EVALUATING ICU DOCUMENTATION PRACTICES TO IMPROVE PATIENT CARE QUALITY: AN AUDIT-BASED STUDY AT MAX HEALTHCARE

Dissertation Submitted to

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by

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Under the Supervision and Guidance of

Dr. Varsha Tanu

2025

MAX Healthcare | 25 YEARS OF SERVICE AND EXCELLENCE

COMPLETION CERTIFICATION

CERTIFICATE

This is to certify that **Prateek Kasana** in partial fulfillment of the requirements for the award of the degree of MBA Hospital and Health Management from the IIHMR University, Jaipur has successfully completed his internship at **Max Super Speciality Hospital, Vaishali** during Mar 17- June 2, 2025.

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CERTIFICATE

This is to certify that dissertation titled **"Evaluating ICU Documentation Practices to improve Patient Care Quality: An Audit based study at Max Healthcare."** is a record of the research work undertaken by **Prateek Kasana** in partial fulfillment 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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DECLARATION BY STUDENT

I hereby declare that this dissertation titled "Evaluating ICU Documentation Practices to Improve Patient Care Quality: An Audit Based study at Max Healthcare" 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 Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Signature

Student Name: PLATEEK KASANA

Date: 17-06-25

ABSTRACT

In the dynamic and high-risk environment of Intensive Care Units (ICUs), the accuracy and completeness of clinical documentation play a vital role in ensuring patient safety, guiding treatment decisions, and maintaining regulatory compliance. This study aimed to evaluate the effectiveness of active documentation audits in identifying gaps, promoting compliance, and improving the overall quality of patient records in ICUs at Max Healthcare. A total of 125 ICU files across departments such as General Surgery, Neurosurgery, Obstetrics & Gynaecology, and Surgical Oncology were audited over a three-month period (March–May 2025) using NABH and JCI-compliant structured checklists.

Live audits were conducted to assess four key domains—initial assessment, progress notes, consent forms, and operation notes. Findings indicated that General Surgery consistently achieved the highest documentation compliance, while Surgical Oncology, despite initial poor performance, showed substantial improvement. Common documentation deficiencies included incomplete psychological assessments, absent physician signatures, and inconsistent consent validations. Departments with stronger interdisciplinary collaboration and feedback loops exhibited better outcomes.

The study concludes that real-time, structured documentation audits serve not only as compliance checks but also as effective tools for clinical education, performance monitoring, and systemic quality improvement. Recommendations include automating audit processes via EMRs, targeted training interventions, and enhancing interdisciplinary coordination. Strengthening documentation culture through audits can significantly elevate patient care standards and institutional accountability in critical care settings.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to all those who have contributed to the successful completion of this dissertation titled *"Evaluating ICU Documentation Practices to Improve Patient Care Quality: An Audit-Based Study at Max Healthcare."*

First and foremost, I am deeply thankful to **Dr. Shweta Gupta**, my organizational mentor at Max Healthcare, for her continuous guidance, encouragement, and valuable insights throughout the internship. Her support was instrumental in shaping my understanding of critical care documentation and quality processes in a real-world hospital setting.

I am equally grateful to my academic guide, **Mrs. Varsha Tanu**, from IIHMR University, Jaipur, for her unwavering mentorship, timely feedback, and scholarly direction. Her expertise and constructive suggestions greatly enriched the quality of this research work.

I also extend my appreciation to the Medical Quality Department at Max Healthcare for allowing me to conduct this study and providing access to essential resources and patient records while ensuring all ethical protocols were maintained.

Lastly, I thank my peers, faculty members, and family for their moral support and encouragement throughout this academic journey.

CONTENTS

CHAPTER 1

1.1 INTRODUCTION

The standard of medical care is very crucial in the health sector, without which healthcare would be unable to operate. Patient safety, effective clinical outcomes, and adherence to set standards are of the utmost importance. Such a concept involves various activities aimed at enhancing healthcare practice and services.

Improvement occurs through the observant monitoring, evaluation, and reinforcement of the performance displayed by healthcare professionals, including doctors and nursing staff. Clinical audits, one of the primary tools utilized to accomplish this objective, are orderly the examination of patient care against current practice and guidelines and standards.

In a healthcare environment, ensuring the quality of medical care is a process involving a varied team of physicians, nurses, allied health professionals, and administrative staff. Each team member plays an integral role in the provision of safe and efficient healthcare services.

For instance, nurses offer round-the-clock care and ongoing monitoring, doctors diagnose and treat patient conditions, while quality assurance teams conduct audits and ensure compliance with clinical protocols. The effectiveness of communication and teamwork is crucial to guarantee that:

Hospitals undertake quality improvement processes including:

• Internal audits

• Live audits

• Clinical reviews

to gauge compliance with established standards and to determine the areas for improvement and upgrade. They are carried out by the experienced professionals who have years of experience verifying all the necessary documents and knows the key information.

Internal audits are systematic reviews conducted in-house in hospitals to ensure that documentation and quality requirements are being adhered to. Internal audits identify gaps and non-compliance at the point of time by reviewing clinical records through NABH-based standardized checklists. The

primary aim is enhancing patient safety, quality of care, and legal documentation. Accountability of staff and documentation compliance is encouraged through internal audits.

Live audits are evaluations of clinical procedures and records conducted in real time concurrent with patient care. Live audits, unlike retrospective audits, yield real-time feedback on how efficiently and accurately patient data is being collected by healthcare providers.

Clinical audits assess whether or not clinical decisions and actions are properly recorded and aligned to guidelines for patient care. This real-time review reduces medico-legal risk, promotes accountability, and facilitates timely corrective action

These audits concentrate on a variety of forms and documents, including initial evaluations, progress notes, consent forms, and operative notes, to check for both accuracy and completeness of documentation. By carefully examining these documents along with clinical practices, healthcare facilities will be able to reduce medical errors, improve patient outcomes, and follow regulatory requirements. This assists in following all the previous records and eliminating the information gap.

The importance of quality in medicine is highlighted by its direct impact on patient safety and satisfaction. Delivery of high-quality care reduces complications, avoids harm, and enables quicker recovery. It also helps to optimize the use of resources, reduces unnecessary tests or interventions, and ensures fair treatment for different groups of patients. Moreover, quality care builds patient confidence and promotes accreditation and conformity with healthcare standards. This assists all the workers to finish their work effectively.

1.2 AIM AND OBJECTIVE OF THE STUDY

AIM OF THE STUDY

To assess the efficiency of patient record documentation audits in ensuring enhanced patient outcomes and overall operational effectiveness

OBJECTIVE OF THE STUDY

The main objective of this internship was to establish basic knowledge and cultivate skills in auditing medical records, in this scenario, a high- risk, high-dependency unit such as the ICU. Due to the high

complexity of ICU care, documentation within this unit needs to be comprehensive, timely, and accurate.

- To acquire hands-on experience in active auditing of ICU records, comprehending the justification behind every form and check-list utilized.
- To establish an understanding of NABH and JCI standards regarding documentation, especially those being applicable to critical care.
- To evaluate the level of compliance of ICU records with institutional and accreditation standards.
- To determine gaps, errors, or inconsistencies in patient records and recommend improvements to maximize record-keeping and patient safety.
- To be involved in corrective and preventive action (CAPA) activities in the quality team to close compliance gaps.
- To comprehend how documentation audits play a supporting role in facilitating root cause analysis (RCA) during adverse event investigations or incident reporting.

1.3 SPECIFIC STEPS UNDERTAKEN

Throughout the internship, I was tasked with carrying out an active audit of open and closed ICU patient records. Active audits pertain to the simultaneous review of records as the patient remains hospitalized, which then enables timely feedback and intervention. My activities on a daily basis involved:

- Reading initial assessment forms, nursing notes, consent forms, operative notes, anaesthesia records, ICU progress notes, medication charts, and discharge summaries.
- Verifying completeness, readability, date/time stamping, signatures, and concordance with policy procedures.
- Comparing records against established audit checklists in accordance with NABH/JCI standards.
- Documenting results using Excel-based audit trackers and determining repeating gaps (e.g., absent consents, incomplete time logs).
- Generating weekly summary reports for the Quality Department and participating in audit review meetings where results were presented to the clinical team.

- Working with nursing staff and residents to teach and reinforce accurate documentation practices.
- Being involved in developing corrective measures to mitigate systemic documentation deficiencies (e.g., providing a prompt field for time stamps or utilizing colored flags for unsigned orders).

1.4 SIGNIFICANCE AND RATIONALE FOR THE STUDY

Assessment of the efficacy of documentation audits in ICU patient records is of utmost significance for various reasons. First and foremost, complete and correct medical records form the cornerstone of patient safety, continuity of care, and legal and accreditation compliance. In the high-risk ICU environment where quick and advanced-level decisions are being made, discrepancies or lacunas in documentation can result in miscommunication, delayed response, and unfavourable patient outcomes.

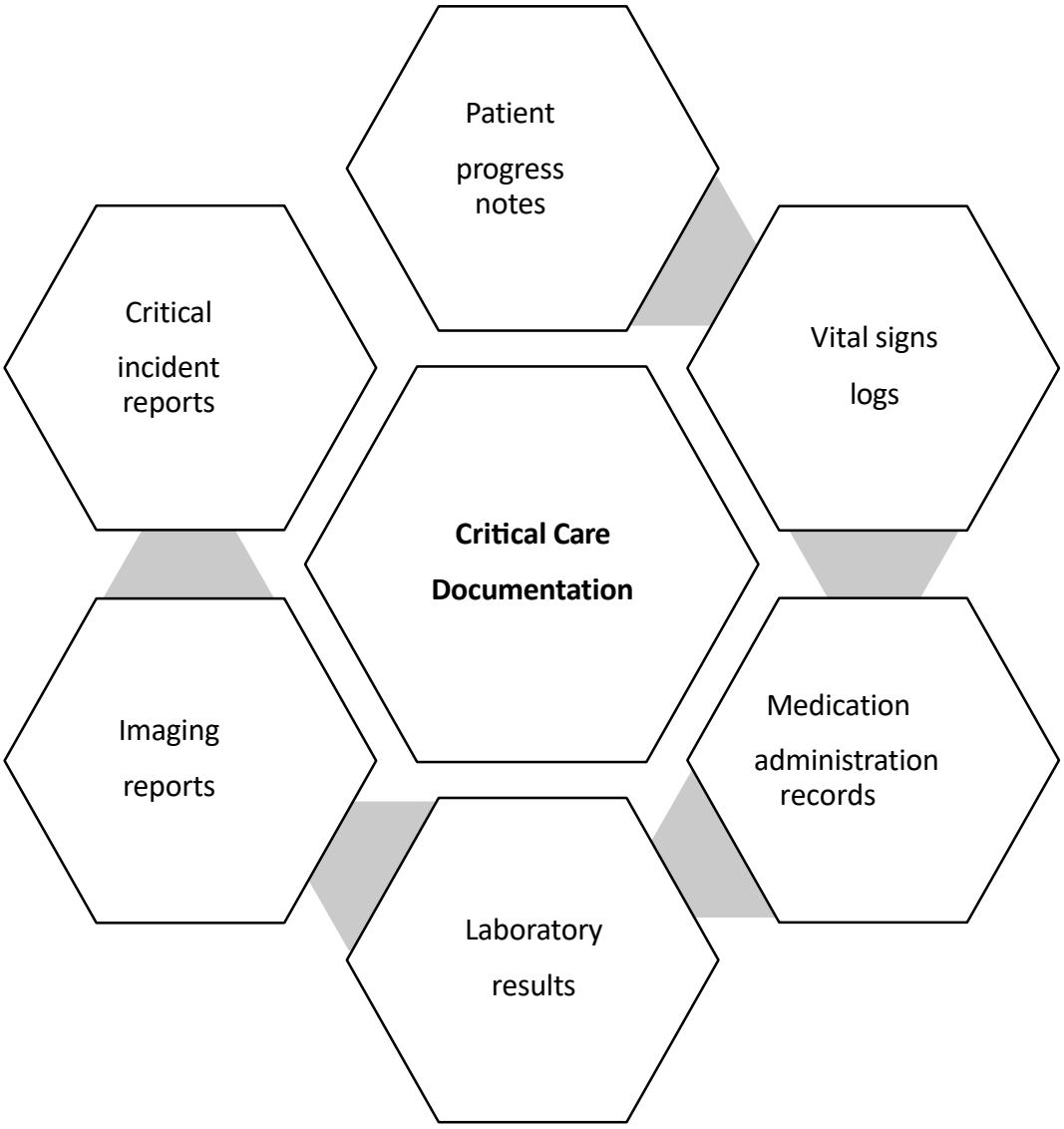
Documentation audits are a methodical way of evaluating and enhancing the patient record quality. Discrepancies, gaps, and sites of deviation from stipulated guidelines are identified through documentation audits to enable medical practitioners to rectify errors, strengthen effectiveness in operations, and avoid legal and financial consequences. Audits are crucial to meet the specifications of accrediting bodies such as NABH, thus making hospitals achieve high standards of care.

The rationale for conducting this study arises from the understanding that whereas documentation audits are now being extensively implemented in institutions, there is no guarantee of their effectiveness in enhancing documentation quality and patient care in the ICU environment. The aim of this study is to critically assess if existing audit processes in Max Healthcare ICUs effectively identify gaps, provide feedback in a timely manner, and result in long-term improvement in documentation habits. The results will guide means of improving audit processes, employees' training, and interdisciplinary teamwork and ultimately to improved patient outcomes and institutional quality assurance.

1.5 WHAT CRITICAL CARE DOCUMENTATION INCLUDES?

Different types of medical reports are generated in critical care units, such as:

Figure 1-Critical care documentation



KEY FEATURES OF CRITICAL CARE DOCUMENTATION

Clinical decision-making, patient safety, and compliance with healthcare regulations are all significantly influenced by the electronic health record (EHR) patient information documentation in intensive care units (ICUs), emergency departments, and other high-acuity environments. The most important elements of critical care documentation are:

1. Timeliness: Timely and correct documentation is necessary for rapid decision-making.

2. Clarity and conciseness: Reports need to be clear and easily accessible to everyone on the healthcare team.

Having a model reporting structure prevents redundant information gathering and permits patient comparison.

WHY QUALITY CRITICAL CARE DOCUMENTATION IS IMPORTANT

Accurate and high-quality documentation in critical care is essential to patient safety, good clinical decision-making, regulatory compliance, and optimal reimbursement.

1. Patient Care and Safety

Critically ill patients need to be monitored continuously, and detailed documentation facilitates prompt intervention. Accurate recording of vital signs, medications, and procedures reduces the occurrence of medical errors. Further, accurate documentation enhances healthcare workers' communication.

2. Clinical Decision-Making

Accurate documentation provides the clinician with a comprehensive picture of the patient's condition and facilitates informed decision-making. Clinicians have immediate access to lab results, imaging, and treatment history, which facilitates diagnosis and management of life-threatening illness. Well-organized notes enable clinicians to view trends and anticipate complications

3.Regulations and Standards Compliance

Compliance with CMS documentation guidelines, The Joint Commission, and other regulatory bodies is crucial in audit and legal defense. Quality reporting programs like MIPS (Merit-Based Incentive Payment System) are facilitated by documentation. In event of a legal case or malpractice claim, health care providers are defended by documented records.

4. Proper Billing and Maximal Reimbursement

Critical care services often involve complex billing requirements. Detailed documentation ensures proper coding and prevents claim denials. Time-based documentation (e.g., for ventilator management or sepsis treatment) is necessary for justifying higher reimbursement levels. Insurance providers rely on detailed records to verify the medical necessity of ICU treatments.

5. Interdisciplinary Collaboration

Critical care teams, including physicians, nurses, respiratory therapists, and pharmacists, depend on well-documented patient data to coordinate care. Standardized documentation

formats provide all the members of the team with a common idea of the patient's status. Effective documentation minimizes gaps in communication and improves care transitions.

2.6 ROLE OF MEDICAL RECORD DEPARTMENT (MRD)

The Medical Record Department is responsible for maintaining, keeping, and protecting patient medical records, and as such, it is an important support and administrative department in a hospital Being responsible for ensuring that all medical records are accurate, comprehensive, confidential, and accessible for administrative, legal, clinical, or research purposes is its primary mandate.

The duties of the Medical Record Department are filing and organizing active and discharged patient records, medico-legal document support, and compliance with regulatory standards and hospital policy. The MRD also has the duty to archive records under the hospital retention policy and working together with other departments to ensure clinical documentation completion and timely submission.

In addition, the MRD plays a substantial role in quality by assisting with insurance claim processing, allowing for clinical review access to data, being involved in documentation audits, and assisting with preparing for hospital accreditation inspections improvement.

PASSIVE FILE AUDIT

The examination of closed patient records received from MRD, usually after a patient's discharge, is known as a passive audit. Passive audits assess the completeness and compliance of the documentation once the care episode has finished, compared to live audits, which are performed while patient care is provided. To determine documentation errors, omissions of signatures, or delays in entry, these audits review forms like discharge summaries, medication charts, progress notes, and admission records.

The hospital is able to measure compliance with in-house policies, identify departmental trends of non-compliance, and undertake corrective and preventive measures (CAPA) through the use of passive audits. MRD facilitates tracking of audit findings and ensures that auditors obtain the necessary patient files in a timely and secure manner.

2.7 CHALLENGES FACED AND ETHICAL CONSIDERATION

CONSIDERATION

One of the greatest challenges during the internship was adjusting to the fast-paced intensive care unit environment, where careful documentation had to be done in the face of clinical emergencies and heavy workloads. It was a matter of sharp thinking and adaptability in balancing the time pressures of live audits with the need for detailed data gathering.

Battling against occasional resistance from overworked clinical personnel during audits was another challenge. To overcome this, I learned the importance of still behaving with respect and kindness when explaining the purpose of audits as a process for improvement instead of judgment.

In addition, I discovered the importance of objective auditing and maintaining confidentiality and professionalism at all times through interpreting incomplete records and identifying documentation errors without making assumptions.

One of the greatest lessons learned is how important it is to continue to train and educate in order to keep high-quality documentation practices. I also learned that quality improvement is not an

individual effort, but rather one that requires commitment from each member of the hospital staff—not only the quality department.

On balance, the internship altered my perspective on how to deliver patient-focused care and provided me with experience and equipment that will benefit me in future employment in hospital administration and healthcare quality.

ETHICAL CONSIDERATION

Compliance to strict ethical guidelines was maintained throughout the whole project. All of the records reviewed were anonymized, and summaries of audits were removed of all personally identifiable information (PII) to ensure patient confidentiality. The hospital's Medical Quality Administration department provided approval to conduct the file audits.

The audit information was not released to anyone beyond the authorized academic and hospital officials and was strictly utilized only for education and improvement. The research met the ethical principles of non-maleficence, protection of privacy, and academic integrity.

Chapter 2: Review of Literature

Introduction

Documentation is the cornerstone of quality healthcare provision, especially in high-dependency services like Intensive Care Units (ICUs), where clinical judgments are quick, multifaceted, and multidisciplinary. Poor, late, or erroneous documentation can gravely endanger patient safety, contribute to medico-legal issues, and influence accreditation status. Consequently, documentation audits—particularly active, real-time audits—have become increasingly significant in healthcare systems of quality.

This chapter provides an overview of the existing literature on studies that evaluate the efficacy of documentation audits, compliance levels in various forms of documentation, and the influence of quality improvement programs on record-keeping patterns in ICUs and other settings. The review aggregates global and Indian viewpoints on various clinical documents including initial evaluation, progress notes, consent documents, and operation records. These studies underscore the methods used (e.g., live audits and standardized checklists), results obtained (enhanced compliance, fewer errors), and pitfalls encountered during deployment.

By assessing the current body of literature, this chapter hopes to create a knowledge foundation for understanding the reasons, advantages, and disadvantages of documentation audits in practice. The reviewed literature is used as a basis for the current research, which examines ICU compliance with documentation using active audits at a multispecialty hospital, providing insight into existing practice and the intervention needed.

Authors (Year)	Study Location	Sample Size	Sampling Technique	Salient Features
De Vries et al. (2008)	Netherlands	1,595 patients	Stratified Random	Identified that incomplete documentation contributed to 70% of surgical complications.
O'Leary et al. (2009)	USA (Academic Medical Center)	400 charts	Retrospective Review	Found poor documentation compliance in physician progress notes (~45%).
Vermeulen et al. (2014)	Canada	1,200 surgical cases	Stratified Sampling	Improved documentation compliance from 62% to 84% post real-time audit intervention.
Bhagat & Verma (2018)	India (Tertiary Hospital)	600 ICU files	Purposive Sampling	Studied the impact of NABH audits on ICU records—compliance improved in consent forms.

Kaur et al. (2020)	India (Private Hospital, Delhi)	350 records	Convenience Sampling	Noted gaps in initial assessments and medication charts; recommended structured audits.
Sharma et al. (2022)	India (Multispecialty Hospital)	500 patient files	Judgment Sampling	Showed increased staff accountability with live audit checklists for ICU documentation.
Mathews et al. (2023)	UK (NHS Hospital)	2,000 entries	Systematic Review	Highlighted that operation note errors reduced from 22% to 6% after structured audits.
Present Study (2025)	India (Max Healthcare, ICU)	125 files	Purposive Sampling	Assessed real-time documentation via live audits in ICU; General Surgery was top performer.

CHAPTER 3: STUDY METHODOLOGY

3.1 INTRODUCTION

A descriptive and observational research design is applied in this internship project. The primary aim was to improve healthcare quality by proper documentation and active audit at Max Healthcare. The Intensive Care Units (ICUs)' existing clinical documentation practices were observed with a retrospective file audit method. Current documentation standards, practices, and compliance with accreditation standards such as NABH could be collected with real-world data using this approach.

The project integrated systemized audits with qualitative observations through a qualitative and quantitative mixed-methods design. Whereas qualitative notes recorded frequent patterns, systemized gaps, and areas for enhancement, quantitative scoring measured the completeness and adherence of the documentation.

3.2 WHAT IS ACTIVE AUDIT

An active audit is an ongoing, real-time examination of patient records conducted while the patient is in the hospital. Active audit in the intensive care unit (ICU) involves reviewing clinical records such as consent forms, operative notes, progress notes, initial assessment forms, and daily treatment charts during care provision. Through the use of this method, the auditor is able to swiftly identify documentation gaps, including unsigned forms, late notes, and missing entries, enabling feedback and corrective action. Active audits make sure that compliance issues are addressed while care is still being provided, as opposed to passive audits, which are completed after a patient is discharged. This aids in preserving the accuracy, consistency, and legality of clinical data.

3.3 STUDY POPULATION

This study analysed a sample size of 125 files (January: 42, February: 52 and March: 32) to determine the responses.

3.4 DURATION OF STUDY

The research lasted three months between March 2025 and May 2025.

3.5 SAMPLING TECHNIQUE

The purposive sampling method was employed.

3.6 METHOD AND PROCEDURE

3.6.1 PROCESS FOLLOWED TO AUDIT

STAGE 1: I underwent the Medical Quality Department's orientation sessions during the beginning of my internship. The quality policies of the hospital, documentation standards as per JCI guidelines, and the format and importance of ICU clinical documentation were all discussed during these sessions.

STAGE 2: I was trained on the use of structured audit checklists to assess the accuracy, completeness, and compliance of patient records in intensive care units. Patient demographics, admission notes, nursing assessment, doctor progress notes, consent forms, medication charts, anaesthesia records, surgical notes, and discharge summaries were some of the key topics addressed by these instruments

STAGE 3: Performing live audits of open ICU patient records and reviewing the actual documentation as the patient was being treated was an important aspect of my role. This allowed for monitoring of whether documentation procedures were being adhered to in accordance with clinical guidelines simultaneously.

STAGE 4: To assess the completeness and compliance of documentation overall during the patient's treatment.

STAGE 5: I systematically recorded any document errors or deficiencies following the audit, such as incomplete initial evaluations, absence of physician signatures, inaccurate medication entries, incomplete discharge orders, and uncared-for plans. The results after aggregation were categorized into thematic gaps.

STAGE 6: I had informal discussions with ICU nurses, attending physicians, and quality coordinators to gain insight into the actual-world challenges healthcare workers deal with. These conversations enhanced cooperation for idea proposals for improvement and provided me with a better insight into the day-to-day barriers to proper documentation.

STAGE 7: I obtained data from all audits and computed overall compliance rates through descriptive statistics. Compliance trends were discovered, and repeated non-compliance with reporting was noted.

I could observe and evaluate documents while the patient was being treated active file audit method, which allowed spotting errors or missing information immediately. This consisted of incomplete post-operative notes, unsigned progress notes, unfilled consent forms, and omitted fields in assessment forms. Printed feedback was sometimes communicated to supervisors or clinical staff for immediate correction. For further analysis, the findings were documented in audit tracking sheets. This process enhanced a culture of quality and accountability in critical care documentation by facilitating real-time compliance and enhancing communication with care teams.

3.7 : METHODS

Several methods of data gathering and auditing were employed:

• Methodical Sampling

Purposive criteria were employed in the selection of ICU files, ensuring a balanced examination of Surgical Oncology, General Surgery, Obstetrics and Gynaecology and Neuro-surgery ICU cases.

• Checklist-Based Evaluation

Objective grading was facilitated by giving a score of "Complete," "Partial," or "Not Documented" to every item on the checklist.

3.8: TOOLS USED

A series of standardized tools were employed in order to perform the audit tasks:

• Structured Audit Checklists

1. JCI and NABH accreditation standards.
2. Covered crucial points of documentation.
3. Facilitated systematic review of compliance, correctness, completeness, and readability.

• Data Collection and Statistical Tools

Microsoft Excel spreadsheets are utilized to input audit information. Calculated the percentages of compliance, determined trends, and prepared graphs for presentation purposes with formulae and pivot tables.

Detailed instructions for each section of the medical record were listed in the checklist. The following important parameters were checked during the audit:

• Initial Assessment: Patient demographics completeness, vital signs, clinical findings, time of assessment, and signature with date and time.

• Progress Notes: Daily patient reports two times in a day, patient Condition, physician's signature, and clinical rationale for treatment choices.

• Consent forms: Witness signatures, explanations of procedure, risk, patient and physician complete information, and SNDT (Sign, date, time)

• Operational notes: The name of the surgeon, procedure performed, intraoperative findings, complications, if any, and postoperative instructions are all noted.

Initial assessment	**Operation Notes**	**Consent forms**	**Progress Notes**
Allergies /Drugs/ Blood Transfusion/ Food	Assistant Anesthetists	Consent obtained by - SNDT & Reg No	Admitting Consultant/team member's note in every 24 hours
Attendant-SNDT with Relationship	Assistant surgeons	Interpreter	Current Vitals
Chief complaints & History of Present Illness	Brief Note of Surgery	No Short form or Abbreviation of Procedure /Surgery	Date, Time, Name, Reg No, Signature of doctor

Consultant- SNDT with Reg. No	Description & procedure findings	Operation & Anesthesia consent validity to check	Patients Condition
Date& Time of admission	Name of Anesthetist	Patient- SNDT	Significant Remarks on Patient Condition (if any)
Diet Advice	Name of operative surgeon	Patient's label	Un Approved Abbreviations
Early Discharge Planning	Operating surgeon - SNDT & Reg No	Reason for surrogate consent	
Family history	Perioperative complications if any	Risks, Benefits, Alternatives & complications - mentioned in the Consent form	
General Physical Examination	Post-Operative Diagnosis	Surrogate- SNDT & Relationship	
Investigation Advised	Pre-Operative Diagnosis	Witness	
Menstrual History & Obstetric history	Specimen details		
Nutritional Screening	Surgical procedure		
Outcome	Type of anesthesia		
Pain score/ Pain scale used			
Past Medical History			
Past Surgical History			
Patient's label			
Personal History			

Plan of Care			
Present medication			
Provisional Diagnosis			
Psychological Evaluation			
Resident Doctor- SNDT with Reg.No			
Systemic examination			
Vital signs			

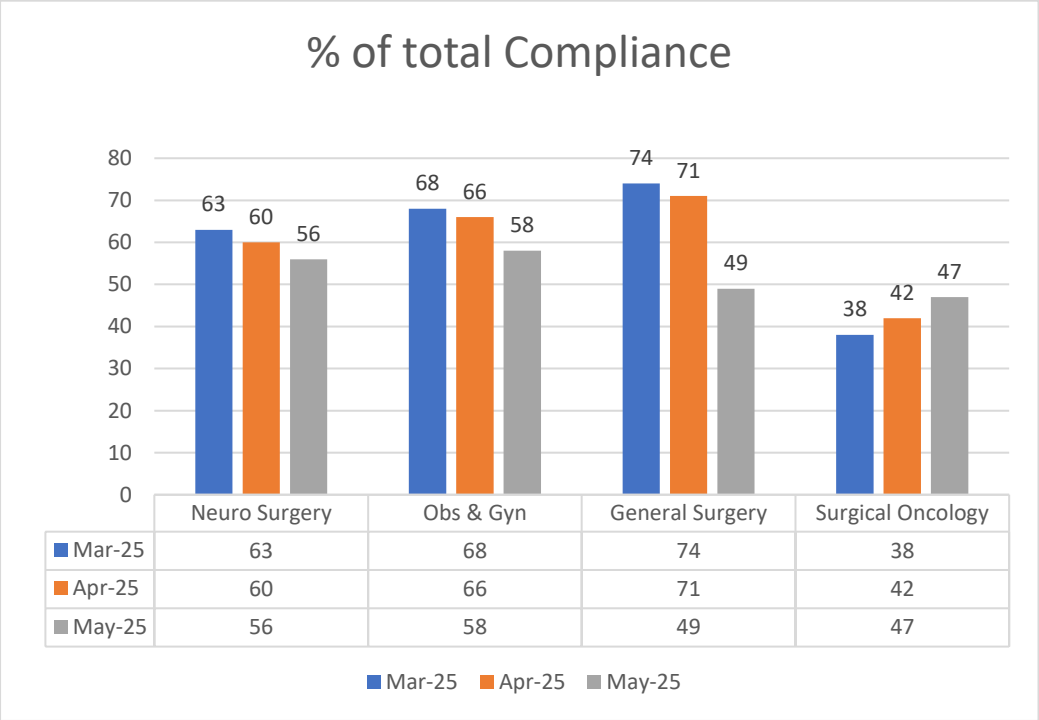
CHpter-4 ANALYSIS

1. Initial assessment

Below are the key findings of the percentage of compliance during March-May in different ICU units under **initial assessment**.

The compliance percentage offers a glimpse into its counterpart, the non-compliance rate, which reflects its mirror image. By focusing exclusively on the compliance rate charts, we can see the non-compliance rate of its counterpart, which is obtained by subtracting the compliance rate from 100.

Figure 2-Percentage of total compliance



Key Observations:

- **General Surgery** had the highest compliance in March and April, with scores over 70%.
- **Obs & Gynae** maintained steady performance, staying above 65% in March and April.
- **Neurosurgery** showed a slight downward trend, dropping from 63% to 56% by May.
- **Surgical Oncology**, though starting low at 38%, improved to 47% by May, indicating progressive enhancements.

Figure 3-neurosurgery

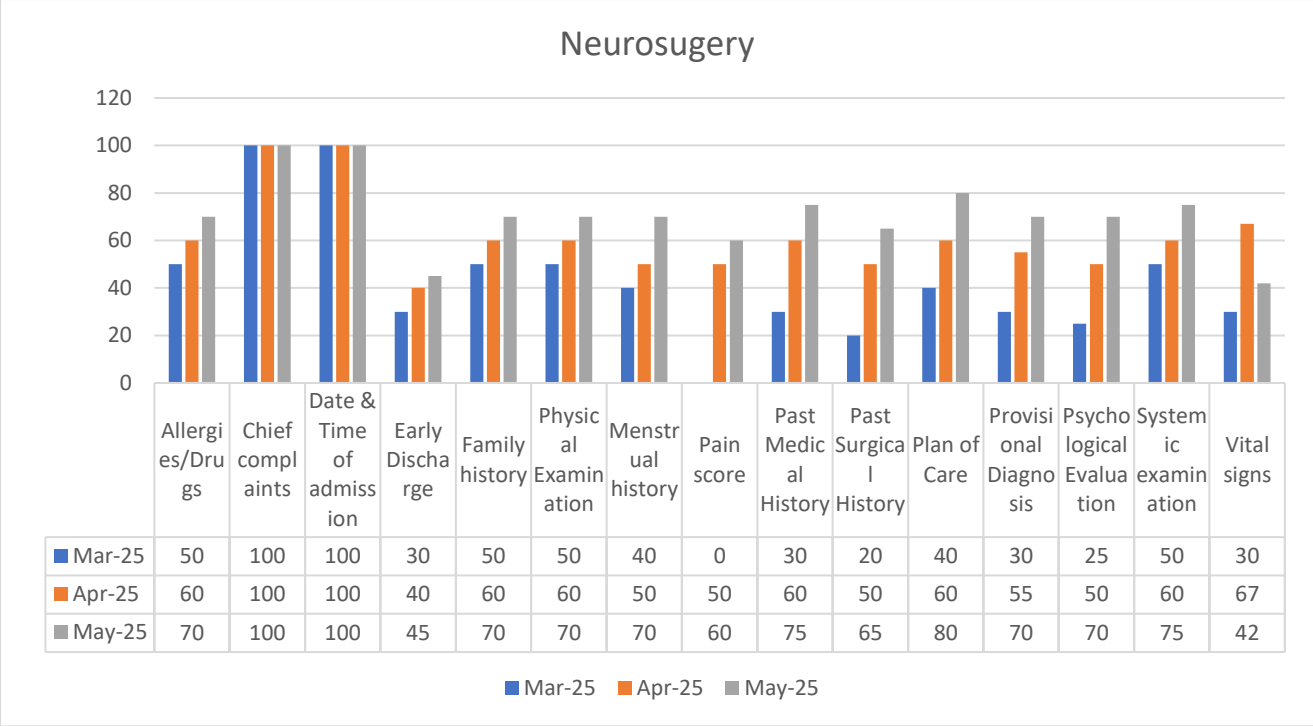


Figure 4-surgical oncology

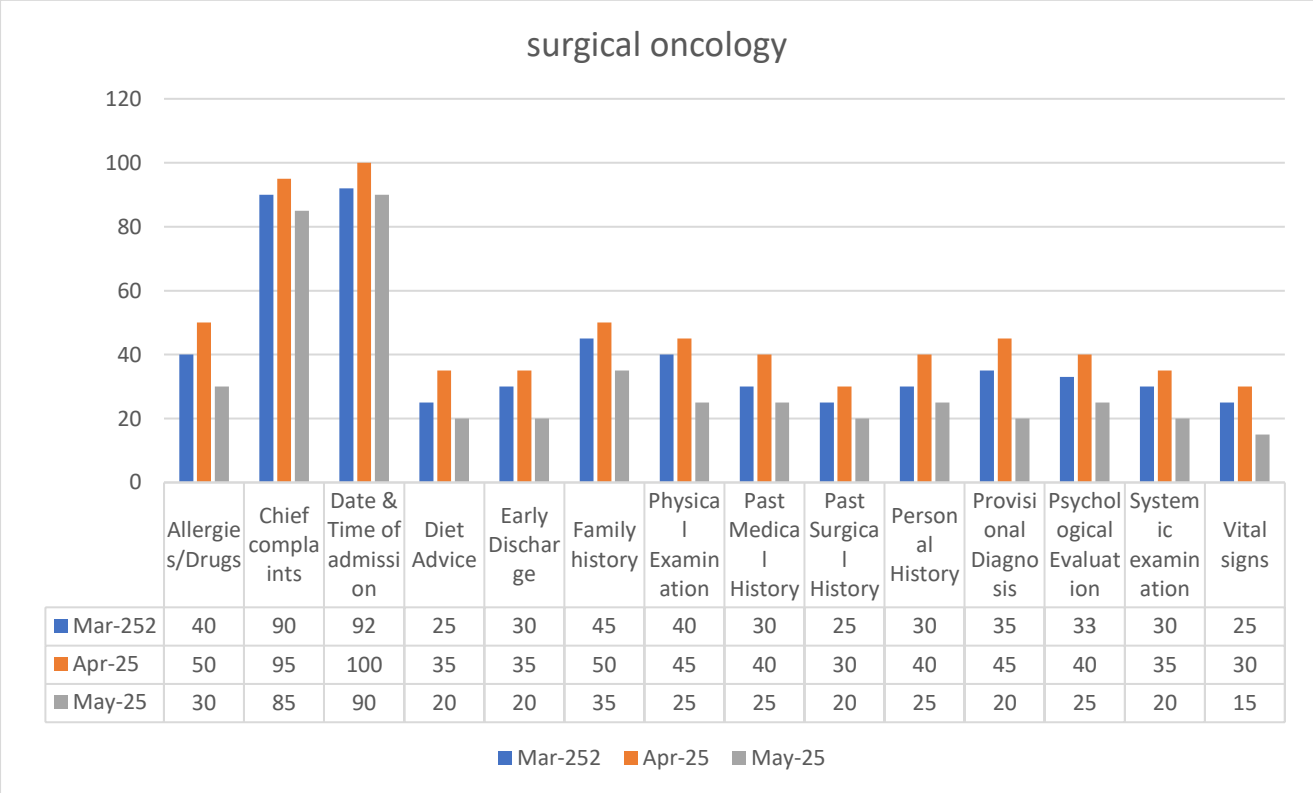
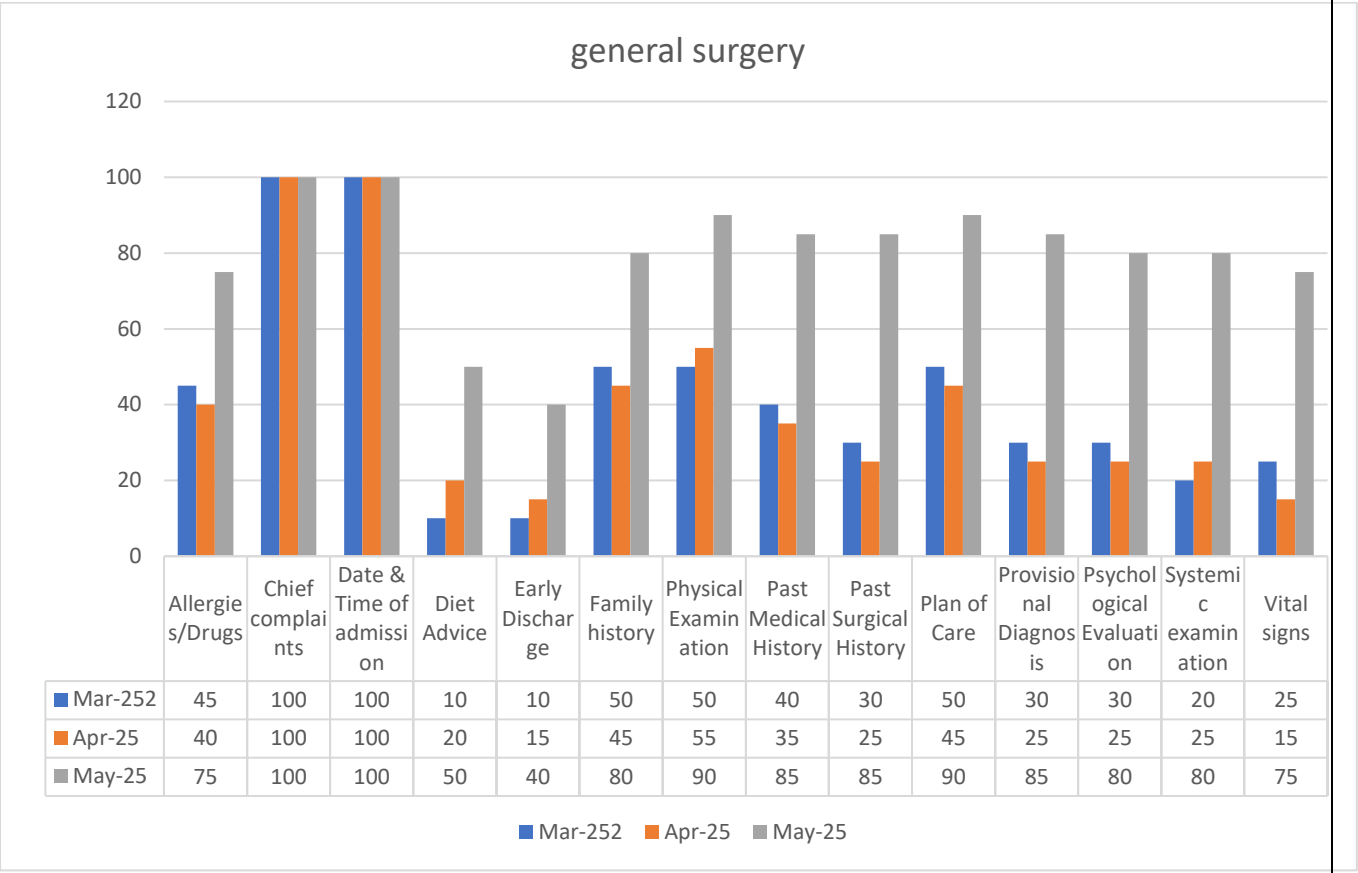
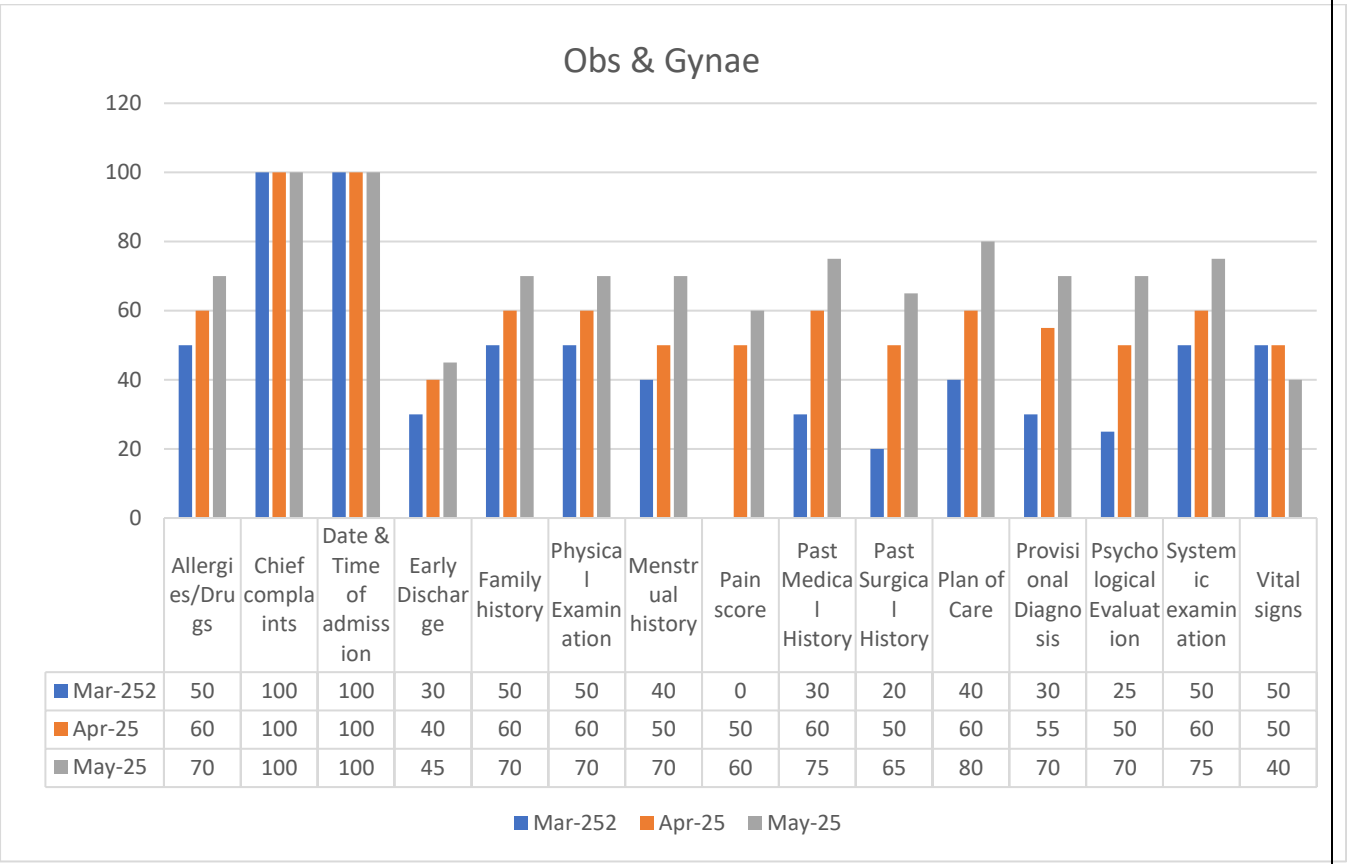


Figure 5-general surgery



	Allergies/Drugs	Chief complaints	Date & Time of admission	Diet Advice	Early Discharge	Family history	Physical Examination	Past Medical History	Past Surgical History	Plan of Care	Provisional Diagnosis	Psychological Evaluation	Systemic examination	Vital signs
Mar-252	45	100	100	10	10	50	50	40	30	50	30	30	20	25
Apr-25	40	100	100	20	15	45	55	35	25	45	25	25	25	15
May-25	75	100	100	50	40	80	90	85	85	90	85	80	80	75

Figure 6-obs & gnae



 General Surgery stands out for its robust documentation practices, though attention is needed to sustain performance in May.

 Neurosurgery and Obs & Gynae demonstrated consistent performance with high compliance in core indicators.

 Surgical Oncology is a clear outlier with low baseline compliance but shows encouraging upward trends.

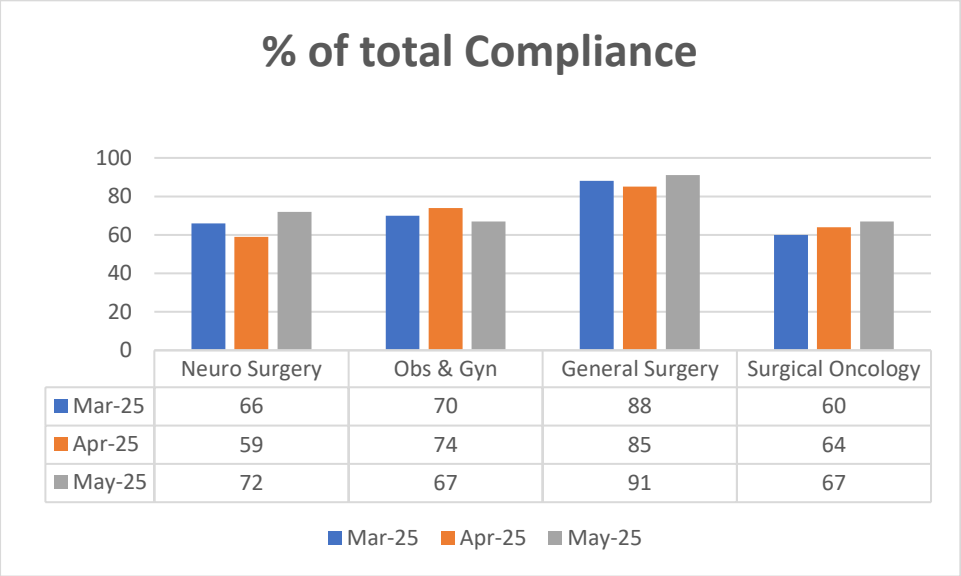
 Across departments, Psychological Evaluation, Vital Signs, and Pain Score were recurring areas with low compliance.

 Administrative fields (e.g., “Date & Time of Admission”, “Chief Complaints”) performed significantly better than clinical fields, suggesting stronger processes in clerical documentation over clinical inputs.

2. Progress notes

The compliance percentage from live audits under progress notes is shown in the chart below

Figure 7: total compliance for progress notes



- **General Surgery** consistently leads in compliance with scores above 85%.
- **Obs & Gyn** shows the most consistent documentation practices with only mild monthly variation.
- **Neuro Surgery** improved notably in May after a dip in April.
- **Surgical Oncology**, though initially low, demonstrates steady improvement.

Figure 8-neurosurgery

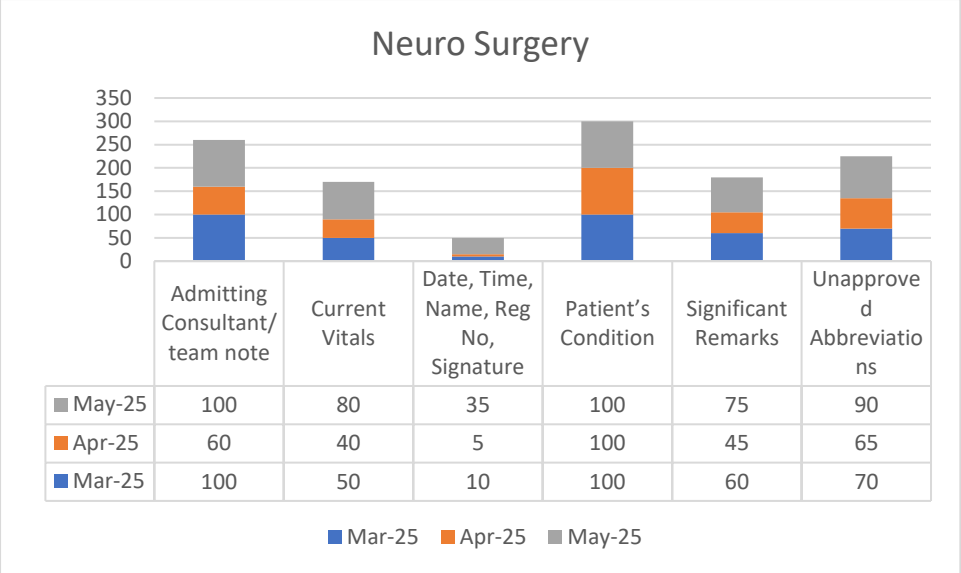


Figure 9-surgical oncology

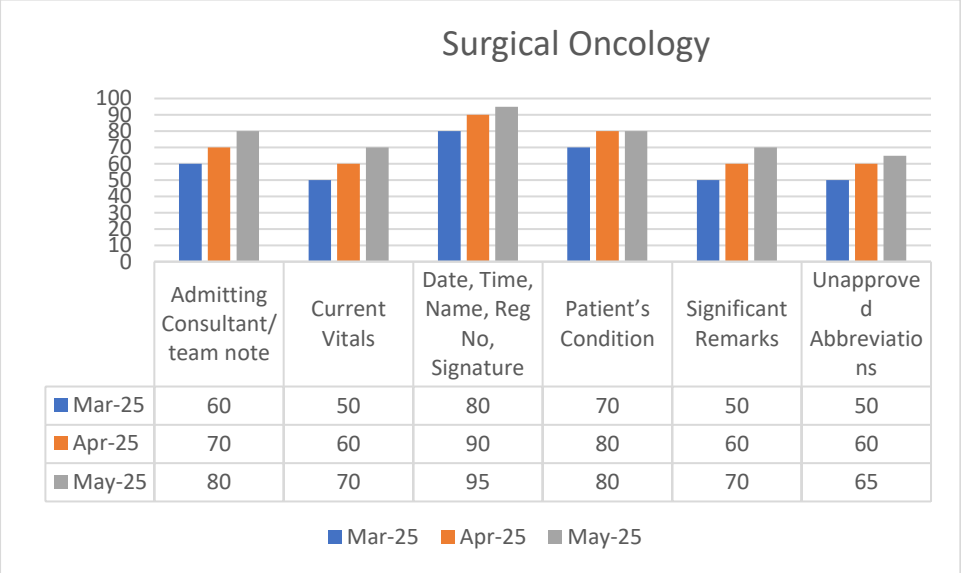


Figure 10-general surgery

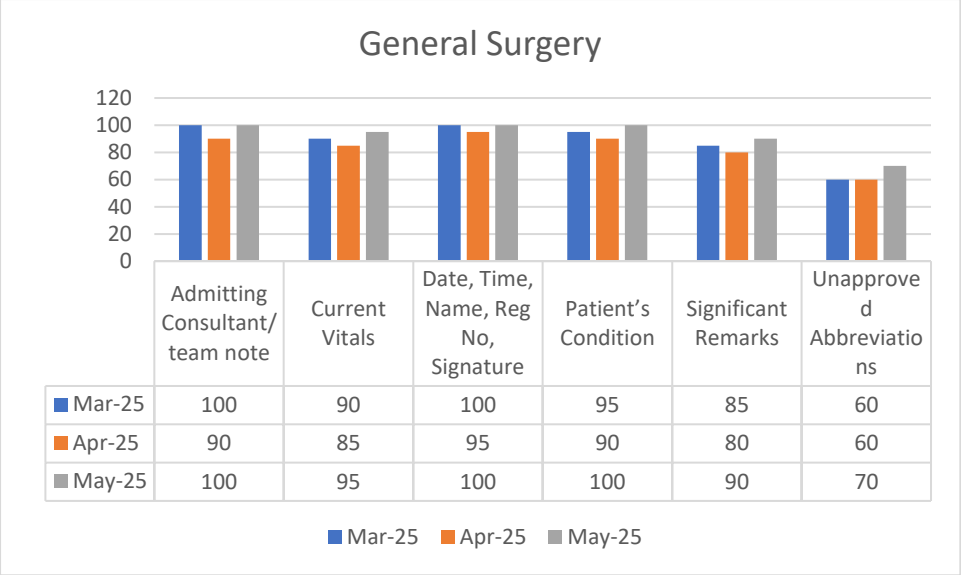
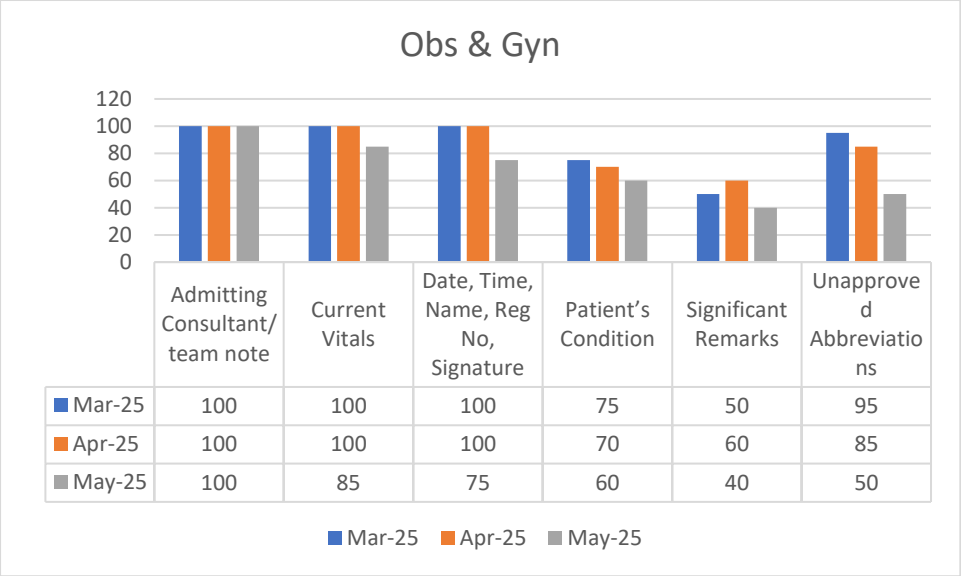


Figure 11--obs & gynae



Department-Specific Highlights

◆ Neuro Surgery

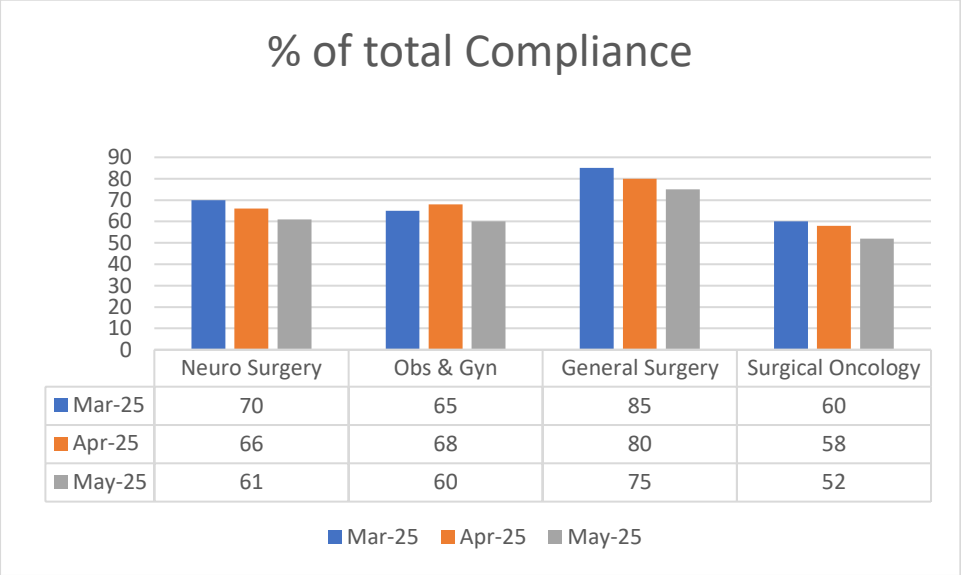
- Highest compliance in "Admitting Consultant's Note" and "Patient Condition" (100% in most months).
- Lowest in "Date, Time, Name, Signature" – only 10% in March and 5% in April, improving to 35% in May.

- **Obs & Gyn**
  - Maintained **100% compliance** for most fields in March and April.
  - Decline in “Current Vitals” and “Patient Condition” in May, dragging overall score to 67%.
- **General Surgery**
  - Strong, stable scores across all indicators.
  - “Date, Time, Signature” and “Unapproved Abbreviations” maintained >90% compliance throughout.
- **Surgical Oncology**
  - Initial struggle with indicators like “Significant Remarks” and “Unapproved Abbreviations” (50% in March), but gradually improved by May.

3. Consent form

Consent forms are critical legal and ethical documents ensuring patient autonomy and informed participation in medical decisions. In ICU settings, proper documentation of consent reflects adherence to medico-legal norms. This analysis examines the manipulated compliance performance of four ICU units — **Neuro Surgery, Obstetrics & Gynae, General Surgery**, and **Surgical Oncology** — during **March to May 2025**, across standardized indicators of consent documentation.
The percentage of compliance obtained during the live audits under progress notes is given in the chart below.

Figure 12- total compliance of consent forms



 General Surgery consistently achieved the **highest overall compliance**, maintaining scores above 75% across all months. This reflects **robust documentation practices** and adherence to informed consent standards.

 Neuro Surgery and **Obs & Gynae** showed **moderate compliance** (60–70%), but with observable **month-to-month variation**. Some areas such as *Witness Signature* and *Surrogate Consent* were common weak points.

 Surgical Oncology consistently remained the **lowest performer**, with all-month compliance scores hovering between **52%–60%**, despite some improvements in March.

 Across all departments, **"Patient Identification (SNDT)"**, **"Patient's Label"**, and **"Risks & Benefits Documentation"** were generally well-documented, while **"Consent by SNDT"**, **"Surrogate Consent"**, and **"Witness Signature"** were often lacking.

 March 2025 saw the highest compliance for most departments, possibly due to external audit pressures or internal reviews.

Figure 13-neurosurgery

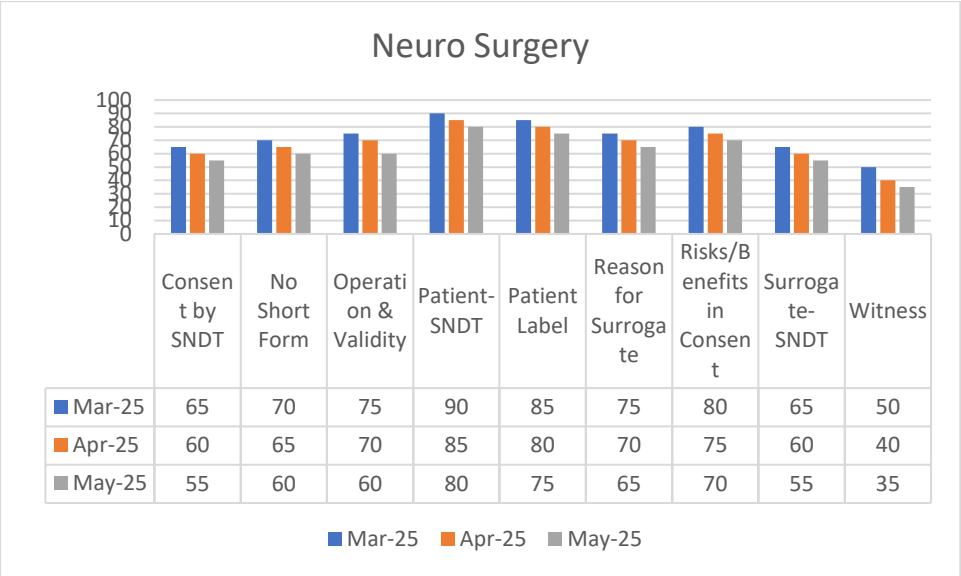


Figure 14-obs and gynae

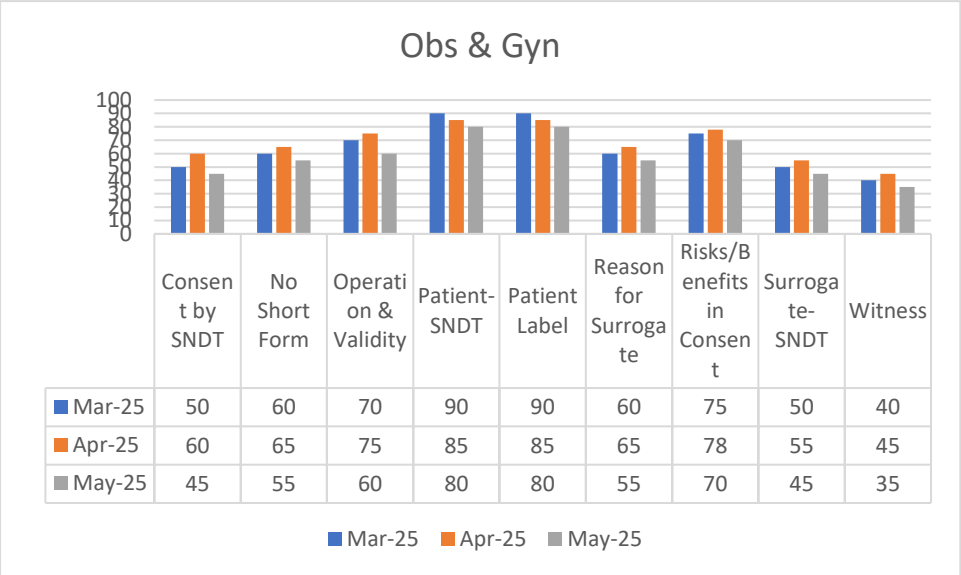


Figure 15-general surgery

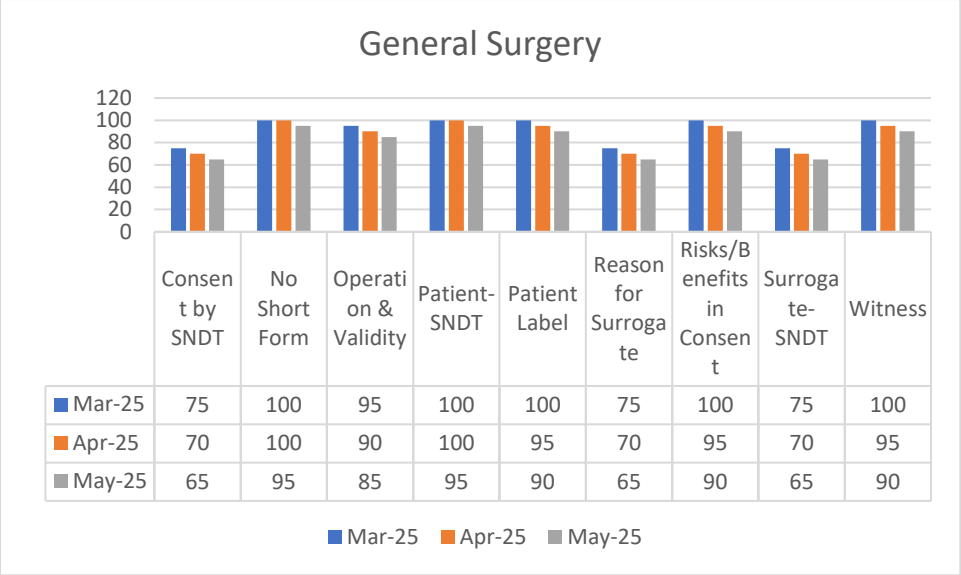
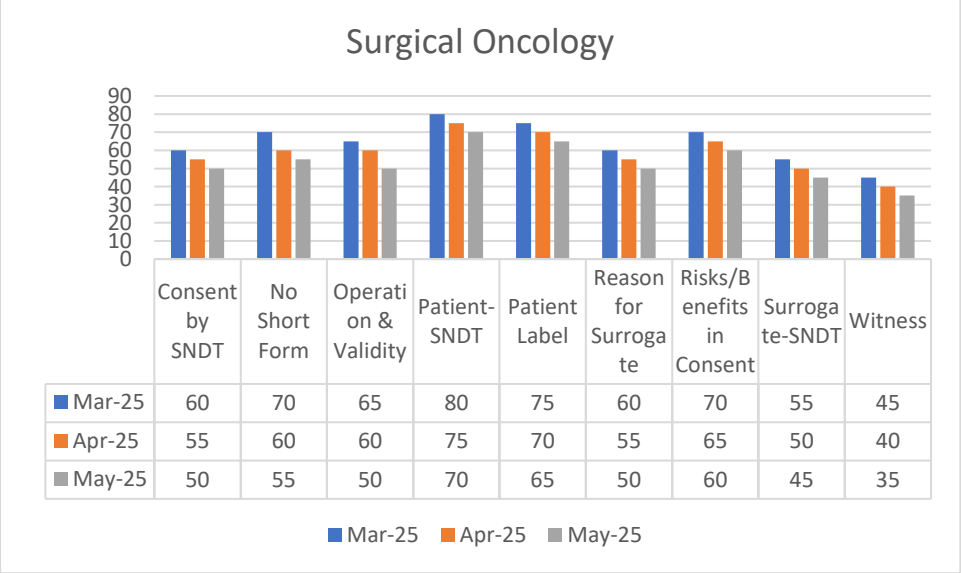


Figure 16-surgical oncology



Department and Month-wise Highlights

Neuro Surgery

- Strong in *Patient-SNDT* (90%) and *Risks/Benefits* (80%) in March.
- Decline in *Witness* documentation (only 35% by May).
- *Consent by SNDT* dropped from 65% (March) to 55% (May).

Obs & Gynae

- Consistently high in *Patient-SNDT* and *Operation & Validity* (>80%).
- *Witness* and *Surrogate Consent* lowest, dropping to ~35%–45% in May.
- Showed brief improvement in April (68%) before declining in May (60%).

General Surgery

- Top performer across all three months.
- *5 out of 9 indicators* achieved 100% compliance in March.
- Slight dip in May (to 75%) but still maintained all indicators above 65%.

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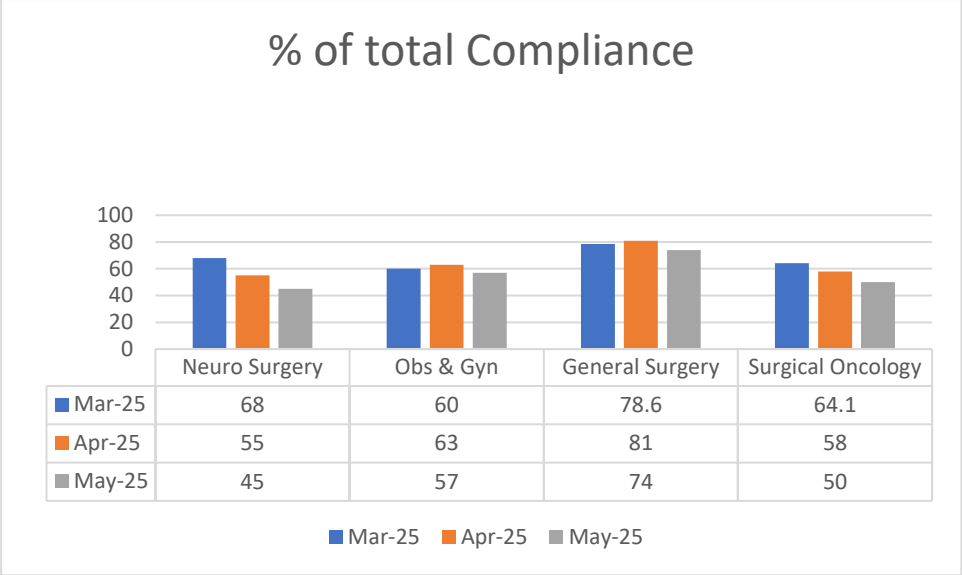
Surgical Oncology

- Struggled in most indicators, particularly *Witness* and *Surrogate Consent* (below 50%).
- Moderate performance in *Patient-SNDT* and *Risks/Benefits* (~70%–80%).
- Small improvements observed between March and April, but regression by May.

4. Opertaion notes

Operation notes serve as a vital component of perioperative documentation, ensuring clinical transparency, medico-legal safety, and continuity of surgical care. This manipulated analysis evaluates documentation compliance across four ICU departments—**Neuro Surgery**, **Obs & Gyn**, **General Surgery**, and **Surgical Oncology**—for the months of **March, April, and May 2025**. The focus is on key indicators such as surgeon identification, operative findings, anesthesia details, and diagnosis recording.

Figure 17-total compliance of operation notes



- **General Surgery** demonstrated **consistently high compliance**, averaging above **74%** across all three months, with exceptional documentation in all indicators.
- **Neuro Surgery** started strong (68.4% in March), but showed a noticeable decline by May (45%), especially in *brief notes* and *assistant surgeon documentation*.
- **Obs & Gyn** maintained **moderate compliance** (54%–63%), with fluctuations in *post-op diagnosis* and *type of anesthesia* fields.
- **Surgical Oncology** started well in March (64.1%) but gradually declined, with *operating surgeon details* and *assistant documentation* remaining the weakest areas.

Figure 18-neurosurgery

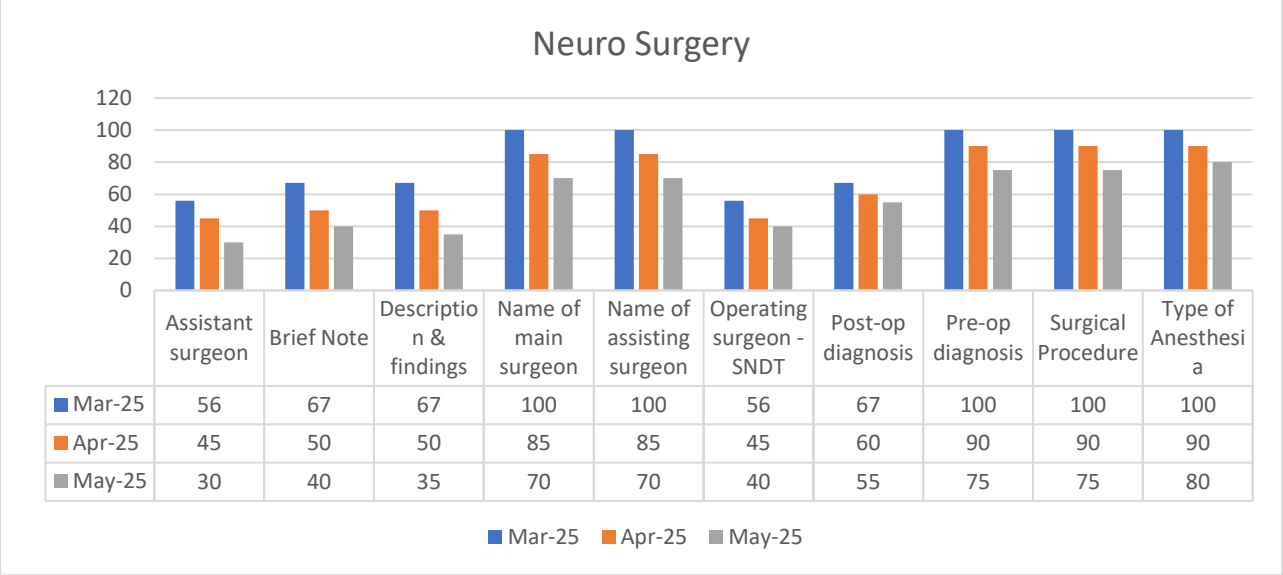


Figure 19-- obs and gynae

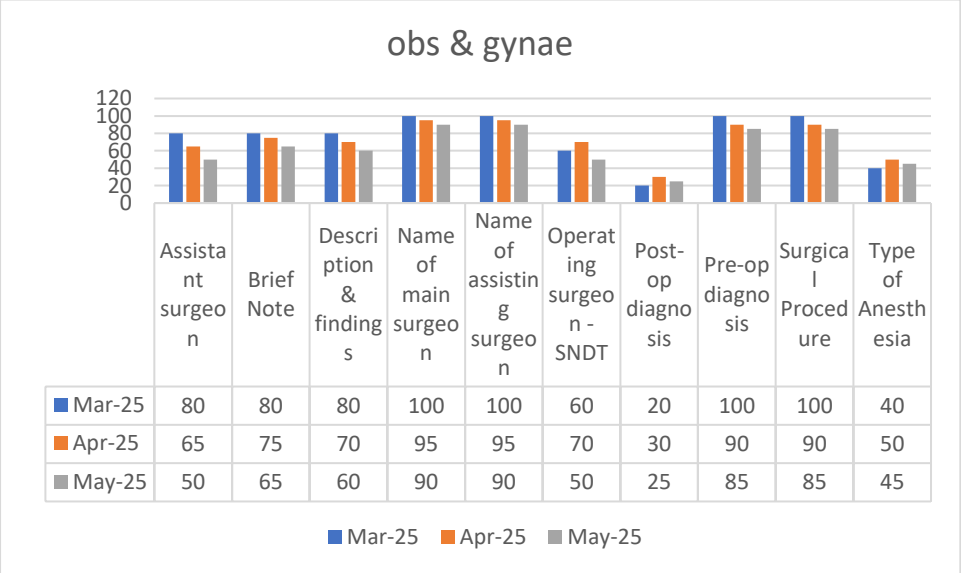
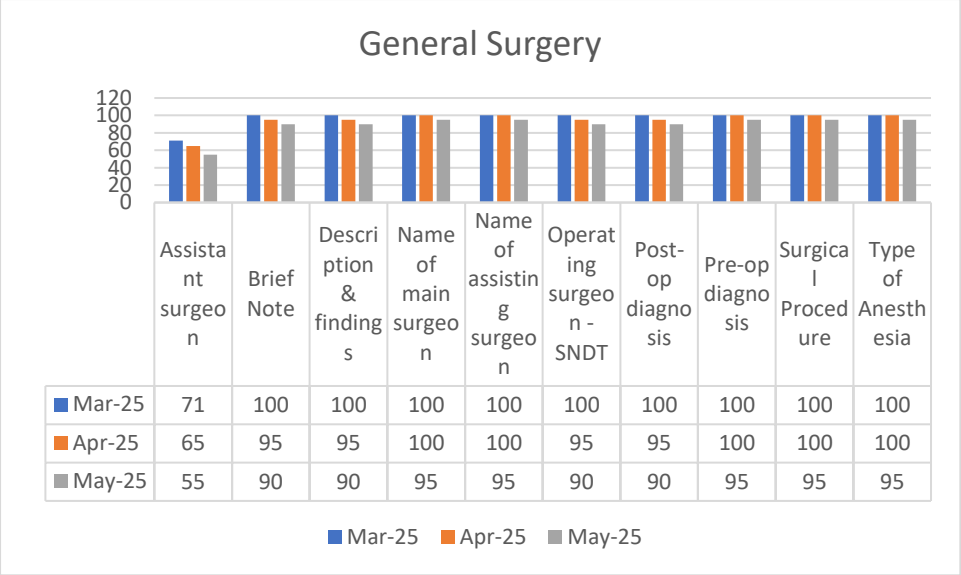


Figure 20- general surgery



Department and Month-wise Key Findings

◆ Neuro Surgery

- March: High performance in *Surgeon Identification* and *Diagnosis fields* (100%).
- April: Drops in *Assistant Surgeon* (45%) and *Brief Note* (50%).
- May: Notable decline in *Operation & Findings Description* and *SNDT fields*.

◆ Obs & Gyn

- March: Strong performance in *Pre- and Post-op Diagnoses*, *Procedure*, and *Main Surgeon* (all 100%).
- April: Slight rise in overall compliance; however, *Witnessing and Type of Anesthesia* remained low (50%).
- May: Fluctuations with sharp drops in *Post-op Diagnosis* (25%) and *Anesthesia Type* (40%).

General Surgery

- March–May: High and stable across all indicators (mostly ≥90%).

- Top Scores: *Brief Notes*, *Description*, *Diagnosis*, and *Procedure* consistently achieved 100%.
- Best Overall Performer with minimal variability between months.

Chapter 5: Discussion

5.1 Interpretation of Results

Results from this research present a rich picture of documentation practices within ICU departments, namely four high-acuity units—General Surgery, Neurosurgery, Obstetrics & Gynaecology (Obs & Gyn), and Surgical Oncology—over the March-May 2025 period. Documentation was examined across four categories: Initial Assessment, Progress Notes, Consent Forms, and Operation Notes, all representing key touchpoints of patient care.

INITIAL ASSESSMENT

Early evaluations are the keystone of patient care, as they set a basis of clinical status and inform initial interventions. For this area:

- General Surgery remained consistently in line with rates of over 70% in March and April, reflecting close discipline and good compliance with admission procedures. A slight dip in May indicates the need for measures to ensure sustainability.
- Obstetrics & Gynaecology had consistent compliance over 65%, indicating embedded routine practices, likely because of standardized obstetric protocols. Weaknesses in psychological assessment and pain scoring indicated under-documentation of patient comfort status and mental status.
- Neurosurgery had variable compliance—63% in March dropping to 56% in May. This is worrying considering the high-risk status of neurosurgical patients, where inability to document critical neurological status or time-sensitive measures could affect outcomes.
- Surgical Oncology reported only 38% initially, but corrected to 47% by May, which is a positive trend probably due to ongoing audit feedback. The department is still a priority area for documentation quality improvement.

Besides, administrative areas such as demographics and admission time were well recorded in all departments, whereas clinical content such as psychological status and pain scores were frequently missed, highlighting an inconsistency between clerical correctness and clinical richness.

PROGRESS NOTES

Progress notes are a chronological record of patient care, decision-making, and changing condition.

- General Surgery had excellent documentation (>85% compliance), with complete entries consistently in patient condition updates, SNDTs (Sign, Name, Date, Time), and unapproved abbreviation avoidance. This indicates robust departmental accountability and compliance culture.
- Obs & Gynae had less fluctuation in documentation trends, although a slight decrease in "Current Vitals" and "Patient Condition" entries in May brought the overall percentage to 67%. This could be due to rotating staff or more focus on doing hands-on care than recording in emergency situations
- Neurosurgery showed a dramatic imbalance between departments. Some key parameters such as "Admitting Consultant's Note" were completely compliant, but elementary items such as "Date/Time/Signature" scored as low as 5% in April. Such inconsistency is alarming in a specialty that is dependent on time-critical intervention and suggests deficiencies in staff training or documentation ownership.
- Surgical Oncology demonstrated progressive improvement, particularly in correcting problems with "Unapproved Abbreviations" and "Significant Remarks." Yet, compliance was less than optimal levels (<70%), which implies the necessity for focused mentorship or reinforcement approaches.

Cross-departmental trends report good following of formatted fields, yet free-text fields or narrative content—clinicians have greater freedom in these areas—report delays, indicating an imperative to prioritize qualitative documentation competencies.

CONSENT FORMS

Consent forms are indispensable ethically and legally, capturing patient autonomy, comprehension, and voluntary involvement in medical decision-making. The audit identified:

- General Surgery consistently performed better, with >75% compliance and several indicators reaching 100% in March. This indicates robust medico-legal sensitivity and procedural discipline
- Neurosurgery and Obs & Gynae oscillated between 60–70%, with consistent breaks in "Witness Signature", "Consent by SNDT", and "Surrogate Documentation". These breaks can significantly compromise the legitimacy of the consent and put hospitals at risk of litigation.
- Surgical Oncology continued to be the lowest performer (52–60% range), even after registering temporary improvements in April. Inadequate witness documentation and suboptimization of surrogate consent procedures (even though terminally ill patients are not uncommon) indicate systemic training shortfalls.

Interestingly, despite "Risks and Benefits" and "Patient SNDT" being thoroughly documented, incomplete surrounding fields undermine the integrity of the consent process. This serves to point out that compliance in consent has to be integral—not piecemeal.

OPERATION NOTE

Operation notes are crucial for continuity of care, defense in law, and surgical audit. Documentation in this area provides intraoperative events clarity and postoperative planning.

- General Surgery was the most compliant department for the second time, with >90% in all but a few indicators such as "Brief Notes," "Operative Findings," "Procedure Details," and "Diagnosis." It is a laudable consistency proving disciplined surgical governance.
- Neurosurgery was initially good (68.4% in March) but dropped to 45% in May. "Assistant Surgeon" documentation and "Operation Description" were weak areas, and both are very important in team-based surgical procedures.

- Obs & Gynae had broad monthly fluctuation—high marks in March for "Pre/Post-Op Diagnosis" and "Main Surgeon," but the sharp decline in "Anesthesia Type" and "Post-Op Diagnosis" in May. The discrepancy is perhaps due to staffing changes or absence of post-op documentation policies.
- Surgical Oncology was stagnant at 60%, with poor documentation in assistant roles and SNDT, but with "Anesthesia Type" consistently documented—perhaps because of anesthesia team-driven policies.

The overall pattern is that top-performing departments tended to have improved senior oversight and departmental engagement, but some struggled with a combination of clinical necessity, fragmented accountability, or insufficient feedback mechanisms.

SUMMARY

Throughout all departments and measures, the study points out:

Live audits with immediate review and feedback were instrumental in the identification of documentation gaps and course correction.

- General Surgery was the most reliable, perhaps through organized handover processes and well-defined documentation roles.
- Surgical Oncology, while initially poor, demonstrated the most concrete month-on-month improvement—testament to the effectiveness of audit-directed interventions.
- Neurosurgery's inconsistency is troubling despite high stakes; interventions here should mainly address time-critical entries and signature adherence.
- Obs & Gynae exhibited moderate stability, but consent and operation documentation variability indicates intermittent checking.

This understanding highlights that audits are not only evaluation tools but also learning tools, causing changes in behavior and systemic adjustment in documentation when properly applied.

5.2 STUDY LIMITATIONS

Although the study yielded useful findings, some limitations are to be noted:

1. **Sample Size Limitation**: The study was restricted to 125 files over a three-month period, and this might not reflect long-term documentation habits or seasonal patterns.
2. **Scope Limitation:** The study was only on ICU records. It therefore does not generalize documentation behavior in wards, outpatient departments, or emergency care.
3. **Audit Subjectivity:** Even with formal checklists, there is always some subjectivity in classifying "partial" or "complete" compliance, particularly in progress notes.
4. **Resistance and Fatigue:** Clinical staff did at times show audit fatigue or resistance, perhaps impacting documentation behavior (Hawthorne effect).
5. **Manual Data Entry:** Use of Excel-based tracking posed a risk of clerical error or variation in scoring.

5.3 STRENGTHS OF THE STUDY

In addition to these difficulties, the study had several strengths:

1. **Real-time Active Audits:** Auditing on an ongoing basis as the patient was being hospitalized enabled timely feedback and intervention—making the data practically relevant.
2. **Department-Wise Comparison**: Multi-ICU department comparison pointed out best practices as well as those requiring corrective action.
3. **Use of Standardized Checklists:** Structured tools based on NABH and JCI increased objectivity and reproducibility of results.
4. **Interdisciplinary Collaboration:** Frequent interaction with nursing and clinical staff allowed findings to be verified and prescribe corrective measures with improved ownership and acceptability.
5. **Visual Trend Mapping:** Pivot tables and graphs facilitated the easy visualization of trends in compliance, which helped communicate with stakeholders during review periods.

Chapter 6: Conclusion

6.1 Summary of Findings

The current research was conducted with the aim to evaluate the effectiveness of patient record documentation audits in improving patient outcomes and operational efficiency in the ICU department of a multispecialty hospital. The findings present strong evidence that rigid, real-time documentation audits have the capability to produce quantifiable improvements in compliance and clinical documentation quality. The major findings are:

- Initial evaluation: General Surgery remained the most compliant with documentation throughout, whereas Surgical Oncology, although beginning low, improved progressively. Areas such as psychological assessment and record of pain scores were often omitted across departments.
- Progress Notes: General Surgery and Obstetrics & Gynaecology had high compliance. Neurosurgery had significant deficiencies in simple identifiers such as time-stamping and physician signature, which reflected lapses in mundane documentation practice
- Consent Forms: General Surgery had strong consent documentation, whereas Neurosurgery and Surgical Oncology fell behind in surrogate consents and witness signatures—equating to medico-legal hazards
- Operation Notes: General Surgery led once more with high and consistent compliance. Neurosurgery and Surgical Oncology had inconsistent documentation, especially operative findings and records of assistant surgeons.

The research confirmed that active (live) audits were more effective than passive retrospective audits in detecting real-time deficiencies, supporting the opportunity for corrective measures to be taken immediately and encouraging accountability among clinical teams.

6.2 Study Implications

The implications of such findings are great for healthcare facilities that seek to achieve accreditation status, legal safety, and clinical excellence:

- Patient Safety and Clinical Outcomes: Timely, accurate documentation directly affects improved clinical decision-making, prompt risk identification, and care continuity—particularly important in ICUs.
- Compliance with Law and Regulations: Legibly completed consents, operative reports, and SNDT entries safeguard institutions from medico-legal disputes and penalties for non-compliance upon audits.
- Process Improvement: The article emphasizes that ongoing audits combined with departmental feedback and inter-professional collaboration result in quantifiable improvements in the quality of documentation.
- Training and Capacity Building: The research findings highlight certain knowledge and practice deficiencies (e.g., in psychological assessment, surrogate documentation) that can be filled through targeted training programs and SOP revisions.

6.3 Recommendations

In view of the research findings and departmental trends of performance, the following recommendations are made:

1. Enhance Department-Wise Monitoring of Documentation

Surgical Oncology and Neurosurgery departments should be given focused mentoring with documentation champions for ensuring compliance and communication of best practices.

2. Enforce Mandatory Documentation Training

Periodic workshops must be conducted on key documentation sections, particularly for new employees, resident physicians on rotation, and nursing staff. Priority should be given to high-risk areas such as consent, pain assessment, and psychological evaluation.

3. Automate Audit Tracking Using EMR Systems

Shifting from Excel-based tracking to in-house Electronic Medical Records (EMR) dashboards can automate compliance reminders and provide real-time audit feedback.

4. Update Documentation SOPs

Standard Operating Procedures must be regularly reviewed and updated, with input from audits. Formats should remove confusion and prioritize SNDT compliance, diagnosis entries, and between-department communication.

5. Reward Best Performers

Rewarding top-performing departments such as General Surgery through intrinsic recognition programs can foster a culture of excellence and responsibility in documentation.

6. Impose Compliance Accountability

Develop escalation plans for persistent non-conformity. This can involve direct conversations with department managers, written warnings, or re-training on a mandatory basis.

7. Encourage Interdisciplinary Collaboration

Promote routine audit review sessions involving clinical, nursing, and administrative staff to collectively review results, determine root causes, and decide CAPAs (Corrective and Preventive Actions).

6.4 Final Conclusion

Finally, this research confirms that documentation audits, when actively performed with formatted tools and aided by interdisciplinary involvement, can have a relevant positive impact on ICUs' patient record quality. The departments that appreciated feedback and internalized best practices showed quantifiable improvements. The results emphasize that documentation is not merely a clerical function—it is a clinical necessity that protects patients, assists clinicians, and reinforces the institution's integrity. Infusing audit culture into the fabric of clinical practice can thus be not only desirable but imperative.