

# DISSERTATION PRESENTATION

ON



**“UNRAVELLING THE DYNAMICS OF PRIVATE  
HEALTHCARE POST INTRODUCTION OF RGHS  
AND CHIRANJEEVI SCHEME - AN IN DEPTH  
ANALYSIS ON FUNCTIONING OF HOSPITALS  
AND THE IMPACT ON PROFITABILITY, FACILITY  
UTILISATION AND QUALITY”**

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# INTRODUCTION

India's healthcare system, the largest private sector globally, has historically been marked by high out-of-pocket expenses and inadequate public funding, leading to significant barriers in accessing healthcare, particularly for low-income populations. This was starkly exposed during the Covid-19 pandemic, as costs for treatment in private hospitals were often unaffordable for average citizens. Inequalities also persist in urban-rural health infrastructure, with rural areas significantly under-resourced. However, recent policy changes have sought to address these disparities.

The COVID-19 pandemic also hit private hospitals in India hard, causing financial distress due to decreased patient numbers and halted non-emergency procedures. They implemented measures like reducing doctors' salaries to manage losses. Fortis Healthcare, a prominent chain, saw a 46.8% operational income decrease, falling from Rs 1,138.3 crore in Apr-Jun 2019 to Rs 606 crore in the same period in 2020. It also went from a net profit of Rs 67.8 crore to a net loss of Rs 178.9 crore. This crisis showcased private hospitals' vulnerability amidst health emergencies.

India's 2017 health policy change sought universal coverage, leading to the ABPMJAY (Ayushman Bharat Pradhan Mantri Jan Arogya Yojana), aiming to provide world's largest health insurance to economically weaker sections. However, it faced setbacks due to lower reimbursement rates causing few private hospitals to participate, resulting in underfunding. The COVID-19 pandemic underscored this issue, as unaffordable private healthcare and overburdened public hospitals put significant financial strain on many. To address this, the Rajasthan government launched two initiatives, RGHS and Mukhyamantri Chiranjivi Yojana, aiming to increase healthcare accessibility and affordability for its residents.

These initiatives have significantly impacted public healthcare access and the private healthcare sector, especially during the COVID-19 crisis. These initiatives have likely influenced the operations and finances of private healthcare institutions, altering patient inflow, healthcare usage, and revenue. Despite these impacts, a comprehensive understanding of these initiatives' effects on private healthcare is lacking. Bridging this knowledge gap is essential for understanding how such programs influence the operational and financial aspects of private healthcare organizations, a crucial factor in the evolution of India's healthcare sector.



## RGHS INITIATIVE

- ▶ The RGHS, launched in September 2021, provides comprehensive healthcare to Rajasthan government employees, retirees, MLAs, and state Judges.
- ▶ This comprehensive digital initiative provides a multitude of services such as outpatient and inpatient treatments, cashless day care procedures, diagnostic tests at approved centres, and maternal and child health services.
- ▶ Beneficiaries can avail these services at government and empanelled private hospitals within Rajasthan.
- ▶ The scheme includes a cashless facility for medical treatments and OPD medicines at network healthcare providers, including government and private hospitals, as well as diagnostic/imaging centres.
- ▶ A unique feature of the RGHS is the Card Tracker System, allowing beneficiaries to monitor their OPD and IPD card limits in real time.
- ▶ For serving and retired SAB employees, the scheme provides insurance coverage of up to Rs 5 lakhs per family per year for specific catastrophic illnesses.

# Mukhyamantri Chiranjeevi Swasthya Bima Yojana

- ▶ The Chief Minister Chiranjeevi Health Insurance Scheme, initiated on May 1, 2021, is a significant state-level initiative aimed at achieving 'Universal Health Coverage' in Rajasthan.
- ▶ The scheme offers an increased annual cashless medical insurance benefit of up to INR 25 lakh per family, marking a significant increase from the previous limit of INR 10 lakh.
- ▶ It includes families registered to the Jan Aadhaar database, eligible under the National Food Security Act (NFSA), contract workers in state departments, boards, corporations or government companies, small farmers, and those who received COVID-19 financial aid. Other non-government affiliated families can join by paying a premium.
- ▶ Valid for In-Patient Department procedures and identified procedures, the scheme covers a wide range of medical costs. This includes pre-admission and post-discharge expenses, registration, bed and nursing costs, surgery and consultation fees, costs of anaesthesia, blood, oxygen, OT, medicines, X-rays, tests, and necessary protective equipment.
- ▶ The scheme imposes no restrictions on the size and age of the family. Infants up to one year are eligible for benefits without their name in the family card.

# RESEARCH METHODOLOGY

## Key Research Questions :

- ▶ How do the RGHS and Chiranjeevi Scheme affect the profitability of private hospitals, and what factors contribute to this impact?
- ▶ What is the association between public schemes and the patient footfall in private hospitals, and how does this relationship affects different specialties or departments?
- ▶ How has the resource utilisation changed in the private hospitals after the introduction of these government schemes

## RESEARCH OBJECTIVES :

- ▶ To evaluate changes in patient turnout for both inpatient (IPD) and outpatient (OPD) services following the implementation of the government schemes.
- ▶ To examine the utilization of pharmacy services and the frequency of pathology and radiology tests subsequent to the adoption of the RGHS and Chiranjivi Scheme.
- ▶ To analyse changing trends in various operational activities of hospital due to external factors.

## RESEARCH HYPOTHESIS :

- ▶ The implementation of the RGHS and Chiranjeevi Scheme will potentially stimulate an upward trend in revenue generation and healthcare service usage, reflecting in various operational sectors of a private hospital.

# RESEARCH METHODS

## STUDY DESIGN

- Observational Retrospective study

## STUDY SETTING

- Medipulse Hospital
- 300-bed private hospital
- Empaneled under RGHS and Chiranjivi Scheme

## STUDY POPULATION

- Study population: All patients accessing healthcare services at Medipulse Hospital.
- Inclusion criteria: Available records
- Exclusion criteria: Incomplete or missing records for analysis.
- Study tools: Hospital management information system and operational records

# RESEARCH METHODS

## STUDY DURATION

- Three months for data collection and analysis
- Covers approximately five years of data.
- Pre-empanelment, COVID-19 pandemic, and post-empanelment periods

## SAMPLE SIZE

- Exhaustive study
- Includes data and instance during five year period under study

## SAMPLING TECHNIQUE

- Total population sampling technique
- Entire dataset for specified time frame included in analysis



# RESEARCH PROCEDURE

## DATA COLLECTION

- Online database of the hospital was leveraged to gather five-year monthly data (Jan 2018-April 2023) using Google Sheets and MS Excel.
- Data included facility and resource usage, number of OPD and IPD visits, lab tests, surgeries, pharmacy purchases, revenue proportions from cash and credit patients, and operational costs.

## DATA ANALYSIS

- Monthly data was converted into a quarterly format for concise representation and trend analysis. MS Excel and Google Sheets were used for chart creation and statistical analysis.
- Trend analysis involved examining data from 2018 to 2023 to spot significant patterns in patient numbers and resource utilization.
- Comparative analysis evaluated hospital operations' differences before, during, and after the pandemic, and before and after the introduction of RGHS and Chiranjeevi.

# RESULTS

- ▶ Research study conducted over three months from January 2018 to April 2023.
- ▶ Analyzed long-term hospital operational trends, including patient footfall, resource utilization, and revenue generation.
- ▶ Assessed the impact of external factors like policy shifts and global health crises on hospital operations.
- ▶ Comprehensive understanding of the evolving landscape of hospital operations amidst changing external conditions.
- ▶ Data transformed into graphical representations and analyzed on a monthly and quarterly basis.

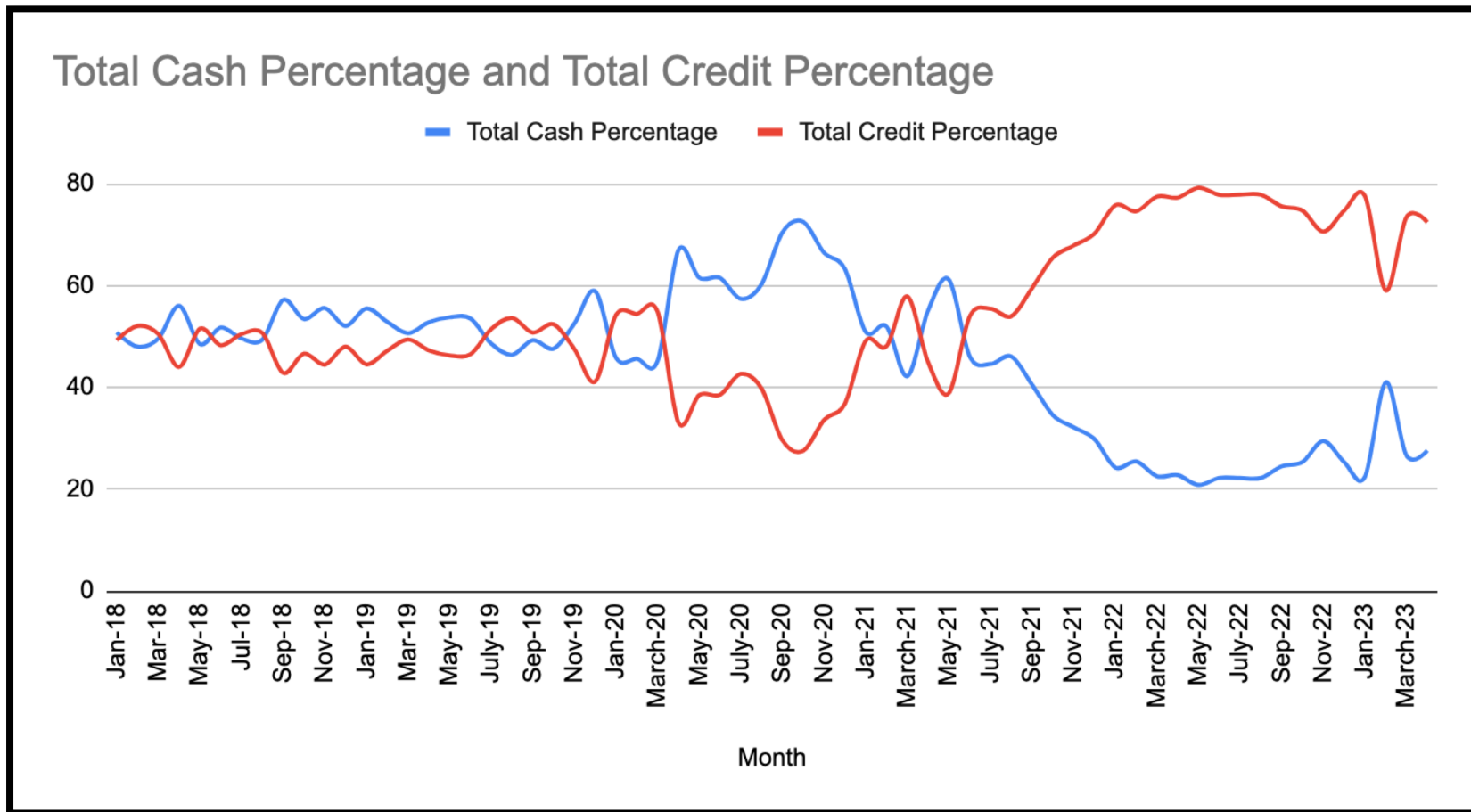


Figure 1 (The cash percentage and credit percentage as the y-axis variables and the months as the x-axis variable. The data is taken from April 2017 till April 2023 and shown in alternate months.)

- Downward trend in cash payments observed over the years.
- Temporary increase in cash payments during the COVID-19 pandemic in 2020.
- Upward trend in credit payments after October 2021 with the introduction of RGHS and Chiranjeevi schemes

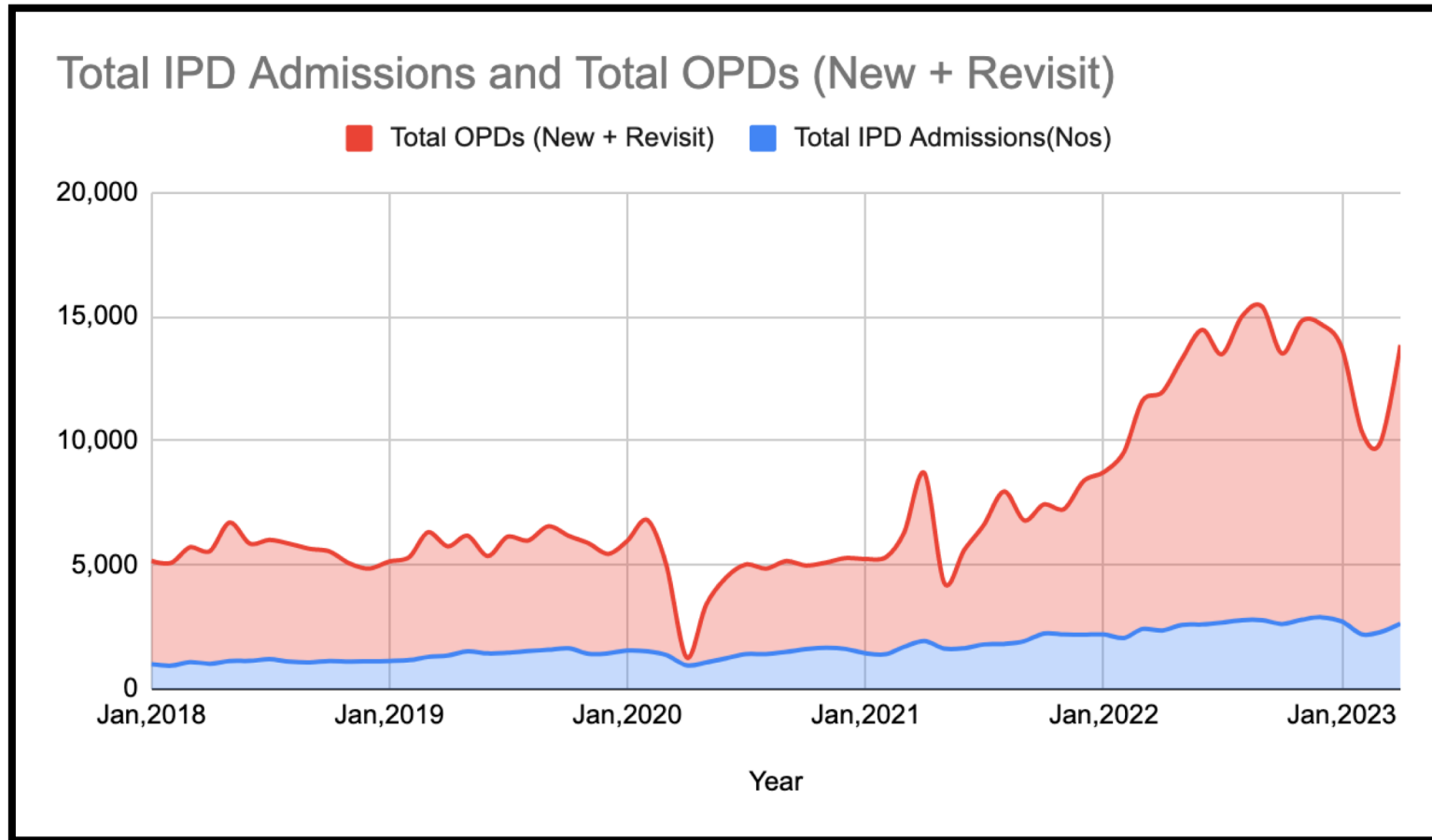


Figure 2 (The stacked data graph showing the total number of admissions to the IPD and OPD from January 2018 through April 2023)

- Notable rise in OPD and IPD admissions over the years.
- Decrease in OPD admissions during COVID-19 lockdowns in March 2020 and April 2021.
- Disruption in IPD services during the pandemic due to the focus on managing COVID-19 cases.
- Significant increase in both OPD and IPD admissions following the implementation of Rajasthan's public health schemes.
- Temporary decrease in OPD admissions in March 2023 due to a doctors' strike against the RTH Bil

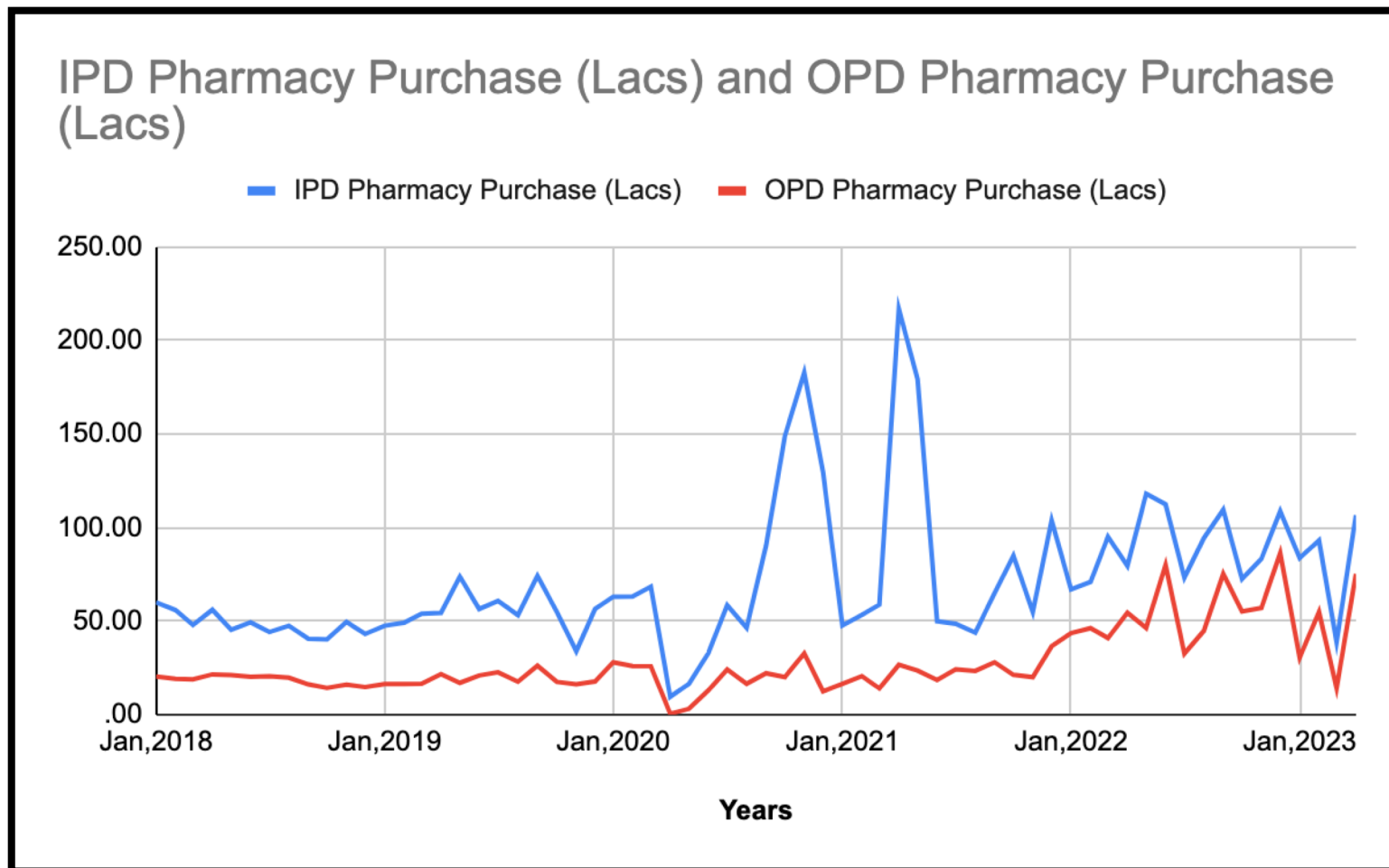


Figure 3 (The percentage increase in the OPD and IPD pharmacy purchases of the hospital from the year 2018 until April 2023)

- OPD pharmacy purchases dropped during the first wave of COVID-19 but revived after the introduction of RGHS.
- Monthly OPD purchases increased by around 275% by April 2023.
- IPD pharmacy purchases showed a robust growth trajectory, peaking during the pandemic.
- IPD purchases increased by approximately 77% from 2018 to 2023.
- Doctors' strike in March 2023 led to a temporary dip in both IPD and OPD pharmacy purchases

## No. of Dialysis Admissions/Month

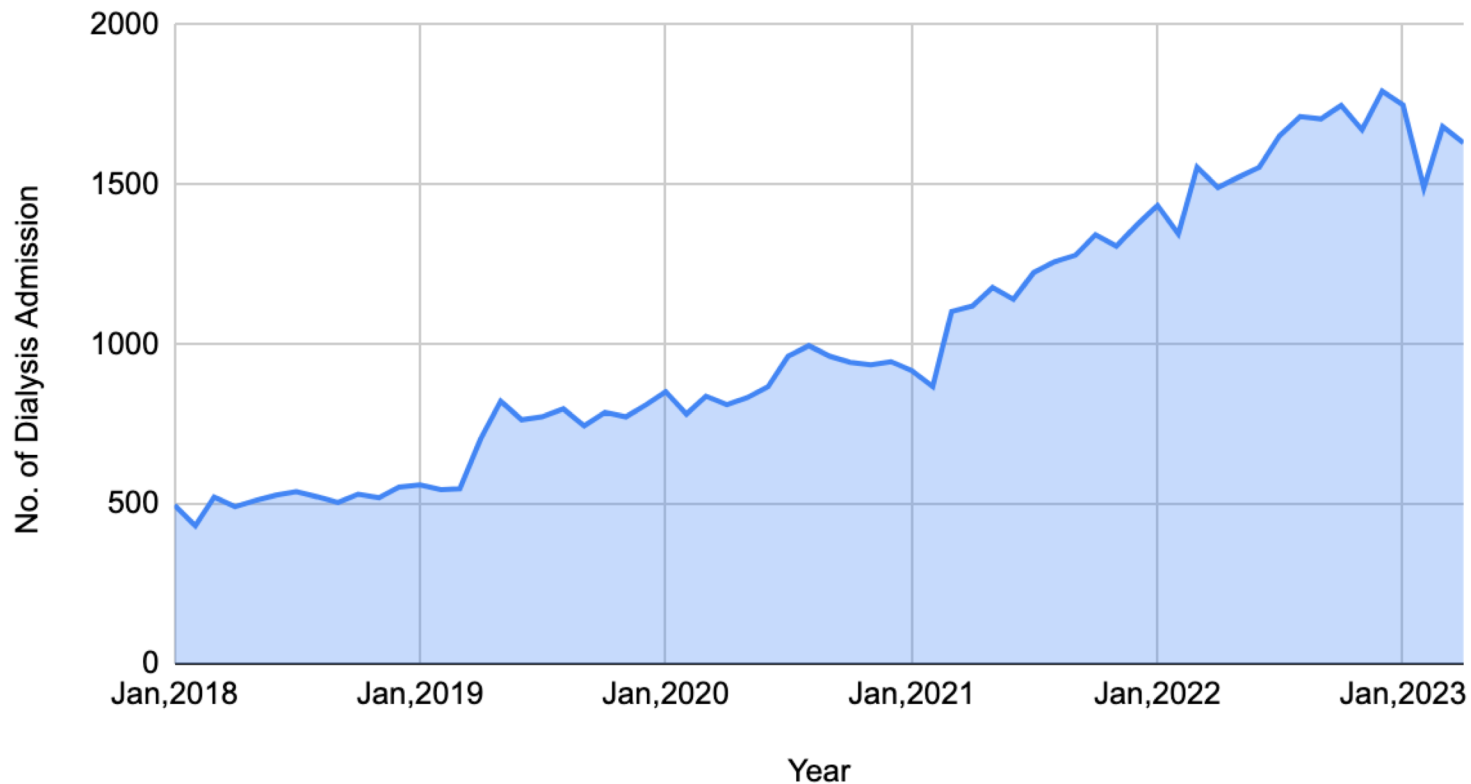


Figure 4 (Number of dialysis admissions per month. The data is taken from January 2018 till March 2023, for convenience only first month for every year is labelled on x axis)

- Significant increase in monthly dialysis procedures from around 500 in January 2018 to approximately 1700 in April 2023.
- Dialysis services saw a substantial rise in utilization over the five-year period.
- Dialysis is a preferred treatment option for end-stage renal disease (ESRD) due to organ transplant shortage.
- 228.8% increase in dialysis patients after the implementation of RGHS and Chiranjeevi schemes.
- Dialysis services continued during COVID-19 waves and doctors' strike, unaffected by these circumstances.



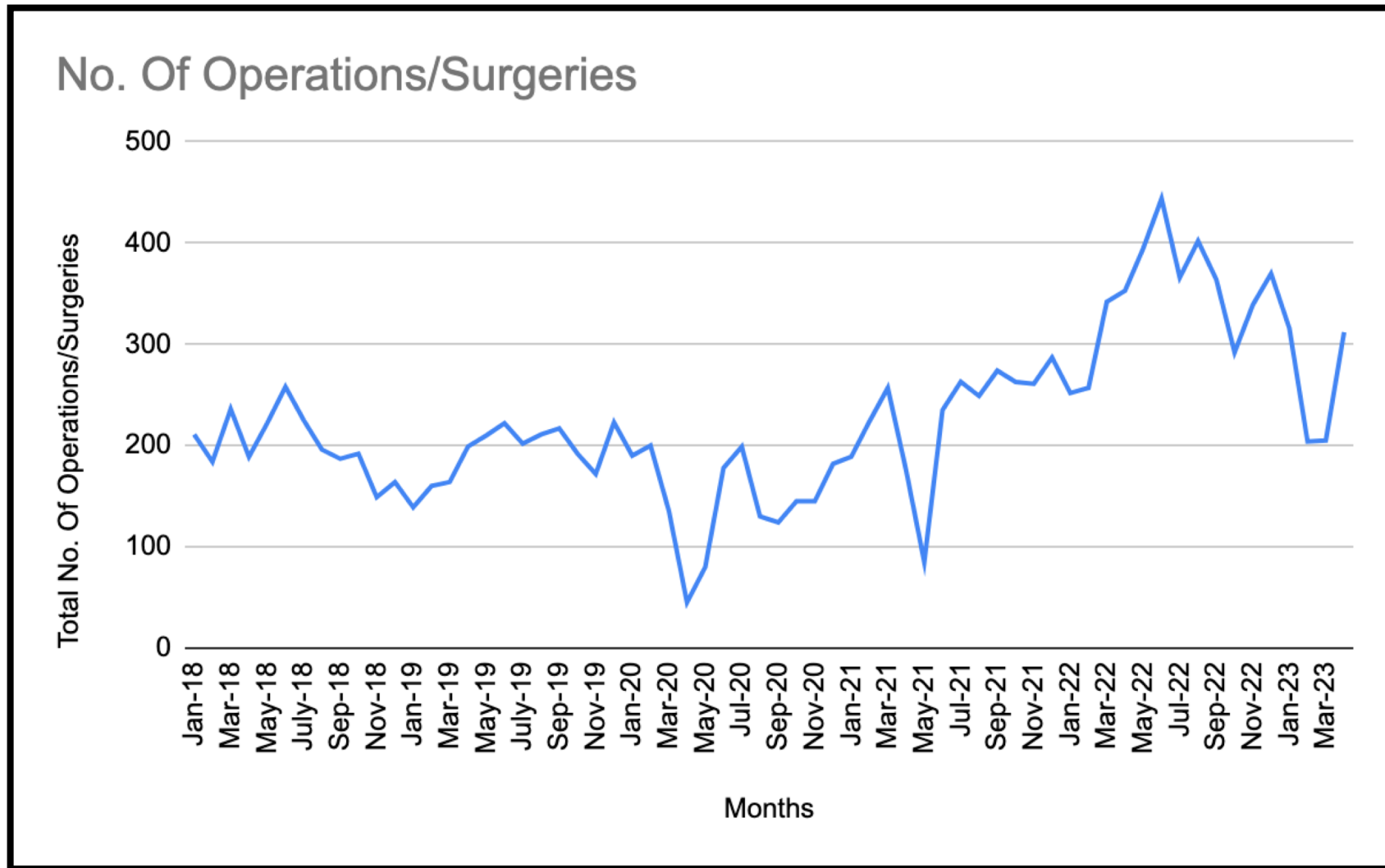


Figure 5 (Shows total number of surgeries performed per month. The data is taken from January 2018 till March 2023 and shown in alternate months)

- The number of surgeries decreased during COVID-19 waves, hitting the lowest in May 2021.
- The introduction of cashless schemes prompted a significant increase in surgeries.
- The peak in surgeries was observed in May 2022 after the scheme's implementation.
- Overall, there has been a significant surge of approximately 47% in surgeries post-empanelment.



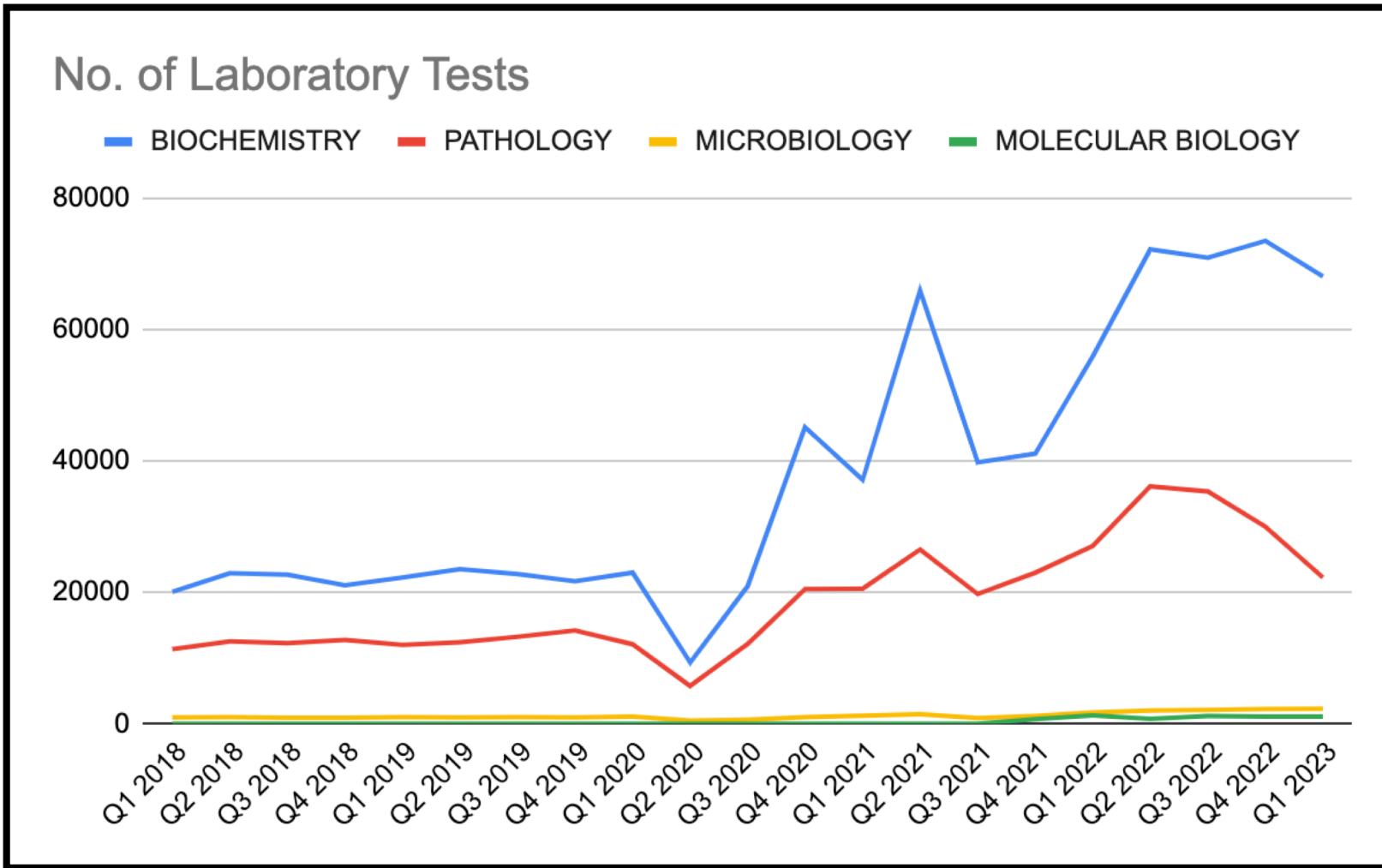


Figure 6 (The graph presents an examination of laboratory tests conducted in different departments. The data in the graph has been grouped into quarterly summaries to provide a clearer understanding of the trends.)

- The implementation of cashless schemes triggered a substantial rise in the number of tests conducted across all departments.
- Despite a drop during the first wave, a significant surge was observed during the second wave, peaking in December 2022 with an increase of approx. 317%.
- Biochemistry, covering a wide range of health assessments, and Pathology, crucial for diagnosing diseases, saw considerable increases in test volumes.
- The second wave of COVID-19 caused an uptick in Pathology tests for infection or antibody detection, aiding disease management and containment.

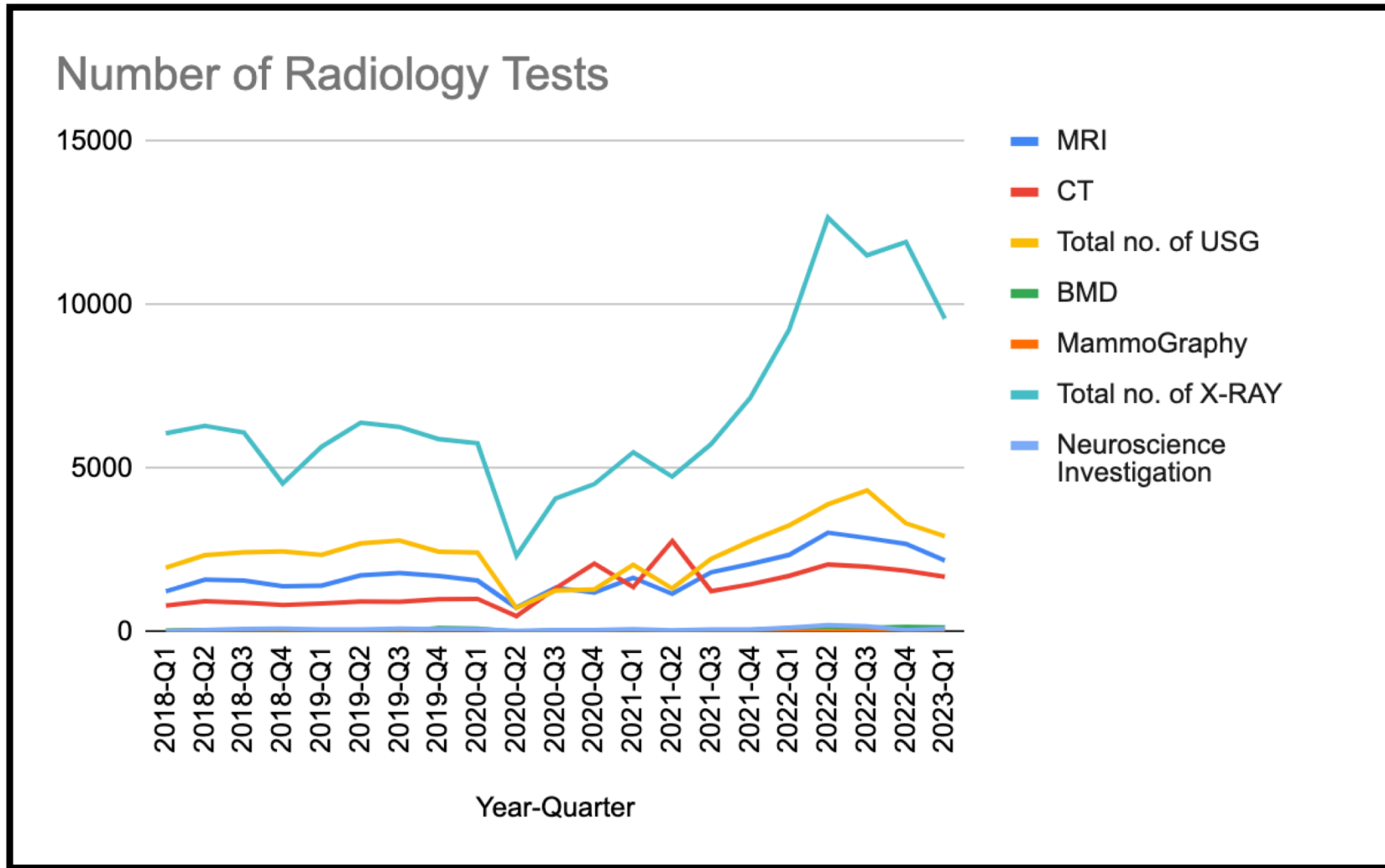


Figure 7 (The graph portrays the number of various types of radiology tests. The data has been consolidated from a monthly to a quarterly format for easier comprehension).

- X-ray tests showed the highest frequency, experiencing a surge after the implementation of the scheme.
- CT scans and MRIs had a notable increase during the COVID-19 pandemic, while Mammography and neuroscience investigations remained steady.
- Other tests saw a significant increase in frequency after the transition to cashless payments.

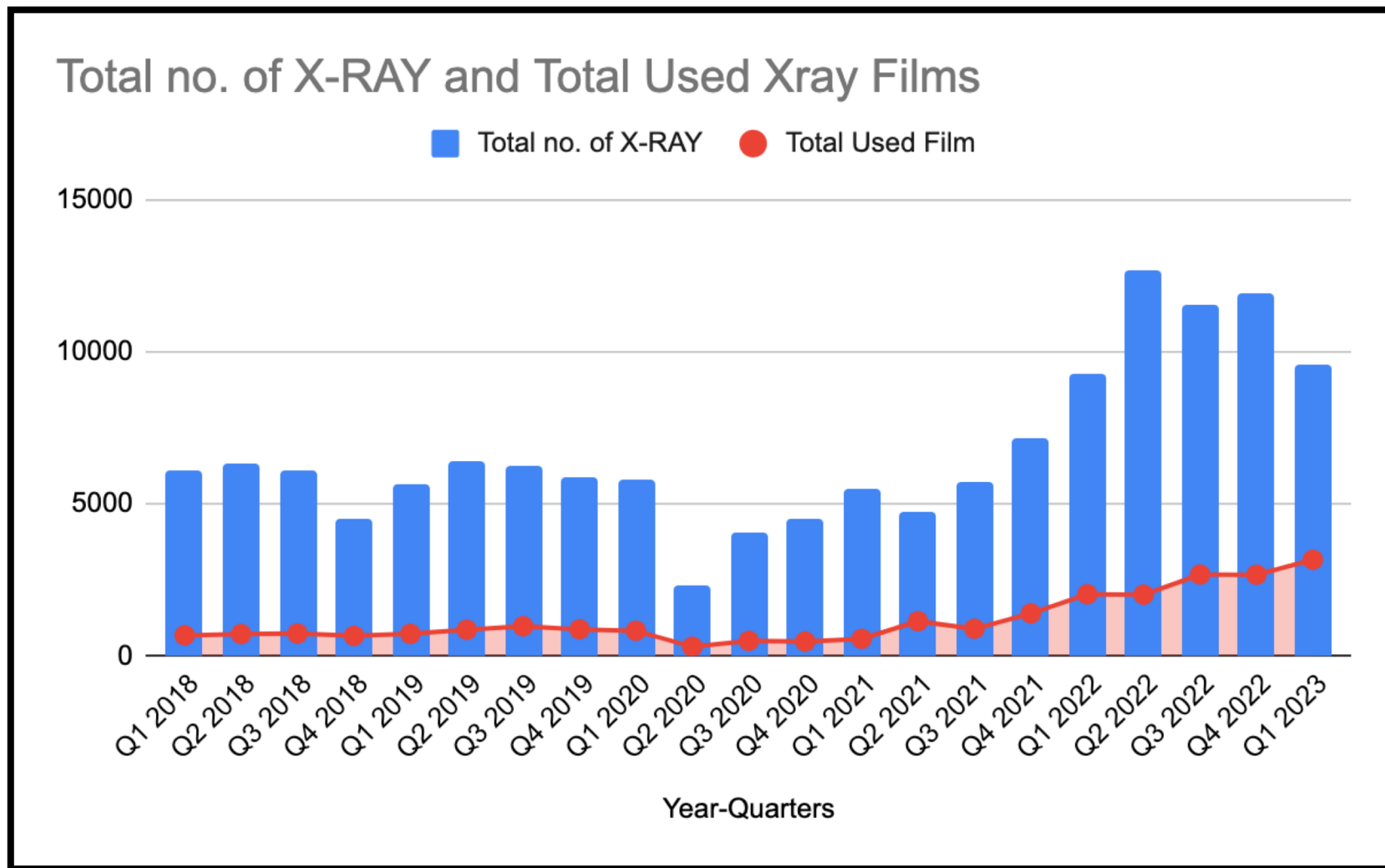


Figure 8 (The figure depicts the correlation between the quantity of X-rays conducted and the consumption of 8\*10 X-ray films)

- X-ray film usage increased alongside the rise in the number of X-rays performed.
- During the first wave of COVID-19, film usage declined, but later experienced a significant rise.
- Introduction of public health schemes improved access to diagnostic services and increased resource utilization

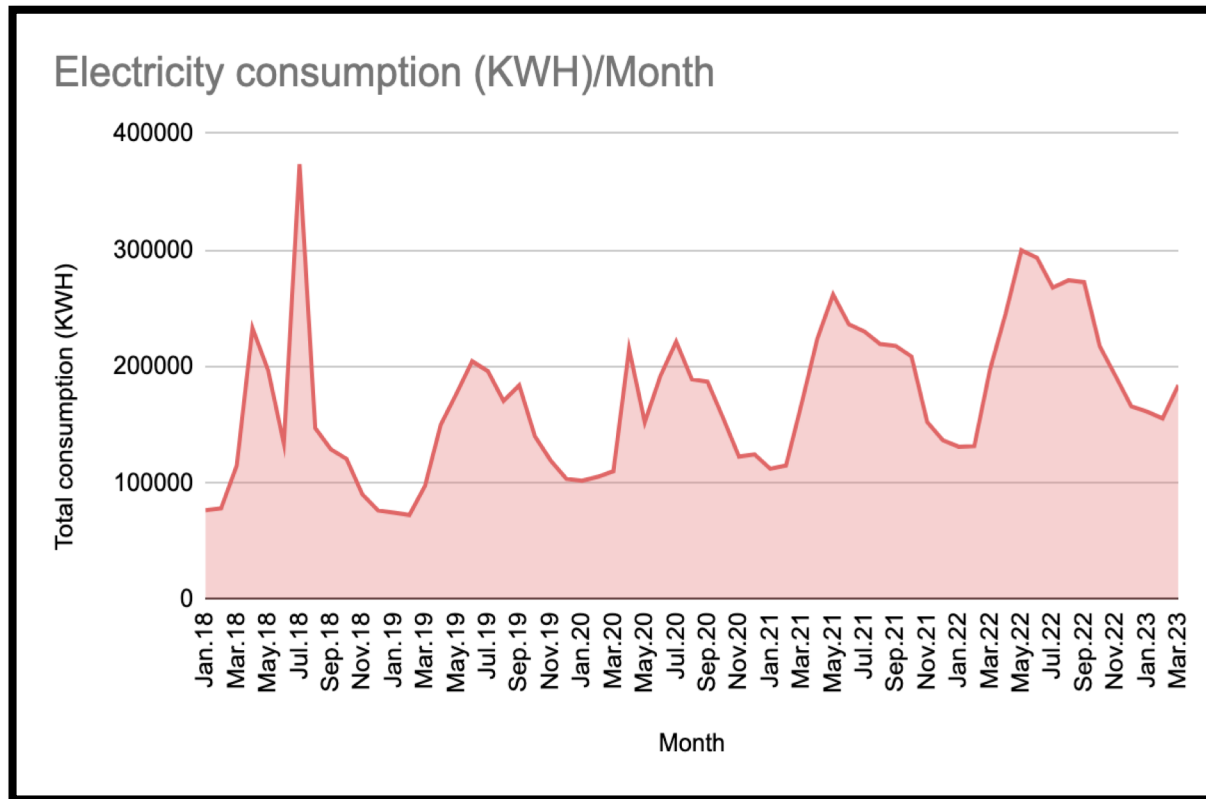


Figure 9 (Electricity consumption every month in Kilowatt Hour from January 2018 till March 2023)

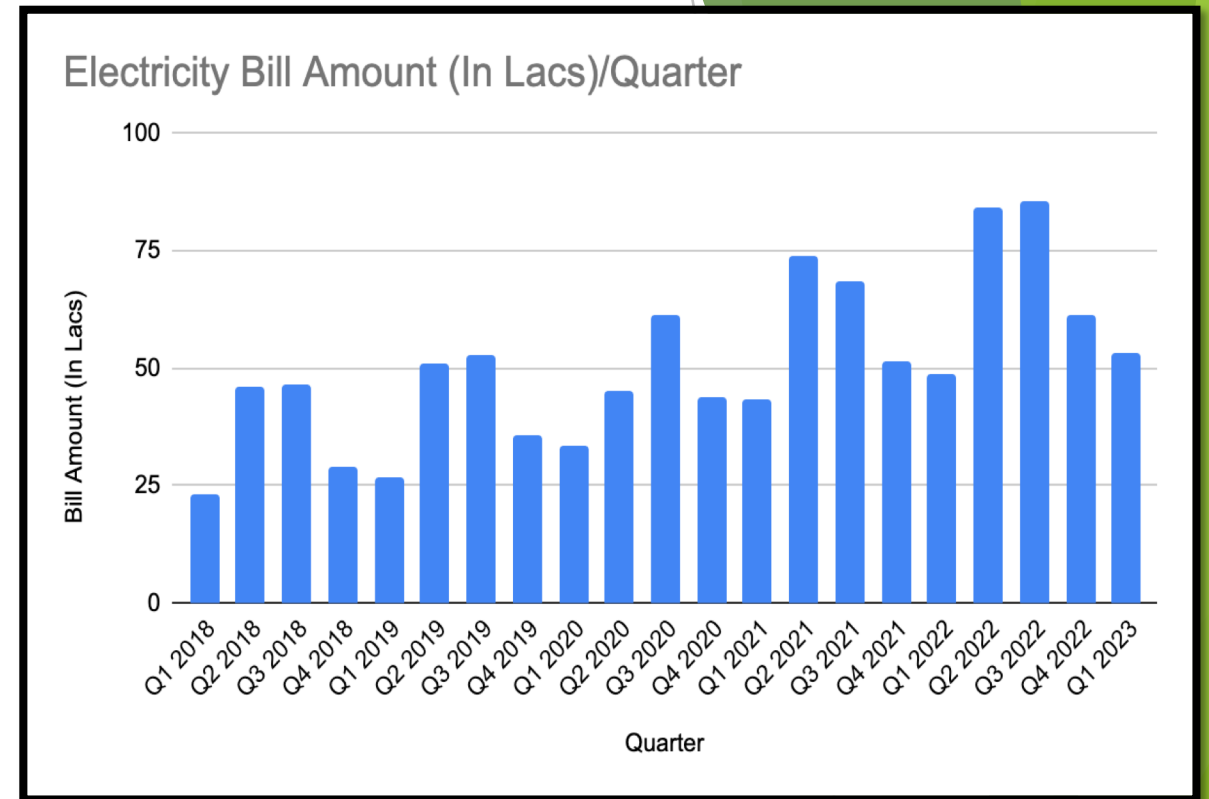


Figure 10 (This shows the electricity bill amount in Lakhs for every quarter since 2018 till the first quarter of 2023)

- Electricity consumption and associated costs showed a significant increase, peaking in 2022.
- Over the study period, there was a 103% increase in electricity consumption, reflecting growing demand.

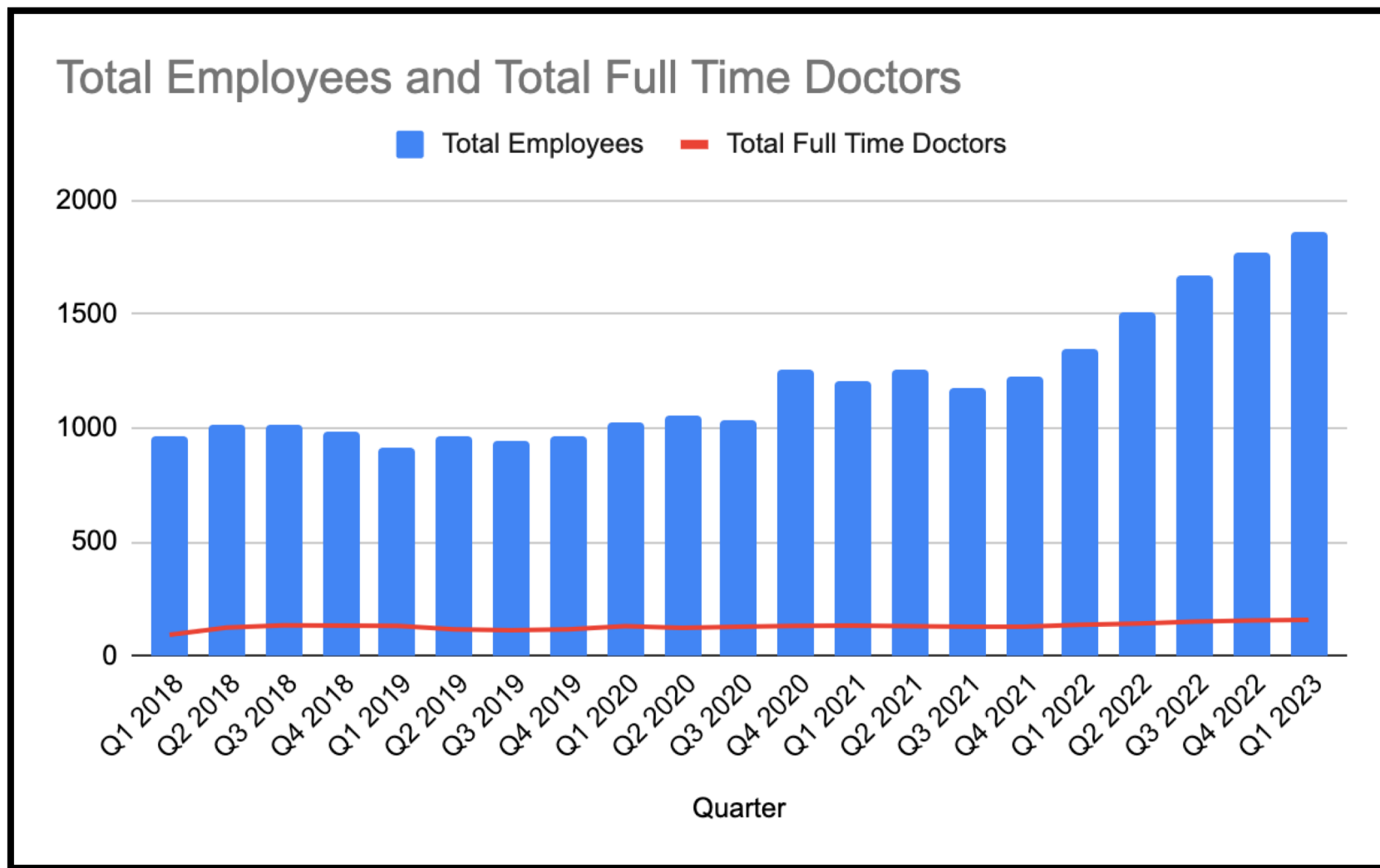


Figure 11 (This shows the Total number of Employees and Total number of Doctors working at the hospital. The data is consolidated from a monthly to a quarterly format for easier comprehension.)

- Employee numbers increased after the first wave of COVID-19 and RGHS empanelment.
- The number of doctors remained constant throughout the years.

## Trends in Hospital Departments

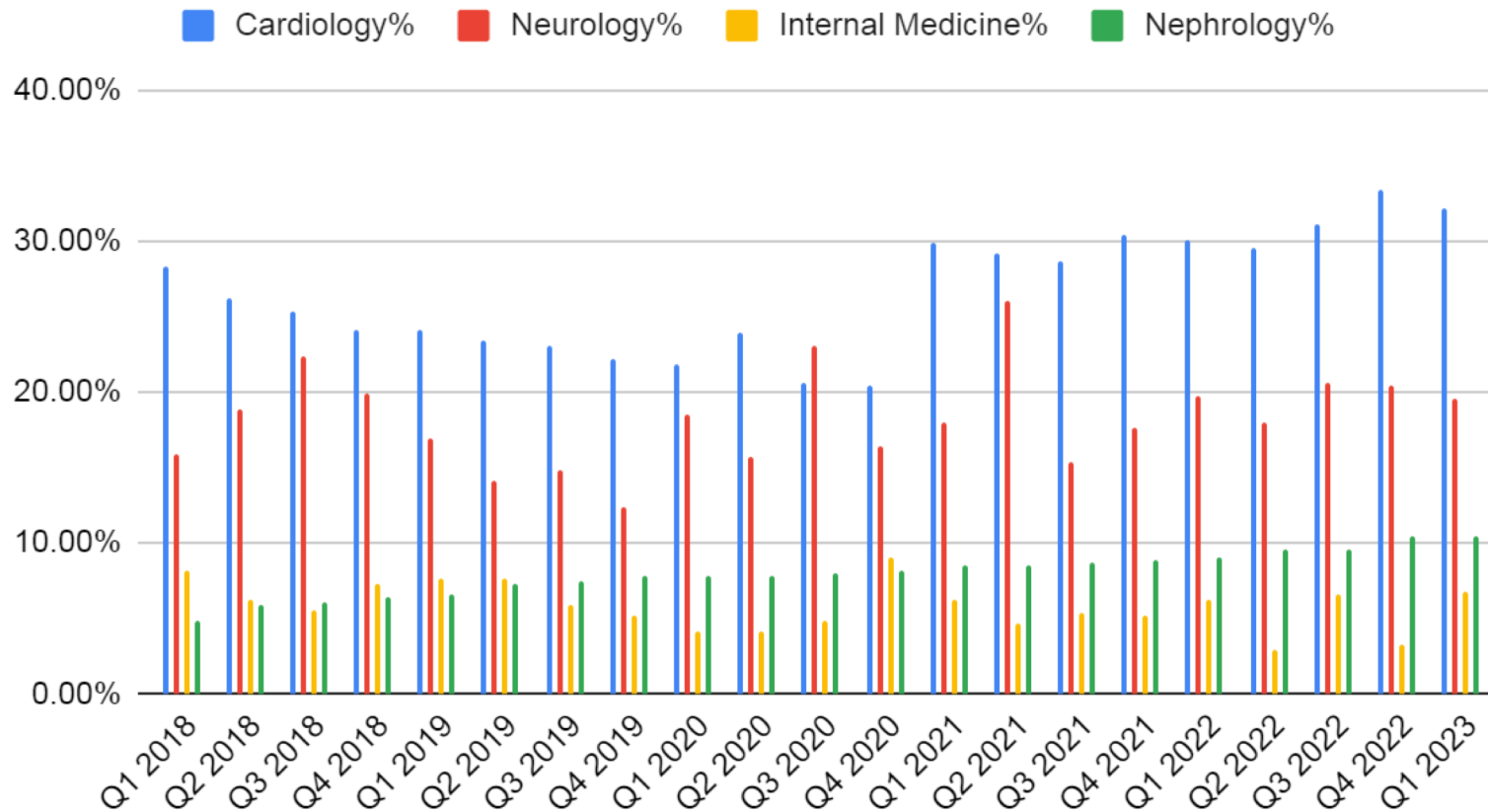


Figure 12 (The graph shows changing trends in the cardiology, neurology , internal medicine and nephrology departments of the hospital in percentages. The data is taken from 2018 to 2023.)

- Cardiology department experienced the highest increase in financial benefits due to the high prevalence of related conditions.
- Nephrology and Internal Medicine departments also saw significant increases in financial benefits due to managing chronic conditions.
- Health schemes covered regular check-ups, medication, and surgical interventions for these specialties

## Trends in Hospital Departments

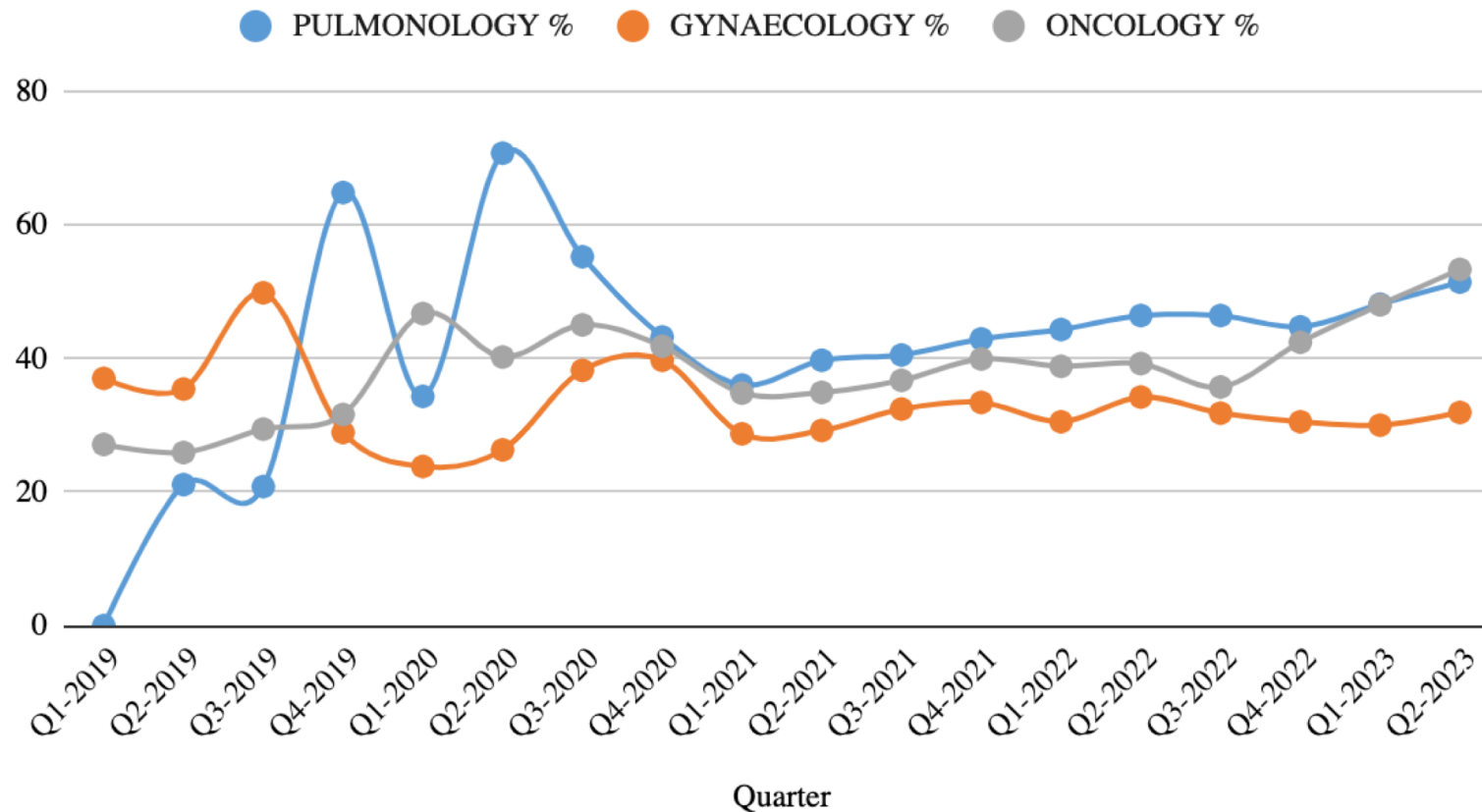


Figure 13 (The graph shows changing trends in the Pulmonology, Gynaecology, and Oncology Departments of the hospital in percentages. The data is taken from 2019 to 2023)

- Pulmonology department experienced increased cases during the first wave of COVID-19.
- Oncology department witnessed more patients after the empanelment, providing affordable cancer treatments.
- Gynaecology department showed no noticeable effect, potentially due to limited awareness and outreach during pregnancy.



# DISCUSSION

- ▶ The introduction of RGHS and Chiranjeevi Swasthya Bima Yojana significantly changed how patients paid for medical care, shifting towards cashless credit transactions.
- ▶ Increased patient influx led to a rise in hospital admissions and revenue for private hospitals.
- ▶ Resource utilization, particularly pharmacy services, saw a significant increase, making medications more accessible.
- ▶ Dialysis, surgeries, and diagnostics experienced notable increases, improving patient access to critical services.
- ▶ Challenges included strain on healthcare resources and infrastructure, highlighted by a significant rise in electricity consumption.
- ▶ Further research is needed to assess the impact on treatment quality, patient waiting times, and overall satisfaction.
- ▶ Expansion of the hospital workforce became necessary to meet increased demand while managing operational challenges.

# LIMITATIONS OF THE STUDY

**Limited Sample:** Research conducted in a single private hospital.

**Confidentiality Concerns:** Data on resource utilization limited due to concerns related to confidentiality

**Unexplored Areas:** Primary focus on financial performance and resource utilization without a thorough examination of quality of care, patient satisfaction, or long-term sustainability of the health schemes.

**Generalizability:** Findings might not be generalizable to other regions or to public hospitals where healthcare delivery and infrastructure can be vastly different.

# STRENGTHS OF THE STUDY

**Foundation for Future Research:** A strong foundation for future research into the effectiveness of these government schemes and their broader implications on healthcare delivery.

**Practical Implications:** Need for a more balanced approach in the face of a health crisis - one that enhances healthcare access while efficiently managing heightened demand for resources.

**Ground-breaking Research:** Critical insights into the impact of the RGHS and Chiranjeevi Scheme on private healthcare institutions in Rajasthan.

**Patient Behaviour Insight:** Highlights a significant shift in patient behaviour and payment preferences towards cashless transactions, which is a valuable insight for future healthcare planning and policy-making.

**Real-world Application:** Applicable to real-world challenges faced during the pandemic, making it potentially useful to policymakers and healthcare providers.

# CONCLUSION

- ▶ Increased Patient Footfall: The RGHS and Chiranjeevi scheme significantly increased patient footfall in private hospitals. The shift towards cashless transactions reduced out-of-pocket expenses, making private healthcare more affordable.
- ▶ Improved Financial Performance: The schemes positively impacted the hospital's financial performance by increasing admissions and reducing losses incurred during the COVID-19 pandemic.
- ▶ Enhanced Accessibility: By mitigating cost barriers, the schemes enhanced healthcare accessibility, increasing the use of pharmacy services, surgeries, and diagnostic procedures, especially in Cardiology department.
- ▶ Operational Challenges: The surge in patient footfall led to higher demand for healthcare services, increased operational costs, and need for improved patient management strategies and infrastructural capacity.
- ▶ Recommendations and Further Research: Private hospitals should invest in digital health technologies and infrastructure to improve operational efficiency. Policymakers should study these dynamics to ensure the sustainability of these schemes, while further research is needed to understand their impact on patient care.

**THANKYOU**

