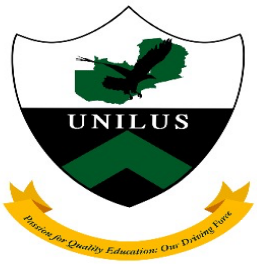

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ASSESSING THE IMPACT OF INTERDEPARTMENTAL COMMUNICATION ON PATIENT MORTALITY AT LEVY MWANAWASA TEACHING HOSPITAL

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A research submitted to the University of Lusaka in partial fulfilment of the requirements for the award of the degree of Bachelor in Medical Sciences.

June, 2025.

ABSTRACT

Introduction:

Effective communication between hospital departments plays a critical role in patient safety and care outcomes. At Levy Mwanawasa University Teaching Hospital, gaps in interdepartmental communication may be contributing to preventable patient mortality. This study draws on Systems Theory, Social Exchange Theory, and Human Error Theory to explore how communication failures within hospital systems affect patient outcomes.

Objective:

The objective of this study was to assess the impact of interdepartmental communication on patient mortality and to identify communication-related challenges and potential solutions within the hospital setting.

Method:

A qualitative research design was employed, using open-ended survey questions distributed to healthcare professionals, including doctors, nurses, and technicians. The responses were analyzed thematically to identify recurring issues and insights regarding communication practices and their influence on patient outcomes.

Result:

The analysis revealed recurring challenges such as inadequate communication tools, delayed departmental responses, lack of structured training, and poor coordination during emergencies. Participants emphasized the need for regular interdepartmental meetings, reliable communication devices, and a work culture that encourages staff to voice concerns about patient safety.

Conclusion:

Although the study did not quantify the relationship between communication and mortality, the qualitative evidence indicates a strong association between poor communication and preventable patient deaths. The study recommends implementing structured communication frameworks like SBAR, investing in modern communication technologies, and enhancing staff training. These measures are essential for improving interdepartmental communication and ultimately reducing patient mortality.

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

In modern healthcare systems, effective communication is not a peripheral concern, it is a central element of high-quality care and patient safety. Within hospital settings, communication occurs at multiple levels and across various departments, each of which plays a critical role in the continuum of care. Interdepartmental communication refers specifically to the exchange of information, instructions, patient data, and clinical updates between different units or departments within a hospital, such as Emergency, Surgery, Radiology, Laboratory, Internal Medicine, and Pharmacy. This type of communication is essential for ensuring that patient care is seamless, efficient, and safe. When communication between departments breaks down, the consequences can be grave, leading to delayed diagnoses, treatment errors, and, in the most severe cases, preventable patient deaths.

Hospitals today are increasingly complex organizations, particularly tertiary care and teaching hospitals that handle a diverse range of cases, from routine procedures to high-risk emergencies. In such dynamic environments, the need for well-coordinated communication is especially critical. As patients transition across departments for diagnostics, treatment, surgery, or monitoring, their safety hinges on the accuracy, clarity, and timeliness of information exchange. Breakdowns during these transitions, whether in handovers, referrals, or interdisciplinary consultations, can lead to clinical oversights, delayed interventions, and avoidable complications. Recent research by Vermeir et al. supports this, highlighting that effective communication among healthcare providers significantly improves patient safety, reduces medical errors, and enhances overall care quality (Vermeir et al., 2015). The study emphasizes that structured, bidirectional communication pathways, particularly in multidisciplinary settings, are essential for reducing adverse events and optimizing patient outcomes.

Globally, communication failures have been recognised as one of the primary contributors to patient harm. According to the World Health Organisation (WHO, 2016), breakdowns in communication are responsible for a significant percentage of avoidable medical errors and have been implicated in adverse events such as wrong-site surgeries, medication errors, delayed

responses to deteriorating patients, and diagnostic inaccuracies. The WHO emphasizes that communication problems are not limited to individual misjudgments but often reflect systemic flaws in healthcare delivery processes. These systemic issues may include a lack of standardized communication protocols, inconsistent documentation practices, insufficient staff training, and overreliance on verbal or informal information exchanges.

To address these challenges, various structured communication models have been developed and implemented across healthcare systems worldwide. Among the most widely adopted is the SBAR framework, an acronym for Situation, Background, Assessment, and Recommendation. This model provides healthcare professionals with a standardized method for conveying patient information clearly and concisely. De Meester et al. demonstrated that the implementation of SBAR led to a measurable reduction in unexpected deaths and adverse events in hospitals, particularly during handovers and interdepartmental transitions (De Meester et al., 2013). These findings underscore the importance of having formalised and repeatable communication structures in place, especially in high-stakes environments such as intensive care units and emergency departments.

Despite the benefits of structured communication models, hospitals in low- and middle-income countries (LMICS), including many in sub-Saharan Africa, face considerable obstacles in adopting these frameworks. Challenges such as staff shortages, limited access to communication technologies, high patient loads, and inadequate professional development hinder the establishment of consistent interdepartmental communication systems. Agarwal et al. point out that many LMIC healthcare facilities lack electronic medical records, interoperable systems, or designated communication officers, forcing departments to rely on fragmented or informal channels (Agarwal et al., 2020). This situation creates room for miscommunication, information loss, and delayed responses to urgent clinical needs.

At the Levy Mwanawasa University Teaching Hospital (LMUTH) in Zambia, interdepartmental communication is a critical component of clinical workflow, particularly as the hospital serves as a tertiary referral centre for complex and urgent cases. Efficient communication between departments such as Emergency Medicine, Surgery, Radiology, and Laboratory Services is

essential to minimize treatment delays and optimize patient outcomes. For example, timely imaging for trauma cases often requires rapid coordination between the emergency and radiology units, while laboratory results are vital for surgical decision-making and patient monitoring. When communication across these departments is efficient, it contributes to timely interventions and supports safer patient care.

However, in many healthcare settings, including those in resource-limited contexts, several systemic and operational factors can affect how communication occurs between departments. These may include challenges in referral documentation, variations in communication protocols, technological limitations, or delays in information transmission. Research conducted in similar environments has identified such challenges as significant barriers to effective communication and coordinated care. For example, Okeke et al. report that healthcare systems in sub-Saharan Africa often struggle with communication fragmentation due to the absence of formal channels and integrated systems (Okeke et al., 2020). While specific conditions may vary by institution, these findings emphasize the importance of assessing communication frameworks in local contexts.

Moreover, delays in obtaining diagnostic tests, gaps in the relay of laboratory results, or inconsistencies in referral information can critically impact patients who require multidisciplinary intervention. In time-sensitive cases such as sepsis, internal bleeding, or trauma, even minor delays or miscommunications can result in significant harm. The integration of communication practices and timely collaboration between departments has been recognised as a vital element of patient-centered care and a key strategy in reducing preventable deaths.

Although the link between communication practices and patient outcomes has been extensively studied in high-income countries, there is a notable gap in research focused on low-resource healthcare systems. Limited empirical data exist regarding how interdepartmental communication practices affect patient mortality in Zambia. This lack of data poses a challenge for healthcare leaders and policymakers aiming to improve hospital performance and patient safety outcomes. It also creates an opportunity for research that is context-specific, practical, and responsive to the unique needs of local health systems.

Rationale for the Study

Given the foundational role of communication in healthcare delivery, this study is motivated by the need to generate local evidence that can inform strategies for improving patient outcomes. Investigating the relationship between interdepartmental communication and patient mortality at Levy Mwanawasa University Teaching Hospital offers an opportunity to identify systemic strengths and weaknesses within current communication frameworks. This research aims to contribute to Zambia's growing body of healthcare quality improvement initiatives and to support the development of communication strategies that are feasible, scalable, and sustainable in a resource-constrained environment.

By focusing on the specific interactions between hospital departments, this study seeks to enhance understanding of how communication pathways function in high-demand clinical settings. The findings can inform practical recommendations for improving documentation, handovers, diagnostic coordination, and real-time decision-making processes. Moreover, insights from this research may support future efforts in policy development, staff training, and investment in communication infrastructure, ultimately leading to more coordinated and efficient care.

1.2 Statement of the Problem

Effective communication between hospital departments is essential for providing coordinated and safe patient care. However, communication breakdowns are a leading cause of adverse events, delays in treatment, and preventable patient deaths in healthcare settings (Gordon et al., 2018). At Levy Mwanawasa University Teaching Hospital, which manages a high patient load and complex cases, the lack of advanced communication protocols and barriers such as limited technological support and inadequate staffing may contribute to suboptimal outcomes.

Despite the global recognition of communication as a critical determinant of patient safety, there is a lack of empirical evidence examining the specific relationship between interdepartmental communication and patient mortality in Zambian hospitals. Understanding this link is vital to developing targeted strategies to enhance communication systems, reduce preventable deaths, and improve overall patient care. This research seeks to address this gap by investigating how

interdepartmental communication influences patient mortality at Levy Mwanawasa University Teaching Hospital.

1.3 The Research Questions

1. What are the primary communication barriers between departments at Levy Mwanawasa University Teaching Hospital that contribute to delays in patient care and potential increases in patient mortality?
2. How effective are the current communication protocols and tools in ensuring timely and accurate information exchange between departments?
3. What are the recommended strategies for enhancing interdepartmental communication to reduce patient mortality at Levy Mwanawasa University Teaching Hospital?

1.4 Research Aims and Objectives

Research Aim

To assess the impact of interdepartmental communication on patient mortality at Levy Mwanawasa University Teaching Hospital.

Specific Objectives

1. To identify the specific communication barriers that impede the efficient flow of patient information between departments, leading to delays in care.
2. To evaluate the effectiveness of existing communication protocols and tools used between departments.

1.5 The Scope of the Study

The study will be conducted at Levy Mwanawasa University Teaching Hospital, focusing on communication between key departments such as emergency, surgery, radiology, laboratory, and pharmacy. The research will assess communication practices, barriers to effective communication, and their impact on patient mortality over the past two years. The study will involve hospital staff, including doctors, nurses, and administrative personnel.

1.6 The Significance of the Study

The main objective of this study is to examine the relationship between interdepartmental communication and patient mortality at Levy Mwanawasa University Teaching Hospital.

Specifically, it aims to assess how the processes, quality, and timeliness of communication between departments influence critical patient outcomes. This research is significant as it addresses a crucial gap in understanding the impact of communication practices on patient care within resource-limited hospital settings. By identifying existing communication challenges and evaluating their effect on clinical outcomes, the study seeks to offer evidence-based recommendations for improving care coordination and reducing preventable deaths. The findings will not only inform strategies to enhance healthcare delivery at Levy Mwanawasa University Teaching Hospital but may also have broader relevance for other teaching hospitals in similar contexts facing systemic communication challenges.

1.7 The Organisation of the rest of the report

The report will follow a structured approach, beginning with a Literature Review to explore the impact of interdepartmental communication on patient outcomes. This will be followed by the Theoretical and Conceptual Frameworks, which will provide the foundation for understanding the study's key concepts and guiding principles. The Methodology section will detail the research design, data collection, and analysis methods. Next, the Data Presentation and Analysis section will organize and interpret the collected data using tables, graphs, or charts. The Results and Findings section will highlight key trends and observations. The Discussion will then interpret these findings, comparing them with existing studies and exploring their implications. Finally, the report will conclude with Recommendations for improving communication in healthcare, along with suggestions for further research. A References section and Appendices will provide supporting materials.

CHAPTER 2: LITERATURE REVIEW

2.1 Theoretical Review

Systems Theory

Originally proposed by Ludwig von Bertalanffy in the 20th century, Systems Theory conceptualizes organisations as complex, interdependent systems composed of multiple interacting subsystems (von Bertalanffy, 1968). Within healthcare institutions, each department functions as a critical subsystem, and the efficiency of the whole system depends on the seamless interaction between these parts. For instance, if communication between the emergency and radiology departments is delayed, a patient's diagnosis may be compromised, thereby affecting subsequent care processes and increasing the risk of adverse outcomes. Disruptions in any one component can result in a domino effect across the system, leading to inefficiencies, care delays, and in some cases, elevated patient mortality. Systems Theory underscores the necessity for reliable communication structures and coordination mechanisms across departments to sustain optimal performance and ensure patient safety.

Social Exchange Theory

Social Exchange Theory, developed by George C. Homans, emphasizes the importance of reciprocal relationships and trust in human interactions (Homans, 1958). In the context of healthcare, the theory suggests that mutual respect, perceived fairness, and trust among healthcare professionals promote open communication and collaborative decision-making. When professionals perceive their interactions as constructive and beneficial, they are more likely to share crucial patient information without hesitation. This positive interpersonal dynamic supports comprehensive care planning, reduces duplication of efforts, and enhances the quality of healthcare services. The theory, therefore, provides a psychological and sociological lens through which to understand how interpersonal dynamics within and between departments affect communication efficiency and, ultimately, patient outcomes

Human Error Theory

Formulated by James Reason, the Human Error Theory posits that errors in complex systems, such as hospitals, are often a result of latent conditions rather than individual negligence (Reason, 1990). Latent conditions may include flawed communication channels, lack of standardized procedures, and inadequate supervision. In the context of healthcare, these systemic issues can lead to active

failures, such as incomplete handovers, incorrect treatment orders, or diagnostic omissions. Rather than blaming individuals, the theory advocates addressing the underlying organisational weaknesses that predispose staff to errors. This perspective is particularly relevant to interdepartmental communication, as poorly designed systems can contribute to a breakdown in information flow, increasing the likelihood of preventable complications or deaths. Applying the Human Error Theory helps shift the focus from individual blame to systems-based improvements in communication infrastructure and protocol standardization.

Together, these three theories provide a multi-dimensional framework for analysing the role of interdepartmental communication in hospital settings. They highlight the importance of systemic coordination, interpersonal dynamics, and the need to address structural barriers to improve communication practices and patient outcomes.

2.2 Empirical Review

Global Perspectives

There is a broad global consensus that communication breakdowns are among the leading causes of preventable adverse events in hospitals. Studies across high-income countries consistently link poor communication with increased patient morbidity and mortality. Mortensen et al. found that efficient communication during interdepartmental transfers significantly reduced care delays and improved patient satisfaction, suggesting a direct link between communication quality and patient outcomes (Mortensen et al., 2020). Similarly, Walia et al. demonstrated that incorporating structured multidisciplinary bedside rounds not only improved coordination among care teams but also enhanced the accuracy of treatment plans and reduced clinical errors (Walia et al., 2021).

Structured communication protocols, particularly the SBAR (Situation-Background-Assessment-Recommendation) model, have emerged as widely adopted tools for ensuring clarity in high-stakes environments. Huggins et al. reported that SBAR implementation improved communication clarity, reduced handover-related errors, and elevated both patient safety and staff confidence in communication (Huggins et al., 2018). Furthermore, Schwartz et al. found that ineffective handovers and poor documentation increased the risk of patient mortality by up to 1.8 times. Their findings recommend not only structured communication models but also regular interdisciplinary meetings and the use of health information technologies to improve data accessibility and accuracy (Schwartz et al., 2020). These studies collectively affirm the critical role of formalised communication systems in maintaining safety and efficiency in healthcare delivery.

African and Regional Evidence

In the African context, the relationship between interdepartmental communication and patient outcomes is compounded by additional systemic challenges. Overburdened health systems, understaffed facilities, and limited technological infrastructure often impede timely and effective information exchange. Toney-Butler et al. noted that insufficient training, lack of access to communication devices, and absence of standardized communication protocols hinder coordination among departments in many African healthcare institutions, contributing to diagnostic and treatment delays (Toney-Butler et al., 2023).

A study by Gordon et al. in South Africa revealed that inadequate communication during handovers was a significant factor in adverse events such as medication errors and delayed interventions. The authors recommended adopting structured communication frameworks and training programs to foster a culture of accountability and improved coordination (Gordon et al., 2019). In Kenya, the implementation of digital referral and communication systems during emergency transfers was associated with improved response times and treatment outcomes. Were et al. highlighted how digital tools, when combined with comprehensive staff training and supportive leadership, resulted in reduced delays and enhanced patient care quality (Were et al., 2019).

These regional findings demonstrate that context-specific interventions tailored to resource limitations and healthcare worker capacities can significantly improve interdepartmental communication and related outcomes.

The Zambian Context

Zambia's healthcare system, like others in sub-Saharan Africa, operates under resource constraints and experiences high patient demand. While there is substantial anecdotal evidence suggesting that poor interdepartmental communication contributes to delays in care and adverse outcomes, limited academic literature exists that directly explores this relationship in Zambian hospitals. Informal interviews and observations in public facilities, including Levy Mwanawasa University Teaching Hospital (LMUTH), suggest that lapses in communication, particularly during referrals, shift handovers, and interdepartmental consultations, may lead to diagnostic delays, fragmented care, and increased risk of complications.

Studies conducted in the region offer insights into potentially transferable solutions. Maphumulo and Bhengu emphasize that standardising documentation and promoting the use of checklists during interdepartmental transfers have contributed to measurable improvements in patient care in South African hospitals (Maphumulo et al., 2021). Similarly, the use of mobile communication platforms and electronic health records, though limited in Zambia, has shown promise in improving communication reliability in comparable settings. Integrating such tools within LMUTH's infrastructure could facilitate faster and more accurate communication, particularly for time-sensitive cases such as trauma, sepsis, or obstetric emergencies.

The scarcity of locally focused research on interdepartmental communication and patient outcomes highlights an urgent need to examine this issue in depth. Understanding the specific barriers to effective communication at LMUTH and evaluating how they relate to patient mortality can inform the development of evidence-based strategies tailored to the Zambian healthcare context.

Summary of the Literature Review

The theoretical and empirical literature consistently demonstrates the critical role of interdepartmental communication in shaping patient outcomes. Systems Theory emphasizes the interconnectedness of hospital departments, while Social Exchange Theory highlights the importance of interpersonal trust and reciprocity. Human Error Theory frames communication failures as systemic rather than individual faults, advocating for organisational reform. Globally, empirical studies support the use of structured communication frameworks to reduce errors and mortality. Regionally, evidence from South Africa and Kenya illustrates the effectiveness of targeted interventions even in resource-limited settings.

Although Zambia shares many of the systemic challenges faced by its regional counterparts, the absence of comprehensive local data underscores the importance of context-specific research. This study seeks to bridge that gap by examining the relationship between interdepartmental communication and patient mortality at Levy Mwanawasa University Teaching Hospital, providing insights that could shape healthcare practices both locally and in comparable settings.

2.3 Theoretical Framework

This chapter presents the theoretical underpinnings that guide the study. It draws upon Systems Theory and Social Exchange Theory to provide a structured understanding of how interdepartmental communication impacts patient mortality within hospital settings. These

theories offer complementary perspectives, structural and relational, that help frame the complex nature of hospital operations and communication dynamics.

Systems Theory

Originally developed by Ludwig von Bertalanffy, The Systems Theory views an organisation as a complex system composed of interrelated and interdependent components (von Bertalanffy, 1968). Within the context of a hospital, this includes departments, healthcare workers, protocols, and technologies, all working together to deliver patient care. The effective functioning of the system requires seamless communication and coordination among its parts. Any communication breakdown can cause systemic inefficiencies, leading to delayed diagnoses, treatment errors, and adverse patient outcomes, including mortality.

By applying Systems Theory, this study examines the hospital not as a collection of isolated departments but as a single system in which communication is a critical feedback mechanism. The theory helps explain how failures in one area, such as miscommunication between departments, can ripple through the entire system and negatively affect patient safety.

Social Exchange Theory

The Social Exchange Theory, proposed by George Homans (Homas, 1958) and further developed by Blau and Emerson, is grounded in the notion that human relationships are formed by the use of a subjective cost-benefit analysis and the comparison of alternatives. In the healthcare setting, it emphasizes the importance of trust, respect, and reciprocity in interactions among professionals. The theory suggests that when healthcare workers perceive communication as fair, respectful, and beneficial, they are more likely to engage in collaborative behaviour, share critical information, and support one another in clinical decision-making.

By using Social Exchange Theory, the study investigates how interpersonal relationships and professional interactions influence the quality of communication and, subsequently, patient outcomes. Trust and mutual respect among staff are expected to foster stronger collaboration and fewer communication-related errors.

Core Premise

Effective interdepartmental communication is essential for the delivery of timely and safe healthcare. When communication is clear, complete, and consistent, it enhances coordination, minimizes duplication of effort, and prevents clinical oversights. Conversely, failures in

communication disrupt workflow, contribute to misdiagnosis or delayed interventions, and significantly raise the risk of mortality.

Key Constructs

To operationalize the study, the following constructs are used:

- **Communication Quality**: The degree to which information shared between departments is accurate, timely, clear, and comprehensive. It includes both formal (e.g., written referrals, handover notes) and informal (e.g., verbal consultations) communication.
- **Collaboration**: The level of teamwork, trust, and mutual respect demonstrated by healthcare professionals across departments. Strong collaboration promotes shared decision-making and coordinated action.
- **Patient Outcomes**: Primarily focusing on **mortality rates** but also including secondary indicators such as length of hospital stay, incidence of adverse events, and readmission rates, which collectively reflect the quality and safety of care.

Moderating Variables

The study acknowledges several variables that may influence the strength or direction of the relationship between communication and patient outcomes:

- **Resource Availability**: This includes the adequacy of staffing, medical equipment, and communication infrastructure (e.g., electronic health records, internal communication tools). Insufficient resources can hinder effective communication.
- **Workload and Staffing Levels**: High workloads and understaffing may contribute to rushed or omitted communication, increasing the likelihood of medical errors.
- **Training and Competency**: The extent to which healthcare workers are trained in communication protocols such as SBAR and interprofessional communication skills. Proper training enhances clarity, consistency, and confidence in communication practices.

Application to the Study

This theoretical framework provides the lens through which interdepartmental communication practices will be assessed at the Levy Mwanawasa University Teaching Hospital. By integrating both structural (Systems Theory) and relational (Social Exchange Theory) perspectives, the study seeks to uncover how communication dynamics influence patient mortality and identify potential leverage points for intervention. The framework will guide data collection, analysis, and

interpretation of findings, ensuring that both organisational systems and human interactions are adequately considered.

2.4 Conceptual Framework

Model Overview

The conceptual framework illustrates the relationship between interdepartmental communication and patient mortality.

Key Component	Description
Interdepartmental Communication	Refers to the frequency, timeliness, accuracy, and clarity of information exchanged between different hospital departments. Including both verbal and written communication and encompassing formal mechanisms such as referral notes and handover protocols, as well as informal consultations. Ineffective communication at this level often results in fragmented care and clinical errors.
Patient Safety	Encompasses all processes and systems implemented to minimise the risk of harm to patients during healthcare delivery. This includes error reporting systems, adherence to clinical guidelines, effective handovers, and safety checklists. Patient safety acts as a buffer between communication practices and outcomes, determining whether poor communication results in adverse events or is mitigated through safety mechanisms.
Patient Mortality	Refers to the number or rate of patient deaths occurring within a specific timeframe (e.g., during hospital admission or within 30 days post-discharge). This is used as the primary outcome indicator of healthcare quality and is influenced by both direct clinical care and systemic factors such as coordination, communication, and safety practices.

Table 1: Model overview of the conceptual framework.

Theoretical Linkages

- **From Communication to Safety**: Clear, timely, and structured communication ensures that all departments involved in patient care are aligned, reducing the risk of omissions, duplications, or errors.

- **From Safety to Mortality**: Strong patient safety systems reduce preventable complications such as medication errors, surgical delays, or misdiagnoses factors that have been consistently linked to higher mortality rates,
- **Indirect Link**: While poor communication alone may not directly cause mortality, its effect is mediated through lapses in safety practices that ultimately jeopardize patient survival.

Hypothesized Relationship

The model posits that improvements in interdepartmental communication enhance patient safety mechanisms, which, in turn, reduce patient mortality rates. Factors such as resource availability, workload, and staff training serve as moderators that can strengthen or weaken this relationship.

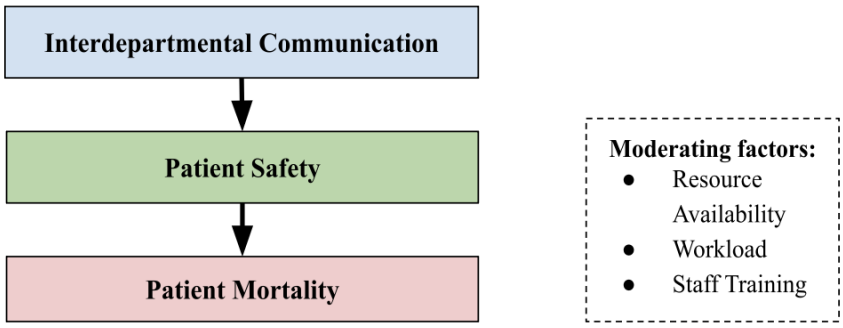


Figure 1: Graphical representation of the conceptual framework.

CHAPTER 3: METHODOLOGY

3.1 The Research Design

A descriptive cross-sectional design guided this study. This design was suitable as it facilitated data collection at a single point in time, offering a clear representation of the state of interdepartmental communication and its relationship with patient mortality (Bryman, 2015). By capturing participants' perceptions, the study identified communication gaps that may have contributed to patient care challenges.

3.2 The Research Population

The study population consisted of healthcare professionals employed at LMUTH. This included individuals directly involved in patient care and interdepartmental communication, such as doctors, nurses, radiologists, laboratory technicians, pharmacists and administrative staff.

3.3 Sampling Design and Sample Size

The sample size for this study was determined using the Yamane formula for finite populations to ensure adequate representation and statistical validity. With an estimated total population of 906 healthcare staff at Levy Mwanawasa University Teaching Hospital (LMUTH), a 90% confidence level and a 10% margin of error were applied, resulting in a calculated sample size of 90 participants. To achieve a balanced representation, a stratified random sampling technique was employed. Each department, including surgery, paediatrics, radiology, and laboratory, was treated as a separate stratum, and participants were randomly selected within these strata to minimise selection bias. The inclusion criteria required participants to have direct involvement in patient care and communication processes, with a minimum of six months of work experience at LMUTH.

3.4 Data Collection

The primary method of data collection was a structured questionnaire. The questionnaire was designed to capture healthcare professionals' perceptions of interdepartmental communication, including;

- Communication clarity, frequency, and effectiveness.
- Challenges and barriers to effective information sharing.
- Perceived impacts of communication on patient outcomes, particularly mortality.

The questionnaire utilised a Likert scale to measure responses and ensure consistency. Questions were adapted from validated tools such as the SBAR (Situation, Background, Assessment,

Recommendation) communication framework to maintain reliability (Shahid et al., 2018). Before implementation, the questionnaire underwent a pilot test to refine wording, ensure clarity, and confirm reliability.

3.5 Data Analysis

The collected data were analyzed using both descriptive and inferential statistics to provide a thorough understanding of communication quality and its potential impact on patient outcomes. Descriptive statistics, including frequencies, means, and percentages, were applied to summarize respondents' demographic characteristics and their perceptions of communication quality across various departments. These statistics helped identify trends and patterns, such as the frequency, clarity, and timeliness of communication as perceived by the respondents.

3.6 Study Variables (Independent, Dependent, Control)

Independent Variable (IV):

- Interdepartmental Communication (Measured by clarity, frequency, effectiveness, and use of structured communication tools like SBAR)

Dependent Variable (DV):

- Patient Mortality (Measured by mortality rates and reported cases of adverse patient outcomes related to communication failures)

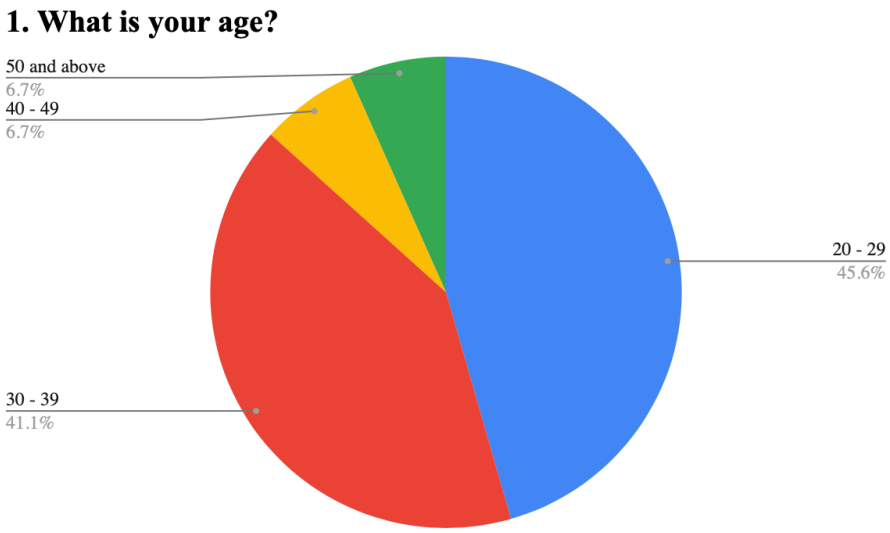
Control Variables:

These are factors that could influence patient mortality but are not the primary focus of the study. They are kept constant or accounted for to ensure valid results. Examples include:

- Patient Factors (age, underlying health conditions, severity of illness)
- Healthcare Provider Factors (experience level, workload, adherence to protocols)
- Hospital Resources (availability of medical equipment, staffing levels, hospital policies)

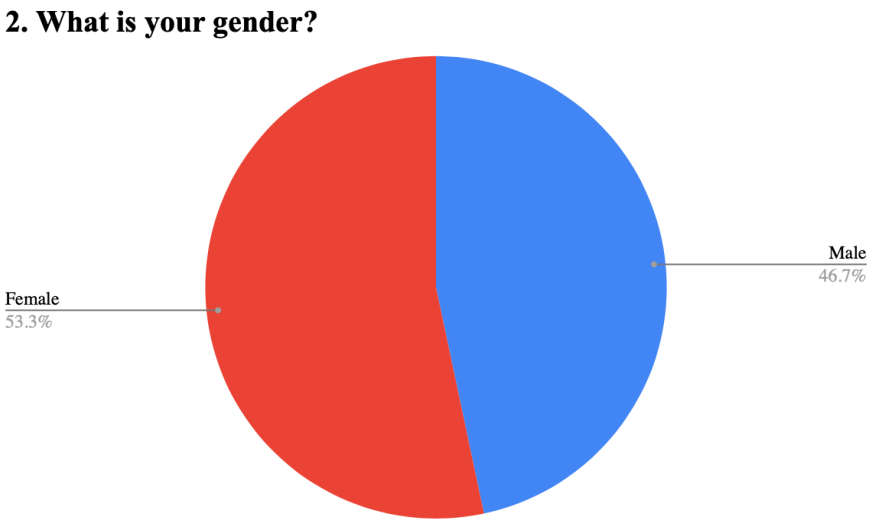
CHAPTER 4: RESEARCH FINDINGS AND DATA PRESENTATION

The study included a total of 90 participants drawn from various clinical and technical departments at Levy Mwanawasa University Teaching Hospital (LMUTH). These participants represented a diverse range of demographic characteristics, professional roles, and work experiences. A breakdown of the age distribution revealed that 45.6% of participants were aged between 20 and 29 years, while 41.1% fell within the 30 to 39-year age group. The remaining participants included 6.7% who were between 40 and 49 years, and another 6.7% aged between 50 and 59 years. These statistics indicate that a majority of the respondents were relatively young professionals, with a strong representation of early- and mid-career healthcare workers.



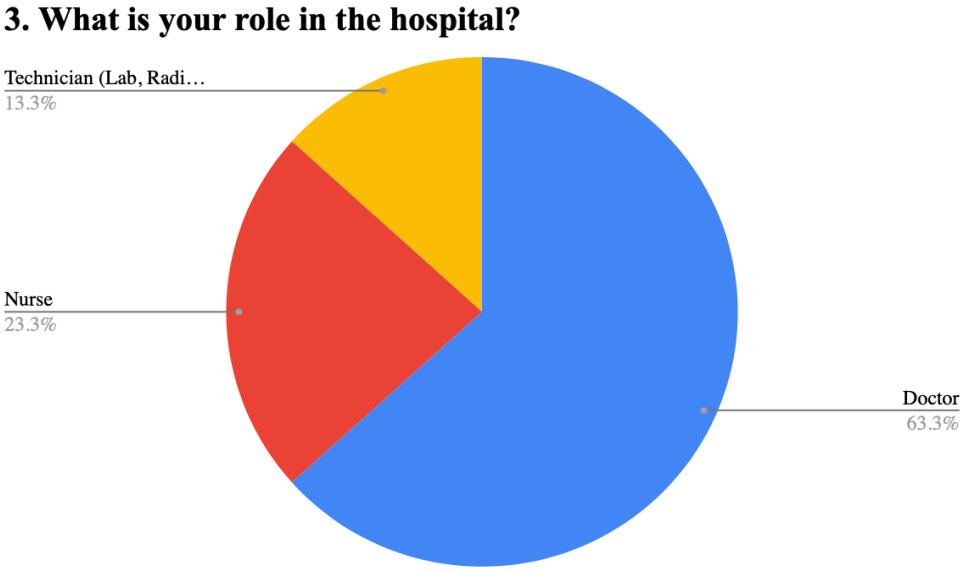
Graph 1: Graphical representation of age distribution.

Regarding gender distribution, 53.3% of the respondents were female, while 46.7% were male. This reflects a slightly higher female participation, which is consistent with the broader gender composition often observed in healthcare institutions, particularly within nursing and some allied health professions.



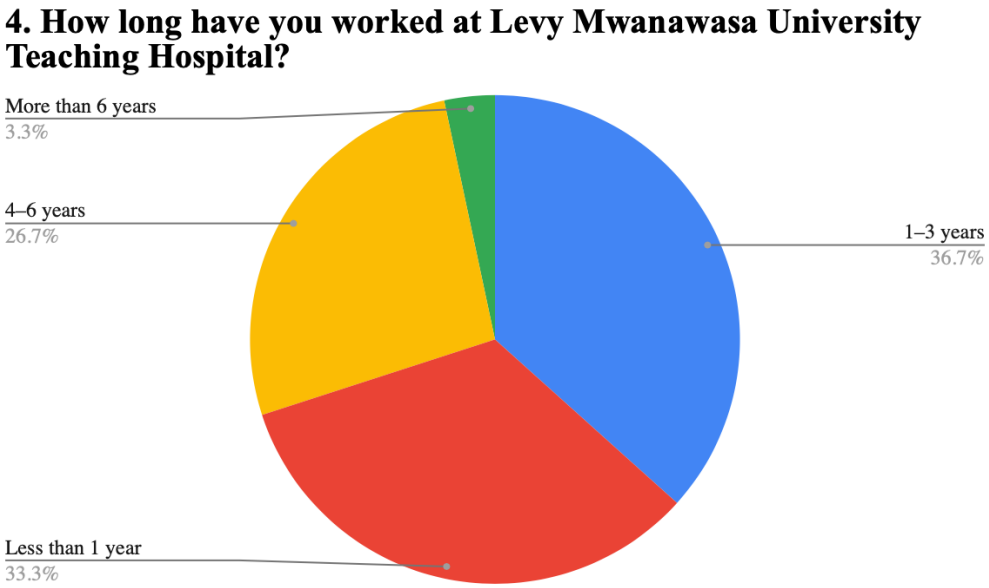
Graph 2: Graphical representation of gender distribution.

In terms of the participants' professional roles within the hospital, the majority (63.3%) were medical doctors. Nurses accounted for 23.3% of the participants, while the remaining 13.3% comprised technicians, including those working in laboratory and radiology services. This professional spread ensured that the study captured perspectives across key clinical functions, offering a well-rounded understanding of interdepartmental communication practices and their perceived implications for patient care.



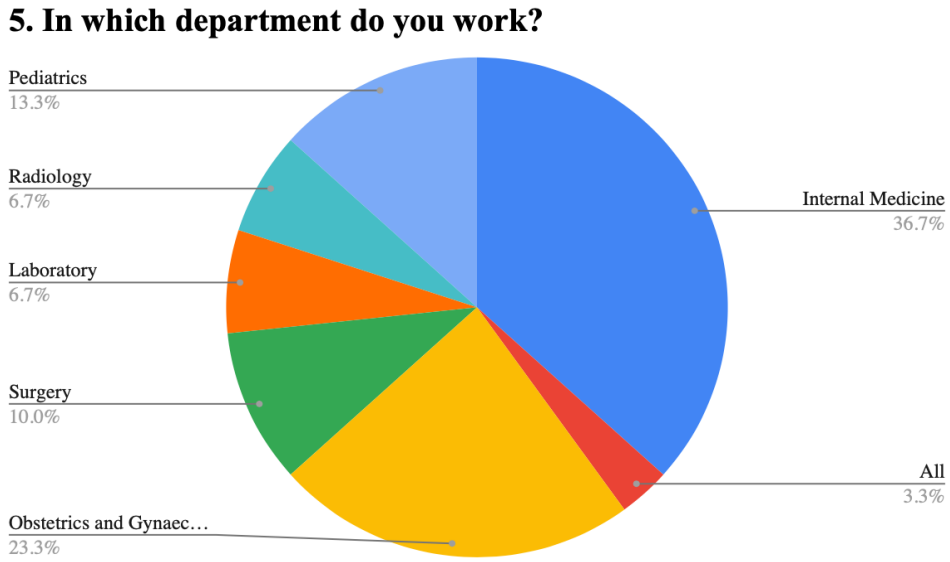
Graph 3: Graphical representation of professional roles.

Participants had varying durations of service at LMUTH. Specifically, 36.7% had worked at the hospital for between 1 and 3 years, while 33.3% had been employed for less than one year. Meanwhile, 26.7% had served between 4 and 6 years, and only 3.3% had been with the institution for more than six years. This shows that the majority of participants were relatively new to the institution, which may influence their perspectives on institutional communication culture and systems.



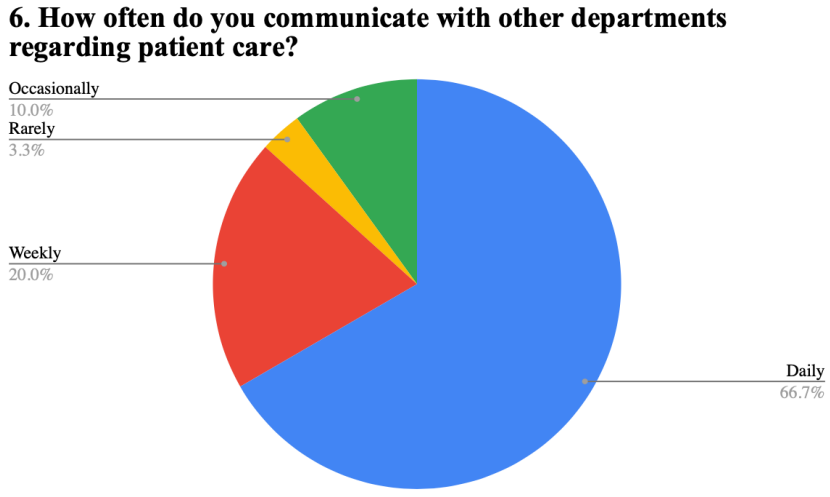
Graph 4: Graphical representation of duration of service at LMUTH.

Departmental representation showed that 36.7% of participants were affiliated with internal medicine, making it the most represented specialty in the study. Obstetrics and gynaecology accounted for 23.3%, while pediatrics made up 13.3% of the sample. The surgery department was represented by 10.0% of participants, the laboratory with 6.7 % and the radiology department accounted for 6.7% as well. This distribution reflects the broad operational scope of the hospital and ensures that communication practices across both medical and diagnostic departments were evaluated.



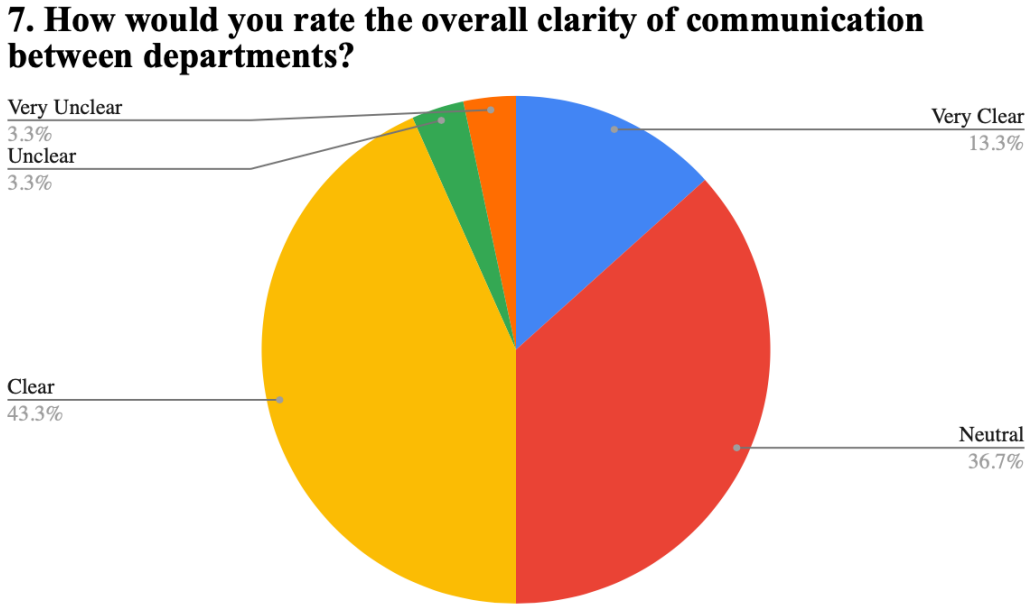
Graph 5: Graphical representation of affiliated departments.

Participants were asked about the frequency with which they communicate with other departments regarding patient care. A majority (66.7%) indicated that such communication occurs daily, reflecting the high interdependence among departments in the clinical setting. Another 20.0% reported weekly communication, 10.0% stated that communication occurred only occasionally, while 3.3% rarely communicated with other departments. These responses underscore the routine necessity for interdepartmental collaboration, particularly for patient management and emergency cases.



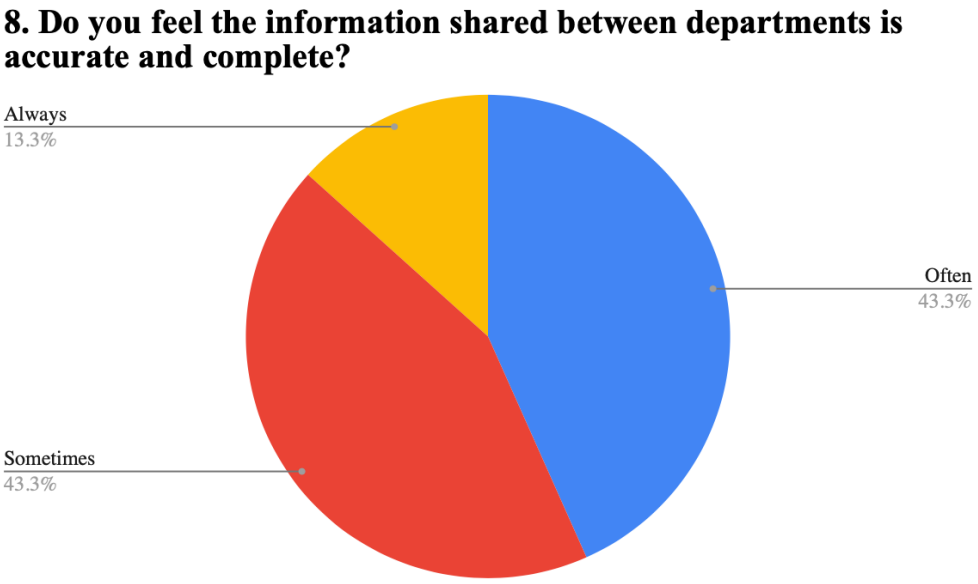
Graph 6: Graphical representation of frequency of communication with other departments.

Regarding the clarity of communication between departments, 43.3% of respondents rated it as "clear", 36.7% as "neutral" (neither clear nor unclear), and 13.3% as "very clear". A small minority indicated that communication was unclear (3.3%) or very unclear (3.3%). This variation highlights that while many healthcare workers perceive interdepartmental communication as generally functional, there is still a significant proportion who believe it is suboptimal or lacking consistency.



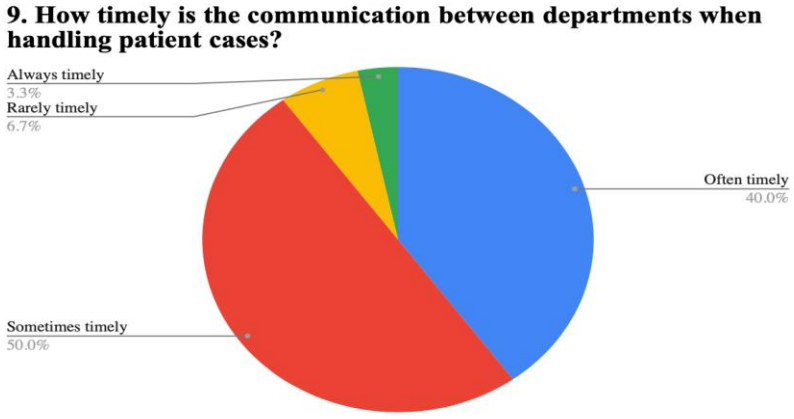
Graph 7: Graphical representation of clarity of communication between departments.

In assessing the accuracy and completeness of the information shared between departments, 43.3% of participants felt that communication was often both complete and accurate. Another 43.3% stated that information was often accurate but perhaps not always complete, while 13.3% indicated that information was always both complete and accurate. These responses suggest that while most communication was generally perceived as reliable, gaps still exist that could lead to clinical misjudgment or delayed interventions thus impacting patient outcomes.



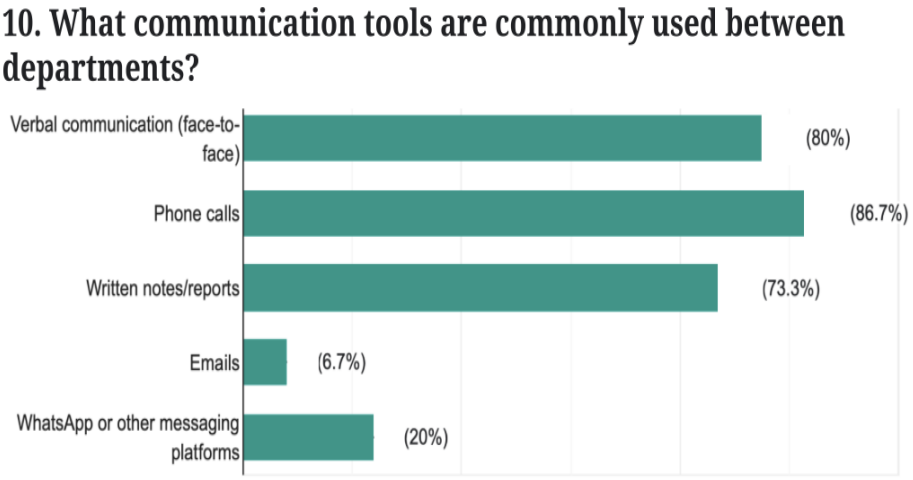
Graph 8: Graphical representation of accuracy and completeness of information shared between departments.

Timeliness is another critical dimension of effective communication in healthcare. Participants were asked to evaluate how timely interdepartmental communication was, particularly during the management of patient cases. Forty percent (40.0%) reported that communication was "often timely", 30.0% described it as "sometimes timely", while 6.7% said it was "rarely timely". Only 3.3% believed communication was always timely. These findings suggest that although time-sensitive communication occurs in many instances, delays are still common, potentially contributing to inefficiencies or adverse outcomes.



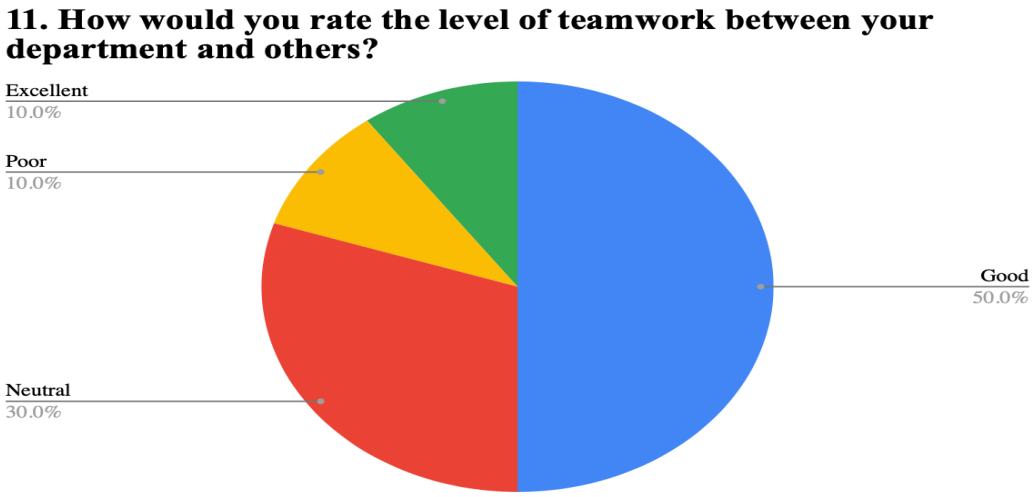
Graph 9: Graphical representation on how timely communication between departments is when handling patient cases.

The study also examined the communication tools commonly used for interdepartmental interactions. The most frequently used method was phone calls, followed by direct verbal communication. Other tools included written notes or reports, digital messaging platforms such as WhatsApp, and, to a lesser extent, emails. This preference for informal, real-time communication methods highlights a reliance on speed and accessibility, though it may raise concerns about documentation and traceability in formal clinical records.



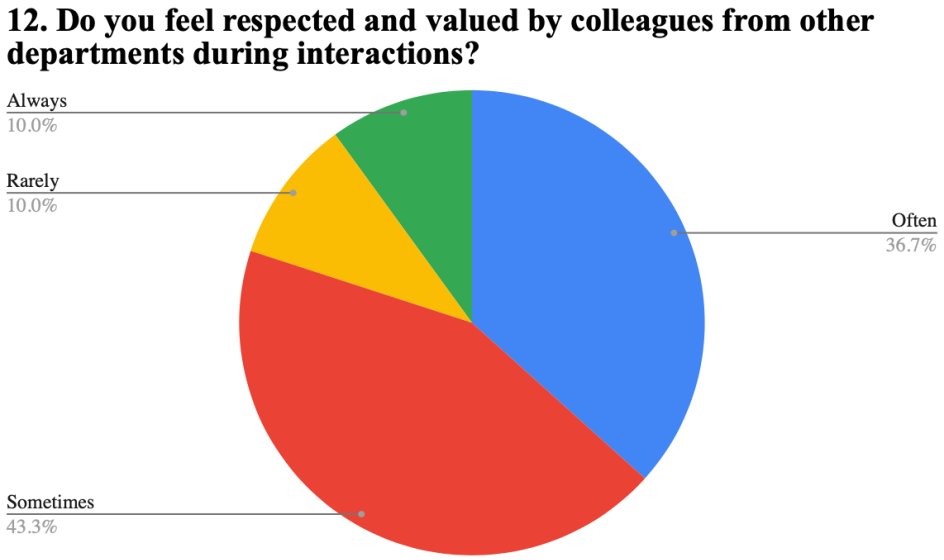
Graph 10: Graphical representation of commonly used communication tools between departments.

When asked to rate the level of teamwork between their department and others, half of the respondents (50.0%) described it as good. Meanwhile, 30.0% were neutral, 10.0% rated teamwork as excellent, and another 10.0% rated it as poor. While the majority viewed interdepartmental collaboration positively, the presence of a neutral or negative response among 40.0% of participants indicates room for improvement in fostering mutual support and coordination.



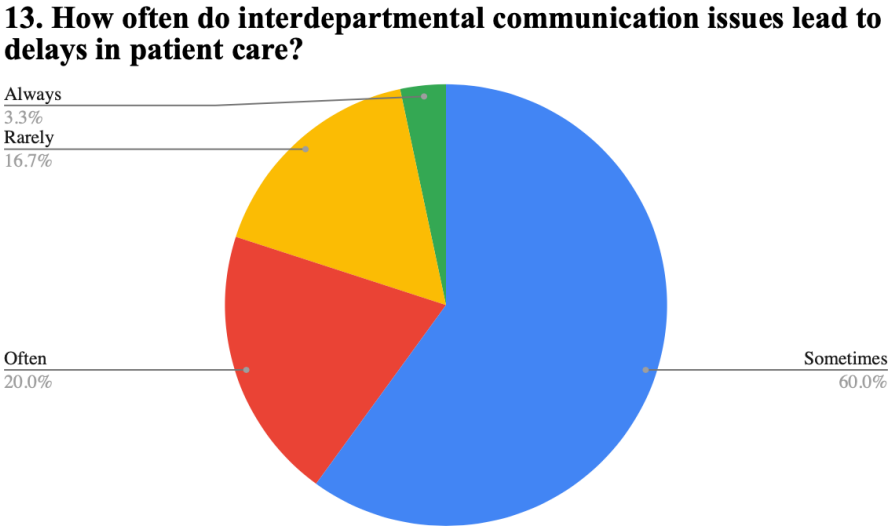
Graph 12: Graphical representation on the level of teamwork between participants' department and others.

The extent to which participants felt respected and valued by colleagues from other departments was also explored. About 43.3% said they "sometimes" felt respected, 36.7% said they "often" felt respected, 10.0% "always" felt respected, and another 10.0% stated they "rarely" felt respected. These sentiments suggest variability in interpersonal dynamics between departments, which could influence communication effectiveness.



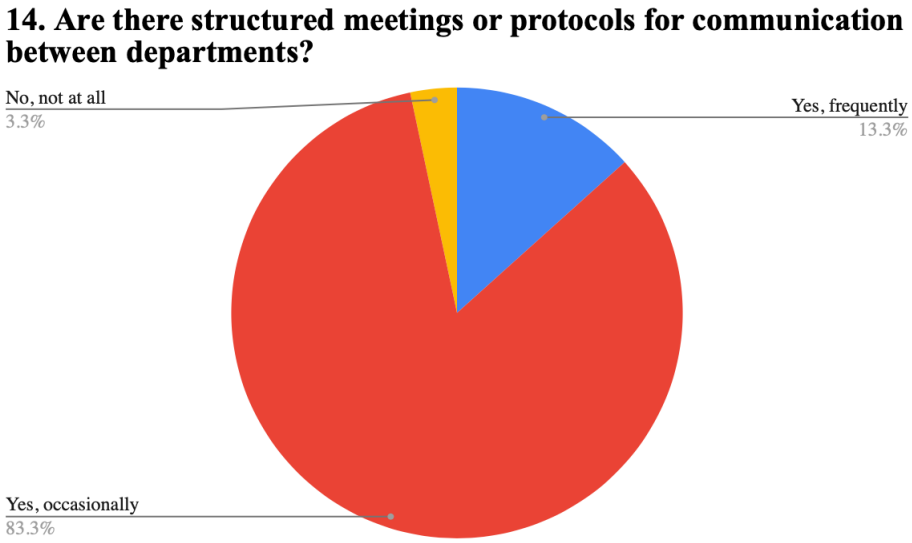
Graph 12: Graphical representation on how respected participants felt from other departments during interactions.

Participants were asked how often communication breakdowns led to delays in patient care. Sixty percent reported that this happened “sometimes”, 20.0% said “often”, 16.7% said “rarely”, and 3.3% indicated “always”. This shows that communication failures are a significant and recurring issue that can affect the quality and timeliness of care provided to patients.



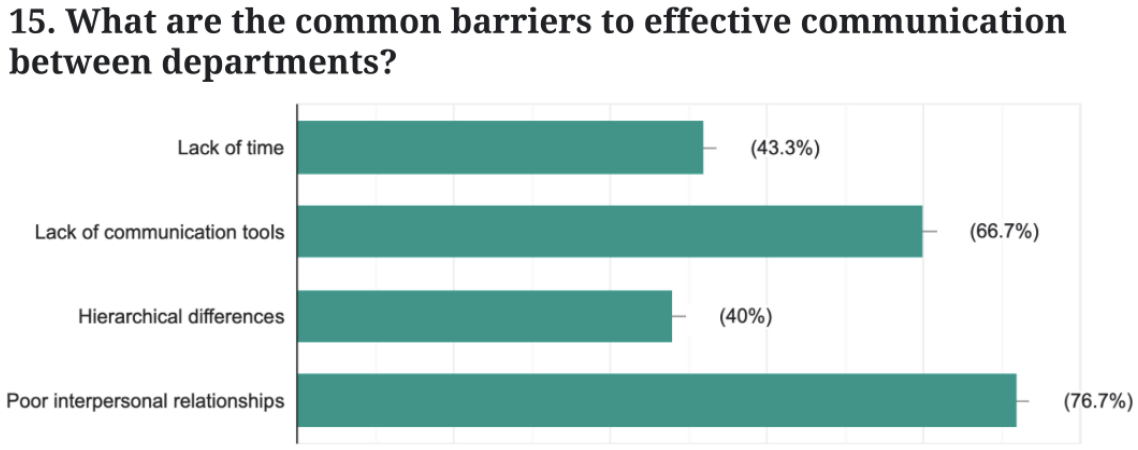
Graph 13: Graphical representation on how often interdepartmental communication issues lead to delays in patient care.

On the presence of structured protocols or formal meetings for interdepartmental communication, 83.3% of respondents said such structures existed occasionally, while 13.3% said they were frequent. A small proportion (3.3%) reported no structured communication mechanisms. These findings suggest that although there are systems in place for coordination, they may not be consistently utilized or institutionalized across all departments.



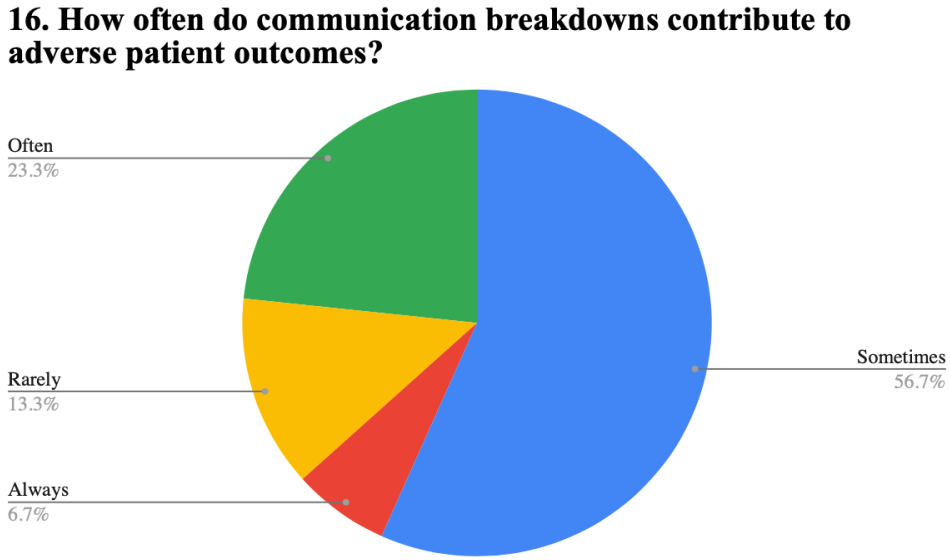
Graph 14: Graphical representation of presence of structured meetings or protocols for communication between departments.

When asked about barriers to effective communication, participants identified several key challenges. The most commonly cited obstacles were poor interpersonal relationships and the lack of appropriate communication tools. Others mentioned lack of time/ time constraints and hierarchical differences, where junior staff felt unable to challenge or question decisions made by those in senior positions or found it difficult to consult senior professionals from other departments. These barriers underscore the need for cultural and infrastructural reforms within hospital communication systems.



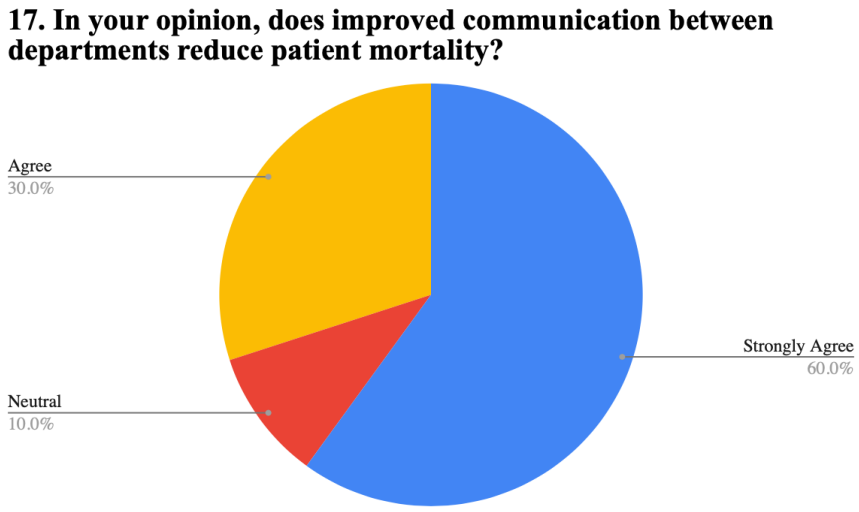
Graph 15: Graphical representation of the common barriers to effective communication.

Participants were also asked how frequently communication failures contributed to adverse patient outcomes. About 56.7% reported this occurred “sometimes”, 23.3% said “often”, 13.3% said “rarely”, and 6.7% indicated “always”. These findings emphasize the clinical significance of communication in preventing adverse patient outcomes and underscore the necessity of strengthening communication strategies.

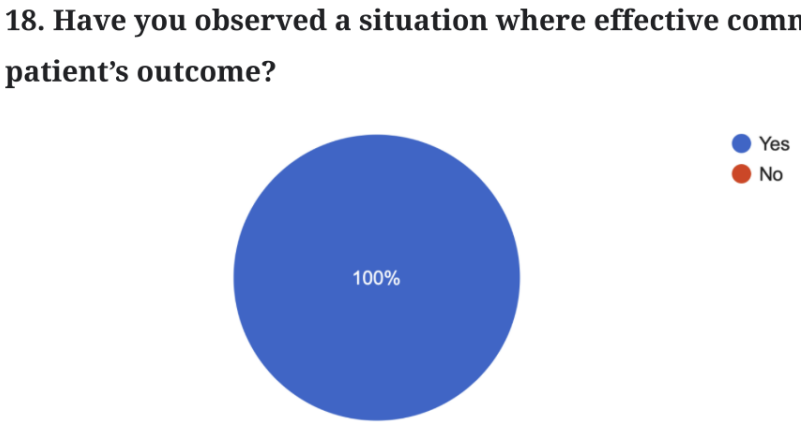


Graph 16: Graphical representation of how often communication breakdowns contribute to adverse patient outcomes.

The study further explored whether improved interdepartmental communication could reduce patient mortality. A substantial majority of participants (60.0%) strongly agreed, while 30.0% agreed, and 10.0% were neutral. Notably, 100% of participants stated they had personally witnessed cases where effective communication led to better patient outcomes. This unanimous agreement adds strong support to the notion that timely and clear interdepartmental communication is a vital component of safe patient care.

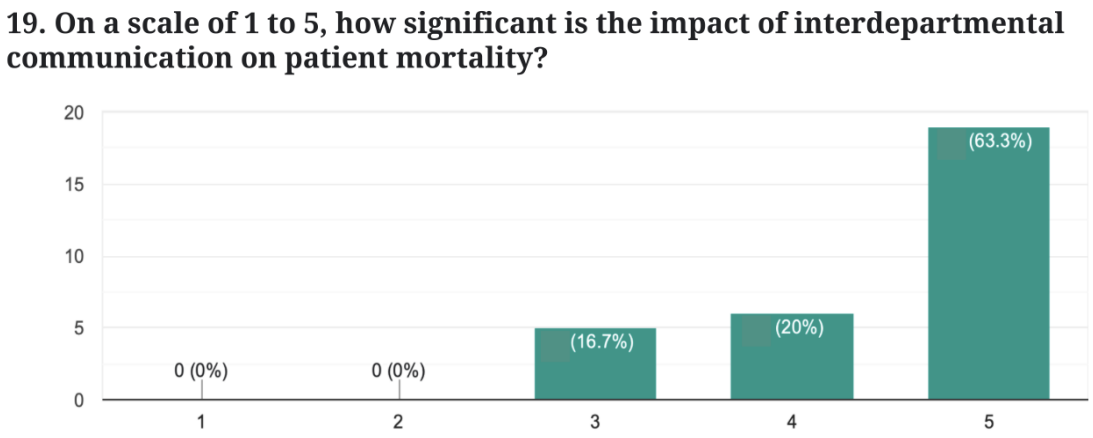


Graph 17: Graphical representation on whether improved communication between departments reduces patient mortality.



Graph 18: Graphical representation of a situation where effective communication improved a patient's outcome.

On a scale of 1 to 5 (with 5 being the highest), participants were asked to rate the perceived impact of interdepartmental communication on patient mortality. A majority (63.3%) rated the impact as 5, while 20.0% rated it a 4 and 16.7% rated it a 3. These high ratings suggest that healthcare professionals consider communication a critical determinant of patient outcomes.



Graph 19: Graphical representation of the impact of interdepartmental communication on patient mortality.

Finally, participants were invited to offer recommendations for improving interdepartmental communication and reducing patient mortality. The most common suggestions included increasing the frequency and quality of communication between departments. Many advocated for regular interdepartmental meetings, especially during critical periods such as patient handovers and emergencies. Participants also emphasized the need for better communication tools such as pager phones, structured consultation forms, and in-person visits to enhance clarity and reduce delays. Some proposed investing in more communication equipment to address device shortages. Cultural shifts were also recommended, including promoting openness, encouraging staff to raise concerns without fear, and holding frequent feedback sessions to evaluate communication processes. Overall, there was a strong consensus on the importance of developing systematic, proactive, and technology-supported communication strategies to enhance collaboration and ultimately prevent avoidable patient harm.

CHAPTER 5: DISCUSSION AND INTERPRETATION OF RESULTS

This chapter presents a critical analysis of the study's findings in relation to the overall aim and specific objectives. The central aim was to evaluate the influence of interdepartmental communication on patient mortality at Levy Mwanawasa University Teaching Hospital (LMUTH). The discussion is organized around the two specific research objectives:

1. To explore communication barriers that hinder the efficient exchange of patient information between departments, contributing to care delays.
2. To assess the effectiveness of current communication protocols and tools used across hospital departments.

The interpretation of findings is grounded in the study's theoretical framework, which includes Systems Theory, Social Exchange Theory, and Human Error Theory. Relevant literature is integrated to contextualize the results. Furthermore, this chapter addresses the research hypotheses to determine whether they were supported by empirical evidence.

Addressing Objective 1: Identifying Communication Barriers

The primary objective of this study was to identify the key barriers to effective interdepartmental communication that interfere with the timely and accurate exchange of patient information at Levy Mwanawasa University Teaching Hospital (LMUTH). Analysis of the data revealed a range of consistent and deeply embedded obstacles across departments, which collectively hinder communication and, by extension, compromise patient safety and outcomes.

A major barrier identified was the strained interpersonal relationships among healthcare staff, often stemming from departmental tensions or isolated professional practices. These strained dynamics fostered environments where collaboration was limited and trust was eroded. Such conditions discourage open dialogue and mutual respect which are both essential for effective information exchange, particularly during critical moments in patient care.

A closely related issue was the prevalence of rigid hierarchical structures, which discouraged junior staff from questioning or seeking clarification from more senior professionals. This form of institutionalized intimidation leads to suppressed concerns, unvoiced doubts, and incomplete transmissions of crucial patient information. Sutcliffe et al, emphasize that lack of role clarity and entrenched power imbalances are fundamental contributors to communication breakdowns in hospital settings (Sutcliffe et al., 2017).

Another significant barrier was the continued reliance on outdated communication tools, such as undocumented verbal communication and standard phone calls. While these tools are commonly used for their immediacy, they lack permanence, traceability, and standardization key elements necessary for ensuring accuracy and accountability in clinical communication. The absence of structured handover protocols, especially during emergencies and shift changes, further exacerbated the potential for information loss, misinterpretation, and delayed interventions.

In addition, time constraints and poorly synchronized departmental schedules were frequently cited as systemic barriers to coordinated care. These logistical inefficiencies reduce opportunities for face-to-face communication and often lead to hurried, incomplete exchanges, particularly in high-pressure or time-sensitive scenarios.

These communication challenges had tangible consequences. According to survey results, 60% of participants reported that communication breakdowns "sometimes" led to delays in patient care, and 56.7% acknowledged that these failures "sometimes" contributed to adverse patient outcomes, including mortality. These statistics lend strong empirical support for rejecting the null hypothesis (H_{02}) and accepting the alternative hypothesis (H_{12}): that barriers to interdepartmental communication significantly contribute to patient mortality.

To interpret these findings, the Social Exchange Theory offers a valuable conceptual framework. This theory posits that relationships grounded in trust, reciprocity, and perceived mutual value promote greater openness and cooperation. However, the participants in this study frequently reported feeling disrespected, undervalued, or ignored, particularly in multidisciplinary interactions. These perceptions of imbalance and limited mutual respect obstruct open communication and sustain fragmented information flow. It is clear from the findings that to reduce communication breakdowns, healthcare institutions must foster environments that prioritize mutual respect, interprofessional collaboration, and psychological safety.

In summary, the study confirms that communication barriers at LMUTH are both interpersonal and systemic. Addressing these issues will require institutional changes that flatten hierarchies, promote team-building, invest in communication infrastructure, and enforce standardized communication practices. Without such changes, these barriers will continue to jeopardize patient safety and contribute to avoidable mortality.

Addressing Objective 2: Evaluating Existing Communication Protocols and Tools

The second objective of the study was to evaluate the current communication protocols and tools in use across departments and assess their effectiveness in facilitating accurate, timely information exchange. Although 66.7% of participants reported engaging in interdepartmental communication on a daily basis, a closer examination of the quality of that communication reveals significant shortcomings. Only 13.3% described the communication as "very clear," and a mere 3.3% believed it was "always timely." These findings reveal a critical distinction: frequency of communication does not necessarily equate to its effectiveness.

The study found that informal communication methods, such as direct phone calls or verbal exchanges, dominated interdepartmental interactions. While these tools may provide speed and convenience in certain clinical contexts especially during emergencies, they lack the necessary structure, consistency, and traceability required for safe patient care. Verbal communication, particularly when undocumented, creates room for misunderstanding, omission, and miscommunication, especially when messages are passed across multiple people or shifts.

Moreover, there was minimal evidence of systematic use of formalized communication tools, such as SBAR (Situation-Background-Assessment-Recommendation) or secure digital platforms, both of which are recommended by global best practices for enhancing clarity, reducing ambiguity, and ensuring documentation. This gap between recommended standards and actual practice represents a missed opportunity for improving communication quality and patient safety.

Based on these findings, we can reject Hypothesis H_{01} and accept Hypothesis H_{11}, which states that the clarity, frequency, and effectiveness of communication significantly impact patient mortality. This conclusion is strongly supported by literature. For instance, Shahid and Thomas argue that tools like SBAR enhance information transfer and decision-making by providing a shared mental model across clinical staff (Shahid & Thomas, 2018).

Participants in the study identified several interventions they believed could improve communication:

- Training on and consistent use of structured tools like SBAR.
- Introduction of digital platforms, such as secure messaging apps or hospital intranet systems for real-time communication and documentation.
- Standardized protocols for critical care communication, especially during emergencies and shift handovers.

- Routine interdisciplinary meetings aimed at fostering coordination, clarifying responsibilities, and reinforcing communication norms.

These recommendations are aligned with best practices in clinical communication. A study by Starmer et al. found that implementing structured handoff programs reduced medical errors by 23% and preventable adverse events by 30% (Starmer et al., 2014). It is likely that LMUTH could achieve similar improvements in patient safety outcomes if such measures were adopted and institutionalized.

Perceived Impact of Communication on Patient Mortality

The final part of the study examined the extent to which healthcare providers perceive communication failures as contributing to patient mortality. The results were both consistent and compelling. A significant 60% of participants strongly agreed, and 30% agreed, that improved communication could directly reduce patient mortality. Furthermore, 63.3% rated the impact of communication on patient mortality as 5 out of 5, indicating a strong consensus on the importance of this issue. Notably, 100% of respondents reported witnessing at least one instance where effective communication positively impacted a patient's outcome.

These perceptions validate the overall conclusion of this study and provide robust support for rejecting the main null hypothesis (H_0) and accepting H_1: that interdepartmental communication significantly affects patient mortality.

This conclusion is well-supported by global evidence. According to The Joint Commission, up to 70% of sentinel events in hospitals are attributed to communication failures (The Joint Commision, 2021). Furthermore, the World Health Organization (2016) has repeatedly emphasized the importance of effective clinical communication as a foundational component of patient safety. The WHO identifies poor communication as a major contributor to misdiagnoses, delayed treatment, medical errors, and preventable complications.

At LMUTH, as participants indicated, clearer and more timely communication could directly reduce such risks, particularly in emergency scenarios, transitions of care, and multidisciplinary treatment planning. By aligning hospital communication strategies with evidence-based practices, including standardized protocols, digital tools, and interprofessional collaboration models, it is possible to meaningfully reduce preventable mortality and improve overall patient outcomes.

Hypothesis Testing Summary

The table below summarizes the hypothesis testing results based on study findings:

Hypothesis	Result	Interpretation
H_0: Interdepartmental communication has no significant effect on patient mortality.	Rejected	Communication significantly affects patient outcomes.
H_1: Interdepartmental communication significantly affects patient mortality.	Accepted	Strong link confirmed between communication and mortality.
H_{01}: Communication clarity, frequency, and effectiveness do not significantly impact mortality.	Rejected	These elements strongly influence care outcomes.
H_{11}: Communication clarity, frequency, and effectiveness significantly impact mortality.	Accepted	Quality communication improves patient safety.
H_{02}: Communication barriers do not contribute to patient mortality.	Rejected	Barriers are a significant contributing factor.
H_{12}: Communication barriers significantly contribute to mortality.	Accepted	Institutional and interpersonal obstacles harm outcomes.

All null hypotheses were rejected in light of the study's findings, while the alternative hypotheses were accepted. The results indicate a strong perceived connection between communication quality and patient safety.

Theoretical Framework Application

The findings of this study align closely with the theoretical frameworks that underpinned its design Systems Theory, Social Exchange Theory, and Human Error Theory each of which helps explain how communication failures occur and why they persist within complex hospital environments like LMUTH.

a) Systems Theory

Systems Theory conceptualizes healthcare organizations as complex, interdependent systems, where each department or professional role operates as a "node" within a broader network. In such a system, communication is the critical mechanism that ensures coordination, continuity, and alignment across various nodes. The study revealed significant breakdowns at these points particularly during patient handovers, interdisciplinary coordination, and emergency responses thus highlighting the absence of well-functioning communication pathways.

For instance, the lack of structured protocols during handovers led to missed information, duplication of efforts, and delays in treatment decisions. These breakdowns are not isolated; rather, they reflect systemic inefficiencies where interdepartmental links are weak or underdeveloped. According to Systems Theory (von Bertalanffy, 1968), when communication fails to support integration across functions, the system as a whole becomes vulnerable, and patient safety is compromised. Therefore, the results underscore the urgent need to reinforce LMUTH's communication infrastructure so that each component of the system works cohesively toward shared goals.

b) Social Exchange Theory

Social Exchange Theory provides insight into the interpersonal and cultural dimensions of communication breakdowns observed in the study. It emphasizes that individuals are more likely to engage in open, honest, and proactive communication when they perceive their relationships as being based on trust, mutual respect, and reciprocal benefit. However, participants described workplace environments marked by rigid hierarchies, insufficient recognition of junior staff, and professional divisions that hindered collaboration.

This culture of undervaluing contributions from nurses, junior doctors, and allied health professionals leads to the suppression of voice behavior meaning staff may withhold concerns, avoid clarifying instructions, or disengage altogether from critical conversations. These behaviors directly elevate the risk of preventable harm, especially in time-sensitive or high-stakes scenarios. The findings thus reinforce the need to promote a workplace culture where contributions from all levels are encouraged and respected, fostering open communication that improves decision-making and care delivery.

c) Human Error Theory

Human Error Theory distinguishes between individual mistakes and latent system failures that set the stage for those errors. According to this framework, poor communication is not merely the result of human oversight, but often a symptom of flawed system design. At LMUTH, the heavy dependence on verbal communication, lack of documentation, and absence of standardized communication tools created the ideal conditions for miscommunication, omissions, and misunderstandings.

In this context, communication errors are not random, they are predictable outcomes of a system lacking safeguards. The findings suggest that LMUTH's current setup inadvertently facilitates error by failing to provide clear, reliable, and traceable communication channels. Applying the Human Error Theory, the solution lies in designing systems that are supportive, standardized, and error-tolerant. This includes implementing checklists, handoff templates, secure digital platforms, and protocols that reduce reliance on memory and informal exchanges.

Staff Recommendations for Improvement

Participants in the study proposed several actionable recommendations to improve interdepartmental communication and reduce patient risk. These suggestions reflect both their lived experiences and an understanding of what is practically feasible within the hospital's context. The key recommendations include:

- Institutionalizing structured handoff tools such as SBAR (Situation-Background-Assessment-Recommendation), especially for shift changes, patient transfers, and emergencies.
- Conducting regular interdepartmental meetings, including case reviews and briefings, to enhance cross-functional understanding and accountability.
- Introducing secure communication technologies, such as hospital-based messaging systems or pagers, to replace undocumented verbal communication and improve traceability.
- Fostering interdisciplinary respect and psychological safety, where all staff feel empowered to speak up, clarify doubts, and share observations without fear of reprimand.
- Establishing feedback mechanisms, such as communication audits, staff debriefings, and continuous performance monitoring, to track and improve communication practices over time.

These recommendations are consistent with global best practices. For example, Amy Edmondson emphasizes that psychological safety, a shared belief that the workplace is safe for interpersonal risk-taking, is essential for learning from errors and speaking up early (Edmondson, 2018). Likewise, guidelines from the World Health Organization and The Joint Commission stress the need for structured, traceable, and consistent communication protocols as part of a comprehensive approach to patient safety.

Summary and Implications

The findings of this study present strong evidence that, despite occurring frequently, interdepartmental communication at Levy Mwanawasa University Teaching Hospital is frequently disjointed, delayed, and impeded by both systemic and interpersonal challenges. These deficits extend beyond administrative shortcomings, they directly impact patient safety and can have fatal consequences. The study's results support all proposed hypotheses and effectively address the stated research objectives.

- Objective 1 identifies the structural, technological, and cultural barriers that impede effective communication between departments, such as hierarchical rigidity, lack of respect across roles, outdated communication tools, and inconsistent handover practices.
- Objective 2 evaluated the effectiveness of current communication tools and protocols. It found heavy reliance on informal methods, limited standardization, and a lack of integration with modern digital technologies factors that undermine accuracy, timeliness, and accountability.

The implications are clear – interdepartmental communication must be restructured and prioritized as a core component of patient safety strategy. Based on the findings, LMUTH should take the following critical steps:

1. Adopt standardized communication protocols, such as SBAR, to ensure consistency, clarity, and accountability.
2. Upgrade to digital communication platforms that facilitate secure, traceable, and real-time information sharing.
3. Promote a culture of respect and teamwork in which all staff members feel empowered to actively participate and collaborate across departmental and professional boundaries.
4. Provide ongoing training and leadership accountability to reinforce communication best practices and establish a culture of continuous improvement.

5. Implement routine monitoring and evaluation, such as communication audits and feedback loops, to assess the effectiveness of new interventions and adjust as necessary.

Ultimately, this research reinforces that effective communication is not optional, it is essential. By recognizing communication as a central pillar of safe, high-quality care, LMUTH has the opportunity to reduce preventable mortality, enhance collaboration, and raise the standard of patient outcomes across the board.

Limitations of the study

The study on interdepartmental communication and patient mortality at Levy Mwanawasa University Teaching Hospital (LMUTH) provides valuable insights but has several limitations. First, the cross-sectional design limits the ability to establish causal relationships, as it only captures perceptions at a single point in time. This means that while correlations between communication practices and patient mortality were identified, causality cannot be conclusively determined.

Secondly, the reliance on self-reported questionnaires introduces response bias, with participants potentially providing socially desirable answers, especially regarding professional conduct and communication effectiveness. This could lead to inaccuracies in assessing the true quality of communication. Another limitation is the unequal representation of departments within the sample. Certain departments, such as radiology and laboratory services, had fewer participants, which could affect the comprehensiveness of the study's findings, particularly regarding how communication dynamics impact these areas. Furthermore, the study did not differentiate between formal and informal communication or assess communication during night shifts or emergencies, which could be critical times for communication breakdowns. The sample size of 90 participants, drawn from a single tertiary hospital, may not be representative of healthcare professionals across the country, particularly in rural or private hospitals. Thus, the findings may not be generalizable to other healthcare settings in Zambia.

Lastly, the study focused solely on healthcare providers, omitting the patient perspective. Including patient experiences of miscommunication or delays could have provided a more holistic view of how interdepartmental communication influences patient outcomes. These limitations should be considered when interpreting the findings and drawing broader conclusions.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The study conducted at Levy Mwanawasa University Teaching Hospital (LMUTH) revealed critical insights into the nature and implications of interdepartmental communication within a major healthcare institution. While communication between departments is reported to occur frequently, its quality is often compromised by several key issues. These include a lack of clarity in message delivery, delays in information sharing, and inconsistent use of formal communication channels. The overreliance on informal methods such as verbal instructions or personal messaging applications raises concerns about the accuracy, traceability, and reliability of crucial clinical information.

Further complicating communication efforts are organizational and cultural challenges. Hierarchical structures within departments often inhibit open dialogue, particularly between junior and senior staff. Additionally, inconsistent perceptions of mutual respect and teamwork hinder the formation of a cohesive, collaborative working environment. Strained interpersonal dynamics, professional compartmentalization, and the absence of unified communication standards further complicate coordination efforts, increasing the risk of errors in patient management.

These communication breakdowns are not isolated administrative flaws; they carry serious clinical consequences. Delays in conveying diagnostic results, unclear transfer instructions, or poorly coordinated emergency responses can directly affect patient safety and, in extreme cases, contribute to preventable mortality. The study affirms that communication inefficiencies are a systemic issue with tangible impacts on the quality of care delivered.

Nevertheless, the findings also reveal a strong institutional recognition of the value of effective communication. Participants across departments expressed a shared understanding that improved communication could lead to faster decision-making, better coordination, and ultimately, lower patient mortality rates. This consensus reflects a readiness for change and provides a solid foundation upon which targeted improvements can be implemented.

Importantly, the study confirmed all its research hypotheses and met its objectives. It demonstrated the direct and indirect relationships between interdepartmental communication and patient outcomes, while also identifying the structural, cultural, and behavioral barriers that must be addressed. The recommendations provided by respondents, including the need for standardized

communication tools, enhanced training, and the promotion of a respectful, team-based culture, offer a practical roadmap for reform.

In conclusion, improving interdepartmental communication at LMUTH is not merely an operational priority but a critical patient safety intervention. Addressing the identified weaknesses and implementing evidence-based strategies can strengthen collaboration, enhance care efficiency, and most importantly, save lives.

6.2 Recommendations

Based on the findings of this study, the following recommendations are proposed to enhance interdepartmental communication at LMUTH and reduce patient mortality:

1. **Implementation of Structured Communication Protocols** - The study revealed that the underdevelopment of standardized communication tools and protocols contributed to communication breakdowns. To address this, the hospital should adopt structured communication models such as SBAR (Situation, Background, Assessment, Recommendation), which has proven effective in improving clarity and reducing errors during handoffs and transitions in care. Standardized communication should be incorporated into daily practice, especially during critical times like patient handovers, emergencies, and transfers between departments.
2. **Increase in Frequency and Quality of Interdepartmental Meetings** -Regular, scheduled interdepartmental meetings should be encouraged, especially during key moments such as shift changes and patient handovers. These meetings can serve as opportunities to clarify care plans, discuss patient needs, and resolve potential issues before they escalate. Furthermore, these meetings can improve mutual understanding and strengthen teamwork, which was identified as a key factor in effective communication.
3. **Enhanced Use of Digital Communication Tools** - The study revealed that informal communication methods, such as phone calls and verbal exchanges, are heavily relied upon, potentially leading to communication gaps. To improve communication efficiency and accountability, LMUTH should invest in digital communication platforms, such as secure messaging systems, electronic medical records (EMRs), and consultation forms, which can facilitate real-time information sharing and ensure that critical information is captured and accessible to all relevant departments.

4. **Training Programs on Effective Communication** - Given the challenges highlighted in the study, including unclear communication and poor interpersonal relationships, it is recommended that LMUTH invest in training programs for healthcare workers. These programs should focus on improving communication skills, fostering respect and collaboration, and addressing the psychological safety of staff members. Staff should be trained on how to effectively use communication tools and techniques, how to interact respectfully with colleagues from other departments, and how to handle difficult or sensitive conversations.
5. **Promotion of a Culture of Respect and Openness** - The study revealed that many participants sometimes or rarely felt respected during interdepartmental interactions. To improve collaboration and communication, it is crucial to promote a culture of respect and openness. The hospital leadership should create an environment where staff feel valued and empowered to express concerns without fear of retribution. Regular feedback sessions and the establishment of support networks for staff can help foster an inclusive environment where open dialogue is encouraged.
6. **Addressing Hierarchical Barriers** - Hierarchical differences within the hospital were identified as a significant barrier to effective communication. It is essential that hospital leadership works to flatten hierarchical barriers that may prevent junior staff from speaking up or contributing to decision-making. This can be achieved by promoting a more inclusive decision-making process, encouraging collaborative problem-solving, and fostering an environment where all staff, regardless of rank, feel their input is valued.
7. **Investment in Communication Infrastructure** - The study revealed that a lack of communication tools, such as pagers and dedicated communication devices, hinders effective communication between departments. To address this issue, LMUTH should invest in modern communication infrastructure, ensuring that all departments are equipped with reliable communication tools. This investment will facilitate faster, clearer, and more consistent communication, especially during emergencies and critical patient care situations.
8. **Ongoing Evaluation and Feedback Mechanisms** - The study found that communication practices were inconsistent, with some departments experiencing better communication than others. To address this, LMUTH should establish regular evaluation mechanisms to

monitor the effectiveness of communication strategies and identify areas for improvement. Feedback from staff members, patient outcomes, and incident reports should be used to assess the success of communication improvements and guide future interventions.

9. **Interdepartmental Collaboration on Patient Safety Initiatives** - As communication failures were linked to adverse patient outcomes, it is recommended that LMUTH prioritize interdepartmental collaboration in patient safety initiatives. Creating interdisciplinary teams focused on patient safety and quality improvement will allow staff from different departments to collaborate on reducing errors, improving care coordination, and enhancing patient outcomes. This approach can also improve the mutual understanding of each department's challenges and responsibilities.
10. **Investing in Research and Continuous Improvement** - To ensure that LMUTH remains at the forefront of patient safety and communication best practices, the hospital should invest in ongoing research and continuous improvement initiatives. Participating in national and international healthcare communication studies, benchmarking against other hospitals, and regularly reviewing and updating communication protocols will ensure that LMUTH is continually improving its communication practices and minimizing risks to patient safety.

In conclusion, effective interdepartmental communication is a crucial determinant of patient safety and outcomes. This study has highlighted several barriers to effective communication at LMUTH, including unclear messaging, timeliness issues, and lack of standardized tools. However, it has also provided valuable recommendations that can be implemented to improve communication and reduce patient mortality. By adopting these strategies and fostering a culture of collaboration, respect, and openness, LMUTH can significantly enhance the quality of care provided to its patients, ensure timely decision-making, and ultimately improve patient outcomes.

Through these efforts, the hospital can build a more effective and cohesive healthcare environment where communication flows seamlessly between departments, staff feel empowered and respected, and patient safety is always a top priority.

6.3. REFERENCES AND BIBLIOGRAPHY

1. Agarwal, Shweta, et al. “Barriers and Facilitators to Implementation of Communication Tools in Low-Resource Settings: A Qualitative Study in Kenyan Hospitals.” *BMJ Global Health*, vol. 5, no. 3, 2020, pp. 110–120.
2. De Meester, Karin, et al. “SBAR Improves Nurse–Physician Communication and Reduces Unexpected Deaths: A Quasi-Experimental Study.” *Resuscitation*, vol. 84, no. 9, 2013, pp. 1192–1196.
3. Edmondson, Amy C. *The Fearless Organization: Creating Psychological Safety in the Workplace for Learning, Innovation, and Growth*. Wiley, 2018.
4. Gharaveis, A., Kazem-Zadeh, M., and Eijkelenboom, A. “The Impact of Healthcare Environmental Design on Teamwork and Communication: A Systematic Literature Review.” *HERD: Health Environments Research & Design Journal*, vol. 14, no. 1, 2021, pp. 180–196. https://doi.org/10.1177/1937586720912853.
5. Gordon, M., et al. “Exploring Communication Challenges During Patient Handovers in South African Public Hospitals.” *BMJ Open*, vol. 9, no. 10, 2019, pp. 560–568.
6. Homans, George C. *Social Behavior: Its Elementary Forms*. Harcourt, Brace & World, 1958.
7. Huggins, C. A., et al. “Evaluating the Impact of SBAR Communication Training on Clinical Outcomes in High-Risk Units.” *Journal of Nursing Care Quality*, vol. 33, no. 2, 2018, pp. 116–123.
8. Manojlovich, M., and DeCicco, B. “Healthy Work Environments, Nurse–Physician Communication, and Patients’ Outcomes.” *American Journal of Critical Care*, vol. 26, no. 6, 2017, pp. 438–443. https://doi.org/10.4037/ajcc2017477.
9. Maphumulo, W. T., and B. R. Bhengu. “Challenges of Quality Improvement in the Healthcare of South Africa Post-Apartheid: A Critical Review.” *Curationis*, vol. 44, no. 1, 2021, pp. 1–9.
10. Mortensen, K., et al. “Effect of Interdepartmental Communication on Patient Outcomes in Tertiary Hospitals.” *Journal of Hospital Medicine*, vol. 15, no. 3, 2020, pp. 126–134.
11. Okeke, Chinedu, et al. “Improving Communication in Sub-Saharan Hospitals: A Review of Contextual Challenges and Practical Strategies.” *African Journal of Health Systems*, vol. 7, no. 1, 2020, pp. 45–60.

12. Reason, James. *Human Error*. Cambridge University Press, 1990.
13. Schwartz, R. M., et al. "The Impact of Communication Gaps in Inpatient Settings on Mortality and Morbidity." *International Journal for Quality in Health Care*, vol. 32, no. 8, 2020, pp. 785–791.
14. Sendlhofer, G., Pelkner, A., Leitgeb, K., Brunner, G., Tax, C., and Hoffmann, M. "Communication as a Main Contributor to Adverse Events in Hospitals: A Retrospective Study." *Journal of Patient Safety*, vol. 15, no. 4, 2019, pp. e75–e81. https://doi.org/10.1097/PTS.0000000000000331.
15. Shahid, S., and Thomas, S. "Situation, Background, Assessment, Recommendation (SBAR) Communication Tool for Handoff in Health Care – A Narrative Review." *Safety in Health*, vol. 4, no. 1, 2018, p. 7. https://doi.org/10.1186/s40886-018-0073-1.
16. Starmer, A. J., et al. "Changes in Medical Errors after Implementation of a Handoff Program." *New England Journal of Medicine*, vol. 371, no. 19, 2014, pp. 1803–1812. https://doi.org/10.1056/NEJMsa1405556.
17. Sutcliffe, K. M., Paine, L., and Pronovost, P. J. "Re-Examining High Reliability: Actively Organizing for Safe and Reliable Care." *BMJ Quality & Safety*, vol. 26, no. 3, 2017, pp. 248–251. https://doi.org/10.1136/bmjqs-2015-004265.
18. The Joint Commission. *Sentinel Event Data – Root Causes by Event Type 2004–2020*. 2021. https://www.jointcommission.org/resources/patient-safety-topics/sentinel-event/.
19. Toney-Butler, Tamara J., et al. "Barriers to Effective Communication in African Healthcare Settings." *African Health Sciences*, vol. 23, no. 1, 2023, pp. 198–209.
20. Vermeir, P., et al. "Communication in Healthcare: A Narrative Review of the Literature and Practical Recommendations." *International Journal of Clinical Practice*, vol. 69, no. 11, 2015, pp. 1257–1267. https://doi.org/10.1111/ijcp.12686.
21. von Bertalanffy, Ludwig. *General System Theory: Foundations, Development, Applications*. George Braziller, 1968.
22. Walia, K., et al. "Impact of Multidisciplinary Team Rounds on Patient Safety in Indian Public Hospitals." *International Journal of Healthcare Management*, vol. 14, no. 2, 2021, pp. 232–240.
23. Were, M. C., et al. "Using Digital Technology to Improve Health System Performance: Results from Kenya." *Global Health Action*, vol. 12, no. 1, 2019, pp. 140–152.

24. World Health Organization. *Patient Safety: Making Health Care Safer*. WHO Press, 2016.

APPENDIX

Appendix 1: Information Sheet

Dear Participant,

My name is Lupando Lubemba, and I am a 3rd-year medical student at the University of Lusaka, School of Medicine and Health Sciences. As part of my academic requirements for a Bachelor's in Medical Sciences, I am conducting research titled "***Assessing The Impact Of Interdepartmental Communication On Patient Mortality At Levy Mwanawasa Teaching Hospital***."
You have been selected to participate in this study through random sampling, which makes your input valuable to the research. Your participation is completely voluntary, and all information you provide will be kept confidential. Please note that you have the right to decide whether or not to participate, and there is no material compensation for your involvement, as this is an academic exercise. There are no risks involved in participating.

If you have any questions or need further clarification, feel free to contact me via email at lupandolubemba@gmail.com.

Thank you for your time and consideration.

INFORMED CONSENT

By signing below, you confirm that you have understood the information provided about this study, voluntarily agree to participate, and understand the purpose of the research. You consent to provide information to the best of your knowledge while respecting your rights and privacy.

Initials and Signature of Participant: _____
Name and Signature of Researcher: _____
Date: _____

Appendix 2: Questionnaire

Assessing the Impact of Interdepartmental Communication on Patient Mortality at Levy Mwanawasa Teaching Hospital"

Instruction: Tick (✓) where applicable

Section A: Demographic Information

1. What is your age?
    - 20–29
    - 30–39
    - 40–49
    - 50 and above
2. What is your gender?
    - Male
    - Female
    - Prefer not to say
3. What is your role in the hospital?
    - Doctor
    - Nurse
    - Technician
    - Administrator
    - Other (specify) ……..
4. How long have you worked at Levy Mwanawasa Teaching Hospital?
    - Less than 1 year
    - 1–3 years
    - 4–6 years
    - More than 6 years
5. In which department do you work?
    - Surgery
    - Paediatrics
    - Radiology
    - Laboratory
    - Other (specify) ……

Section B: Communication Quality

6. How often do you communicate with other departments regarding patient care?
    - Daily
    - Weekly
    - Occasionally
    - Rarely
7. How would you rate the overall clarity of communication between departments?
    - Very clear
    - Clear
    - Neutral
    - Unclear
    - Very unclear
8. Do you feel the information shared between departments is accurate and complete?
    - Always
    - Often
    - Sometimes
    - Rarely
    - Never
9. How timely is the communication between departments when handling patient cases?
    - Always timely
    - Often timely
    - Sometimes timely
    - Rarely timely
    - Never timely
10. What communication tools are commonly used between departments? (Select all that apply)
    - Verbal communication (face-to-face)
    - Phone calls
    - Written notes/reports
    - Emails
    - WhatsApp or other messaging platforms

Section C: Collaboration and Coordination

11. How would you rate the level of teamwork between your department and others?
    - Excellent
    - Good
    - Neutral
    - Poor
    - Very poor
12. Do you feel respected and valued by colleagues from other departments during interactions?
    - Always
    - Often
    - Sometimes
    - Rarely
    - Never
13. How often do interdepartmental communication issues lead to delays in patient care?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Always
14. Are there structured meetings or protocols for communication between departments?
    - Yes, frequently
    - Yes, occasionally
    - No, not at all
15. What are the common barriers to effective communication between departments? (Select all that apply)
    - Lack of time
    - Lack of communication tools
    - Hierarchical differences
    - Poor interpersonal relationships
    - Other (specify)

Section D: Patient Outcomes

16. How often do communication breakdowns contribute to adverse patient outcomes?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Always
17. In your opinion, does improved communication between departments reduce patient mortality?
    - Strongly agree
    - Agree
    - Neutral
    - Disagree
    - Strongly disagree
18. Have you observed a situation where effective communication improved a patient's outcome?
    - Yes
    - No
19. On a scale of 1 to 5, how significant is the impact of interdepartmental communication on patient mortality?
    - 1 (Not significant)
    - 2 (Slightly significant)
    - 3 (Moderately significant)
    - 4 (Significant)
    - 5 (Highly significant)
20. What recommendations would you suggest to improve interdepartmental communication and reduce patient mortality?

THANK YOU FOR YOUR PARTICIPATION!

Appendix 3: Ethical Clearance

UNIVERSITY *of* LUSAKA

Passion for Quality Education: Our Driving Force

UNIVERSITY OF LUSAKA RESEARCH ETHICS COMMITTEE (UNILUS-REC)

Plot No. 37413, Off Alick Nkhata Mass Media. P. O Box 36711, Lusaka.
Phone: +260211258505, 258409 Fax +260211233409; Cell +260976075850,961917862,
E-mail:unilus@zamnet.zm,ictar@zamnet.zm

UNILUS-RESEARCH ETHICS COMMITTEE

Ref no: FWA00033228-540(08)/(08)/{2024}

Date: 03 March 2025

STUDENT NAME: **Ms. Lupando Lubemba**

ASSESSING THE IMPACT OF INTERDEPARTMENTAL COMMUNICATION ON PATIENT MORTALITY AT LEVY MWANAWASA TEACHING HOSPITAL.

The above research was submitted to the research ethics committee for review. The study has no major ethical problems and is approved subject to the following:

1. The study cannot be changed without express permission of the UNILUS research ethics committee.
2. Approval from the necessary authority should be sought.

_____

Professor Kasonde Bowa

MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)

Chairman- UNILUS REC

Professor of Urology and Consultant Urologist

Deputy Vice-Chancellor – Research and Innovation

Executive Dean - School of Medicine and Health Sciences

Appendix 4: National Health Research Authority Response

NATIONAL HEALTH RESEARCH AUTHORITY

Lot No. 18961/M, off Kasama Road, Chalala, P.O. Box 30075, LUSAKA

Tell: +260211 250309 | Email: znhrasec@nhra.org.zm | www.nhra.org.zm

NHRA8157/10/02/2025 **5th March 2025**

The Principal Investigator,
Lupando Bupe Lubemba,
University Of Lusaka (UNILUS),
Lusaka

Dear Lupando Bupe Lubemba,

Re: Request for Authority to Conduct Research

The National Health Research Authority Is in Receipt of Your Request for Authority to Conduct Research Titled **"ASSESSING THE IMPACT OF INTERDEPARTMENTAL COMMUNICATION ON PATIENT MORTALITY AT LEVY MWANAWASA TEACHING HOSPITAL"**

I wish to inform you that following submission of your request to the Authority, our review of the same and in view of the ethical clearance, this study has been **approved** on condition that:

1. The relevant Provincial and District Medical Officers where the study is being conducted are fully appraised.
2. Progress updates are provided to NHRA bi-annually from the date of commencement of the study.
3. The final study report is cleared by the NHRA before any publication or dissemination within or outside the country.
4. After clearance for publication or dissemination by the NHRA, the final study report is shared with all relevant Provincial and District Directors of Health where the study was being conducted, University leadership, and all key respondents.

Yours sincerely,

National Health Research Authority

Prof Victor Chalwe,
Director and Chief Executive Officer

Appendix 5: Authorization To Conduct Research At Levy Mwanawasa University Teaching Hospital

All Communications should be addressed to:
The Senior Medical Superintendent
Tel: +260 211 285461
Fax: +260 211 285462

In reply please quote.

No.:.....

REPUBLIC OF ZAMBIA

MINISTRY OF HEALTH

LEVY MWANAWASA UNIVERSITY
TEACHING HOSPITAL
P.O. BOX 310084
LUSAKA

11th April, 2025

The Principal Investigator,
Lupando Lubemba
UNILUS
Lusaka

Dear Researcher,

PERMISSION TO CONDUCT A RESEARCH STUDY – YOURSELF

Reference is made to your letter requesting for permission to conduct a research study entitled ***"ASSESSING THE IMPACT OF INTERDEPARTMENTAL COMMUNICATION ON PATIENT MORTALITY AT LEVY MWANAWASA TEACHING HOSPITAL"***

Management of Levy Mwanawasa University Teaching Hospital wishes to inform you that the hospital has no objection to your request. As a Hospital, we wish to benefit from the study by you contributing materially or financially to suit your overheads as budgeted. Kindly avail us with the final findings.

In your publication, kindly acknowledge the institution and the supervising team in the area of your study.

You may commence with the study when you are ready. **By copy of this letter, permission is granted.**

Yours faithfully

Dr. Gabriel Mpundu (MPH, BDS, Dip. DS, Cert. PMGH)
+260977782075
gmpundu3@gmail.com
Chairperson - LMUTH Research Committee
For/Senior Medical Superintendent