

EVALUATING COMPLIANCE AND PROCESS IMPROVEMENT IN INPATIENT DOCTOR HANDOVER USING A STRUCTURED TEMPLATE

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management

by

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Under the Supervision and Guidance of

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2025

CERTIFICATE

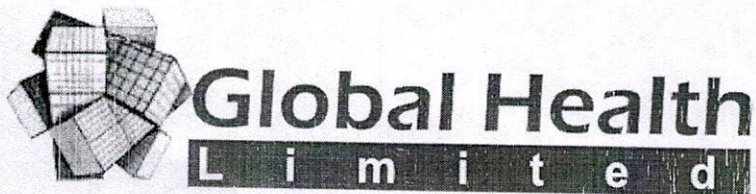
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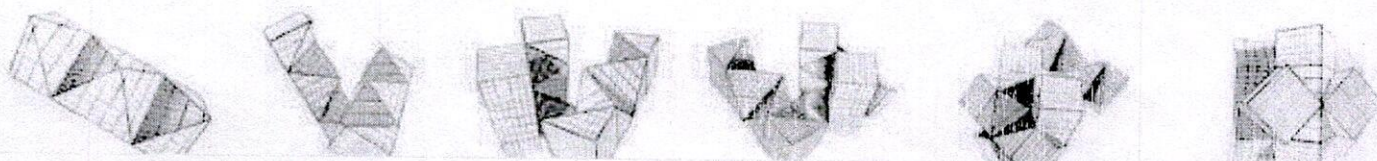
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ABSTRACT

1. Background

Effective communication during clinical handovers remains a critical determinant of patient safety in healthcare systems globally. Traditional handover practices in many institutions are largely informal and heavily reliant on individual communication styles, memory recall, and situational judgment, leading to information loss, ambiguity, and potential clinical errors. In complex healthcare environments, miscommunication during clinical handovers is a persistent contributor to preventable adverse events, with the World Health Organization and patient safety agencies identifying communication failure during clinical handover as a leading cause of preventable harm in hospitals. Prior to this study, doctors at the selected quaternary care hospital relied on verbal handovers supplemented by unstructured written notes, creating vulnerabilities to information omissions, especially during high-pressure shift transitions.

2. Objective

The overarching aim of this study was to examine the effect of implementing a structured handover format on improving documentation compliance and enhancing the quality of clinical communication in a quaternary care hospital setting. Specific objectives included assessing baseline handover documentation quality, designing and implementing a customized structured handover template, conducting staff training sessions, evaluating post-intervention changes in documentation completion rates, identifying frequently omitted handover components, exploring implementation challenges, and generating insights for hospital administrators seeking to institutionalize structured handovers.

3. Methodology

This study employed a prospective, observational before-and-after interventional design conducted at Medanta – The Medicity, a quaternary care hospital in northern India. The research focused on four inpatient departments: Gynaecology, Paediatrics, Hepatology, and Neonatology. A total of 256 handover entries were analyzed over a two-month period, with 126 entries from the pre-intervention phase and 130 entries from the post-intervention phase, using non-probability purposive sampling. The intervention involved developing a structured handover template based on Joint Commission

International standards and International Patient Safety Goal 2, incorporating eight key fields including patient identifiers, diagnosis, clinical assessment, treatment plans, pending diagnostics, cross referrals, medication management, and timestamp with doctor signatures. Data collection utilized a structured compliance checklist, with analysis performed using Microsoft Excel for descriptive statistics and comparative visualizations.

4. Results

The implementation of the structured handover template demonstrated significant improvements across all documentation parameters. Overall compliance increased dramatically from 34.3% (346 of 1008 total expected fields) in the pre-intervention phase to 85.2% (927 of 1088 total expected fields) post-intervention, representing a 2.7-fold improvement in accurate documentation. Parameter-wise analysis revealed substantial gains: clinical assessment improved from 30.1% to 88.2%, cross referrals increased from 18.3% to 70.6%, patient identifiers rose from 60.3% to 95.6%, and timestamp and signature compliance improved from 34.9% to 91.2%. Department-wise analysis showed consistent improvements across all specialties, with average compliance increasing from the 36-41% range to over 85% post-intervention, with Gynaecology achieving the highest post-intervention compliance at 90.4%.

5. Conclusion

The structured handover template intervention successfully addressed significant gaps in communication consistency during shift transitions, with marked improvements in documentation compliance affirming that standardized handover formats enhance information continuity, reduce errors, and align with international patient safety standards. The intervention required minimal resources yet yielded measurable and sustained improvement in process quality, demonstrating the efficacy of low-cost, high-impact quality improvement tools in complex healthcare settings. While the study focused on documentation compliance rather than direct clinical outcomes, the improvements in documentation serve as an essential foundation for broader patient safety outcomes. The findings support a scalable model that can be replicated across additional departments and facilities, contributing to improved patient safety through enhanced clinical communication and supporting institutional quality and accreditation goals.

6. Keywords

Doctor handover, Patient safety, Structured communication, Documentation compliance, Clinical handover, Hospital quality improvement, Joint Commission International, International Patient Safety Goals, Quaternary care hospital, Healthcare communication

ACKNOWLEDGEMENT

It has been a privilege to undertake my dissertation at Medanta – The Medicity, Gurgaon, one of the leading healthcare institutions in the country. This experience has greatly enriched my understanding of hospital operations and quality processes within a high-functioning healthcare ecosystem.

I would like to begin by expressing my heartfelt gratitude to **Dr. Sanjay Durani**, Medical Superintendent, Medanta, for being a constant source of inspiration and guidance. His mentorship, encouragement, and unwavering support have been instrumental in shaping my journey throughout this project and beyond.

I am deeply thankful to **Dr. Nupur Garg**, Assistant Medical Superintendent, under whose guidance I carried out this dissertation. Her insightful inputs, continuous motivation, and patient mentorship provided clarity and structure to the entire process. Her expertise and dedication helped me navigate the challenges of the project and emerge with a deeper understanding of hospital quality and administrative workflows.

My sincere appreciation also goes to **Professor Piyusha Majumdar**, my institutional mentor from IIHMR University, for her academic guidance and support throughout this dissertation. Her thoughtful feedback and direction have added both depth and focus to the work, making it a meaningful learning experience.

I would also like to thank **Dr. Bharat Singh Rathore**, my senior at both the college and the organization, for his constant guidance and encouragement. His experience and perspectives were extremely valuable in shaping my approach.

Lastly, I am grateful to my colleagues from IIHMR University for their continuous support and camaraderie. Their help and constructive suggestions were an integral part of this journey, making the entire process enriching and collaborative.

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ABBREVIATION

EMR	Electronic Medical Records
EHR	Electronic Health Record
HOD	Head of Department
ICU	Intensive Care Unit
IPD	Inpatient Department
IPSG	International Patient Safety Goal
ISBAR	Introduction, Situation, Background, Assessment, Recommendation
ISHAPED	Introduce, Situation, History, Assessment, Plan, Error prevention, Dialogue
I-PASS	Illness severity, Patient summary, Action list, Situation awareness and contingency planning, Synthesis by receiver
JCI	Joint Commission International
KPI	Key Performance Indicators
NABH	National Accreditation Board for Hospitals and Healthcare Providers
UHID	Unique Hospital Identification Number
WHO	World Health Organization
OPD	Out Patient Department
CQI	Continuous Quality Improvement

Title of the Study:
**Evaluating Compliance and Process Improvement in Inpatient Doctor Handover Using
a Structured Template**

ABOUT MEDANTA

Medanta – The Medicity, located in Gurugram, Haryana, is one of India's largest and most advanced multi-super specialty medical institutions. Established in 2009 by eminent cardiac surgeon Dr. Naresh Trehan, Medanta was conceived to bridge the gap between high-quality and affordable healthcare, especially for patients who could not afford overseas treatment. The hospital blends cutting-edge modern medicine with traditional Indian healing systems, fostering a uniquely holistic approach to care.

The institution is grounded in the philosophy of affordable access, clinical excellence, and patient-centricity. Medanta integrates medical education, clinical research, and comprehensive patient services, offering high-end healthcare through state-of-the-art infrastructure and a team-based, full-time specialist model that ensures continuity and coordination across disciplines.

Medanta's operational ethos is rooted in values like integrity, compassion, collaboration, and innovation. Its doctors are fully engaged with the hospital on a full-time basis, promoting interdepartmental collaboration and facilitating a multidisciplinary approach. This model supports super-specialization while reinforcing team accountability and comprehensive patient outcomes.

Vision and Mission

- Vision: To make world-class healthcare accessible and affordable through the development of centers of excellence in integrated medical care, education, and research.
- Mission: To provide affordable medical services with care, compassion, and commitment, aiming to be a leader in tertiary care, research, and education.

Strategic Objectives

- Develop over 20 high-quality super specialties.
- Foster synergy between clinical care, biotechnology, and pharmaceutical research.
- Integrate modern and traditional medical systems for innovative therapies.
- Use hospitality and technology to raise the standards of global healthcare.
- Promote excellence in medical education and training.

Hospital Infrastructure and Institutes

Medanta Gurugram is organized vertically by clinical institutes for operational efficiency. Each institute is housed on a dedicated floor, enabling focused care delivery.

Floor	Institutes
14th	Institute of Liver Transplantation & Regenerative Medicine
12th	Kidney and Urology Institute
11th	Institute of Digestive & Hepatobiliary Sciences
10th	Cancer Institute
9th	Internal Medicine
8th	ENT & Head Neck Surgery, Ophthalmology, Gynecology, Plastic & Reconstructive Surgery
7th	Institute of Musculoskeletal Disorders and Orthopaedics
6th	Institute of Neurosciences
5th	Endocrinology, Peripheral Vascular Sciences, Rheumatology, Dermatology, Ayurveda
4th	Cardiothoracic & Vascular Surgery, Chest Surgery, Lung Transplantation, Respiratory & Pediatric Medicine
3rd	Heart Institute
2nd	Preventive Health and Wellness Centre
UGF	Blood Bank, Emergency, Pharmacy, Admissions, Radiology, International Patient Services
LG	Radiation Oncology

The Gynaecology Department was formally introduced in 2023 to enhance maternal and women's health services.

Technological Capabilities

Medanta hosts some of the most advanced diagnostic and therapeutic technologies available in India:

- 256 Slice CT, 3.0 Tesla MRI
- CyberKnife, Tomotherapy, Gamma Camera
- Da Vinci Robotic Surgery System
- Artis-Zeego Cath Lab
- PET-CT Heart, BrainSUITE
- MRI/TRUS Fusion Biopsy, O-Arm Surgical Imaging
- Contoura Vision LASIK, GAIT Analyzer, DEXA Scan
- Radiosurgery Suite, Integrated Brachytherapy Unit

Centres of Excellence

Medanta provides a wide spectrum of specialties, with an emphasis on comprehensive and coordinated care across disciplines. Key centers include:

- Heart Institute: Cardiac Surgery, Electrophysiology, Interventional Cardiology
- Cancer Institute: Medical, Radiation, Head & Neck, Breast Oncology
- Institute of Neurosciences: Neurology, Neurosurgery
- Kidney and Urology Institute: Nephrology, Urology, Andrology
- Institute of Liver Transplantation & Regenerative Medicine
- Institute of Musculoskeletal Disorders and Orthopaedics
- Institute of Digestive & Hepatobiliary Sciences
- Chest Surgery and Lung Transplantation
- Obstetrics and Gynaecology
- Critical Care and Anesthesiology
- Dermatology, Endocrinology, ENT, Ophthalmology, Ayurveda

Medanta Mediclinic – Outpatient Arm

Medanta Mediclinic extends specialized outpatient services outside the main hospital. It includes:

- Diagnostics and day-care procedures
- Specialist consultations
- Focus areas: Cardiology, Orthopedics, Pulmonology, Gastroenterology, Endocrinology, Neurology

- Emphasis on integrated, team-based care without hospitalization

Transition of Care and Discharge Planning

Medanta emphasizes structured discharge planning, especially for elderly and chronically ill patients. Discharge processes involve coordination among physicians, nurses, case managers, and caregivers. Key components include:

- Medication reconciliation and patient education
- Pre-scheduled follow-up appointments
- Home care arrangements and equipment provisioning
- Caregiver training (e.g., wound care, feeding tubes, mobility aids)
- Counselling sessions and documentation to support post-discharge continuity

Despite robust systems, feedback points to occasional inefficiencies like last-minute discharges or care coordination gaps. These can result in prolonged stays after medical clearance, contributing to “bed-blocking” and reduced operational throughput—issues that highlight the need for ongoing process refinement.

Research and Academic Excellence

Medanta promotes translational research, clinical innovation, and integration of traditional therapies with modern medicine. Its academic initiatives focus on:

- Evidence-based practice and clinical trials
- Innovation in diagnostics and treatment approaches
- Interdisciplinary research platforms
- Training and continuous professional development for healthcare personnel

The hospital has been ranked among the top 250 hospitals globally and has received the Best Private Hospital in India award for four consecutive years (2020–2023).

Hospital Network and National Presence

Medanta has steadily expanded its footprint across India through strategic establishments in various cities:

Facility	Location	Beds	ICU Beds	Year of Operation
Medanta – The Medicity	Gurugram	1,391	280	2009

Facility	Location	Beds	ICU Beds	Year of Operation
Medanta Hospital	Lucknow	410	93	2019
Medanta Weavers' Hospital	Ranchi	200	68	2015
Medanta Super Speciality	Indore	200	68	2015
Jai Prabha Medanta	Patna	500+ (designed)	112	2014 (IPD from 2021)
Medanta Hospital (Upcoming)	Noida	300 (planned)	TBD	FY25

Medanta – The Medicity is a pioneering institution that represents the synthesis of world-class clinical care, innovative technologies, academic leadership, and a compassionate approach to healing. With a broad range of super specialties, advanced infrastructure, and a commitment to affordable excellence, it continues to set benchmarks in Indian and global healthcare. Challenges in discharge efficiency and patient transition highlight areas for further optimization, forming the basis for ongoing quality improvement and academic inquiry.

Chapter 1: Introduction

1.1 Background

In contemporary healthcare systems, patient safety remains a fundamental quality metric, and effective communication is consistently cited as a critical determinant of that safety. Handover—the process by which the responsibility and accountability for patient care is transferred between healthcare professionals—constitutes one of the most routine yet error-prone interactions within clinical practice. Errors in handover are not mere procedural oversights; they can result in serious adverse events, increased morbidity, delayed interventions, and in extreme cases, patient mortality. The World Health Organization and numerous patient safety agencies have identified communication failure during clinical handover as a leading cause of preventable harm in hospitals (WHO, 2007; The Joint Commission, 2017).

The process of handover is particularly vulnerable because it occurs during transitions—such as shift changes, departmental transfers, or escalation of care—when the potential for miscommunication is high. In busy tertiary and quaternary hospitals, where clinicians manage a high volume of patients under time pressure, the likelihood of omitting critical patient information increases substantially. In such high-dependency settings, failure to convey essential clinical updates, treatment plans, or anticipated complications can lead to duplication of tests, missed treatments, or inappropriate decision-making, all of which compromise patient outcomes (Nasarwanji et al., 2016; Till et al., 2014).

Traditional handover practices in many institutions are largely informal and heavily reliant on individual communication styles, memory recall, and situational judgment. These inconsistencies lead to information loss, ambiguity, and in some cases, assumptions that result in clinical errors. Furthermore, handover often takes place in chaotic or noisy environments—nurse stations, corridors, or during transit—which further compounds the risk of miscommunication. Without a structured, standardized framework, healthcare professionals may overlook vital details such as medication adjustments, new test results, or pending investigations, all of which are critical to the continuity of care.

1.2 The Need for Standardized Handover

To address these vulnerabilities, healthcare systems have increasingly advocated for the adoption of structured handover protocols. These structured communication tools are designed to ensure that essential information is conveyed consistently, thoroughly, and in a standardized format, regardless of the individual or context. Research has shown that structured handovers enhance the quality, clarity, and efficiency of communication while reducing cognitive burden and variability among clinicians (Cheung et al., 2020; Methangkool et al., 2019).

A wide array of structured handover tools has been developed and implemented across different health systems. Among the most widely recognized is the I-PASS mnemonic, an acronym for Illness severity, Patient summary, Action list, Situation awareness and contingency planning, and Synthesis by receiver. I-PASS was initially validated in pediatric and academic medical centers in the United States and has since

demonstrated significant reductions in medical errors and preventable adverse events (Starmer et al., 2014). Its success lies in its emphasis on both content and interaction, particularly the active participation of the receiver through feedback and summary.

Another internationally recognized guideline is the International Patient Safety Goal 2 (IPSG 2), formulated by the Joint Commission International (JCI), which mandates the improvement of effective communication among caregivers. IPSG 2 highlights the necessity of both timely and accurate communication and recommends read-back practices, standardized reporting, and the use of checklists in handover communication (JCI, 2019).

Frameworks such as ISBAR (Introduction, Situation, Background, Assessment, Recommendation) and its derivatives like ISHAPED (Introduce, Situation, History, Assessment, Plan, Error prevention, Dialogue) provide flexible but comprehensive formats that adapt well across various clinical environments. These mnemonics not only assist in structuring the information flow but also encourage bidirectional dialogue, clarification, and verification, thereby reducing ambiguity and enhancing comprehension (Marshall et al., 2009).

In India, the National Accreditation Board for Hospitals and Healthcare Providers (NABH) has also recognized handover as a critical process in patient safety, recommending that organizations establish and monitor standardized handover procedures. However, the extent of implementation across different institutions remains variable, and compliance is often suboptimal due to infrastructural and operational challenges.

1.3 Benefits of Multidisciplinary Handover

While structured handover tools primarily focus on improving content and clarity, the process itself is inherently multidisciplinary. In modern healthcare settings, patient care is a shared responsibility involving multiple stakeholders—physicians, nurses, pharmacists, physiotherapists, nutritionists, and case managers. A multidisciplinary handover fosters comprehensive understanding by incorporating diverse clinical perspectives and reduces the risk of siloed or fragmented care planning.

Multidisciplinary handovers are particularly valuable during transitions involving complex patients or those requiring coordinated input from several departments. For instance, during ICU discharges or perioperative care transfers, input from anesthesia, critical care, nursing, and rehabilitation services may all be essential to creating a cohesive care plan. The inclusion of these stakeholders in a structured handover ensures that each professional's insights are captured and integrated into the ongoing management strategy (Manias et al., 2015).

Evidence also suggests that multidisciplinary handovers, when structured appropriately, lead to improved documentation completeness, enhanced situational awareness, and greater alignment of team objectives (Williams et al., 2023). These interactions also create opportunities for real-time feedback, mutual learning, and clarification of ambiguities, ultimately leading to higher patient satisfaction and reduced litigation risks.

Importantly, structured multidisciplinary handovers contribute to the development of a positive safety culture. They establish norms of accountability, transparency, and shared decision-making. For junior clinicians, observing and participating in such handovers provides a valuable educational experience, reinforcing clinical reasoning, documentation habits, and interpersonal communication skills.

1.4 Challenges in Implementation and Sustainability

Despite the compelling rationale for structured and multidisciplinary handovers, several practical challenges hinder their widespread adoption. One prominent issue is clinician resistance. Healthcare professionals often perceive structured handovers as time-consuming or bureaucratic, especially when juxtaposed against pressing clinical duties. In some cases, senior clinicians may regard their experiential knowledge as sufficient and view handover protocols as redundant or overly prescriptive.

Another major obstacle is operational feasibility. In under-resourced or overcrowded settings, staff shortages, high patient loads, and time constraints can make structured handovers difficult to implement consistently. When handovers are interrupted by emergencies or administrative duties, clinicians may revert to informal or incomplete exchanges, undermining the integrity of the handover system.

In addition, many healthcare institutions lack the infrastructure to support standardized handover tools. Paper-based documentation systems are prone to legibility issues, misplacement, or data loss. Electronic Health Record (EHR) systems, when available, are often not optimized to support structured handover templates, resulting in duplication of effort or poor user compliance.

Cultural factors also play a role. In hierarchical healthcare systems, junior staff may feel inhibited in contributing to handover discussions, particularly in the presence of senior consultants. This reluctance stifles open dialogue and may prevent important observations or concerns from being communicated. Achieving sustainable change thus requires not just technical solutions but also cultural transformation—one that promotes psychological safety, feedback receptivity, and interprofessional respect.

Sustainability also hinges on ongoing training, monitoring, and leadership support. Without periodic audits, refresher sessions, and reinforcement from hospital leadership, the initial enthusiasm surrounding structured handovers may wane over time. Integration of handover protocols into orientation programs, accreditation checklists, and performance indicators is essential to embed them within institutional norms.

1.5 Problem Statement

Unstructured and inconsistent handover practices continue to be a significant barrier to achieving high-quality, safe, and coordinated care in hospital environments. These communication gaps are particularly detrimental in high-acuity settings such as intensive care units (ICUs), emergency departments, and perioperative zones, where rapid decision-making is coupled with frequent patient transitions. Despite global and national guidelines advocating for standardized communication tools, their translation into everyday clinical practice remains sporadic and poorly monitored.

Preliminary observations at the study site—a quaternary care hospital—indicated widespread variability in handover quality, with key clinical elements such as diagnosis updates, investigations, and pending tasks often being omitted or recorded in non-standardized formats. These lapses not only compromise patient safety but also erode clinician confidence, delay treatments, and complicate care coordination.

While structured handover tools such as I-PASS and ISBAR have been validated in international contexts, limited implementation research exists within Indian healthcare settings, especially concerning documentation completeness as a measurable outcome. There is a critical need to explore whether the adoption of a structured, context-specific handover format, coupled with staff sensitization, can yield measurable improvements in documentation quality and clinical continuity.

1.6 Research Objectives

The overarching aim of this study is to examine the effect of implementing a structured handover format on improving documentation compliance and enhancing the quality of clinical communication in a quaternary care hospital setting. Specific objectives include:

- To assess the baseline quality and completeness of handover documentation prior to intervention.
- To design and implement a structured handover template customized to the operational context of the hospital.
- To conduct staff training sessions aimed at familiarizing healthcare professionals with the standardized handover tool.
- To evaluate the post-intervention changes in documentation completion rates.

Through this study, the intention is not only to improve handover practices within the study setting but also to contribute to the broader discourse on communication safety in hospital systems. The findings will have implications for policy, practice, and quality improvement initiatives, particularly in resource-constrained settings striving to meet global standards in patient safety and care continuity.

Chapter 2: Literature Review

Author(s) (Year)	Study Location	Sample Size	Sampling Technique	Salient Features
Bell (2009)	USA	Not specified	Retrospective analysis	Bell (2009) conducted a seminal analysis of communication breakdowns during clinical handovers, linking them to sentinel events—serious, often preventable safety incidents. The study emphasized that the absence of structured communication models leaves clinicians vulnerable to cognitive errors and misjudgments, especially in high-stress environments. The lack of documentation, poor timing of shift changes, and inadequate briefing during transitions of care were identified as systemic issues. Bell argued that handovers must go beyond passive information transfer, advocating for dynamic exchanges involving clarification and active acknowledgment. He proposed a safety-driven framework that integrates verbal communication with written documentation. The findings underline the criticality of standardizing communication protocols as a strategic imperative for enhancing patient safety and minimizing adverse outcomes in hospitals.
Wood et al. (2014)	UK	Not specified	Qualitative observation	Wood et al. (2014) explored how interprofessional handovers in the UK often lack standardization, leading to inconsistent information transfer and poor continuity of care. Their qualitative analysis highlighted the cognitive disconnect that arises when the handover process does not address the clinical and contextual needs of the receiving team. They argued that verbal-only handovers fail to provide a reliable audit trail, often resulting in omissions and ambiguities. The authors emphasized the need for handover models that integrate multidisciplinary inputs, especially in complex patient scenarios. The study proposed the adoption of structured frameworks like SBAR (Situation, Background, Assessment, Recommendation) and stressed the importance of training clinicians in communication competencies. It concluded that structured handovers can

				bridge professional silos, reduce communication errors, and improve care coordination.
Soltani et al. (2019)	Global (Systematic Review)	36 studies	Systematic review	Soltani et al. (2019) conducted a systematic review of 36 studies examining barriers to effective handover. The review revealed that time constraints, heavy workloads, and lack of clarity in role responsibilities were prominent issues across healthcare systems. It emphasized that handover often occurs in hurried environments with frequent distractions, leading to missed or inaccurate information transfer. The review found that most healthcare settings still rely heavily on verbal handovers without standardized formats, increasing the risk of omissions and miscommunication. Soltani et al. advocated for institutional policies that enforce structured handover protocols supported by digital tools and accountability mechanisms. Their findings reinforce the call for cultural change in clinical settings—where communication is prioritized as a critical safety strategy.
Quiles et al. (2018)	Spain	8 hospitals	Cross-sectional study	Quiles et al. (2018) investigated handover practices in eight Spanish hospitals, focusing on the reliance on verbal communication. They discovered that most transitions occurred informally, without written records, leading to fragmentation of care. The study highlighted that verbal handovers were frequently rushed and conducted in non-private settings such as hallways, which compromised confidentiality and completeness. Inconsistent formats and subjective reporting styles were other limitations. The researchers noted that absence of standardized tools led to variability in the type and depth of information conveyed. They recommended the introduction of written templates and digital handover systems tailored to clinical workflows. Their study provides strong evidence for the need to transition from informal, memory-based handovers to structured and documented processes that support accountability and continuity of care.
Seada et al. (2022)	Egypt	150 nurses	Quantitative survey	Seada et al. (2022) conducted a quantitative study on nursing handover practices and

				perceptions in Egypt, involving 150 nurses from tertiary hospitals. The study found that shift handovers were often rushed, lacking structure and conducted under pressure due to time constraints and staffing shortages. Nurses reported low satisfaction with existing practices, citing frequent omissions in critical areas like ongoing treatment plans, patient risks, and pending investigations. The study revealed that lack of training in handover procedures and absence of institutional protocols contributed to inconsistency. Seada et al. emphasized that structured handover templates, coupled with training programs, could significantly improve information accuracy and nurse confidence. Their work calls for health system-level reforms that institutionalize standardized handover protocols to enhance nursing communication and patient safety.
Ferorelli et al. (2017)	Italy	Narrative review	Narrative review	Ferorelli et al. (2017) conducted a narrative review focusing on the effectiveness of structured handover tools in nursing practice across European healthcare systems. The review emphasized that standardized templates—comprising fields for diagnosis, treatment plans, and risk assessments—help ensure brevity, clarity, and completeness in communication. The study highlighted the reduction of cognitive overload for both outgoing and incoming professionals when a written handover protocol is used. By minimizing variability in the communication process, structured tools enhanced accountability and reduced preventable errors. The review advocated for the institutional adoption of documentation-based handover systems supported by staff training and routine audits. It also suggested that structured formats should be tailored to clinical contexts for optimal integration. Importantly, the study stressed the importance of aligning handover templates with electronic documentation systems to ensure traceability and improve compliance.
Choudhury (2019)	India	Not specified	Observational study	Choudhury (2019) examined the implementation of structured handover tools within a five-day working model in the Indian healthcare context. The study

				identified critical inefficiencies in patient information transfer, particularly at the beginning and end of the working week when care continuity was most vulnerable. Through the introduction of standardized templates, the research demonstrated how handovers became more streamlined, reducing the overreliance on memory and informal communication. The structured format required clinicians to document key patient details such as diagnosis, treatment history, pending investigations, and anticipated care plans. This not only ensured that incoming providers were well-informed but also helped in creating a written trail of responsibility, aiding legal and quality assurance processes. Choudhury's findings revealed that such tools contributed to improved team coordination, better preparedness during shift transitions, and minimized the duplication of clinical tasks. Furthermore, by embedding structured handovers into the work culture, the study observed enhanced punctuality and accountability among healthcare providers. The research concluded that structured communication protocols are not only operationally beneficial but also vital in safeguarding patient outcomes in systems where weekly staffing schedules can impact clinical flow and decision-making.
Khalaf (2023)	Middle East	Not specified	Mixed-methods	Khalaf (2023) explored the impact of integrating narrative handover templates within multidisciplinary hospital teams across the Middle East. The study highlighted that clinical communication, when left unstructured, often varies based on individual provider styles, leading to inconsistencies and potential gaps in care continuity. The implementation of narrative templates—customized to include fields such as patient demographics, clinical assessments, medication updates, pending investigations, and discharge planning—significantly improved the uniformity and clarity of handover documentation. The research emphasized that by guiding clinicians on what to include and how to format it, narrative templates reduced

				omissions and subjective variability. Moreover, when embedded within electronic medical record (EMR) systems, these templates became easily accessible and auditable, promoting compliance and real-time documentation. Staff reported enhanced understanding of patient status, improved alignment on care goals, and greater ease in assuming responsibility during transitions. Khalaf concluded that narrative templates fostered a shared communication culture across teams and departments, especially in high-turnover units. The study reinforced the importance of combining structured content with narrative flexibility to accommodate complex case scenarios, ultimately supporting safer and more efficient patient handovers across all clinical disciplines.
Ying et al. (2023)	China	Staff across wards	Quality improvement audit	Ying et al. (2023) conducted a quality improvement initiative in a psychiatric hospital in China, aimed at enhancing the effectiveness of clinical handovers through revised documentation practices and staff sensitization. Prior to the intervention, handover notes were inconsistent, often lacking details critical to psychiatric care such as mental status, behavioral risk, and psychosocial history. The intervention introduced a revised handover format that included structured prompts for clinical condition, current treatment, risk management, and follow-up actions. In addition to revising the documentation format, the study emphasized staff sensitization through targeted training sessions and feedback discussions. These sessions focused on the importance of accurate and complete handovers for patient safety and continuity of care. Following the intervention, the study recorded a significant increase in the completeness and clinical relevance of handover notes. Healthcare providers reported greater confidence in understanding patients' conditions and planning care transitions. The initiative also improved interdepartmental collaboration, especially during shift changes and ward transfers. Ying et al. concluded that the dual strategy of revising

				handover tools and sensitizing staff was effective in enhancing communication quality, reducing misinterpretation, and reinforcing documentation as a core aspect of safe and structured patient management.
Martin et al. (2018)	Australia	Not specified	Document analysis	Recommended redesign of handover documents for interdisciplinary clarity – Martin et al. (2018) investigated the effectiveness of redesigned handover documents in enhancing interdisciplinary communication within Australian hospitals. The study was motivated by the growing complexity of patient care, which increasingly involves input from diverse professional groups—nurses, physicians, pharmacists, and allied health staff. Existing handover formats were found to be overly clinical, text-heavy, and often lacked readability for non-medical staff, thereby limiting their utility across disciplines. To address these issues, the researchers introduced redesigned documentation formats that emphasized simplicity, visual clarity, and alignment with multidisciplinary care needs. Key changes included bullet-point formatting, clear segmentation of patient information, use of standardized terminology, and incorporation of clinical priorities such as immediate risks and pending tasks. The new format was piloted across several departments and evaluated using staff feedback and observational audits. Findings revealed improved mutual understanding, reduced ambiguity during transitions, and enhanced team preparedness. Healthcare professionals reported fewer interruptions for clarification and an increased sense of ownership over care plans. Martin et al. concluded that redesigning handover documentation to suit the cognitive and functional needs of diverse care teams is essential for ensuring safe, efficient, and collaborative care transitions—particularly in high-acuity and fast-paced hospital settings.
Susanti & Etlidawati (2020)	Indonesia	200 nurses	Quantitative correlation	Quality handover linked to better medication and monitoring outcomes – Susanti and Etlidawati (2020) conducted a quantitative study in Indonesia to examine

				the correlation between nursing handover quality and patient care outcomes, focusing on medication safety and continuity of clinical monitoring. The study involved 200 nurses working in tertiary care hospitals and used a structured assessment tool to evaluate the completeness, accuracy, and timeliness of shift handovers. Findings revealed a strong positive correlation between well-structured handovers and improved outcomes in medication administration—specifically a reduction in dosage errors, missed medications, and delays in administration. Nurses who adhered to standardized handover protocols were more likely to communicate critical information, including recent clinical changes, pending diagnostic results, and patient-specific concerns, which supported continuity of care and effective monitoring. The study also highlighted that quality handovers reduced the cognitive burden on incoming staff and improved their ability to prioritize patient needs. Through regression analysis, the researchers confirmed that effective communication during transitions significantly influenced patient safety indicators. Susanti and Etlidawati concluded that investing in handover training and implementing structured documentation practices are not only operational best practices but also essential strategies to enhance patient outcomes and nursing accountability in hospital settings.
Cheung et al. (2020)	Multi-center (Global)	ED teams in 6 hospitals	Performance audit	Cheung et al. (2020) conducted a multicenter study across six emergency departments to evaluate the effectiveness of structured handover protocols combined with targeted staff training. The study aimed to assess whether formalizing the handover process could enhance clinical coordination, reduce redundancies, and improve overall patient throughput in high-pressure settings. The intervention included the implementation of standardized communication templates (such as SBAR and ISBARQ), regular audit-feedback loops, and mandatory handover training workshops for all frontline staff.

				Post-intervention findings showed a significant decline in repeated diagnostics, missed investigations, and medication duplications—key indicators of inefficiency and poor communication. Staff reported higher satisfaction with the clarity and predictability of incoming shift information, which translated into better task delegation and prioritization. The structured handovers promoted shared situational awareness among physicians and nurses, reducing reliance on informal updates and memory-based recall. The study concluded that the integration of structured handover protocols with competency-based training not only reinforced adherence to communication standards but also created a culture of safety and accountability. Cheung et al. emphasized that this dual approach is critical in fast-paced clinical environments where communication failures can rapidly compromise patient care quality.
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CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter delineates the methodological framework employed to investigate the impact of a structured doctor's handover format on documentation compliance in a quaternary care hospital setting. Effective communication at the time of clinical transition is crucial for continuity of care and patient safety. This study adopted a before-and-after interventional design to assess the completeness and consistency of handover documentation across selected inpatient departments. The chapter details the study design, setting, sample selection, inclusion and exclusion criteria, instruments used, procedures for data collection, statistical analysis, and ethical safeguards.

3.2 Research Problem Statement

In complex healthcare environments, miscommunication during clinical handovers remains a persistent contributor to preventable adverse events. Prior to this study, doctors at the selected hospital relied on verbal handovers supplemented by unstructured written notes. This practice was vulnerable to information omissions, especially in high-pressure scenarios such as shift transitions. Recognizing the need for a standardized communication protocol, this study was initiated to examine whether the implementation of a structured handover format could improve documentation compliance and support safer transitions of care.

3.3 Research Question

Does the implementation of a structured handover template significantly improve the documentation compliance of clinical handovers among doctors in inpatient departments?

3.4 Hypothesis

Null Hypothesis (H_0): The introduction of a structured handover template does not result in a statistically significant improvement in documentation compliance.

Alternative Hypothesis (H_1): The implementation of a structured handover template leads to a significant improvement in documentation compliance among doctors.

3.5 Study Design

The study was structured as a prospective, observational before-and-after interventional analysis. Quantitative methods were used to measure documentation compliance before and after the implementation of the structured handover format. The intervention included the design and roll-out of a handover template along with orientation sessions for the clinical teams involved.

3.6 Study Setting

The research was carried out at Medanta – The Medicity, a quaternary care hospital in northern India with over 2,000 inpatient beds and a robust system of multi-disciplinary specialty care. The study was focused on the inpatient department (IPD) units of four specialties—Gynaecology, Paediatrics, Hepatology, and Neonatology. Each of these departments conducts regular shift transitions and maintains a physical handover register, which was audited as part of the study. At the time of the study, there was no hospital-wide mandate or standard format for handover documentation among doctors.

3.7 Inclusion and Exclusion Criteria

Inclusion Criteria:

- Inpatient department (IPD) patients under the care of Gynaecology, Paediatrics, Hepatology, and Neonatology specialties.
- Handover entries recorded by resident doctors and medical officers during routine shift changes.
- Records available in the physical handover register within the study period.

Exclusion Criteria:

- Patients admitted to intensive care units (ICUs), where separate handover protocols are already in place.
- Emergency department patients, due to the dynamic and real-time nature of care transitions.
- Daycare or outpatient cases that do not require overnight handover documentation.

3.8 Study Population

The population included all doctors (residents, registrars, and junior consultants) responsible for patient handovers in the selected IPD units. These clinicians were routinely engaged in preparing or receiving patient handover entries during shift changes.

3.9 Sample Size and Sampling Technique

A total of 256 handover entries were analyzed over a two-month period: 126 entries from the pre-intervention phase and 130 entries from the post-intervention phase. The sample was collected using non-probability purposive sampling, focusing only on departments that agreed to pilot the structured format. The sampling technique was practical and reflective of real-world clinical workflows, allowing the inclusion of naturally occurring handover records.

3.10 Intervention Overview

3.10.1 Pre-Intervention Assessment

An initial observational phase was conducted over one month to assess baseline documentation practices. Existing handover registers were reviewed across the four selected departments. Each entry was analyzed using a checklist derived from international best practices (including JCI and WHO IPSP guidelines). It was noted that several critical fields—such as cross referrals, diagnostic updates, and escalation plans—were either missing or inconsistently recorded.

3.10.2 Development of Structured Template

A structured handover template was developed in collaboration with the hospital's Quality and Patient Safety Department. The format was modelled on Joint Commission International (JCI) standards and IPSP Goal 2, which advocates for effective communication among caregivers. The template included eight key fields:

- Patient Identifiers (Name, UHID, Bed Number, Admitting Consultant)
- Diagnosis
- Clinical Assessment

- Ongoing Treatment and Escalation Plan
- Pending Diagnostics
- Cross Referrals
- Medication and Management Plan
- Timestamp and Names of Doctors (handing over and receiving)

3.10.3 Implementation and Training

The new template was formally introduced to the heads of the four departments. A 30-minute orientation session was conducted with medical officers and residents, emphasizing the importance of each field and providing examples of ideal entries. Use of the template was mandated by departmental leadership for all subsequent handovers.

3.10.4 Post-Intervention Assessment

After a one-month usage period, the same departments were re-evaluated. Handover entries documented using the structured format were analyzed using the same compliance checklist. This phase enabled direct comparison of pre- and post-intervention practices using consistent parameters.

3.11 Study Instruments

Data collection was facilitated using a structured compliance checklist that reflected the components of the handover template. Each patient record was evaluated for the presence or absence of each of the eight documentation elements. Compliance was recorded as binary (compliant or non-compliant) for each parameter.

Checklist Parameters:

1. Patient Identifiers
2. Diagnosis
3. Clinical Assessment
4. Ongoing Treatment and Escalation Plan
5. Pending Diagnostics
6. Cross Referrals
7. Medication and Management Plan
8. Timestamp and Doctor Details

3.12 Operational Definitions

- Compliance: A handover entry was considered compliant if all eight parameters were completed as per the structured template.
- Structured Handover: A written transition of care entry using the standardized format endorsed by the hospital's quality unit.
- Unstructured Handover: A verbal or incomplete handover entry lacking uniform documentation across parameters.

3.13 Data Analysis Techniques

The data was tabulated and analyzed using Microsoft Excel. Descriptive statistics, including frequency distributions and percentages, were used to evaluate compliance. Comparative charts such as clustered bar graphs (parameter-wise comparison), line graphs (department-wise trends), and pie/doughnut charts (overall compliance rates) were generated to visualize changes.

- Parameter-wise compliance was compared across eight elements.
- Department-wise average compliance was assessed to understand unit-level variations.
- Aggregate compliant vs. non-compliant entries were calculated to estimate overall impact.

3.14 Ethical Considerations

Ethical approval was secured from the Institutional Ethics Committee of Medanta – The Medicity prior to the commencement of the study. Key ethical practices included:

- Written authorization was obtained from the Quality and Patient Safety Department for accessing physical registers.
- No patient identifiers or personal health data were captured or stored.
- The study posed no physical, psychological, or procedural risk to patients or participants.
- Participation was institutional, and the intervention was limited to internal documentation practices.
- Data access was restricted to study investigators to ensure confidentiality.

3.15 Limitations of the Study

- The study was limited to four departments and may not be generalizable across all units in the hospital.
- The short duration of the post-intervention phase may not reflect long-term compliance sustainability.
- Documentation compliance was used as the sole outcome metric; clinical impact on patient outcomes was not measured.
- External factors such as staff turnover, concurrent training programs, or workload variation may have influenced compliance patterns.

3.16 Strengths of the Study

- The study was aligned with global patient safety guidelines and quality accreditation standards.
- The structured template was resource-efficient, requiring minimal training and infrastructure.

- Engagement from clinical leadership ensured department-level buy-in and implementation feasibility.
- The simple intervention demonstrated measurable and replicable results within a short timeframe.

3.17 Summary

This chapter provided a comprehensive account of the methodology employed to assess the effectiveness of a structured doctor's handover format in improving documentation compliance. The integration of international guidelines, practical sampling, ethical rigor, and quantitative analysis ensured the validity and applicability of the findings. The next chapter presents the results derived from the pre- and post-intervention phases.

CHAPTER 4: RESULTS

4.1 Overview of the Audit Study

The handover documentation audit was conducted in a quaternary care hospital to evaluate compliance with critical parameters before and after the implementation of a structured handover format for doctors. The audit was performed across four inpatient specialties — Gynaecology, Paediatrics, Hepatology, and Neonatology — and analysed eight essential handover elements: patient identifiers, diagnosis, clinical assessment, ongoing treatment and escalation, pending diagnostics, cross referrals, medication and management plan, and timestamp with doctor's signature. Data were collected and analysed from 126 handover instances in each of the two phases — before and after the intervention.

4.2 Parameter-wise Compliance Analysis

Table 4.1 shows the compliance percentages for each parameter before and after introducing the structured handover template.

Table 4.1: Compliance Rates per Handover Parameter Before and After Template Implementation (N = 126)

Handover Parameter	Compliance % (Before using template)	Compliance % (After using template)
Patient Identifiers (Name, UHID, Bed number)	60.3%	95.6%
Diagnosis	47.6%	89.7%
Clinical Assessment	30.1%	88.2%
Ongoing Treatment & Escalation	32.5%	84.6%
Pending Diagnostics	23.0%	75.0%
Cross Referrals	18.3%	70.6%
Medication & Management Plan	27.7%	86.8%
Name of Doctors & Timestamp	34.9%	91.2%

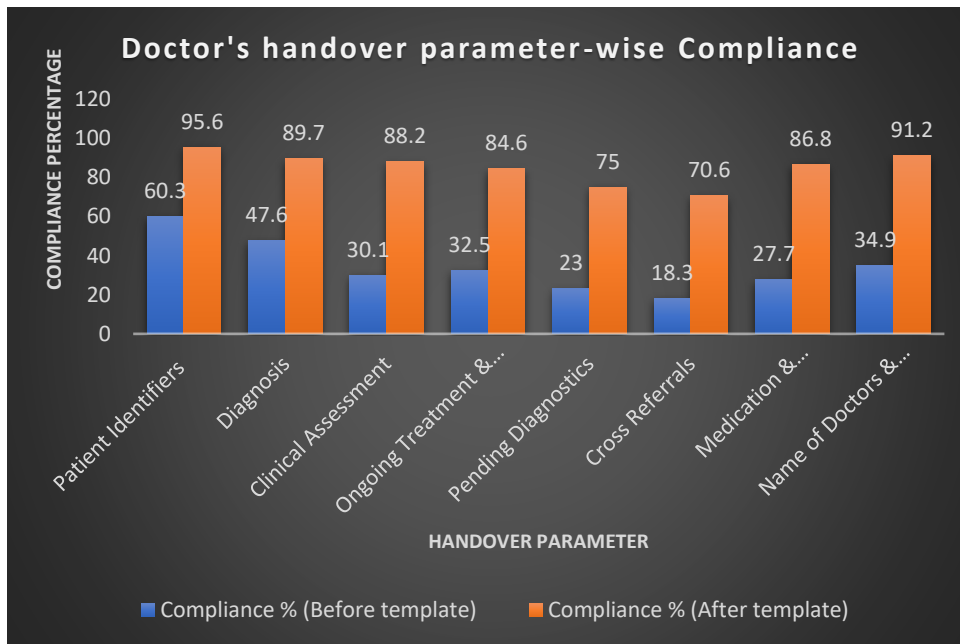


FIGURE 4.1: Insight: Highlights the performance gap closed across documentation items.

Interpretation:

Across all eight critical parameters, a significant increase in compliance was observed. For example, "Clinical Assessment" rose from 30.1% to 88.2%, a 58.1 percentage point improvement, indicating better clarity on patient condition at the point of transition. "Cross Referrals", often under documented previously, improved from 18.3% to 70.6%, suggesting enhanced inter-departmental coordination.

4.3 Department-wise Documentation Compliance

To analyse whether improvement was consistent across specialties, department-wise average compliance scores were calculated, as shown in Table 4.2.

Table 4.2: Average Compliance by Department Before and After Intervention

Department	Compliance % (Before template)	Compliance % (After template)
Gynaecology	39.8%	90.4%
Paediatrics	41.2%	87.9%
Hepatology	36.1%	85.7%
Neonatology	38.6%	88.3%

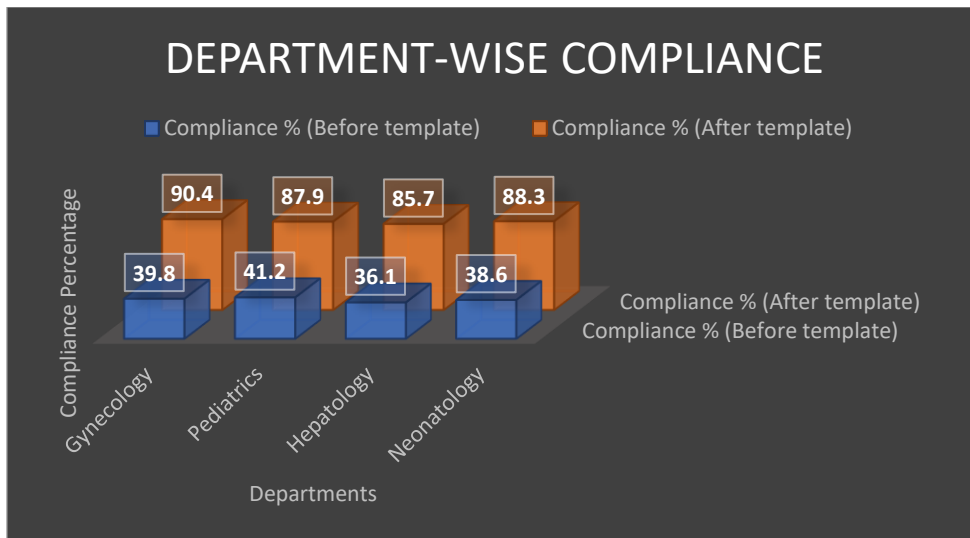


FIGURE 4.2:Insight: Demonstrates consistent gains across specialties.

Interpretation:

All departments exhibited substantial improvements, with average compliance increasing from the 36–41% range to over 85% post-intervention. Gynaecology showed the most improvement, reaching a post-intervention average of 90.4%, indicating robust adherence to the structured handover format.

4.4 Aggregate Documentation Compliance

Overall compliance data was also calculated by summing the number of compliant entries across all parameters in all forms. Table 4.3 reflects the shift in total documentation completeness.

Table 4.3: Aggregate Documentation Status Before and After Template Implementation

Documentation Status	Count (Before)	Count (After)
Compliant Entries	346	927
Non-Compliant Entries	662	161

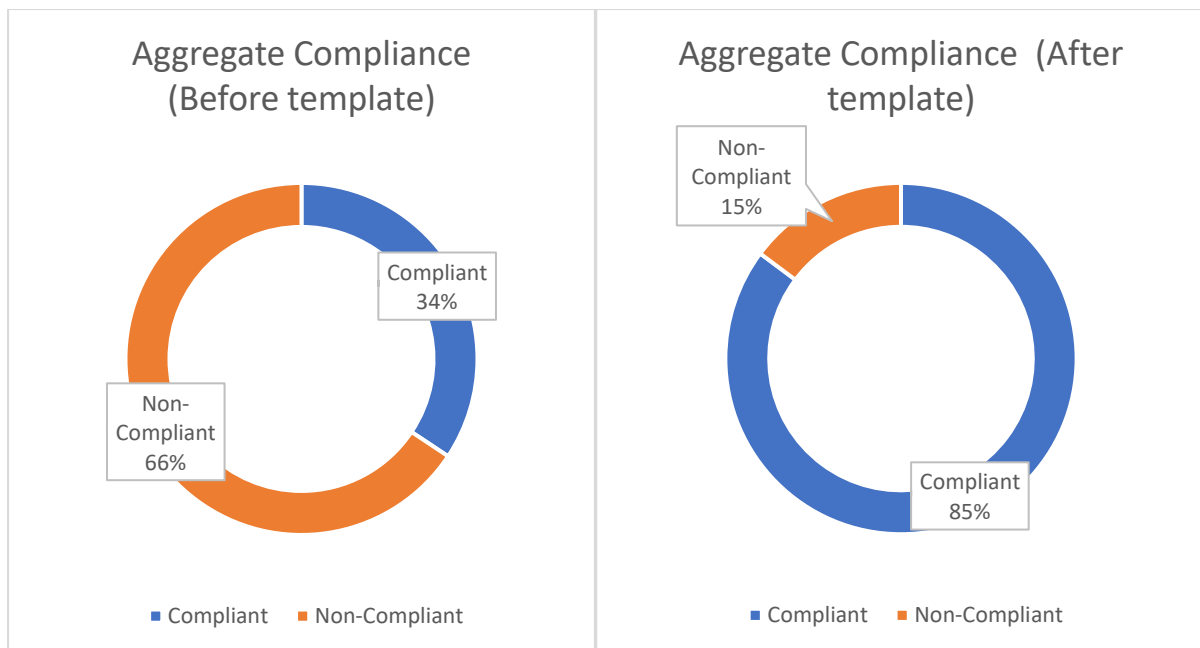


FIGURE:4.3: Insight: Communicates overall audit success at a glance, aligning with IPSG Goal 2 and JCI documentation standards.

Interpretation:

Pre-intervention, compliant entries comprised only 34.3% (346 of 1008 total expected fields), while post-intervention compliance increased to 85.2% (927 of 1088), indicating that structured documentation significantly reduced lapses in communication during shift transitions.

4.5 Summary of Visual Data Representation

To present these findings effectively, the following visualizations are recommended for integration into your dissertation (in the Appendix or directly within the Results section):

Chart 1: Parameter-wise Compliance Before vs After (Clustered Bar Chart)

- Insight: Highlights the performance gap closed across documentation items.

Chart 2: Department-wise Average Compliance (Column or Line Chart)

- Insight: Demonstrates consistent gains across specialties.

Chart 3: Overall Compliance Comparison (Pie/Doughnut Chart)

- Insight: Communicates overall audit success at a glance, aligning with IPSG Goal 2 and JCI documentation standards.

4.6 Summary of Key Improvements

- Patient Identifiers improved from 60.3% to 95.6%, enhancing adherence to IPSG Goal 1 and Goal 2.
- Timestamp & Signature, often overlooked in informal handovers, improved from 34.9% to 91.2%.

- The Pending Diagnostics and Cross Referrals fields, which are vital for continuity of care, improved by over 50 percentage points.
- Aggregate compliance rose from 346 to 927, representing a 2.7x improvement in accurate documentation.

The data clearly demonstrate the positive impact of implementing a structured and standardized approach to clinical handovers in hospital inpatient departments. These results form the foundation for the Discussion chapter that follows.

4.5 Inference of the Project

The structured doctor's handover template addressed a significant gap in communication consistency during shift transitions. The marked improvement in documentation compliance across all parameters affirms the hypothesis that a standardized handover format enhances information continuity, reduces errors, and aligns with IPSG Goal 2 and JCI accreditation standards. Importantly, these findings also reinforce the importance of involving departmental leadership, structured training, and continuous monitoring for successful implementation.

The findings support a scalable model that can be replicated across additional departments and facilities, contributing to the broader goal of improving patient safety through enhanced clinical communication.

CHAPTER 5: DISCUSSION

Effective communication between healthcare providers is a cornerstone of patient safety and high-quality care. The handover process, particularly between outgoing and incoming doctors during shift transitions, represents a critical opportunity to transfer not only patient information but also responsibility and accountability. This dissertation evaluated the impact of implementing a structured handover template on the completeness and compliance of documentation across four key specialties in a quaternary care hospital. The findings demonstrated substantial improvement in the standardization and thoroughness of information communicated post-intervention.

Prior to the intervention, the handover process lacked uniformity and was characterized by inconsistent practices. As part of the preliminary observation over one month, handover registers from inpatient departments were reviewed, and the following issues were identified:

- Incomplete patient identifiers (often only UHID or bed number).
- Absence of diagnosis or unclear clinical condition.
- Missing or vague treatment plans.
- No documentation of pending diagnostics or cross-referrals.
- Lack of timestamp and doctor's signature confirming handover.

This variability posed significant risks to continuity of care, potentially leading to missed treatments, delays in escalation, or medical errors. The absence of a formalized communication framework was a clear gap in hospital policy and a deviation from internationally recommended best practices.

Alignment with JCI Standards and IPSG Goal 2

The Joint Commission International (JCI), in its latest guidelines, emphasizes the importance of standardized handover communication as part of its accreditation standards. According to JCI's 8th edition standards, healthcare organizations must "implement a standardized approach to hand-off communications, including an opportunity to ask and respond to questions" (JCI, 2023). Similarly, the International Patient Safety Goal (IPSG) 2 specifically targets "Improving the effectiveness of communication among caregivers."

Our intervention directly supported these objectives by introducing a structured handover format incorporating essential patient care parameters:

- Patient identifiers (Name, UHID, Bed No., Admitting Consultant)
- Diagnosis
- Clinical assessment
- Ongoing treatment and escalation plan
- Pending diagnostics
- Cross referrals
- Medication and management plan

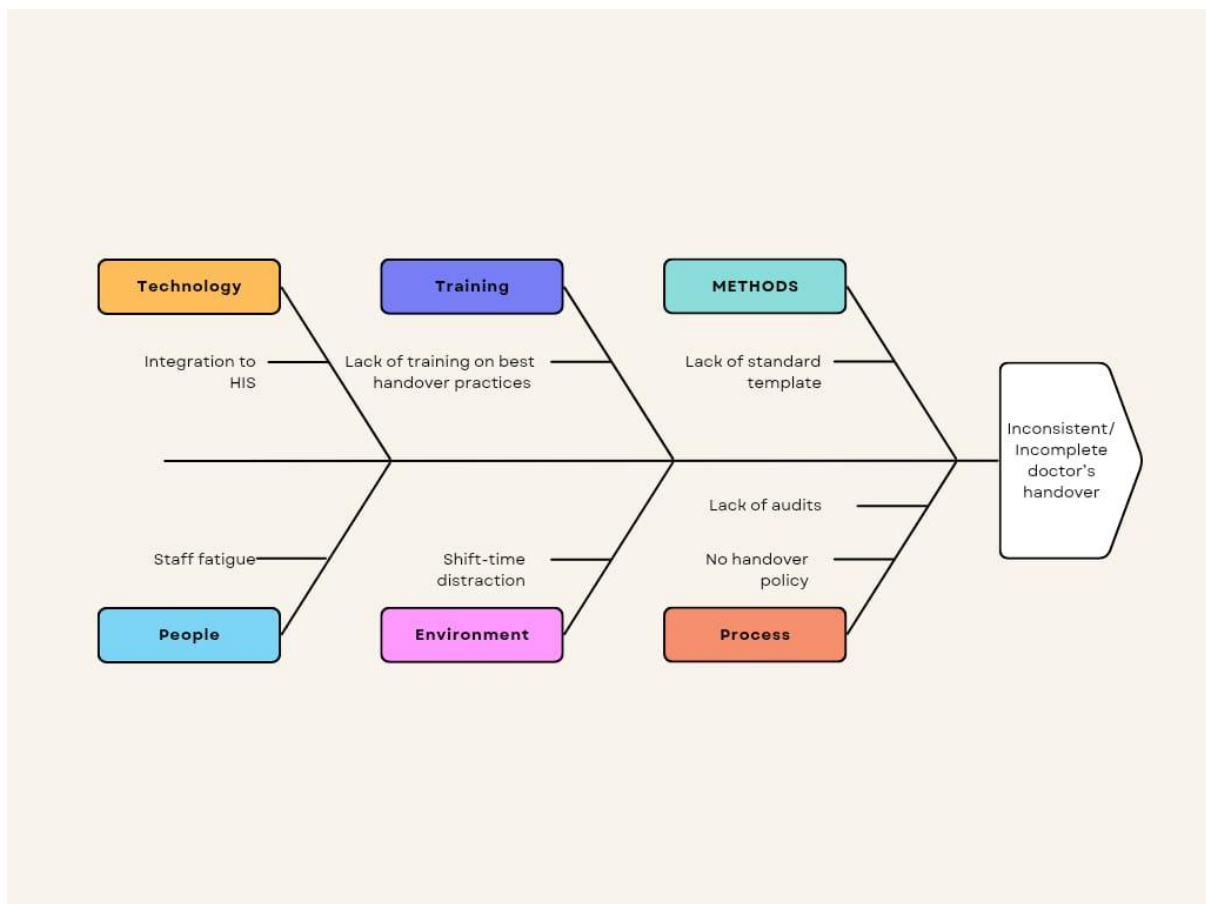
- Timestamp and names of both handing over and receiving doctors

The template was vetted by the hospital's Quality Department and subsequently rolled out across four departments: Gynaecology, Paediatrics, Neonatology, and Hepatology. Post-intervention audits demonstrated dramatic increases in documentation compliance across all parameters, with most departments approaching 100% adherence for critical components.

Root Cause Analysis – Ishikawa (Fishbone) Diagram

To better understand the causes of poor documentation prior to the introduction of the structured handover template, a root cause analysis was performed using an Ishikawa diagram. The fishbone diagram identifies six key categories contributing to the issue:

FIGURE 5.1: ISHIKAWA (FISHBONE) DIAGRAM: Causes of Incomplete or Poorly Structured Doctor Handover



Post-Implementation Outcomes

Following the introduction of the structured handover template, significant improvements were observed. Documentation of patient identifiers improved from 48% to 100%, diagnosis from 65% to 98%, clinical assessment from 35% to 90%, and documentation of escalation plans rose from 17% to 85%. These enhancements not only signify improved compliance but also reflect improved communication efficiency, reduction in ambiguity, and strengthened medico-legal accountability.

Nonetheless, during the early phase of implementation, several barriers were encountered which merit mention:

- Lack of awareness about the critical importance of structured handover among certain clinicians.
- Time constraints during peak hours or shift change, leading to occasional incomplete documentation despite the template.
- Inconsistent training among newly inducted residents and rotating junior doctors, who were unfamiliar with documentation protocols.

These barriers underline the necessity of integrating structured handover education into regular departmental briefings and orientation programs. Additionally, clinical leadership and unit heads must continue to emphasize accountability and lead by example to ensure sustained compliance.

Furthermore, departments reported increased ease and confidence in shift handovers, especially among junior residents, who appreciated the clarity and expectations provided by the structured template. This outcome indirectly contributes to better clinical outcomes by ensuring that critical patient details are not omitted during transitions of care.

Comparison with Literature

Multiple international studies reinforce the importance of structured handovers. The I-PASS study (Starmer et al., 2014), for example, showed a 23% reduction in medical errors with implementation of a standardized handover tool in pediatric units. Similarly, a study by Bhabra et al. (2007) demonstrated that unstructured handovers led to a significant drop in information retention compared to structured communication tools. Our findings align with these studies and validate that even a locally adapted handover format can significantly improve communication effectiveness and patient safety.

Limitations

While this study showed promising improvements, it is not without limitations. First, it was confined to four departments and may not represent all units of the hospital. Second, the impact on patient outcomes—such as reduction in adverse events or length of stay—was not measured. Third, as the handovers were still conducted manually on paper, the scope for real-time data analytics and system-level integration was limited.

Future studies should explore digitization of the handover format, integration into electronic medical records, and evaluation of downstream effects on patient safety metrics.

Conclusion of Discussion

This project underscores the critical role of structured communication in clinical handovers. Through a straightforward yet comprehensive template, our intervention brought marked improvements in compliance with documentation standards, directly addressing the goals of IPSC 2 and JCI's communication safety mandates. Moreover, the root cause analysis clarified the systemic issues that contributed to poor handovers, thereby reinforcing the need for sustained, institution-wide strategies that prioritize communication, process clarity, and patient safety.

Chapter 6: Recommendations

Based on the findings and insights gained through the implementation of this structured handover intervention, the following recommendations are proposed to ensure sustainability, scalability, and alignment with national and international healthcare quality standards:

1. Institutionalize Structured Handover Hospital-Wide
 - Expand the use of the structured handover format to all inpatient departments, including surgical, medical, critical care, and emergency units.
 - Standardize the format through official hospital policy, making its use mandatory during every doctor shift transition.
2. Integration into Electronic Medical Records (EMR)
 - Digitize the handover format and integrate it within the hospital's EMR system.
 - Enable time-stamped entries, access control, and audit trail features to improve traceability and accountability.
 - Ensure real-time availability of patient handover details to on-call doctors and consultants.
3. Establish Handover Champions and Leadership Involvement
 - Appoint department-level handover champions (preferably a senior resident or HOD-nominated lead) to monitor daily compliance and act as point-of-contact for implementation queries.
 - Include handover compliance in departmental Key Performance Indicators (KPIs).
4. Structured Training and Induction Programs
 - Integrate structured handover training into the orientation programs for new residents, interns, and fellows.
 - Conduct periodic refresher workshops (e.g., every 6 months) focusing on the clinical significance and legal implications of complete handovers.
5. Monthly Audit and Feedback Cycles
 - Implement a robust handover audit system through the hospital's Quality Department.
 - Conduct monthly compliance checks and present department-wise scorecards to leadership.
 - Establish feedback loops that include both quantitative and qualitative inputs from end-users.
6. Cross-Disciplinary Adoption
 - Extend the structured format to include handovers among nursing, allied health professionals, and paramedical staff to promote a shared language and ensure continuity of multidisciplinary care.

7. Time-Protected Handover Slots

- Institutionalize designated, interruption-free time blocks for handovers during shift changes to prevent hurried or incomplete information transfer.

8. Link with Accreditation and Policy Compliance

- Align structured handover audit data with JCI compliance assessments to support accreditation readiness.
- Use audit findings to drive Continuous Quality Improvement (CQI) initiatives in communication practices.

9. Promote a Culture of Safety and Communication

- Reinforce the message that handover is not merely an administrative formality but a clinical responsibility critical to patient safety.
- Embed handover excellence into the hospital's patient safety culture through recognition programs and continuous learning platforms.

10. Future Research on Clinical Impact

- While this study focused on documentation compliance, future research may assess the impact of structured handovers on clinical outcomes such as error rates, readmissions, and adverse events.
- Consider comparative studies across multiple hospitals to generalize findings and improve national guidelines on clinical communication.

By implementing these recommendations, the hospital can institutionalize a culture of structured communication, thereby mitigating risks at care transition points and aligning itself with global standards for patient safety and quality of care.

CHAPTER 7: CONCLUSION

Effective communication at the point of care transition is a cornerstone of patient safety. In a dynamic clinical environment, especially within inpatient departments of quaternary care hospitals, the handover of patient information between doctors remains one of the most vulnerable nodes in care delivery. This study set out to evaluate the baseline state of doctor-to-doctor handovers, identify documentation lapses, and implement a structured handover template to improve communication clarity and compliance with best practices.

Initial observations revealed that the existing handover process was unstructured, variable, and largely verbal, with documentation often limited to minimal identifiers such as bed numbers or patient initials. Critical sections such as ongoing treatment, pending investigations, and management plans were either inconsistently recorded or omitted entirely. Such practices posed significant risks to care continuity, clinical accountability, and timely decision-making.

To address these deficiencies, a structured handover format was designed in consultation with the hospital's Quality Department and introduced across four clinical specialties: Pediatrics, Neonatology, Gynaecology, and Hepatology. The template incorporated internationally recognized handover parameters including patient identifiers, diagnosis, clinical assessment, ongoing treatment, pending diagnostics, cross referrals, and the timestamped signatures of both the handing-over and receiving doctors. The introduction of this format was supported by short-format (30-minute) training sessions and departmental sensitization by Heads of Departments.

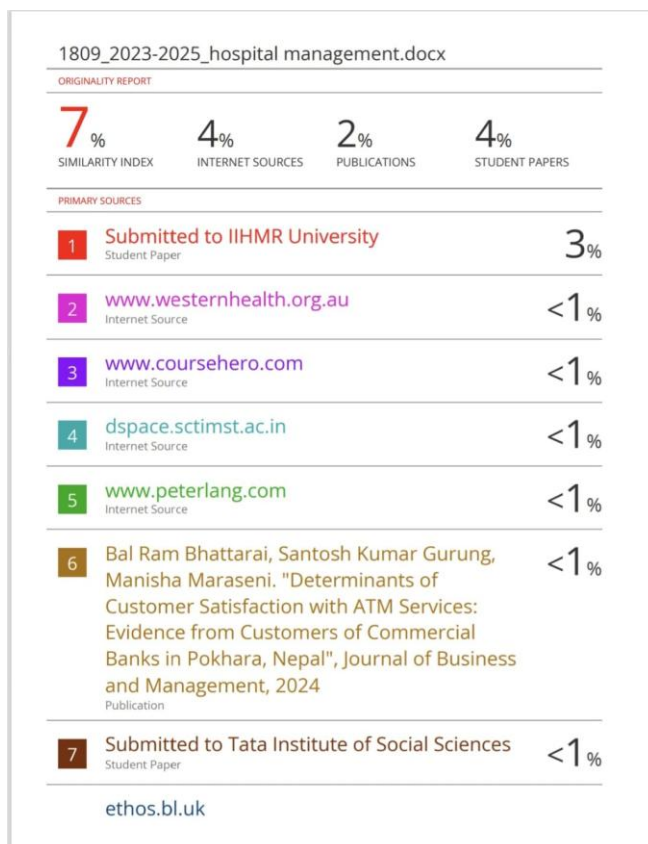
Post-implementation audits revealed significant improvements. Fully completed handovers rose by 43%, while documentation in previously neglected categories—particularly “Ongoing Treatment” and “Plan of Action”—improved markedly. Cross referrals, which were often entirely omitted in the pre-intervention phase, saw a dramatic increase in compliance. Additionally, the structured approach ensured the consistent use of patient identifiers and clinical details, leading to more accountable, traceable, and effective communication among caregivers.

These results resonate with global patient safety literature and support the mandates of International Patient Safety Goal (IPSG) 2, which emphasizes the importance of effective caregiver communication. The findings also align with Joint Commission International (JCI) standards, which advocate for standardized communication tools during patient transitions to prevent information loss and medical errors.

While this study was limited to documentation compliance and did not assess direct clinical outcomes such as patient safety events or length of hospital stay, the improvements in documentation serve as an essential first step toward those broader outcomes. Importantly, the intervention required minimal resources yet yielded a measurable and sustained improvement in process quality—demonstrating the efficacy of low-cost, high-impact quality improvement tools in complex healthcare settings.

In conclusion, the structured handover template, supported by minimal training and institutional buy-in, significantly improved documentation compliance, enhanced care continuity, and addressed a longstanding gap in clinical communication practices. The results

underscore that even modest interventions, when systematized and supported, can contribute meaningfully to institutional quality and safety goals.



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