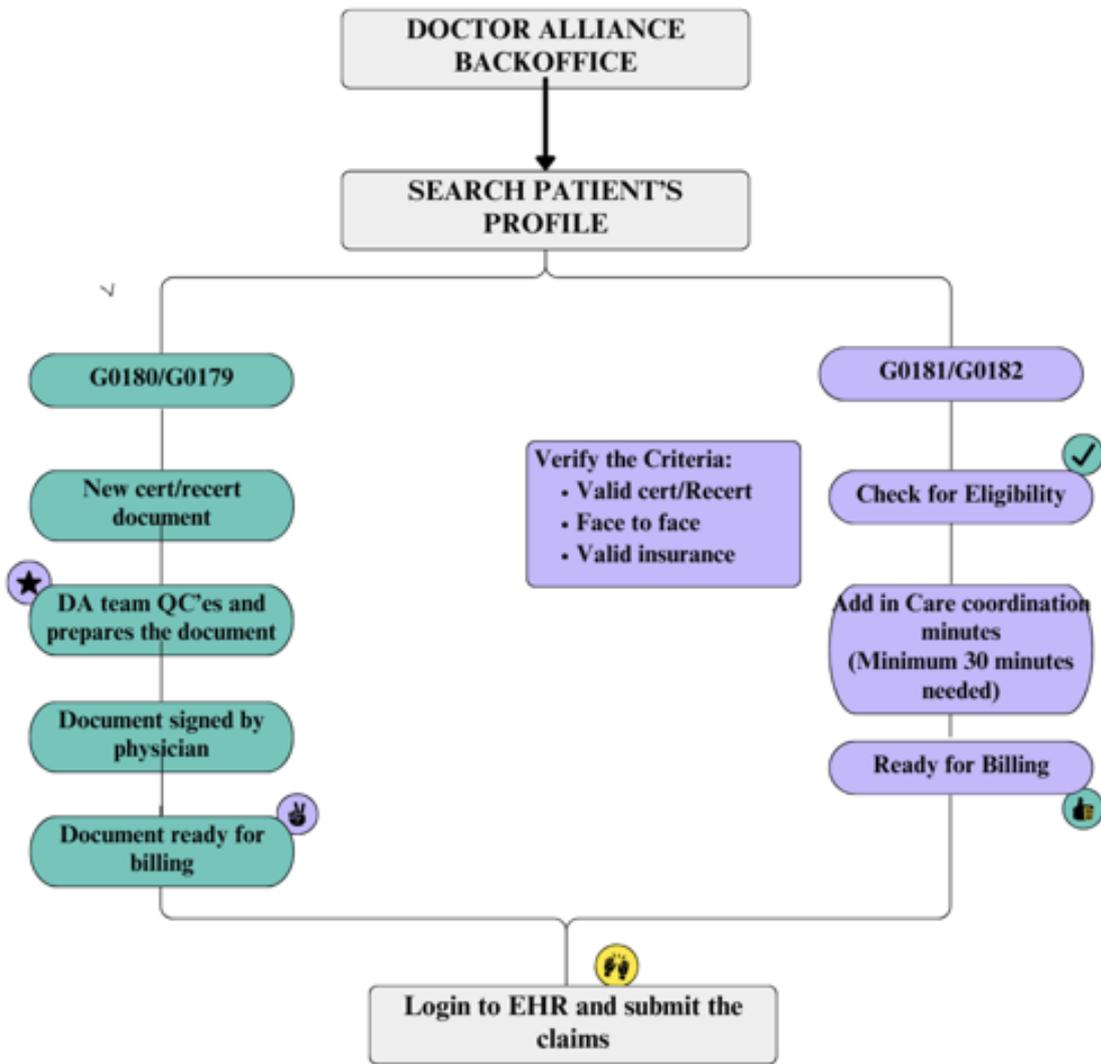
or group practices, where multiple doctors collaborate and share resources within the same location (7). Offering a wide range of locations in Fall River, Somerset, Tiverton, and Westport, Prima care is one of the physician groups in US, dedicated to providing convenient healthcare. Their services are available at their offices, hospitals, nursing homes, and even walk-in clinics. For homebound patients, they offer the additional convenience of in-home care. This research aims to delve into the efficiency of insurance claim processing within the Prima care physician group and its direct impact on physicians' reimbursement. By examining operational effectiveness within healthcare practices, this study seeks to uncover insights that can inform strategies for optimizing claim processing procedures, ultimately improving financial outcomes for physicians and enhancing the overall efficiency of healthcare delivery within the Prima Care physician group.

By delving into the intricacies of claim submission, adjudication, and reimbursement, this study aims to elucidate the challenges faced by physicians and healthcare organizations. Through a multi-faceted approach encompassing qualitative and quantitative methodologies, the research will explore the underlying factors contributing to inefficiencies in claim processing and their effects on physician remuneration.

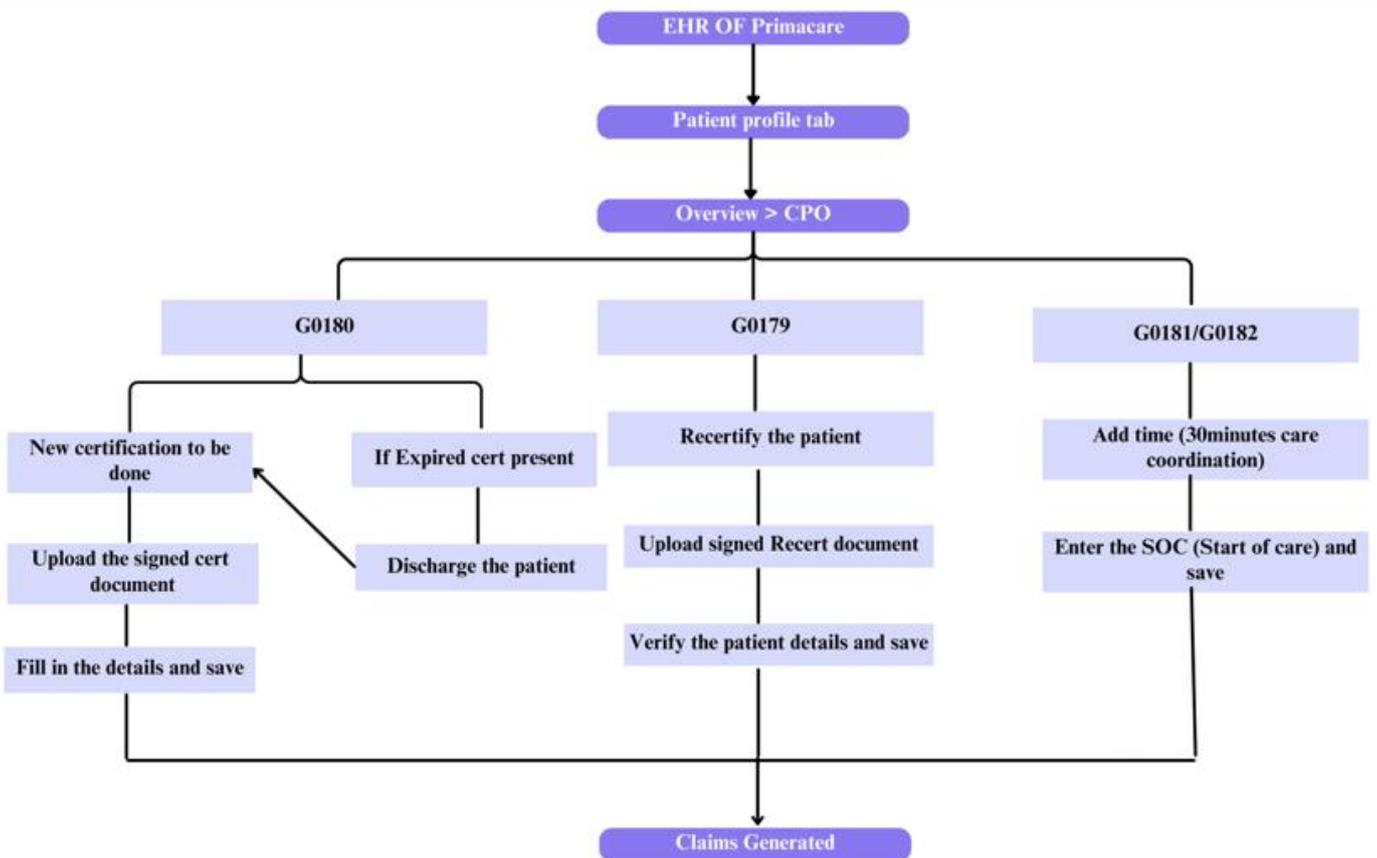
Furthermore, this dissertation endeavours to identify strategies and best practices for optimizing insurance claim processing within the US healthcare system. By leveraging insights from industry stakeholders, regulatory frameworks, and technological advancements, the study aims to propose actionable recommendations for improving the efficiency and effectiveness of claim processing procedures. Ultimately, the findings of this research aim to inform policy makers, healthcare administrators, and physicians alike, facilitating the development of interventions that enhance reimbursement outcomes for physicians and promote the sustainability of the US healthcare system.

**CLAIM PROCESS WORKFLOW:**

**Figure 1: Process followed in the Doctor Alliance Portal**



**Figure 2: Process followed in eClinical Works software (EHR)**



## CHAPTER 2: REVIEW OF LITERATURE

Understanding the complexities of claim processing and reimbursement is crucial for optimizing financial outcomes and ensuring timely payments for medical services. Analysis by Joshua.D. Gottlieb, Adam Hale Shapiro and Abe Dunn (2018) revealed that billing and claim processing is most complex, leading to more claim denials and the complexities cost the healthcare system billions of dollars annually (8). Additionally, Adam Powell, Sergei Savin and Nicos Savva (2012) suggested that overworked physicians may generate less revenue per patient due to less thorough medical paperwork. Hence it is important to find a balance between physician workload and thoroughness of care to optimize both patient outcomes and physician's revenue (9). A study by Sutherland JM, Fischer ES and Skinner JS (2009) brought into light that many stakeholders in the healthcare system including physicians, policymakers and hospital administrators face the burden falling into the trap caused by denials as they believe that the high cost of care in their specific region is due to factors like sicker patients or lower reimbursements rates thereby neglecting the big picture. It emphasizes the need for the reforms on national level addressing all of the inefficiencies and promoting cost-efficiency and cost-containment strategies (10). In the light of this Peter.J. Cunningham and Ann O'Malley (2008) theorize that even higher reimbursement rates won't be enough to attract physicians if claims take too long to process. This emphasizes the need to address both reimbursement and administrative burdens (11). Furthermore, Randall D Cebul, James B Rebitzer and Lowell J Taylor (2008) examined a different aspect of healthcare administration focusing on the negative impact of a fragmented healthcare system in US on care quality. Authors suggest the disjointed nature of healthcare financing and delivery, with multiple entities involved lead to several problems. Ultimately this

fragmentation is found to contribute to both decreased quality of care and increased costs as well (12).

The study conducted by Gilmore A et al. (2016) examined the challenges and opportunities associated with identifying patterns in denied healthcare claims within the context of the transition from ICD-9 to ICD-10 coding systems (13). While the shift from ICD-9 to ICD-10 led to more granular coding system with greater specificity but it also did introduce new complexities. The study proposes concept of mid-level patterns- recurring denial patterns that exist between specific codes that are still not captured by strict code hierarchies (13). The shift has made it difficult to identify the trends of denials using the traditional methods and offers far more nuanced coding for a single procedure thereby making it harder to detect denial patterns using basic code analysis. There are limitations in the study as well, as it does not propose specific methods for identifying these mid-level patterns and further research was needed to develop effective methods to analyse large datasets. New software tools also need to be developed to handle the complexities of the ICD-10 coding and to identify these patterns.

Another study by authors Terra SM and Bryne A et al. (2016) stated that denied claims are a significant source of lost revenue for healthcare providers and these denials can be technical, clinical or related to medical necessity of the services provided (14). The study focused on most of the avoidable technical and clinical denial write-offs in the physician offices, clinics and hospitals where potential recourse exists. As per their study 90% of these denials can be prevented with proper measures and includes coding errors (incorrect procedure code/diagnosis code, missing modifiers), billing errors which includes missing or inaccurate patient information, insurance details and timely filing wherein the claims are not submitted within the designated timeframe by the payer. The study also suggested strategies to address these such as ensuring accurate documentation and obtaining proper pre-authorization for

procedures required by the payer will reduce the denials to a larger extent. Additionally appealing denials with proper clinical information to support the medical necessity is also extremely important to get timely reimbursements.

In one of the key studies conducted by Ryan et al. (2023), the author focused on denials-based approach where billing data was analysed to identify frequently denied procedures and the reasons associated with it (15). The study analysed four years of the billing information from a surgery practice (8800 denials) were identified and studied. It was found that large portion of denials are associated with specific codes and improper documentation (missing data) which led to loss of approximately 11million dollars of revenue. However, the study was conducted at a single surgical practice thereby limiting generalizability to other settings and additionally no specific interventions were implemented to improve the coding and documentation process. By analysing the efficiency of insurance claim processing, this study aims to identify bottlenecks, inefficiencies, and best practices that can optimize reimbursement processes.

## CHAPTER 3: DATA AND METHODS

The complexity of insurance claim processing within the United States healthcare system has profound implications for physician reimbursement rates. As healthcare delivery continues to evolve, understanding the intricate dynamics of this process becomes increasingly essential. Delays, denials, and errors in claim processing can lead to substantial financial losses for physicians, impacting their ability to deliver quality care. By unravelling the intricate relationship between insurance claim processing and physician reimbursement, this study can contribute to a more streamlined and efficient healthcare system that benefits all stakeholders. Therefore, this study aims to investigate the impact of current insurance claim processing procedures on physician reimbursement rates and to propose strategies for optimizing this process.

The study will focus on the “Medicare” insurance claims covering all the plans and coverages. The services under Medicare are applicable for people over 65 years of age and therefore the study population includes geriatric patients receiving homebound services from agencies under the supervision of Prima care physician group.

### **Data Source:**

The study utilizes the secondary data analysis approach. Data on patients with a time range of July- December 2023 (6months) was obtained from the Doctor’s Alliance back office and electronic health record (eClinical Works). Various procedures carried out by the care coordinators were observed in order to get the data. The patient’s care coordinator’s interactions on the portal also provided insight regarding the standard of care being given. With the help of programmes like Microsoft Excel, the responses were gathered, filtered, and statistically analysed.

In total 450 number of geriatric patient data of Prima care physician group, Fall River, Massachusetts was analysed to justify the objective of the study. The study is conducted on Medicare insurance claims beneficiaries which includes the services provided to geriatric patients only.

The study population includes the geriatric patient base receiving homebound care services. Inclusion criteria further narrowed the population to those eligible for specific billing codes (G0181/G0182 and G0179/G0180), indicating procedures typically performed during home visits. Patients who were not eligible for homebound care services or receiving care from external agencies will be excluded.

#### **Criteria to be Considered “Homebound”**

1. A healthcare provider, typically a physician, must certify the individual’s homebound status and provide documentation of the medical condition or disability that makes leaving home difficult.
2. The person must have a medical condition that significantly hinders their ability to leave their home safely or easily.
3. Homebound individuals may leave home, but these outings are rare and primarily for essential purposes such as medical appointments or necessary activities.
4. If leaving home is possible but requires substantial effort or assistance, it can contribute to the homebound status.
5. Even when they leave for medical reasons, these outings should be physically or mentally taxing due to their condition.
6. Homebound status often relates to the need for home healthcare services, as the person cannot readily access medical treatment outside the home.

7. The homebound status may need periodic re-evaluation to ensure it remains applicable, especially if there are changes in the individual's medical condition or mobility.

### **Methods:**

Microsoft Excel and Google Sheets has been used for data cleaning, basic calculations and scientific editing. Descriptive statistical analysis has been used to calculate, describe and summarize the collected research data to derive effective results.

Graphical methods such as combination of bar and line charts have been used to depict the impact of unadjusted claims over the revenue generation during the six months period (July-December) The graph represents the revenue changes in trends over time.

Comparative analysis for unsubmitted claims across service categories (billing codes) has been conducted and pie chart has been used to represent the results. It contains the different service charges as segments which includes G0179, G0180, G0181/G0182 and the percentage distribution of unsubmitted claims were depicted for each segment. The analysis focuses on identifying opportunities for improvement in the revenue cycle management process based on the findings.

### **Research Questions:**

1. How do current insurance claim processing procedure in US healthcare setting impact physician reimbursement rates?
2. What are the most frequent reasons for claim denials within the study population?
3. What strategies can be implemented to optimize the process?
4. How does the potential revenue loss from unsubmitted claims compare to the total revenue generated during the study period?

## **CHAPTER 4: Assessing the current state of insurance claim processing procedures in healthcare settings and its impact on the revenue**

### **Background:**

In the US healthcare system, the physicians' reimbursements rely on the claims submitted to the insurers involving medical codes detailing the services provided to the patient. The detailed documentation, updating of patient's profile followed by adding the billing codes and submission is done to generate a claim. The process varies based on the service charges, payer sources and the type of electronic health record a physician group uses. Our primary objective here is to identify the efficiency of current process being followed for Prima care physician group by evaluating the revenue generation over the 6-month period (July to December). The analysis will depict the Prima care's financial performance during those 6 months.

### **Overview of the current procedure:**

The claims are submitted on the basis of services provided to a patient. A home bound geriatric patient receiving services from a home health agency under the supervision of a physician can be billed for 2 billing codes- G0180/G0179 and G0181/G0182.

Depending upon the requirement and condition of the patient medically, home health agency devises a plan of care document/ Certification document which consists of a detailed current medical status of the patient. It includes the diagnosis (primary followed by the secondary) and the current medications recommended for the patient. The Care plan is sent to the Practitioner for approval. If the care plan is in alignment to the requirements of the patient, then it is approved or else changes are suggested by the Practitioner. After the approval of the plan the HHA starts providing services to the patient. Any change in the plan of care is signed by the practitioner and all the care documents are also signed by the practitioner, this enables the HHA to get billed for the services provided to the patient at the End of the Episode. The physician

also gets reimbursement once the claim is processed for the care plan document for every patient. The billing codes generated here are:

1. G0180- This billing code is generated for a Certification document. The start of care is same as episode start date and is applicable for 60 days from the start of care
2. G0179- This billing code is generated for a Recertification document. The start of care date is different from the Episode start date. The Recertification is done after the expiry of the initial certification and only if the patient needs extended services. The billing of this also done on a real time basis.
3. G0181-
  - a. Complete 30 minutes of care for CPO (care plan oversight) and the minutes allotted should be within the cert period.
  - b. 485 document is signed and billed
  - c. F2F requirement is fulfilled by whoever we are billing for (Practitioner/PG/NPP)
  - d. No double billing (No services should be added here for which we have already billed for)
  - e. No financial interest of the paid medical director (because he is already paid for the services provided by them)
4. G0182-
  - a. We use this billing code for hospice for CPO services.
  - b. When the patient is terminally ill then we refer them to hospice to ease the days left for the patient to survive

- c. Sometimes patient directly referred to the hospice and sometimes the patient is referred to the hospice from the HHA
- d. So, if there is an overlap on services in a given time period, we always bill for hospice services because it pays more than the HHA services
- e. Billing under 182 have better revenue for PGs/practitioner because the patient is terminally ill and best kind of service is provided at the end of days in a patient's life

Medicare Claims must be filed no later than 12 months (or 1 full calendar year) after the date when the services were provided. If the claim isn't filed within this time limit. Medicare can't pay its share.

**Findings:**

The patient base for Prima care physician group is approximately 450 and the average number of claims that are processed every month is 655, out of which the average number of claims submitted are 518 and average number of claims not submitted are 137. The averages have been derived by taking into consideration the data of six months- July to December 2023.

**Results:**

All the claims from July- December 2023 were processed in the month of January 2024 by a team of clinical coordinators and the revenue cycle management sheet was prepared by the end of January 2024. The revenue per claim is 77\$ which is the average revenue generated if the standard billing charges are applied for the respective billing codes

Table 3: Six Months Revenue Assessments

Month	Claims Processed	Claims Submitted	Claims denied	Revenue Generated	Revenue Lost
July	703	598	105	46,046\$	8,085\$
August	557	427	130	32,879\$	10,010\$
September	593	424	169	32,648\$	13,013\$
October	801	564	237	43,428\$	18,249\$
November	637	500	137	38,500\$	10,549\$
December	642	595	47	45,815\$	3,619\$

The highest number of claims were processed in the month of October'23 with 801 claims and the lowest number of claims processed in August'23 with 557 claims.

The highest number of claims that weren't processed was also found to be in October'23 with 237 claims thereby losing 18,249\$ of revenue and the lowest number of claims that couldn't be processed is in December'23 with 47 claims, losing 3,619\$ revenue.

Figure 3: Revenue Assessment

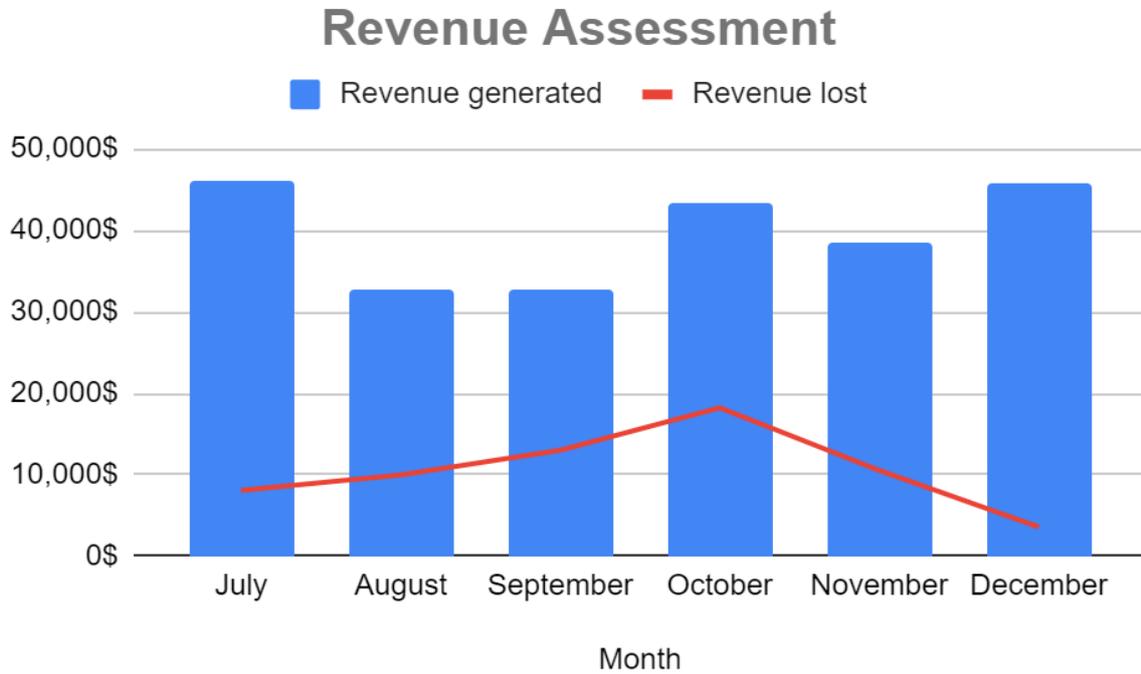


Table 4: Percentage of Unsubmitted Claims

Months	Claims processed	Claims not submitted	%
July	703	105	14.93%
August	557	130	23.33%
September	593	169	28.48%
October	801	237	29.59%
November	637	137	21.52%
December	642	47	7.31%
Total	3933	825	20.97%

Out of 3933 claims that were processed in the 6-month time period, 20.97% of claims couldn't be billed which resulted in loss of 63,525\$ potential revenue.

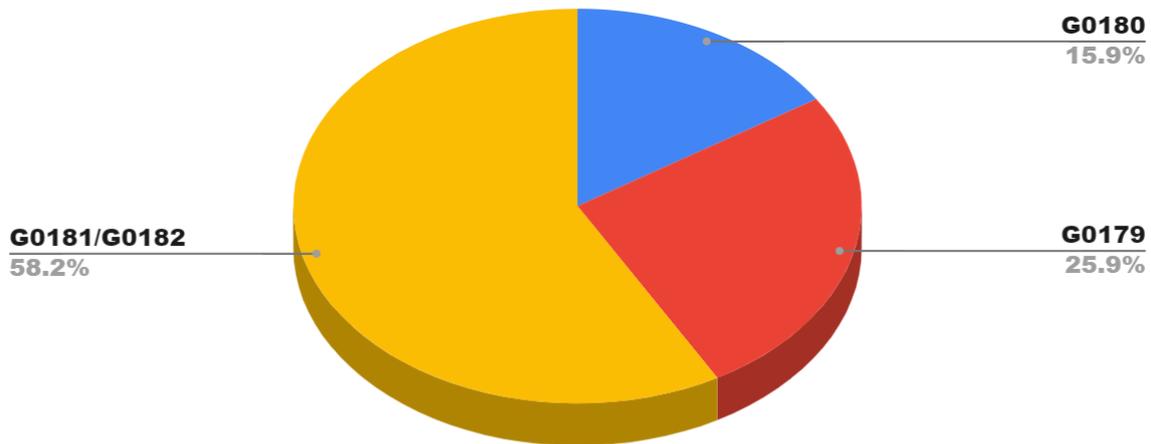
Comparative assessment of the unadjusted claims across different service categories (Billing codes) was also conducted.

Table 5: Unadjusted claims across different service categories

Month	G0180	G0179	G0181/G0182	Unsubmitted Claims
July	12	23	70	105
August	9	29	92	130
September	23	17	129	169
October	53	74	110	237
November	23	44	70	137
December	11	27	9	47

Figure 4: Assessment of Non submitted claims across service categories

### Assessment of Non-submitted claims across service categories (Billing codes)



This reveals that most of the claims that could not be submitted had the billing code G0181/G0182 which is the 30 minutes of care coordination minutes added in the patient profile within their respective cert period. The process of submitting the GO181/G0182 code can be only done if the cert/recert documents of the patients are updated on the HER of the physician group on a real time basis. It sheds light on the importance of following a streamlined process to avoid back dated billing of claims to keep the patient’s profile and status updated on the HER. The claims for G0180/G0179 which together constitutes of almost 41.8% were not processed due to the lack of proper documentation or supporting information for the services being provided to the patient.

#### **Discussion:**

Healthcare claims processing and rejections are significant burden for providers and payers as well and the reasons vary from being administrative delays to eligibility criteria leading to loss of revenue for providers. In a recent study by Gondi S, Kadakia KT, Tsai TC (2024) it was

highlighted that frequent denials with high reversal rates can create delays and frustrations for patients, potentially hindering their access to necessary healthcare services (19). They investigated prevalence of coverage denials for services in Medicare advantage plans compared to traditional Medicare (19).

As per our study which has been conducted to review the Medicare claim efficiency it shows that 20.97% of claims could not be processed leading to high reversal rates. As a result, there would be excess burden on the beneficiaries which includes the payers thereby decreasing the usage of approachable healthcare services by the payers in the near future.

Another study by Jaworski P. (2022) was categorized by source- payer, provider, front-end and back-end staff in two regions (Buffalo and Rochester) and included all kinds of insurance payers. The results accounted for region 1(Buffalo) with high denial count from Medicare B payer (10.8%). The highest denial count in region 2 (Rochester) was from BCBS payer insurance (8.4%). It also stated that there are policy specific denials which can occur due to specific exclusions or limitations within an insurance policy. Understanding these limitations is crucial for preventing the loss in the revenue (20).

As per our study the billing codes G0180/G0179 are generated to bill in for the services of patient in home health agency or hospice. The reimbursement loss was compared on the basis of billing codes and type of service being provided to the homebound patients. Lack of these particular documents (Plan of care/ Certification/ Recertification) results in missing out on claims for the G0180/G0179. There were 41.8% of claims that couldn't be processed due to lack of supporting documentation. This shows that lack of supporting documentation for the services being provided can lead to denials, thereby focusing on the importance of clear and concise medical records (20). Jaworski's study suggests in developing targeted interventions and optimize the claim management process to improve financial performance (20).

In the research conducted by Saripalli et al. (2017) a machine learning engine model was used to identify the high-risk claims and improve efficiency of claims processing. It reveals that problematic claims can mostly be identified and corrected before processing which helps in reducing the rate of denials to a significantly lower number (21). The processes followed in our study involved manual and automated claim scrubbing in the HER of Prima care physician group. Automated processing might not achieve good accuracy if it is followed for the entire process as the workflow includes certain areas where in identification and documentation needs to be done manually to ensure correct patient information.

As per our study there were 58.2% claims that couldn't be submitted for billing code G0181/G0182 which could have been identified and processed as per the criteria and eligibility by interacting and coordinating with the home health agencies to get the necessary documents. Saripalli et al (2017) study focuses on the machine learning which offers a approach to automate the identification of claims prone to rejection ultimately reducing these burdens. Involvement and interaction with the home health agencies is minimal.

**Conclusion:**

The process of claims processing being followed includes a mix of manual and automatic scrubbing in the EHR. The claims that couldn't be processed manually leads to staggering reduction of revenue ultimately discouraging the access to efficient healthcare services. As the analysis presented reduction in billing of G0181/G0182 claims (58.2%), it highlights the need for improved communication and documentation practices between home health agencies and providers. By addressing these issues, we can streamline reimbursement, increase the revenue and ensure Medicare beneficiaries receive effective and efficient home health services.

**CHAPTER 5: Identifying the challenges in insurance claims submission process and their impact on reimbursement and strategies for optimizing insurance claim processing to improve reimbursement outcomes for physicians.**

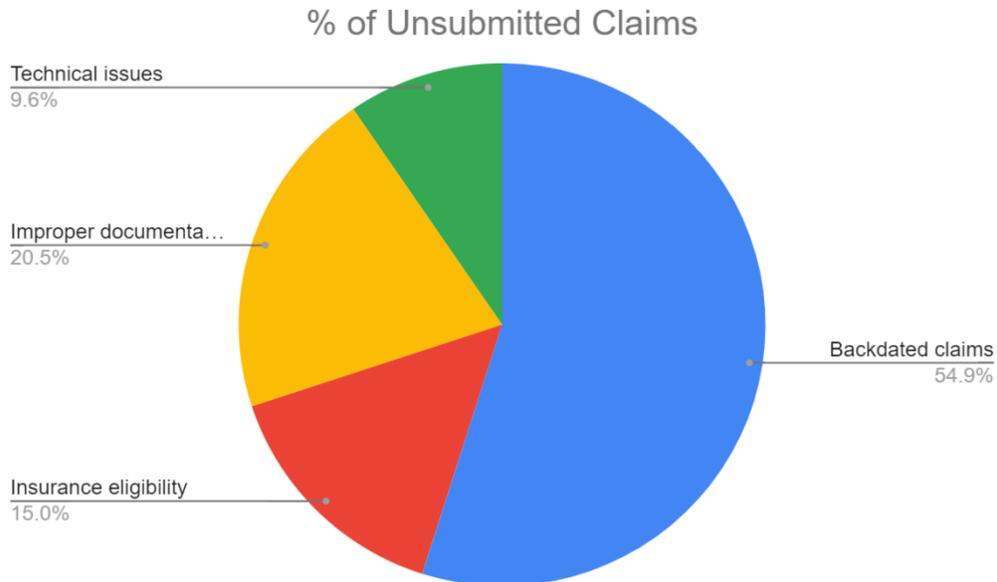
**Background:**

The purpose of the study was to identify the efficiency as well the challenges faced during the insurance claim processing of Prima care physician group and its direct impact on reimbursement. Developing strategies and implementing workflows that are focused to reduce the key challenges in the process is utmost necessary in optimizing the processing of claims. The data from the six months period has been used and critically analysed to identify the main obstacle on the basis of which streamlined processes can be developed to enhance reimbursement outcomes for the healthcare providers.

**Result:**

The most common reasons for non-submission of the claims were derived from the six month claim data. Out of the 825 claims that could not get submitted, backdated billing was the reason for 453 claims which constitutes almost 55% of total denials. The other reasons were found out to be insurance eligibility (15.03%), Incorrect documentation- DOS (20.5%) and technical errors (9.56%).

Figure 5: Percentage of Unsubmitted claims



It was found that back billing of claims is one of the main reasons behind the non-submission and denials constituting of almost 54.9% leading to revenue loss of 63,525\$.

Table 6: Reasons for Denials

REASONS	UNSUBMITTED CLAIMS	LOSS OF REVENUE
Backdated billing	453	34,881\$
Insurance eligibility	124	9548\$
Improper documentation	169	13,013\$
Technical issues	79	6,083\$
Total	825	63,525\$

FIGURE 6: Reasons for denials in Backdated claims

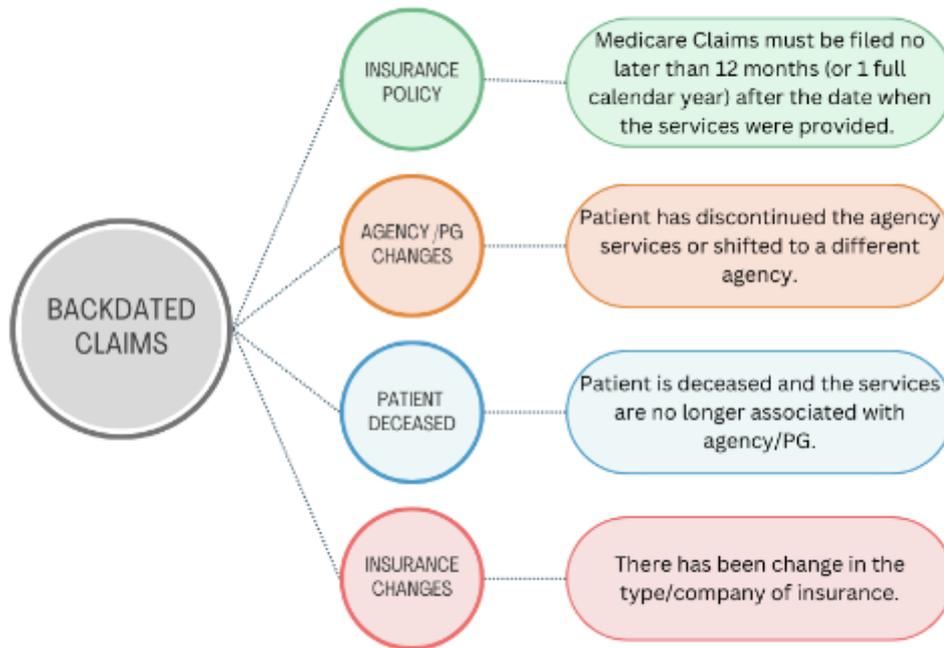


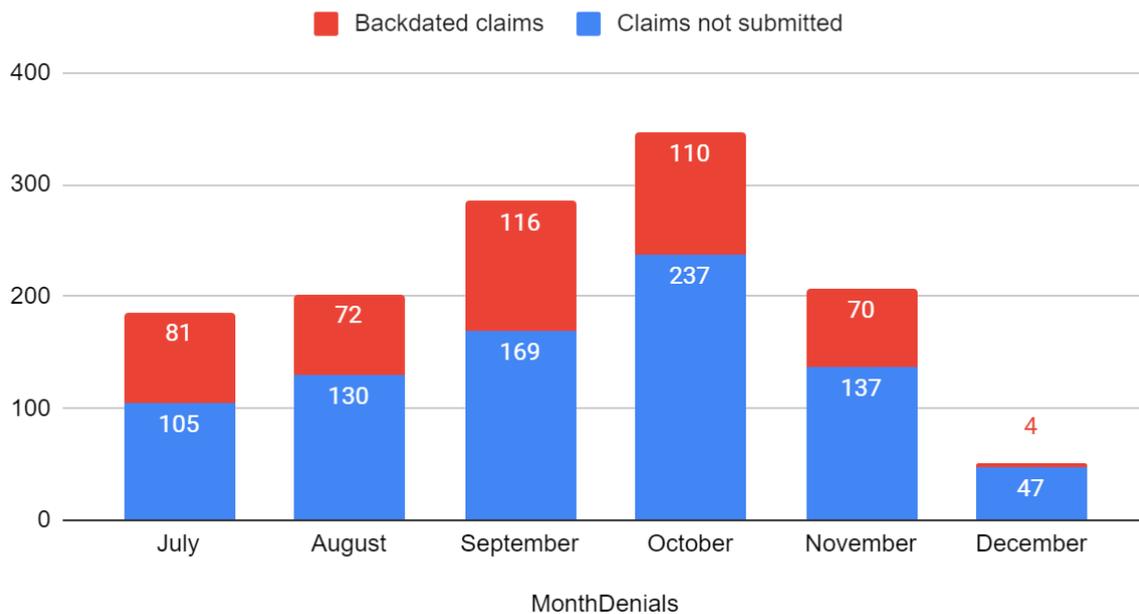
Table 7: Percentage of Unsubmitted claims due to Backdated billing in six months

Month	Claims not submitted	Backdated billing	%
July	105	81	77.14%
August	130	72	55.38%
September	169	116	68.64%
October	237	110	46.41%
November	137	70	51.09%
December	47	04	8.51%

Total	825	453	54.90%
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Figure 7: Six months Assessment of Unsubmitted claims

### Claims not submitted and Backdated claims



### **Discussion:**

In the study conducted by Hodges J. (2007) the primary focus was to mitigate the revenue losses caused by payment reductions. It stated that hospitals must prioritize effective claims denial management by submitting the claims in the first time itself thereby reducing denials. The more the claims are delayed in getting processed the high are the chances of getting rejections and loss of reimbursements. The denied claims add in extra cost because of the administrative rework and lost reimbursement (22). Their study focused on the revenue losses caused by the Balanced Budget Act (BBA). It aimed and reviewed the claims that were denied in the first basis only and no follow ups or reclaims were taken into consideration.

As per our findings, the main reason that resulted in loss of potential revenue was due to the back dated claims. Around 54.90% of the claims could not be processed as they were back dated and were not done on real time basis. This resulted in the loss of 34,881\$ revenue over the six-month period. The claims that were not billed in a particular month were taken into consideration in the subsequent months and were processed after the eligibility criteria was fulfilled. The data in our study thereby utilizes the follow up on the claims during the entire 6-month time period (July-December). By implementing effective strategies, the physician groups and providers can improve the cash flow, enhance the patient satisfaction and maximize revenue collection as well.

**Conclusion:**

Analysis of the six-month claim data revealed that backdated billing was the most significant factor contributing to claim non-submission followed by other factors as well. Investigating the root causes of backdated billings, strengthening eligibility verification processes and implementing strict protocols for accurate and timely submissions of claims is necessary to recoup the lost revenue. As per the findings there has been technical errors as well which can be further minimized to almost negligible by exploring technological solutions and streamlines the processes. In conclusion, the insights gleaned from this analysis provide a foundation for targeted interventions aimed at optimizing revenue cycle management within the Prima Care Physician Group. By addressing key challenges and implementing proactive strategies, the organization can enhance financial performance and ensure seamless delivery of healthcare services to its patient base. By implementing these, Prima Care Physician Group can achieve significant improvements in Revenue cycle management (RCM) efficiency, minimize claim denials, and maximize revenue capture.

## CHAPTER 5: RECOMMENDATIONS

The findings from the analysis of Prima Care Physician Group's claims processing and revenue cycle management provide valuable insights into the operational efficiency and financial implications of the billing practices by highlighting and identifying key challenges to suggest potential strategies for improvement.

1. Streamlined workflows and processes: Maintaining and following standard operating procedures is extremely important to ensure seamless flow of information and timely completion of all documentation requirements. Developing clear and concise protocols for documenting services for the patient's entire episodes.
2. Real-time billing and updates: Ensuring the patient certification and recertification documents are uploaded in the patient's profile promptly and submitting the claim on a real time basis will eliminate the delays and denials caused by back dated billing. Automated reminders, alerts and notifications can be set up for the clinical/administrative staff to flag all the new renewals or documents of patients prioritizing real time action.
3. Integration and using Artificial intelligence and machine learning: Focusing on developing robotic processing automation (RPM) which involves machine learning to identify the targeted actions for claims process. Exploring the use of advanced ML techniques will help improve the accuracy and efficiency of the process as well as help in risk prediction. On the contrary it is extremely important to develop the MI models used in the healthcare claims complying with relevant regulations and are transparent as well to build in trust amongst the healthcare community.

Future research could investigate the effectiveness of specific RCM software solutions and explore the feasibility of implementing electronic claims clearinghouse services to further streamline the claim submission process.

4. Training and monitoring: Providing continuous coding and billing training to the team working on the processes to minimize the manual errors and missing information. Implementing checklists and evaluating the procedures correlating with the outcomes will help to bring down the denial rates to almost negligible. Tracking key performance indicators related to back-billing rated to monitor progress and identify areas of improvement.
5. Furthermore, addressing issues related to insurance eligibility verification and Date of Services (DOS) accuracy is essential for minimizing claim denials. Investing in staff training and leveraging technology solutions to detect and rectify technical errors can further enhance claim submission accuracy and efficiency.

## References:

1. History - CMS: <https://www.cms.gov/about-cms/who-we-are/history>
2. Marr J, Polsky D. Traditional Medicare Supplemental Insurance and the Rise of Medicare Advantage. *American Journal of Managed Care*. 2024 May 1;30(5).
3. Thesmar D, Sraer D, Pinheiro L, Dadson N, Veliche R, Greenberg P. Combining the power of artificial intelligence with the richness of healthcare claims data: opportunities and challenges. *PharmacoEconomics*. 2019 Jun 1;37:745-52
4. Pattanshetti, M., & Lederer, S. E. (2013). Understanding Claim Processing in Healthcare <https://www.billingadvantage.com/medical-claims/>.
5. Kim, S. Y., Kim, H. J., Park, S. C., & Yoon, S. H. (2016). Health Insurance Claim Review Using Information Technologies. *Journal of Medical Informatics & Decision Making*, 16(2), 101–107. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3483480/>
6. Shanafelt, T. D., Boone, B. A., Monson, C. L., & Singh, D. A. (2012). Physician burnout and medical errors among US physicians. *Archives of Internal Medicine*, 172(17), 1377-1382. PubMed: <https://pubmed.ncbi.nlm.nih.gov/37382306/>
7. Group practice impacts on patients, physicians and healthcare systems: a scoping review: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7798803/>
8. Gottlieb JD, Shapiro AH, Dunn A. The complexity of billing and paying for physician care. *Health Affairs*. 2018 Apr 1;37(4):619-26. <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2017.1325>
9. Powell A, Savin S, Savva N. Physician workload and hospital reimbursement: Overworked physicians generate less revenue per patient. *Manufacturing & Service Operations Management*. 2012 Oct;14(4):512-28. <https://pubsonline.informs.org/doi/abs/10.1287/msom.1120.0384>

10. Sutherland JM, Fisher ES, Skinner JS. Getting past denial--the high cost of health care in the United States. *New England Journal of Medicine*. 2009 Sep 24;361(13):1227.
11. Cunningham PJ, O'Malley AS. Do Reimbursement Delays Discourage Medicaid Participation by Physicians? Simply raising fees might not be enough to entice physicians to take Medicaid patients, if they have to wait too long to receive payment for services rendered. *Health Affairs*. 2008;27(Suppl1): w17-28.  
<https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.28.1.w17>
12. Cebul RD, Rebitzer JB, Taylor LJ, Votruba ME. Organizational fragmentation and care quality in the US healthcare system. *Journal of Economic Perspectives*. 2008 Nov 1;22(4):93-113. <https://www.aeaweb.org/articles?id=10.1257/jep.22.4.93>
13. Gilmore A. The complexity and value of mid-level patterns of denials: the greatly expanded number of codes in ICD-10 makes it far more difficult to find patterns in denials; technology can help sort it all out. *Healthcare Financial Management*. 2016 Apr 1;70(4):80-6.
14. Terra SM, Byrne A. Avoidable technical and clinical denial write-off management in hospitals, physician offices, and clinics. *Professional Case Management*. 2016 Mar 1;21(2):73-81.
15. Ryan ML, Mutore KT, DeLeon J, Gillory L, Chung DH, Pandya S. Improving Billing and Collections in a High-Volume Pediatric Surgery Practice: Denials-Based Approach. *Journal of the American College of Surgeons*. 2023 Apr 1;236(4):630-5.
16. American Medical Association. (2020). *Prior Authorization Playbook*.  
<https://www.ama-assn.org/practice-management/prior-authorization>
17. American Academy of Family Physicians. (2023). *Coding and Documentation Tips for Improved Reimbursement*.  
<https://www.aafp.org/family-physician/practice-and-career/getting-paid/coding.html>

18. Xiao, Y., Hu, J., Jiang, F., Li, Y., Luo, Z., & Zhou, C. (2020). Applying Deep Learning Techniques for Medical Claim Processing in Healthcare Insurance. *IEEE Access*, 8, 51223-51234.
19. Gondi S, Kadakia KT, Tsai TC. Coverage Denials in Medicare Advantage—Balancing Access and Efficiency. *In*JAMA Health Forum 2024 Mar 1 (Vol. 5, No. 3, pp. e240028-e240028). American Medical Association.
20. Jaworski P. Sources of insurance claim denials within a regional medical group (Doctoral dissertation, D'Youville College).
21. Saripalli P, Tirumala V, Chimmad A. Assessment of healthcare claims rejection risk using machine learning. *In*2017 IEEE 19th International Conference on e-Health Networking, Applications and Services (Healthcom) 2017 Oct 12 (pp. 1-6). IEEE.
22. Hodges J. Effective claims denial management enhances revenue. *Healthc Financ Manage*. 2002 Aug;56(8):40-50. PMID: 12222011.

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