

**KNOWLEDGE AND PERCEPTION OF TEAM BASED CARE AMONG CLINICAL
STAFFS IN UNIVERSITY OF BENIN TEACHING HOSPITAL**

OSAHON DOROTHY

MED1807480

DEPARTMENT OF PUBLIC HEALTH AND COMMUNITY MEDICINE

COLLEGE OF MEDICAL SCIENCES

UNIVERSITY OF BENIN

EDO STATE.

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DECLARATION

I hereby declare that this project work is original and will be carried out by the under-listed student under the supervision of Prof Obehi Okojie and Dr. Mokogwu Ndubuisi and has not been published elsewhere for the award of a degree or certificate.

OSAHON OSASUMWEN DOROTHY

MED1807480

+2348033037796

Dorryosahon12@gmail.com

CERTIFICATION

This is to certify that this research work titled “knowledge and perception of team-based care among clinical staff in tertiary hospital” will be carried out in the Department of Community Health, School of Medicine, College of Medical Sciences, University of Benin, Benin City, Edo State, Nigeria as part of the requirements for the award of Bachelor of Medicine, Bachelor of Surgery (MBBS) by **OSAHON OSASUMWEN DOROTHY** with matriculation number **MED1807480**.

PROF OBEHI OKOJIE

Professor/Consultant (Project Supervisor),
Department of Public Health and Community Medicine,
College of Medicine,
University of Benin/ University of Benin Teaching Hospital (UBTH),
Benin City, Edo State, Nigeria.

(Date)

Dr. MOKOGWU NDUBUISI

Senior Lecturer/ Consultant (Project co-supervisor),
Department of Public Health and Community Medicine,
College of Medical Sciences,
University of Benin/University of Benin Teaching Hospital (UBTH),
Benin City, Edo State, Nigeria.

(Date)

Dr. (Mrs) O. E. OBARISIAGBON

MBBS; MPH; FMCPH

(Date)

Head of Department,
Associate Professor/Consultant,
Department of Public Health and Community Medicine,
College of Medicine,
University of Benin/ University of Benin Teaching Hospital (UBTH),
Benin City, Edo State, Nigeria.

DEDICATION

I dedicate this work to God Almighty, who has brought me this far in my pursuit of becoming a medical doctor. This project is also dedicated to my family, who have been my pillar over the years and have contributed immensely to my project. I also dedicate this to my colleagues, my study group members 'Team Dynamites', friends, relatives and well-wishers.

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LIST OF ABBREVIATIONS

LGA: Local Government Area

WHO: World Health Organization

SPSS: Statistical Package for the Social Sciences

ANOVA: Analysis of Variance

UBTH: University of Benin Teaching Hospital

MDCN: Medical and Dental Council of Ngeria

NMCN: Nursing and Midwifery Council of Nigeria

PCN: Pharmacy Council of Nigeria

OPERATIONAL DEFINITIONS

Knowledge: is the familiarity, awareness, or understanding of facts, information, and skills acquired through experience or education.

Perception: is a belief or opinion, often held by many people and based on how things seem.

Team-based care: is a collaborative healthcare model where two or more providers, including physicians, nurses, and specialists, work with patients and caregivers to achieve shared, high-quality, patient-centered goals

ABSTRACT

Background: Team-based care is an approach to healthcare delivery that aims to improve patient safety, streamline clinical workflows, and reduce clinical errors. While collaborative models are known to improve patient outcomes, their implementation in everyday practice can be limited by varied levels of awareness, traditional hospital hierarchies, and communication

gaps among healthcare professionals. This study assessed the knowledge and perception of team-based care among clinical staff in the University of Benin Teaching Hospital (UBTH), Benin City, Edo State, Nigeria.

Methods: A descriptive cross-sectional hospital-based study was conducted among 418 clinical staff at UBTH, selected using a stratified random sampling technique. Data were collected using a pretested, structured, self-administered questionnaire covering sociodemographic characteristics, knowledge of team-based care principles, overall perception of interprofessional collaboration, and factors influencing its practical implementation. Knowledge and perception scores were categorized as good ($\geq 50\%$) or poor ($< 50\%$). Data were analyzed using IBM SPSS version 27.0. Descriptive statistics, chi-square tests, and logistic regression were used as appropriate.

Results: The mean age of respondents was 36.84 ± 8.65 years, with the largest proportion (45.1%) in the 30–39 years age group. Most respondents (58.2%) were nurses, while 31.4% comprised doctors, pharmacists, and other clinical professionals. Overall, 88.5% of respondents had previously heard of team-based care, with clinical meetings and departmental seminars being the most common sources of information (54.0%). A total of 72.0% had good knowledge of team-based care frameworks, and 84.0% held a positive perception toward its practice. Professional cadre was significantly associated with knowledge ($\chi^2 = 26.14, p < 0.001$), and years of clinical work experience was also significantly associated with knowledge ($\chi^2 = 8.45, p = 0.012$).

Conclusion: Although overall baseline knowledge of team-based care was moderate, with 72.0% of respondents demonstrating good knowledge, the majority of clinical staff held a positive perception toward interprofessional collaboration (84%). These findings suggest that

while readiness to adopt collaborative care is high among staff, practical execution faces systemic institutional challenges. Routine interprofessional training workshops, formalized hospital guidelines, and the early introduction of team-based modules in undergraduate medical and health curricula are recommended to improve collaborative healthcare delivery at UBTH.

Keywords: Team-based care; knowledge; perception; clinical staff; interprofessional collaboration; UBTH; Nigeria.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Team – based care is a strategy implemented at the health system level. Team based care aims to enhance patient care by having health professionals from different disciplines work collaboratively with the patient and the patient’s primary care provider.¹ The importance of team – based care models can’t be overstated, as these models emphasize interdependence, effective care coordination, and equality among all team members, fostering interdisciplinary collaboration, clear communication and mutual support, promoting teamwork at every level, from leadership to individual units, ensures that patients recognize they have support from a collaborative team.² Inter-professional teamwork is where various professionals such as doctors, pharmacists, medical laboratory scientists, technicians, assistants, nurses, physiotherapists, radiographers, health information officers, human resources managers and others who work in the healthcare institutions, work together with patients, care givers, families and communities to offer a holistic approach to patient care.

Interprofessional team - based care among clinical staffs is essential and enables health care professionals assume complementary roles and cooperatively work together, sharing responsibilities to aid problem solving and decision making to formulate and carryout plans for adequate patient’s care.²

The World Health Organization (WHO) further emphasized that the achievement of these immediate health services output is dependent not only on availability of the human and material resources, but more also on the way the resources are effectively organized, managed and delivered.³ Interprofessional team - based care is not only essential and central to the

achievement of these global health priority of improving access, coverage, and quality of health services but has been found to improve patient outcome and experience and to decrease mortality, morbidity and average hospital length of stay.² The WHO posits that the mechanisms that will positively shape the practice of interprofessional team - based care includes institutional support, organizational culture and operational environment. Institutional support structures involves governance styles, collaborative protocols and tools, shared resources, managerial practices, and procedures and operations. Workable organizational culture involves combination of strategies for effective communication, favorable conflict resolution policies, shared and participatory decision-making processes. Organizational environment includes physical settings, in terms of buildings, facilities, and space designs.³

Interprofessional team – based care offers the multiple healthcare professionals the opportunity to partner with each other, collaborate, participate, and coordinate healthcare management activities that would best address the ever - growing complex disease processes, and the associated medical conditions and health issues.⁴ In view of the growing complexities in disease processes, the complex global health system, and the need for evidence based innovative strategies that will provide a platform for health systems strengthening, there has been a global call for the promulgation and implementation of interprofessional team – based care, both at the medical education training and the health care practicing levels.^{4,5} A clear description of the extent and approaches of the interprofessional team – based care in relation to validated conceptual frameworks, especially at the tertiary referral care level in Nigeria and the implications to the health institution effectiveness, would enable effective and targeted interventions to enhance quality team - based care amongst inter - professionals working towards priority areas of local and national health needs. Thus, this study is an attempt in that direction to

describe the extent of hospital team - based care practices in Nigeria, and the potential implications to the organizational health intervention effectiveness and efficiency.²

1.2 STATEMENT OF PROBLEM

The health workforce crises in Nigeria have taken quite unique, yet worrying, dimension in recent times. There have been emerging issues of distrust, and recurring conflicts among different professional groups in the health sector, some health workers have alleged that the Nigerian health system is designed to benefit doctors mainly. Disputes over salaries, allowances, brain drain, shortage of health workers, consultancy status and who leads the health sector have continued to emerge among different factions in the health sector.^{6,11} For example, the Nigerian Medical Association (NMA) and Joint Health Sector Union (JOHESU) strikes in 2014 was due to contemplation on what team should be at the highest cadre and it involved doctors versus nurses, doctors versus pharmacists, doctors versus laboratory workers and doctors versus other allied health professionals⁶. It is evident that in Nigeria's tertiary healthcare system, the delivery of quality and efficient patient care is often undermined by inadequate team - based care among clinical staff.⁴ Despite the World Health Organization's advocacy for team-based care as a strategy to improve health outcome, many Nigerian hospitals continue to operate within fragmented and hierarchical models. Studies show that around 1 in 20 patients are exposed to preventable harm in medical care.⁷ In low to middle income countries, as many as 4 in 100 people die from unsafe care. Estimates suggest that as many as 4 in 10 patients are harmed in primary and ambulatory settings, while up to 80% (23.6 – 8.5%) of this harm can be avoided.⁴

Poor team - based care also contributes to medication – related harm which affects 1 out of 30 patients in health care, with more than a quarter of this harm regarded as severe or life

threatening.^{4,8} Diagnostic errors occur in 5-20% of physician – patient encounters and patient misidentification can be attributed to poor team – based care.^{4,9} A report of the joint commission of the United States published in 2018 identified 409 sentinel events of patient identification out of 3326 incidents (12.3%) between 2014 and 2017.^{4,10} A study done in tertiary hospital in South East, Nigeria showed approximately 74% of respondents were of the opinion that existing arrangements that emphasized strict professional boundaries in the formation and functioning of clinical service units in the different health professions inadvertently promoted professional segregation and rivalry.

Approximately 78% of respondents believed that interprofessional conflicts/rivalry hinders delivery of medical care in the study centers; this opinion was expressed by 66% of consultants, 83% of senior registrars, 79% of registrars, and 76% of senior house officers.

Approximately 55.2% of respondents had observed interprofessional conflicts in their work places. The commonest sources of conflict were assertion of professional boundaries (48.3%) respondents, superiority (36.2%) respondents, accusation of incompetence (30.2%) respondents, and accusation of irresponsibility (18.9%) respondents. The most common interprofessional conflict/rivalry identified was between doctors and other health care workers.¹² Interdisciplinary rivalry among health care workers was also identified as a factor that hinders team – based care; there is this caustic relationship, manifesting as rivalry and challenge, that some doctors feel or tend to perceive when pharmacists or other health care professionals raise concerns about prescriptions this hinders team – based care, leading to poor communication, reduced trust, fragmented care, compromised patient safety and ultimately poorer health outcomes.

1.3 JUSTIFICATION OF STUDY

This study is justified because of the urgent need to assess the current level of knowledge, understanding, and perception of healthcare providers—doctors, nurses, pharmacists, and other health workers—about team-based care.⁶ Identifying gaps in knowledge and misunderstandings can promote targeted measures, such as staff training, policy adjustments, and interdisciplinary development programs aimed at improving cooperation in healthcare settings.

Additionally, while Nigeria works towards attaining Universal Health Coverage (UHC) and improving its healthcare service quality, adopting team-based care is both necessary and beneficial. Results from this study will offer evidence-based suggestions that can be employed by hospital leaders, policymakers, and public health officials to foster a culture of collaborative practice in tertiary hospitals and provide a platform for advocating for positive social change in the areas of service delivery and policy making arms of the Nigerian health sector. It would also provide a useful database for future intervention studies, evidence-based data for evaluation of the practices of interprofessional team-based care, and for formulation of hospital-based collaboration policy guidelines and charter for interprofessional collaborative team-based care.

At the health service delivery point, the result would provide useful information for responding to hospital challenges of curbing interprofessional conflict, provision of effective and efficient healthcare services, and promoting better patient outcome experience, in terms of reduced mortality, morbidity and average hospital length of stay.² The data generated by this study could be used as a prerequisite database for the Federal Ministry of Health, Nigeria for the evaluation of the practice of interprofessional team-based care at tertiary hospital level. This is in line with the provision of the National Health Policy on health systems strengthening, which advocates for collaboration and partnership at all levels of priority health program implementation, and among

relevant health authorities; to ensure mutual accountability; and involvement of the patients, family members, and communities in healthcare planning, implementation and evaluation.

1.4 RESEARCH QUESTIONS

- 1) What is the level of knowledge of team – based care among clinical staff in University of Benin Teaching Hospital?
- 2) What is the perception of Clinical staff towards the implementation of team – based care in University of Benin Teaching Hospital?
- 3) What factors affect the knowledge, perception and acceptance of team – based care among clinical staff in University of Benin Teaching Hospital?

1.5 GENERAL OBJECTIVE

To evaluate the knowledge, perception, and level of practice of team – based care among clinical staff at UBTH, while identifying the factors that facilitate or hinder its effective implementation.

1.6 SPECIFIC OBJECTIVES

- 1) To determine the knowledge of team – based care among clinical staff in University of Benin Teaching Hospital.
- 2) To assess the perception of clinical staff in University of Benin Teaching Hospital towards practice of team – based care in University of Benin Teaching Hospital.
- 3) To identify facilitators and barriers to effective team – based care among clinical staff in University of Benin Teaching Hospital.

CHAPTER TWO

LITERATURE REVIEW

A team is a distinguishable set of two or more people who interact dynamically, interdependently, and adaptively towards a common and valued goal; who have been assigned specific roles or functions to perform; and have a limited lifespan of membership. Generally, health care providers are skilled human resources for health of diverse professions, age, educational and cultural backgrounds, who share an integrated goal – to provide positive patient outcomes. Provision of optimum health care involves the participation of diverse team members consisting of specialized health care professionals (doctors, laboratory scientists, nurses, pharmacists, physiotherapists, and others); other staff of the health facility; patients; and family. Globally, interdisciplinary health team - based care is increasingly favored as a strategy to improve service delivery. Various studies have shown that effective teamwork in health care services delivery can significantly reduce medical errors and unnecessary wastes, improve efficiency, improve health outcomes and quality of care, enhance patient safety, improve patient satisfaction, reduce patient morbidity, reduce workloads, increase job satisfaction and retention, and strengthen health systems. Effective health care teamwork is beneficial to the patient, team members, the team, the health facility, and society at large; and is globally recognized as an essential tool for building and sustaining an optimum health care services delivery system.

It is well recognized that teamwork by health care professionals at their workplace is essential to achieve optimum health care services delivery, however its practical realization has been limited. Studies have demonstrated that lack of effective teamwork is the bane of weak and ineffective health care systems in many countries of the world, including Nigeria. Earlier studies revealed that the weak and suboptimal quality of health care services in Nigeria is partly

attributable to lack of harmony and teamwork among professionals in the health sector, lack of skilled medical personnel and equipment, and underfunding among other factors.¹²

2.1 DETERMINATION OF KNOWLEDGE OF TEAM BASED CARE AMONGST CLINICAL STAFFS IN TERTIARY HOSPITALS

Interdisciplinary team - based care could facilitate the efficient provision and coordination of increasingly diverse health services, thereby improving the quality of patient care. The purpose of this study was to describe knowledge of interdisciplinary team - based care among obstetricians and gynecologists in two teaching hospitals in 2015 in South East Nigeria and to determine their attitude toward an interdisciplinary collaborative approach to patient care in these institutions.¹⁵

A cross-sectional study was conducted with a sample of 100 registered nurses at Punjab Institute of Neurosciences (PINS) in 2024 in Lahore, Pakistan were conducted to explore associations between teamwork knowledge and demographic factors. Data were collected using a structured questionnaire assessing demographics and teamwork knowledge across domains such as communication, role clarity, conflict resolution, and interprofessional collaboration. Statistical analyses, included using Analysis of Variance (ANOVA) and t-tests. The result indicated a moderate overall teamwork knowledge score among nurses, with strengths in communication (mean score: 3.8) and interprofessional collaboration (mean score: 3.9). However, areas like conflict resolution (mean score: 3.2) and role clarity (mean score: 3.5) showed room for improvement. Higher levels of education, more years of experience, and previous teamwork training were significantly associated with greater teamwork knowledge. Nurses with advanced degrees and those who had received teamwork training scored notably higher than their peers without such training.

The study highlights the influence of education, experience, and targeted teamwork training on nurses' teamwork knowledge. Recommendations include implementing regular teamwork training programs, mentorship initiatives for junior nurses, and department-specific training to strengthen teamwork competencies. Future research should focus on the impact of teamwork knowledge on patient outcomes, providing information into how enhancing teamwork skills can improve healthcare quality and performance of health professionals.¹³

A cross-sectional descriptive study was conducted at a tertiary hospital in Somalia in 2025, targeting nurses and physicians with a minimum of six months of professional practice to assess the knowledge, attitudes, and associated factors that affect interprofessional team-based care among healthcare professional. Given logistical and accessibility constraints, a nonprobability convenience sampling approach was used to select 258 participants. Data were collected through a validated, self-administered questionnaire adapted from the Jefferson Scale of Attitudes toward Nurse-Physician Collaboration. After accounting for incomplete responses, the final sample size was 250. Descriptive and inferential statistical analyses were conducted to assess knowledge, attitude and associated factors.

Most participants (88.8%) acknowledged that shared education fosters better role understanding, while 87.6% emphasized the value of collaborative training. A statistically significant difference was observed in perceptions of physician authority ($p = 0.039$), with nurses demonstrating a higher recognition of physician leadership. However, no significant differences emerged regarding shared education ($p = 0.293$), the balance between caring and curing ($p = 0.208$), or nurse autonomy ($p = 0.453$). These findings highlight prevailing hierarchical structures and the potential for improved interprofessional training.

While overall knowledge toward interprofessional team - based care were positive, entrenched hierarchical norms and differing perceptions of authority remain significant barriers to effective team - based care. Addressing these challenges requires structured interprofessional education programs, policies promoting role equity, and hospital-wide initiatives to foster a culture of teamwork. Strengthening interprofessional team - based care in Somalia's healthcare system could enhance patient care, optimize resource utilization, and improve professional satisfaction in a setting where collaborative practice is crucial for overcoming systemic limitations.¹⁴

A descriptive cross – sectional done to describe knowledge of interdisciplinary team - based care among obstetricians and gynecologists in two teaching hospitals in 2015 in South East Nigeria and to determine their attitude toward an interdisciplinary collaborative approach to patient care in these institutions, it was conducted among 116 doctors, the mean age of the respondents was 31.9 ± 7.0 (range 22–51) years. Approximately 74% of respondents were aware of the concept of interdisciplinary team working. Approximately 15% of respondents who were aware of the concept of interdisciplinary team working had very good knowledge of it. 52% had good knowledge and 33% had poor knowledge. Twenty-nine percent of knowledgeable respondents reported ever receiving formal teaching/training on interdisciplinary team - based care in the course of their professional development. About 78% of those aware of team - based care believed that interdisciplinary teams would be useful in obstetrics and gynecology practice in Nigeria, with 89% stating that it would be very useful. Approximately 77.2% of those aware of team - based care would support establishment and implementation of interdisciplinary teams at their centers.

There was a high degree of knowledge of interdisciplinary team - based care among obstetricians and gynecologists in the study centers. This suggests that the knowledge of physicians may not

be an impediment to implementation of a collaborative interdisciplinary approach to clinical care in the study centers.¹⁵

2.2 ASSESSMENT OF PERCEPTION OF CLINICAL STAFF TOWARDS TEAM BASED CARE IN TERTIARY HOSPITALS

A cross - sectional study conducted in 2018 across five family medicine academic teaching clinics in Edmonton, Alberta, Canada to assess the perception of clinical staffs towards team - based care. There were 565 respondents ,41.8% reported receiving care from a team of health professionals, primarily for chronic disease management or pharmacy consultations. While there was a consistent pattern of patient perception that many aspects of care did not worsen with team-based care, improvements in knowledge of their medical condition (67.4%); the care received (65.0%); access to care (51.1%); ability to self-care (48.9%) and maintain their independence (43.7%); and overall health (51.1%) were reported. Some patients felt that team-based care reduced emergency visits (34.6%) and hospitalizations (29.9%), and 44.1% of patients felt that they had an active role on the team and made decisions about their care together with health professionals.¹⁶

A quantitative cross- correlational study evaluated collaborative capacity done at a tertiary public hospital in Blantyre city, Malawi to assess healthcare workers' perception on team – based care, a total of 384 healthcare workers participated in the study. Most of the respondents had more than five years of experience by analyzing task interdependence, quality of interaction, and collaborative influence, the research revealed that while the workforce is largely concentrated in paediatric and medical units, collaborative experiences vary significantly by professional cadre ($p < 0.05$). Medical and nursing staff reported the highest levels of interaction and influence, whereas technical support staff, specifically pharmacists and radiographers

consistently reported the lowest mean scores across all measures. Although task interdependence remained relatively similar across broad groups, the significant disparities in influence and interaction quality suggest a hierarchical divide in how different roles engage within the clinical team. The study's strength lies in its specific identification of "siloed" cadres like pharmacy and radiography, though its lack of specified location and year limits its broader contextual application.¹⁷

A cross sectional, questionnaire – based study conducted in 2022 to assess the perception and lived experiences amongst pharmacists with experience in multidisciplinary health care provision in a public tertiary hospital in Nigeria, some participants (50%) had worked for 5-10 years in the hospital's Department of Pharmacy, 25% (11-20 years), and 16.7% (21-30 years). Participants agreed that effective teamwork leads to positive patient outcomes ($\pm sd = 3.67$) and is in the public's interest ($\pm sd = 4.25$). However, they disagreed that their workplace supports teamwork ($\pm sd = 2.33$), effective interprofessional collaborative practices exist in the hospital ($\pm sd = 1.08$), and their remuneration reflects their worth to the organization ($\pm sd = 2.33$). Doctors' dominance and claim of ownership of patients, allied professionals' attitudes, ignorance of pharmacists' roles, salary disparity, poor communication, and defective leadership style among others were identified as impediments to teamwork.

The hospital pharmacists demonstrated positive disposition towards teamwork, and agreed that effective teamwork would improve health care delivery. However, they identified some factors that hinder interprofessional teamwork in the hospital. Principles and practices of teamwork should be incorporated into the curriculum of each discipline; interdisciplinary collaborative practices, health system structure, institutional policies and leadership should be strengthened to enhance teamwork.¹⁸

2.3 ASSESSMENT OF FACILITATORS AND BARRIERS TO EFFECTIVE TEAM – BASED CARE AMONG CLINICAL STAFFS IN TERTIARY HOSPITALS

A descriptive qualitative study conducted at a major tertiary medical center in the United Kingdom in 2024, researchers aimed to identify the facilitators and barriers to effective multidisciplinary teamwork within specialized oncology care. The study population consisted of 16 healthcare professionals, including oncologists, hematologists, specialist nurses, and allied health staff, selected via purposive sampling to ensure a diverse range of perspectives. Data were collected through one-on-one semi-structured interviews and analyzed using thematic analysis to explore the clinical staff's knowledge and perceptions of team-based care.

The relevant findings revealed that while staff possessed high levels of clinical expertise, they frequently encountered significant role ambiguity and hierarchical communication structures that hindered collaboration. Key barriers included inadequate information sharing and time constraints, while shared physical workspaces and a culture of mutual respect were identified as primary facilitators. A brief critic of the study highlights its strength in providing deep, valuable knowledge about interprofessional dynamics across multiple disciplines; however, its primary limitation lies in the small sample size and single-center focus, which may limit the generalisation of the findings to different tertiary hospital departments or global regions with varying resource levels.¹⁹

A concurrent (quantitative cross-sectional and phenomenological qualitative) study design conducted from September to October 2022 aimed to investigate inter-professional collaboration and associated factors among nurses and physicians working in referral and teaching hospitals in the Northwest and Ethiopia in 2022. A structured, self-administered nurse-physician

collaborative scale questionnaire was used to collect quantitative data from 279 nurses and 87 physicians. A simple random sampling technique was used to select participants. The magnitude of the association was measured using the odds ratio at a 95% confidence interval and was statistically significant at a p-value less than 0.05 using binary logistic regression analysis. Qualitative data were collected from nine key informants via focused interviews or semi-structured in-depth interviews.

According to the study's findings, a greater number (43.4%) of the respondents had ineffective collaboration during their professional activities. In the final model of multivariable analysis, unsatisfactory organizational support, poor professional support, and poor interpersonal support were all independently associated with ineffective collaboration. The qualitative findings identified poor communication, a lack of professionalism, and failure to adhere to professional duties as barriers to nurse-physician collaboration.

In this study, nurse-physician collaboration was less than expected; thus, the large number of participants had ineffective collaborations. Potential predictors of decreased effective nurse-physician collaboration included dissatisfaction with organizational support, poor professional support, and poor interpersonal support. This outcome emphasizes the importance of improving nurse-physician collaboration by enhancing organizational, professional, and interpersonal factors to form effective collaborative practice. The qualitative finding supports the quantitative study, which showed ineffective collaboration. The researchers recommended that there is a need to empower interprofessional team - based care among nurses and physicians through the creation of a conducive and safe working environment.²⁰

In a qualitative study at a South African tertiary public hospital in 2019, researchers investigated the perceptions and barriers to interprofessional teamwork among clinical staff. Using purposive

sampling, a multidisciplinary population of 14 participants, which included doctors, nurses, and allied health professionals engaged in semi-structured focus group discussions analyzed via thematic analysis. The findings revealed that while staff theoretically valued team-based care, practice was hindered by significant role ambiguity, rigid professional hierarchies, "professional jealousy," and language barriers, compounded by systemic resource shortages and high patient turnover. Effective communication technology and mutual respect were identified as primary facilitators. A brief critic suggests the study's strength lies in capturing unique regional socio-cultural dynamics often missed in Western research, though its small, single-center sample size limits the generalization of its findings to other tertiary institutions across Africa.²¹

A descriptive cross - sectional study using phenomenological approach of inquiry, was conducted among pharmacists with experience in multidisciplinary health care provision in a public tertiary hospital in Nigeria in 2022 using a Likert scale, mean scores was subjected to thematic analysis. Regarding professional qualifications, 83.3% of the cohort held a Bachelor of Pharmacy (B. Pharm.) as their highest credential, while 16.7% had attained an additional Fellowship of the West African Postgraduate College of Pharmacy (FPC Pharm) following their initial degree and professional practice. The results further showed that 41.7% had 11–30 years of work experience, while 50% and 8.3 had less than 10 years and over 30 years of experience, respectively; 91.7% were above 30 years of age; 58.3% are males while 41.7% are females. Participants agreed that effective teamwork leads to positive patient outcomes (\pm sd = 3.67) and is in the public's interest (\pm sd = 4.25). However, they disagreed that their workplace supports teamwork (\pm sd = 2.33), effective interprofessional collaborative practices exist in the hospital (\pm sd = 1.08), and their remuneration reflects their worth to the organization (\pm sd = 2.33).

Doctors' dominance and claim of ownership of patients, allied professionals' attitudes and ignorance of pharmacists' roles, salary disparity, poor communication, resistance to change and new ideas, workplace policies, interdisciplinary rivalry and defective leadership style among others were identified as impediments to teamwork. The hospital pharmacists demonstrated positive disposition towards teamwork, and agreed that effective teamwork would improve health care delivery.²²

CHAPTER THREE³

MATERIALS AND METHODS

3.1 STUDY AREA

This study was conducted at the University of Benin Teaching Hospital (UBTH), a tertiary healthcare institution located in Egor Local Government Area, Benin City, Edo State, Nigeria.

Edo State, situated in the South-South region of Nigeria, is one of the country's 36 states, with Benin City serving as its capital and largest urban center.²³ The state's economy is anchored in agriculture, oil production, and solid minerals, with cassava, yam, maize, and rubber among its key agricultural outputs.²⁴

Benin City is one of the oldest and most historically significant cities in the country. It serves as a major urban center in the Niger Delta region and has a diverse population estimated to be over 1.5 million as of the 2023 projection, reflecting both urban growth and migration trends in Nigeria.²⁵ It is well connected through road and air transport networks and houses several educational institutions, including the University of Benin.

The ethnic composition of Benin City is diverse, though the Edo (also known as Bini) people constitute the indigenous and dominant ethnic group. The Edo people have deep historical roots in the city, tracing back to the powerful Benin Kingdom, one of Africa's most advanced pre-colonial civilizations.²⁶ Their language, also called Edo, remains widely spoken in the city alongside English (as the official language of Nigeria) and Nigerian Pidgin (used in informal contexts).²⁷

Other major ethnic groups in Benin City include the Esan, Etsako, Owan, and Akoko-Edo peoples, who are collectively referred to as the Edoid subgroups. These groups originate from different parts of Edo State and contribute to the broader Edo cultural and linguistic identity. According to estimates drawn from state demographic data, the Edo (Bini) people make up approximately 57.5% of the population of Edo State, followed by the Esan at 17.1%, Etsako at 12.2%, Owan at 7.4%, and Akoko-Edo at 5.7%.²⁶

Benin City boasts a robust network of medical institutions, ranging from the premier federal facility, the University of Benin Teaching Hospital (UBTH) in Ugbowo, which serves as the primary hub for tertiary care and complex surgeries, to specialized centers like the Federal Neuro-Psychiatric Hospital in Uselu and National Orthopedic Hospital. State-led healthcare is anchored by the modernized Edo Specialist Hospital and the Stella Obasanjo Women and Children Hospital, which provides focused maternal and pediatric services. Lily Hospitals and Benin Medical Care (BMC) offer advanced diagnostics and specialized treatments for those seeking private care. While mission-based facilities such as St. Philomena Catholic Hospital remains pillars for maternity and community health. Together, these facilities ensure that the city is well-equipped to handle everything from routine check-ups and emergency trauma to highly specialized psychiatric and orthopedic needs.

The University of Benin Teaching Hospital (UBTH) was established on May 12, 1973 and is one of Nigeria's foremost tertiary healthcare institutions. It is a federal government hospital affiliated with the University of Benin and serves as a teaching, research, and referral center for Edo State and surrounding states such as Delta, Ondo, Kogi, and Bayelsa.²⁸ The hospital has a bed capacity of over 900, with multiple departments including Internal Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, Psychiatry, Dentistry, Radiology, Family Medicine, Ophthalmology,

and Pathology. Specialized units include a Neonatal Intensive Care Unit (NICU), Adult Intensive Care Unit (ICU), Burns and Plastic Surgery Unit, Dialysis Centre, and a Comprehensive Emergency Department. UBTH also operates an Infection Prevention and Control (IPC) Committee. It also boasts of other clinical departments like Pharmacy, Physiotherapy and Occupational Therapy. UBTH also runs two (2) schools namely; UBTH College of Nursing and Institute of Health Sciences and Technology.²⁸ All departments work hand-in-hand to ensure seamless operation within the hospital for overall patient care and satisfaction.

3.2 STUDY DESIGN

A hospital-based, descriptive cross-sectional study was conducted to determine the knowledge, perception and level of implementation of team - based care among clinical staffs in University of Benin Teaching Hospital (UBTH).

3.3 STUDY DURATION

This study was carried out between March 2025 and March 2026. During this 12-month period, the first five months was used for conceptualization and initial write-up. Data collection was done in the community in the next three months. Collated data was analysed in the next three month and the final write-up was done in the twelfth month.

3.4 STUDY POPULATION

The population comprised of all clinical staff directly involved in patient care (including Physicians, Nurses, Pharmacists, Physiotherapists, Laboratory scientist, Radiographers) across all departments of University of Benin Teaching Hospital (UBTH), Benin City, Nigeria.

3.5 SELECTION CRITERIA

3.5.1 INCLUSION CRITERIA

- 1) Clinical staff member who were directly involved in interprofessional patient care.
- 2) Must have worked in their current clinical department/unit for a minimum of six (6) months.
- 3) Must have regular, demonstrated experience in utilizing shared clinical documentation tools.

3.5.2 EXCLUSION CRITERIA

- 1) Staff whose primary duties were purely administrative or academic.
- 2) Clinical staff who were currently on any form of leave (annual, sick or study leave).
- 3) Staff who were currently serving a notice of resignation or termination.

3.6 SAMPLE SIZE DETERMINATION

Sample size was calculated using the Cochran's formula for estimating a single population proportion:

$$n = \frac{(Z^2 \cdot p \cdot q)}{d^2}$$

Where:

n = Minimum sample size

Z = 1.96 (Normal standard deviation set at 95% confidence interval)

p = Prevalence rate of a particular characteristics of the target population

Using the 43.4% prevalence of ineffective inter-professional collaboration and team-based care in referral and teaching hospitals in the Northwest and Ethiopia.

p= 0.434

q = The complementary probability = 1 – p

q = 1 – 0.434 = 0.566

d = 0.05 (constant degree of freedom)

Hence;

$n = z^2 pq / d^2$

Inputting the values;

$$n = \frac{(1.96^2 \times 0.432 \times 0.566)}{0.05^2}$$

$$n = \frac{0.939317}{0.0025}$$

$$n = 375.7 \approx 376$$

Therefore, the minimum sample size for this study was 376 participants.

To make room for non-response, a 10% non – response rate was added to the minimum sample size, using the formular for non-response rate.

$$n_s = n \div (1 - nr)$$

Where,

n_s = Adjusted sample size

n = Calculated sample size

nr = Non response rate = 10% = 0.1

Hence;

$$n_s = 376 \div (1 - 0.1)$$

$$n_s = 418$$

Therefore, the adjusted minimum sample size for this study was 418 participants.

3.7 SAMPLING TECHNIQUE

A multistage sampling method was used to select clinical staff respondents across various professional cadres and departments, ensuring broad representation of the interprofessional team. A total sample size of 418 clinical staff was targeted.

A multi-stage stratified random sampling technique was employed to ensure a representative selection of participants across professional cadres through the following stages:

STAGE 1: STRATIFICATION

The study population was divided into distinct strata based on professional background: the Medical Group, the Nursing Group, and the Allied Health Professional Group. This ensured that the sample is both representative and proportionally distributed across clinical staffs.

The total number of clinical staffs in UBTH was 1,389 with the clinical staffs being:

Medical doctors = 664

Nurses = 630

Pharmacists = 68

Physiotherapists = 19

Radiographers = 8

Sampling fraction = n/N

Where n = sample size = 418

N = Total population = 1,389

Sampling fraction = $418/1389 = 0.30$

STAGE 2: PROPORTIONAL ALLOCATION

The number of participants from each stratum was determined proportionately to the total population of that cadre within the hospital to ensure balanced representation.

Proportional allocation for each cadre,

Medical doctors = $0.3 \times 664 = 199.2$

Nurses = $0.3 \times 630 = 189$

Pharmacists = $0.3 \times 68 = 20.4$

Physiotherapists = $0.3 \times 19 = 5.7$

Radiographers = $0.3 \times 8 = 2.4$

Therefore, joint total = $199.2 + 189 + 20.4 + 5.7 + 2.4 = 416.7$

STAGE 3: SELECTION OF SAMPLING FRAMES

Comprehensive lists and duty rosters was obtained from hospital administration to serve as the sampling frame for each cadre.

STAGE 4: SIMPLE RANDOM SELECTION

Participants were selected from each list using a simple random sampling method, such as a ballot system, to ensure every eligible staff member had an equal chance of inclusion and to eliminate selection bias.

3.8 TOOLS AND METHODS FOR DATA MANAGEMENT

3.8.1 DATA COLLECTION

Data was primarily collected using a pre-tested, structured, self-administered questionnaire distributed to eligible clinical staff, covering their sociodemographic data and professional cadre.

This assessed respondents' knowledge of team-based care and their perception towards its implementation. Informed consent was obtained from the respondents and they were assured of confidentiality.

3.8.2 TOOLS

Structured interviewer-administered questionnaire was used for this survey. The questionnaire was adapted from Team Strategies & Tools to Enhance Performance and Patient Safety (Team STEPPS 3.0) and previous studies done on knowledge, perception, facilitators and barriers of effective team-based care. This tool was validated by using 10% of the estimated sample size for the study. The questionnaire was divided into four sections as follows:

SECTION A: Socio-demographic characteristics of respondents.

SECTION B: Knowledge of team - based care

SECTION C: Perception of team - based care

SECTION D: Facilitators and barriers to effective team - based care

3.8.3 PRE-TESTING

To ensure standardization of the questionnaire, it was pretested using 10% of the initial sample size (n= 418). Pretesting was done in Edo specialist hospital to identify and fix flaws in the questionnaire such as ambiguous wording, excessive length or illogical flow to ensure the final data collected was both reliable and accurate.

3.8.4 RESEARCH ASSISTANT

Research assistants were recruited for the purpose of this study with proper standardization of the questionnaire.

3.8.5 Data Analysis & Presentation

Data gathered were collated and screened for completeness after which they were serially entered into IBM SPSS version 25.0 software for analysis before scoring.

Data was analyzed at three levels: univariate analysis using frequencies and percentages to describe the socio-demographic characteristics and overall levels of knowledge and perception; bivariate analysis using Chi-square tests or ANOVA to determine significant associations between staff cadres and their perceptions of team-based care; and multivariate analysis via logistic regression to identify the primary independent predictors of effective collaborative practice.

Results obtained were presented using frequency distribution tables, contingency tables, charts and prose in line with the specific objectives of the study.

3.9 SCORING SYSTEM

Questions with the most appropriate response were given a score of 1 and those with inappropriate responses/incorrect responses were given a score of 0. Total scores were converted to percentages and grouped as follows:

- Good Knowledge: scores $\geq 50\%$ and Poor Knowledge: scores $< 50\%$.
- Good Perception: scores $\geq 50\%$ and Poor Perception: scores $< 50\%$.

3.10 ETHICAL CONSIDERATION

Ethical approval and permission to carry out the study was obtained from the Health Research Ethics Committee of the University of Benin Teaching Hospital. Written informed consent was also taken from the respondents before administering the questionnaires. The respondents were informed that they had the right to withdraw from the study at any time and that withdrawal poses no loss or harm.

3.11 LIMITATION OF STUDY

The study may be influenced by the significant professional hierarchy characteristic of tertiary hospitals, potentially leading to social desirability bias where clinical staff overreport positive implementation.

CHAPTER FOUR

RESULT

SECTION A – SOCIODEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Table 1: Socio-demographic characteristics of respondents

Variable	Frequency (n=418)	Percent
Age group (years)		
< 26 years	43	10.3
26–34 years	183	43.8
≥ 35 years	192	45.9
Mean ± SD	35.2 ±8.2	
Gender		
Male	179	42.8
Female	239	57.2
Ethnic Group		
Benin	165	39.5
Yoruba	63	15.1
Esan	33	7.9

Urhobo/Isoko	19	4.5
Others	13	3.1
Etsako	12	2.9
Tiv	6	1.4
Owan/Ora	5	1.2
Hausa/Katif	5	1.2
Ibibio/Efik	3	0.7
Religion		
Christian	385	92.1
Muslim	30	7.2

The study comprised 418 respondents. The age distribution showed that nearly half of the participants were aged ≥ 35 years, accounting for 192 (45.9%) individuals. This was followed by those in the 26–34 years age group, who represented 183 (43.8%) respondents, while a smaller proportion, 43 (10.3%), were under 26 years of age.

In terms of gender, there was a higher proportion of female respondents, with 239 (57.2%), compared to 179 (42.8%) males.

Regarding ethnic distribution, the Benin ethnic group constituted the largest proportion of respondents, with 165 (39.5%). This was followed by Igbo respondents, who accounted for 94 (22.5%), and Yoruba with 63 (15.1%). Other ethnic groups included Esan 33 (7.9%), Urhobo 16 (3.8%), Etsako 12 (2.9%), and smaller proportions from Tiv 6 (1.4%) and Hausa/Katif 5 (1.2%). Additional minority groups such as Ibibio/Annang/Efik/Ogoja and Isoko each accounted for 3

(0.7%), while Owan/Ora and respondents classified as “Others” each made up 5 (1.2%) and 13 (3.1%) respectively.

With respect to religion, the majority of respondents were Christians, 385 (92.1%), while Muslims constituted 30 (7.2%), and a very small proportion, 3 (0.7%), identified with other religions.

Table 2: Occupational Characteristics of Respondents

Category	Frequency (n)	Percent
Profession		
Nursing and Rehabilitation Professionals	188	45
Physicians	183	43.8

Pharmaceutical and Nutrition Professionals	25	6
Diagnostic and Laboratory Professionals	22	5.3
Year of Experience		
1–5 years	152	36.4
> 10 years	105	25.1
< 1 year	85	20.3
6–10 years	76	18.2
Department		
Clinical Medical and Surgical Department	276	66
Emergency and Outpatient Service	68	16.3
Allied Health & Public Health Services	52	12.4
Diagnostic and Laboratory Service	22	5.3

In terms of professional background, almost half of the respondents were Nursing and Rehabilitation Professionals, 188 (45.0%), followed closely by Physicians, 183 (43.8%). Diagnostic and Laboratory Professionals accounted for 22 (5.3%), while Pharmaceutical and Nutrition Professionals represented 25 (6.0%).

Regarding years of experience, the largest proportion of respondents had 1–5 years of professional experience, 152 (36.4%). This was followed by those with more than 10 years of

experience, 105 (25.1%), while 85 (20.3%) had less than 1 year of experience, and 76 (18.2%) had 6–10 years of experience.

For departmental distribution, most respondents worked in the Clinical Medical and Surgical Department, 276 (66.0%). This was followed by those in the Emergency and Outpatient Service⁶⁸ (16.3%), Allied Health and Public Health Services, 52 (12.4%), and a smaller proportion in the Diagnostic and Laboratory Service, 22 (5.3%).

SECTION B – KNOWLEDGE OF TEAM BASED CARE AMONG CLINICAL STAFF

Table 3: Respondents’ Knowledge of Team-Based Care

Knowledge Statement	True n (%)	False n	I Don’t Know
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		(%)	n (%)
Team-based care involves multiple healthcare providers from different disciplines working collaboratively with the patient to achieve shared goals.	401 (95.9)	9 (2.2)	8 (1.9)
The primary goal of team-based care is strictly to reduce hospital costs.	66 (15.8)	331 (79.2)	21 (5.0)
In team-based care, the physician is solely responsible for all decision-making.	59 (14.1)	340 (81.3)	19 (4.5)
Effective team-based care reduces the risk of medical errors and improves patient outcomes.	401 (95.9)	13 (3.1)	4 (1.0)
Situation monitoring refers to the process of individual team members watching only their own tasks to avoid errors.	144 (34.4)	238 (56.9)	36 (8.6)
Mutual support is a core competency that involves anticipating and helping other team members with their workload.	359 (85.9)	41 (9.8)	18 (4.3)
Briefs (planning sessions) and debriefs (review sessions) are essential communication tools.	383 (91.6)	16 (3.8)	19 (4.5)
Team leadership must always be performed by a physician.	165 (39.5)	226 (54.1)	27 (6.5)
A benefit of team-based care is the reduction of medical errors and improvement of patient safety.	401 (95.9)	17 (4.1)	—
The effectiveness of a team is reduced if all members clearly understand their roles and responsibilities.	115 (27.5)	294 (70.3)	9 (2.2)
Nurses' roles in team-based care are limited to only medication administration and physical care.	78 (18.7)	320 (76.6)	20 (4.8)
Pharmacists' input in the team helps in medication reconciliation and reducing adverse drug events.	397 (95.0)	16 (3.8)	5 (1.2)

All clinical staff, regardless of their seniority, should feel comfortable speaking up about a potential patient safety concern.	392 (93.8)	14 (3.3)	12 (2.9)
The primary focus of team-based care is the patient's preferences and values.	263 (62.9)	132 (31.6)	23 (5.5)

A very high proportion of respondents demonstrated correct understanding that team-based care involves multiple healthcare providers from different disciplines working collaboratively with the patient to achieve shared goals, with 401 (95.9%) answering correctly, while only 9 (2.2%) answered incorrectly and 8 (1.9%) were unsure. Similarly, most respondents correctly identified that effective team-based care reduces the risk of medical errors and improves patient outcomes, with 401 (95.9%) indicating “True”, 13 (3.1%) “False”, and 4 (1.0%) “I don’t know”. There was also strong knowledge regarding communication and teamwork principles, as 383 (91.6%) correctly recognized that briefs and debriefs are essential communication tools, while 16 (3.8%) disagreed and 19 (4.5%) were unsure. In addition, 359 (85.9%) correctly agreed that mutual support is a core competency involving anticipating and assisting other team members, while 41 (9.8%) disagreed and 18 (4.3%) were unsure. Likewise, 397 (95.0%) correctly identified that pharmacists’ input is important in medication reconciliation and reducing adverse drug events, while 16 (3.8%) and 5 (1.2%) responded “False” and “I don’t know” respectively. A similarly high proportion, 392 (93.8%), agreed that all clinical staff should feel comfortable speaking up about patient safety concerns, while 14 (3.3%) disagreed and 12 (2.9%) were unsure.

However, some gaps in knowledge were observed in specific areas. Only 263 (62.9%) correctly identified that the primary focus of team-based care is the patient's preferences and values, while 132 (31.6%) answered incorrectly and 23 (5.5%) were unsure. Furthermore, misconceptions were evident in several items: only 66 (15.8%) correctly disagreed that the primary goal of team-based care is strictly to reduce hospital costs, while 331 (79.2%) incorrectly agreed with the statement and 21 (5.0%) were unsure. Similarly, only 59 (14.1%) correctly disagreed that the physician is solely responsible for all decision-making, while 340 (81.3%) incorrectly agreed and 19 (4.5%) were unsure. Only 115 (27.5%) correctly disagreed that team effectiveness is reduced when members understand their roles, while 294 (70.3%) incorrectly agreed and 9 (2.2%) were unsure.

In terms of role clarity within the healthcare team, 78 (18.7%) correctly disagreed that nurses' roles are limited only to medication administration and physical care, while 320 (76.6%) held this misconception and 20 (4.8%) were unsure. Similarly, 165 (39.5%) correctly disagreed that team leadership must always be performed by a physician, while 226 (54.1%) incorrectly agreed and 27 (6.5%) were unsure. Additionally, only 144 (34.4%) correctly disagreed with the misconception that situation monitoring refers to individuals focusing only on their own tasks, while 238 (56.9%) agreed with this incorrect statement and 36 (8.6%) were unsure.

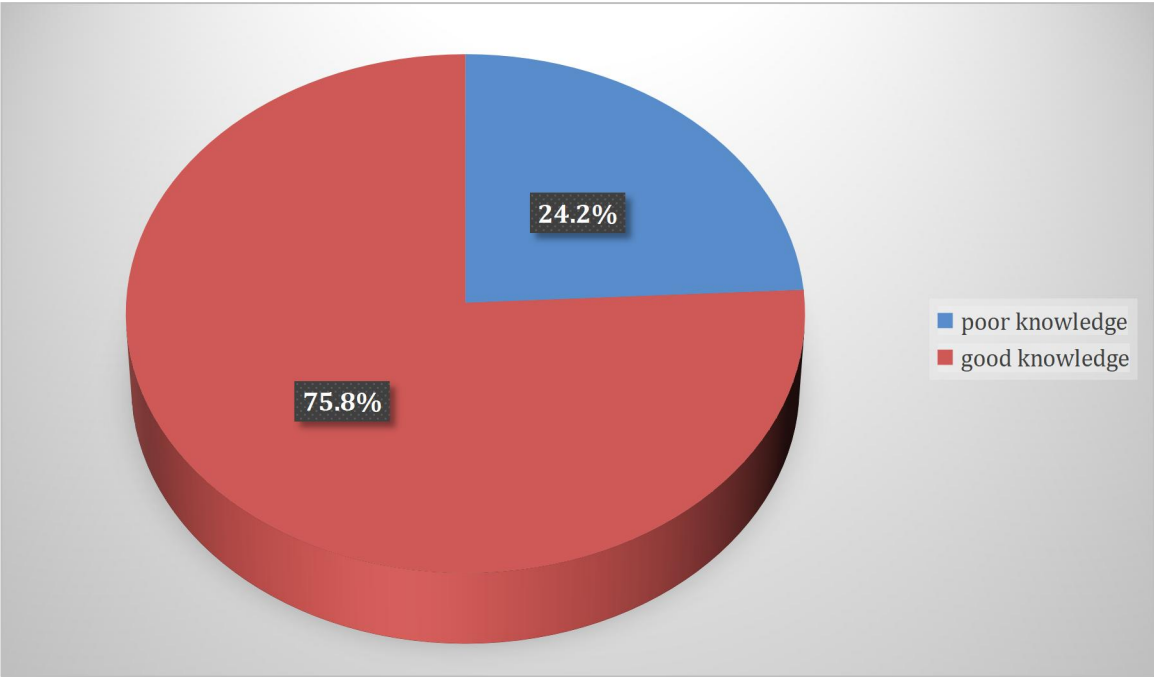


Figure 1: Overall knowledge of team-based care among clinical staff in university of Benin teaching hospital

The chart revealed that majority of the clinical staffs, 75.8% had good knowledge of team-based care while 24.2% had poor knowledge of team-based care.

Table 4: Sociodemographic characteristics and knowledge of team-based care among respondents

Variable	Good knowledge (n = 317) n (%)	Poor knowledge (n = 101) n (%)	Test statistic	p-value
Age group (years)				
<26 yrs	34 (79.1)	9 (20.9)	$\chi^2 = 0.834$	0.659
26–34 yrs	135 (73.8)	48 (26.2)		
≥35 yrs	148 (77.1)	44 (22.9)		
Gender				
Male	132 (73.7)	47 (26.3)	$\chi^2 = 0.749$	0.387
Female	185 (77.4)	54 (22.6)		
Religion				
Christian	295 (76.6)	90 (23.4)	$\chi^2 = 3.645$	0.162
Muslim	21 (70.0)	9 (30.0)		
Others	1 (33.3)	2 (66.7)		

Good knowledge of team-based care did not differ significantly across age groups, as 34 (79.1%) of respondents under 26 years demonstrated good knowledge compared to 135 (73.8%) among

those aged 26–34 years and 148 (77.1%) among those aged ≥ 35 years. This association was not statistically significant, $\chi^2 = 0.834$, $p = 0.659$.

Similarly, there was no statistically significant association between gender and knowledge of team-based care. Good knowledge was observed in 132 (73.7%) of males and 185 (77.4%) of females, $p = 0.387$.

In relation to ethnicity, good knowledge varied across groups, with 127 (77.0%) among Benin respondents, 25 (75.8%) among Esan, 70 (74.5%) among Igbo, 10 (83.3%) among Etsako, 45 (71.4%) among Yoruba, and 14 (87.5%) among Urhobo respondents. Other ethnic groups such as Ibibio/Annang/Efik/Ogoja 2 (66.7%), Isoko 1 (33.3%), Owan/Ora 4 (80.0%), Hausa/Katif 4 (80.0%), Tiv 6 (100.0%), and Others 9 (69.2%) also demonstrated varying levels of good knowledge. However, this association was not statistically significant, $\chi^2 = 7.847$, $p = 0.727$.

Regarding religion, good knowledge of team-based care was observed in 295 (76.6%) of Christians, 21 (70.0%) of Muslims, and 1 (33.3%) of respondents practicing other religions. This association was not statistically significant, $\chi^2 = 3.645$, $p = 0.162$.

Table 5: Occupational characteristics and knowledge of team based care among respondents

Variable	Good Knowledge (n = 317) n (%)	Poor Knowledge (n = 101) n (%)	Test statistic	p- value
Profession				
Physicians	130 (71.0)	53 (29.0)	$\chi^2 = 6.159$	0.104
Nursing & Rehabilitation	153 (81.4)	35 (18.6)		
Diagnostic & Laboratory	15 (68.2)	7 (31.8)		
Pharmaceutical & Nutrition	19 (76.0)	6 (24.0)		
Years of Experience				
<1 year	66 (77.6)	19 (22.4)	$\chi^2 = 0.647$	0.886
1–5 years	115 (75.7)	37 (24.3)		
6–10 years	59 (77.6)	17 (22.4)		
>10 years	77 (73.3)	28 (26.7)		

Department				
Clinical Medical & Surgical	206 (74.6)	70 (25.4)	$\chi^2 =$ 4.361	0.225
Emergency & Outpatient	56 (82.4)	12 (17.6)		
Allied Health & Public Health	36 (69.2)	16 (30.8)		
Diagnostic and Laboratory	19 (86.4)	3 (13.6)		

Good knowledge of team-based care did not differ significantly across years of experience. In terms of professional category, good knowledge was highest among Nursing and Rehabilitation Professionals, with 153 (81.4%), followed by Pharmaceutical and Nutrition Professionals 19 (76.0%), Physicians 130 (71.0%), and Diagnostic and Laboratory Professionals 15 (68.2%). However, this relationship was also not statistically significant, $\chi^2 = 6.159$, $p = 0.104$. Respondents with less than 1 year of experience demonstrated good knowledge in 66 (77.6%) of cases, compared to 115 (75.7%) among those with 1–5 years, 59 (77.6%) among those with 6–10 years, and 77 (73.3%) among those with more than 10 years of experience. This association was not statistically significant, $\chi^2 = 0.647$, $p = 0.886$.

Similarly, there was no statistically significant association between department and knowledge of team-based care. Good knowledge was observed among 206 (74.6%) of respondents in the Clinical Medical & Surgical Department, 56 (82.4%) in Emergency & Outpatient Services, 19 (86.4%) in Diagnostic & Laboratory Services, and 36 (69.2%) in Allied Health & Public Health Services. This relationship was also not statistically significant, $\chi^2 = 4.361$, $p = 0.225$.

Table 6: Logistics regression analysis for determinants of knowledge of team-based care among respondents

Variable	β	p-value	Odds Ratio	95% CI for OR	
				Lower	Upper
Age (years)	0.008	0.727	1.008	0.964	1.053
Gender					
Female	-0.168	0.521	0.845	0.505	1.413
Male			1		
Profession					
Nursing & Rehabilitation	-0.613	0.287	0.542	0.176	1.672
Diagnostic & Laboratory	0.203	0.719	1.225	0.406	3.694
Pharmaceutical & Nutrition	-1.576	0.06	0.207	0.04	1.067
Physicians			1		
Years of Experience-					
1–5 years	0.878	0.102	2.406	0.841	6.883

6–10 years	0.636	0.148	1.889	0.797	4.476
>10 years	0.547	0.17	1.728	0.792	3.774
<1 year			1		
Department					
Emergency & Outpatient	0.439	0.261	1.551	0.722	3.332
Diagnostic & Laboratory	0.873	0.071	2.394	0.929	6.168
Allied Health & Public Health	2.247	0.011	9.463	1.674	53.476

$R^2 = 0.78\% - 1.16\%$; *Reference category, OR = Odds Ratio; CI = Confidence Interval. Outcome = Good knowledge

The logistic regression analysis for determinants of knowledge of team-based care showed that none of the sociodemographic variables were statistically significant predictors of knowledge.

In terms of age group, respondents aged 26–34 years were less likely to have good knowledge compared to those aged <26 years (OR = 0.653, 95% CI: 0.208–2.055), while those aged ≥ 35 years also showed lower odds of good knowledge (OR = 0.549, 95% CI: 0.257–1.174). However, these associations were not statistically significant ($p = 0.467$ and $p = 0.122$ respectively).

Regarding gender, females had slightly lower odds of good knowledge compared to males (OR = 0.845, 95% CI: 0.505–1.413), but this was not statistically significant ($p = 0.521$).

For ethnicity, none of the ethnic categories showed a significant association with knowledge of team-based care when compared to the reference group (Benin). Although some groups such as Ibibio/Annang/Efik/Ogoja (OR = 2.551) and Hausa/Katif (OR = 1.514) showed higher odds, while others such as Owan/Ora (OR = 0.097) showed lower odds, all confidence intervals were wide and included unity, indicating no statistical significance ($p > 0.05$ for all).

Similarly, religion was not a significant predictor of knowledge. Muslims had higher odds of good knowledge compared to Christians (OR = 6.088, 95% CI: 0.487–76.045), and respondents practicing other religions also showed higher odds (OR = 3.729, 95% CI: 0.259–53.777), but these findings were not statistically significant ($p = 0.161$ and $p = 0.334$ respectively). In terms of profession, compared to physicians, nursing and rehabilitation professionals had lower odds of good knowledge (OR = 0.542, 95% CI: 0.176–1.672), while diagnostic and laboratory professionals had slightly higher odds (OR = 1.225, 95% CI: 0.406–3.694). Pharmaceutical and nutrition professionals also had lower odds of good knowledge (OR = 0.207, 95% CI: 0.040–1.067). However, none of these associations were statistically significant ($p > 0.05$).

Regarding years of experience, respondents with 1–5 years (OR = 2.406), 6–10 years (OR = 1.889), and >10 years (OR = 1.728) all showed higher odds of good knowledge compared to those with less than 1 year of experience. Nevertheless, these associations were not statistically significant ($p = 0.102$, 0.148, and 0.170 respectively).

For department, Emergency and Outpatient staff had higher odds of good knowledge compared to those in Clinical Medical and Surgical departments (OR = 1.551, 95% CI: 0.722–3.332), while Diagnostic and Laboratory staff also showed increased odds (OR = 2.394, 95% CI: 0.929–6.168). Notably, respondents in Allied Health and Public Health Services were significantly more likely to have good knowledge of team-based care (OR = 9.463, 95% CI: 1.674–53.476, $p = 0.011$), making department the only statistically significant predictor in the model.

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SECTION C – PERCEPTION OF TEAM BASED CARE AMONG CLINICAL STAFF

Table 7a: Perception of team based care among respondents

Team Function	Strongly Agree Freq. (%)	Agree Freq. (%)	Neutral - Freq. (%)	Disagree Freq. (%)	Strongly Disagree Freq. (%)
The skills of staff overlap sufficiently so that work can be shared when necessary.	105 (25.1%)	206 (49.3%)	78 (18.7%)	24 (5.7%)	5 (1.2%)
Staff are held accountable for their	133 (31.8%)	223	52	7 (1.7%)	3 (0.7%)

actions.		(53.3%)	(12.4%)		
Staff within my unit share information that enables timely decision making by the direct patient care team.	166 (39.7%)	189 (45.2%)	53 (12.7%)	8 (1.9%)	2 (0.5%)
My unit operates at a high level of Efficiency	130 (31.1%)	191 (45.7%)	80 (19.1%)	11 (2.6%)	6 (1.4%)
Team Leadership					
My supervisor/manager considers staff input when making decisions about patient care.	101 (24.2%)	215 (51.4%)	80 (19.1%)	18 (4.3%)	4 (1.0%)
My supervisor/manager ensures that adequate resources (e.g., staff, supplies, equipment, information) are available	108 (25.8%)	209 (50.0%)	86 (20.6%)	11 (2.6%)	4 (1.0%)
My supervisor/manager resolves conflicts successfully.	110 (26.3%)	212 (50.7%)	80 (19.1%)	9 (2.2%)	7 (1.7%)
My supervisor/manager models appropriate team behavior.	118 (28.2%)	237 (56.7%)	57 (13.6%)	2 (0.5%)	4 (1.0%)
My supervisor/manager ensures that staff are aware of any situations or changes that may affect patient care.	55 (13.2%)	207 (49.5%)	124 (29.7%)	26 (6.2%)	6 (1.4%)

Table 7b: Perception of ~~team-based~~team-based care among respondents

Situation Monitoring	Strongly Agree Freq. (%)	Agree Freq. (%)	Neutral Freq. (%)	Disagree Freq. (%)	Strongly Disagree Freq. (%)
Staff effectively anticipate each other's needs	96 (23.0%)	252 (60.3%)	65 (15.6%)	5 (1.2%)	0(0.0%)
Staff monitor each other's performance	127 (30.4%)	227 (54.3%)	58 (13.9%)	6 (1.4%)	0(0.0%)
Staff exchange relevant information as it becomes available	114 (27.3%)	227 (54.3%)	73 (17.5%)	2 (0.5%)	2 (0.5%)
Staff meet to re-evaluate patient care goals when aspects of the situation have changed.	119 (28.5%)	212 (50.7%)	70 (16.7%)	13 (3.1%)	4 (1.0%)
Staff correct each other's mistakes to ensure that procedures are followed properly.	103 (24.6%)	241 (57.7%)	60 (14.4%)	9 (2.2%)	5 (1.2%)
Mutual Support					
Staff assist fellow staff during high workload	119 (28.5%)	220 (52.6%)	66 (15.8%)	7 (1.7%)	6 (1.4%)
Staff request assistance from fellow staff when they feel overwhelmed	64 (15.3%)	186 (44.5%)	108 (25.8%)	44 (10.5%)	16 (3.8%)
Staff caution each other about potentially dangerous situations	153 (36.6%)	209 (50.0%)	40 (9.6%)	14 (3.3%)	2 (0.5%)
Feedback between staff is delivered in a way that promotes positive interactions and future change.	128 (30.6%)	223 (53.3%)	56 (13.4%)	8 (1.9%)	3 (0.7%)

Staff advocate for patients even when their opinion conflicts with that of a senior member of the unit.	118 (28.2%)	198 (47.4%)	80 (19.1%)	18 (4.3%)	4 (1.0%)
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Table 7c: Perception of team based care among respondents

Communication	Strongly Agree Freq. (%)	Agree Freq. (%)	Neutral Freq. (%)	Disagree Freq. (%)	Strongly Disagree Freq. (%)
Information regarding patient care is explained to patients and their families in lay terms	105 (25.1%)	206 (49.3%)	78 (18.7%)	24 (5.7%)	5 (1.2%)
Staff relay relevant information in a timely manner	133 (31.8%)	223 (53.3%)	52 (12.4%)	7 (1.7%)	3 (0.7%)
When communicating with patients, staff allow enough time to answer questions	166 (39.7%)	189 (45.2%)	53 (12.7%)	8 (1.9%)	2 (0.5%)
Staff use common terminology when communicating with each other	130 (31.1%)	191 (45.7%)	80 (19.1%)	11 (2.6%)	6 (1.4%)

Regarding team functioning, most respondents agreed that the skills of staff overlap sufficiently to allow work to be shared when necessary, with 105 (25.1%) strongly agreeing and 206 (49.3%) agreeing, while 78 (18.7%) were neutral, 24 (5.7%) disagreed, and 5 (1.2%) strongly disagreed. Similarly, 133 (31.8%) strongly agreed and 223 (53.3%) agreed that staff are held accountable for their actions, while 52 (12.4%) were neutral, 7 (1.7%) disagreed, and 3 (0.7%) strongly

disagreed. In relation to communication and information sharing, 166 (39.7%) strongly agreed and 189 (45.2%) agreed that staff within their unit share information that enables timely decision-making by the direct patient care team, while 53 (12.7%) were neutral, 8 (1.9%) disagreed, and 2 (0.5%) strongly disagreed.

Perceptions of efficiency and team leadership were also largely positive, as 130 (31.1%) strongly agreed and 191 (45.7%) agreed that their unit operates at a high level of efficiency, while 80 (19.1%) were neutral, 11 (2.6%) disagreed, and 6 (1.4%) strongly disagreed. Similarly, 142 (34.0%) strongly agreed and 210 (50.2%) agreed that team leadership is effective, while 54 (12.9%) were neutral, 8 (1.9%) disagreed, and 4 (1.0%) strongly disagreed.

Regarding supervisory support, 101 (24.2%) strongly agreed and 215 (51.4%) agreed that supervisors consider staff input when making decisions about patient care, while 80 (19.1%) were neutral, 18 (4.3%) disagreed, and 4 (1.0%) strongly disagreed. Likewise, 108 (25.8%) strongly agreed and 209 (50.0%) agreed that supervisors ensure availability of adequate resources, while 86 (20.6%) were neutral, 11 (2.6%) disagreed, and 4 (1.0%) strongly disagreed.

In addition, 110 (26.3%) strongly agreed and 212 (50.7%) agreed that supervisors resolve conflicts successfully, while 80 (19.1%) were neutral, 9 (2.2%) disagreed, and 7 (1.7%) strongly disagreed. Similarly, 118 (28.2%) strongly agreed and 237 (56.7%) agreed that supervisors model appropriate team behavior, while 57 (13.6%) were neutral, 2 (0.5%) disagreed, and 4 (1.0%) strongly disagreed.

Finally, 55 (13.2%) strongly agreed and 207 (49.5%) agreed that supervisors ensure staff are informed about situations or changes that may affect patient care, while 124 (29.7%) were neutral, 26 (6.2%) disagreed, and 6 (1.4%) strongly disagreed

For situation monitoring, a substantial proportion of respondents agreed that staff actively engage in effective teamwork behaviours. Overall, 53 (12.7%) strongly agreed and 216 (51.7%) agreed that situation monitoring is effectively practiced, while 121 (28.9%) were neutral, 23 (5.5%) disagreed, and 5 (1.2%) strongly disagreed. Specifically, 96 (23.0%) strongly agreed and 252 (60.3%) agreed that staff effectively anticipate each other's needs, while 65 (15.6%) were neutral and 5 (1.2%) disagreed, with no respondents strongly disagreeing. Similarly, 127 (30.4%) strongly agreed and 227 (54.3%) agreed that staff monitor each other's performance, while 58 (13.9%) were neutral and 6 (1.4%) disagreed. In addition, 114 (27.3%) strongly agreed and 227 (54.3%) agreed that staff exchange relevant information as it becomes available, while 73 (17.5%) were neutral and 2 (0.5%) disagreed or strongly disagreed respectively. Furthermore, 119 (28.5%) strongly agreed and 212 (50.7%) agreed that staff meet to re-evaluate patient care goals when situations change, while 70 (16.7%) were neutral, 13 (3.1%) disagreed, and 4 (1.0%) strongly disagreed. Likewise, 103 (24.6%) strongly agreed and 241 (57.7%) agreed that staff correct each other's mistakes to ensure proper procedures are followed, while 60 (14.4%) were neutral, 9 (2.2%) disagreed, and 5 (1.2%) strongly disagreed.

For mutual support, responses also reflected generally positive perceptions. Overall, 111 (26.6%) strongly agreed and 245 (58.9%) agreed that mutual support is practiced within teams, while 50 (12.0%) were neutral, 8 (1.9%) disagreed, and 3 (0.7%) strongly disagreed. Specifically, 119 (28.5%) strongly agreed and 220 (52.6%) agreed that staff assist colleagues during high workload, while 66 (15.8%) were neutral, 7 (1.7%) disagreed, and 6 (1.4%) strongly disagreed. However, fewer respondents indicated that staff request assistance when overwhelmed, with 64 (15.3%) strongly agreeing and 186 (44.5%) agreeing, while 108 (25.8%) were neutral, 44 (10.5%) disagreed, and 16 (3.8%) strongly disagreed.

In addition, 153 (36.6%) strongly agreed and 209 (50.0%) agreed that staff caution each other about potentially dangerous situations, while 40 (9.6%) were neutral, 14 (3.3%) disagreed, and 2 (0.5%) strongly disagreed. Similarly, 128 (30.6%) strongly agreed and 223 (53.3%) agreed that feedback between staff promotes positive interaction and improvement, while 56 (13.4%) were neutral, 8 (1.9%) disagreed, and 3 (0.7%) strongly disagreed. Finally, 118 (28.2%) strongly agreed and 198 (47.4%) agreed that staff advocate for patients even when their opinions conflict with senior staff, while 80 (19.1%) were neutral, 18 (4.3%) disagreed, and 4 (1.0%) strongly disagreed.

Overall, 115 (27.5%) strongly agreed and 219 (52.4%) agreed that communication within team-based care is effective, while 59 (14.1%) were neutral, 19 (4.5%) disagreed, and 6 (1.4%) strongly disagreed.

Regarding specific communication practices, 105 (25.1%) strongly agreed and 206 (49.3%) agreed that information regarding patient care is explained to patients and their families in lay terms, while 78 (18.7%) were neutral, 24 (5.7%) disagreed, and 5 (1.2%) strongly disagreed. Similarly, 133 (31.8%) strongly agreed and 223 (53.3%) agreed that staff relay relevant information in a timely manner, while 52 (12.4%) were neutral, 7 (1.7%) disagreed, and 3 (0.7%) strongly disagreed.

In addition, 166 (39.7%) strongly agreed and 189 (45.2%) agreed that staff allow sufficient time when communicating with patients to answer questions, while 53 (12.7%) were neutral, 8 (1.9%) disagreed, and 2 (0.5%) strongly disagreed. Furthermore, 130 (31.1%) strongly agreed and 191 (45.7%) agreed that staff use common terminology when communicating with each other, while 80 (19.1%) were neutral, 11 (2.6%) disagreed, and 6 (1.4%) strongly disagreed.

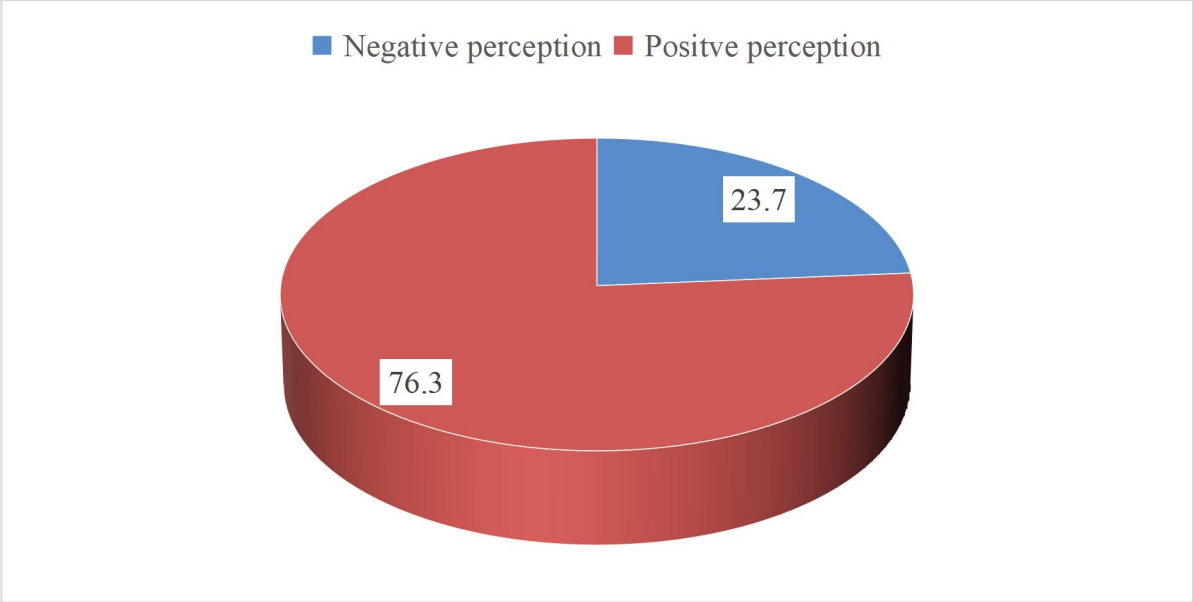


Figure 2: Overall perception of team-based care among clinical staff in university of Benin teaching hospital

The chart revealed that majority of the clinical staffs, 76.3% had positive perception of team - based care while 23.7% had negative perception of team-based care.

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Table 8: Sociodemographic characteristics and perception of team-based care among respondents

Category	Negative Perception (n=99) Freq. (%)	Positive Perception (n=319) Freq. (%)	Test Statistics	p-value
Age group (years)				
<26 years	9 (20.9)	34 (79.1)	$\chi^2 =$ 0.705	0.703
26–34 years	41 (22.4)	142 (77.6)		
≥35 years	49 (25.5)	143 (74.5)		
Gender				
Male	36 (20.1)	143 (79.9)	$\chi^2 =$ 2.211	0.137
Female	63 (26.4)	176 (73.6)		
Ethnicity				
Benin	43 (26.1)	122 (73.9)	$\chi^2 =$ 14.862	0.189
Esan	13 (39.4)	20 (60.6)		
Igbo	22 (23.4)	72 (76.6)		
Etsako	2 (16.7)	10 (83.3)		
Yoruba	11 (17.5)	52 (82.5)		
Urhobo	1 (6.3)	15 (93.8)		
Ibibio	2 (66.7)	1 (33.3)		

Isoko	1 (33.3)	2 (66.7)
Owan/Ora	0 (0.0)	5 (100.0)
Hausa/Katif	1 (20.0)	4 (80.0)
Tiv	1 (16.7)	5 (83.3)
Others	2 (15.4)	11 (84.6)

Religion

Christian	91 (23.6)	294 (76.4)	$\chi^2 =$ 0.157	0.924
Muslim	7 (23.3)	23 (76.7)		
Others	1 (33.3)	2 (66.7)		

Regarding age group, perception did not differ significantly, as 9 (20.9%) of respondents under 26 years had negative perception compared to 34 (79.1%) with positive perception. Among those aged 26–34 years, 41 (22.4%) had negative perception while 142 (77.6%) had positive perception, and among respondents aged ≥ 35 years, 49 (25.5%) had negative perception compared to 143 (74.5%) with positive perception. This association was not statistically significant, $\chi^2 = 0.705$, $p = 0.703$.

Similarly, there was no statistically significant association between gender and perception of team-based care. Negative perception was observed in 36 (20.1%) of males and 63 (26.4%) of

females, while positive perception was recorded in 143 (79.9%) and 176 (73.6%) respectively, $p = 0.137$.

In relation to ethnicity, perception of team-based care varied across groups, with 43 (26.1%) negative perception among Benin respondents and 122 (73.9%) positive perception. Among Esan respondents, 13 (39.4%) had negative perception and 20 (60.6%) had positive perception, while Igbo respondents recorded 22 (23.4%) negative and 72 (76.6%) positive perception. Other ethnic groups including Etsako 2 (16.7%) and Yoruba 11 (17.5%) also showed predominantly positive perception. Overall, there was no statistically significant association between ethnicity and perception of team-based care, $\chi^2 = 14.862$, $p = 0.189$.

Regarding religion, perception of team-based care was also not significantly associated with respondents' religious affiliation. Among Christians, 91 (23.6%) had negative perception and 294 (76.4%) had positive perception, while Muslims recorded 7 (23.3%) negative and 23 (76.7%) positive perception, and those of other religions had 1 (33.3%) negative and 2 (66.7%) positive perception. This association was not statistically significant, $\chi^2 = 0.157$, $p = 0.924$.

Table 9: Occupational characteristics and perception of team based care among respondents

Category	Negative Perception (n=99) Freq. (%)	Positive Perception - (n=319) Freq. (%)	Test Statistics	p-value
Profession				
Physicians	36 (19.7)	147 (80.3)	$\chi^2 =$ 3.942	0.268
Nursing & Rehabilitation	53 (28.2)	135 (71.8)		
Diagnostic & Laboratory	5 (22.7)	17 (77.3)		
Pharmaceutical & Nutrition	5 (20.0)	20 (80.0)		
Year of Experience				
<1 year	16 (18.8)	69 (81.2)	$\chi^2 =$ 2.169	0.538
1–5 years	40 (26.3)	112 (73.7)		
6–10 years	20 (26.3)	56 (73.7)		
>10 years	23 (21.9)	82 (78.1)		
Department				

Clinical medical & Surgical	70 (25.4)	206 (74.6)	$\chi^2 =$ 3.669	0.299
Emergency & Outpatient	10 (14.7)	58 (85.3)		
Diagnostic & Laboratory	6 (27.3)	16 (72.7)		
Allied Health & Public Health	13 (25.0)	39 (75.0)		

In terms of profession, physicians recorded 36 (19.7%) negative perception and 147 (80.3%) positive perception. Among nursing and rehabilitation professionals, 53 (28.2%) had negative perception while 135 (71.8%) had positive perception. Diagnostic and laboratory professionals recorded 5 (22.7%) negative and 17 (77.3%) positive perception, while pharmaceutical and nutrition professionals had 5 (20.0%) negative and 20 (80.0%) positive perception. This association was not statistically significant, $\chi^2 = 3.942$, $p = 0.268$.

Regarding years of experience, respondents with less than 1 year of experience had 16 (18.8%) negative perception and 69 (81.2%) positive perception. Those with 1–5 years recorded 40 (26.3%)

negative and 112 (73.7%) positive perception, while respondents with 6–10 years had 20 (26.3%) negative and 56 (73.7%) positive perception. Those with more than 10 years of experience recorded 23 (21.9%) negative perception and 82 (78.1%) positive perception. This relationship was not statistically significant, $\chi^2 = 2.169$, $p = 0.538$.

In relation to department, respondents in the Clinical Medical and Surgical Department recorded 70 (25.4%) negative perception and 206 (74.6%) positive perception. Those in Emergency and Outpatient Services had 10 (14.7%) negative and 58 (85.3%) positive perception, while Diagnostic and Laboratory Services recorded 6 (27.3%) negative and 16 (72.7%) positive perception. Allied Health and Public Health Services recorded 13 (25.0%) negative and 39 (75.0%) positive perception. This association was not statistically significant, $\chi^2 = 3.669$, $p = 0.299$.

Table 10: Logistics regression analysis for determinants of perception towards team-based care among respondents

Variable	β	p-value	Odds Ratio	95% CI for OR	
				Lower	Upper
Age (years)	-0.030	0.183	0.971	0.929	1.014
Gender					
Female	0.434	0.111	1.544	0.905	2.634
Male			1		
Profession					
Nursing & Rehabilitation	-0.073	0.091	0.93	0.277	3.119
Diagnostic & Laboratory	-0.422	0.479	0.656	0.204	2.107
Pharmaceutical & Nutrition	0.156	0.859	1.169	0.208	6.573

Physicians			1		
Years of Experience					
1–5 yrs	-0.291	0.578	0.747	0.266	2.092
6–10 yrs	-0.567	0.172	0.567	0.251	1.279
>10 yrs	-0.422	0.281	0.656	0.305	1.412
<1 yr			1		
Department					
Emergency & Outpatient	0.077	0.848	1.08	0.492	2.37
Diagnostic & Laboratory	0.918	0.017	2.505	0.922	6.808
Allied Health & Public Health	-0.534	0.047	0.586	0.138	2.496
Clinical Medical & Surgical			1		

$R^2 = 0.74\% - 1.11\%$; *Reference category, Bold = statistically significant ($p < 0.055$), R = Odds Ratio; CI = Confidence Interval.

In terms of age group, respondents aged 26–34 years had higher odds of positive perception compared to those aged <26 years (OR = 1.686, 95% CI: 0.572–4.970), while those aged ≥ 35 years also showed increased odds (OR = 1.697, 95% CI: 0.850–3.385). However, these associations were not statistically significant ($p = 0.343$ and $p = 0.134$ respectively).

Regarding gender, females had higher odds of positive perception compared to males (OR = 1.544, 95% CI: 0.905–2.634), but this was not statistically significant ($p = 0.111$).

For ethnicity, most categories showed mixed patterns of association when compared with the Benin reference group. While Ibibio/Annang/Efik/Ogoja showed higher odds of positive perception (OR = 3.526), other groups such as Igbo (OR = 0.238) and Isoko (OR = 0.097)

showed lower odds. However, all estimates had wide confidence intervals and were not statistically significant ($p > 0.05$ for all).

Similarly, religion was not a significant predictor of perception towards team-based care. Muslims had higher odds of positive perception compared to Christians (OR = 1.668, 95% CI: 0.136–20.499), while respondents practicing other religions also showed higher odds (OR = 1.719, 95% CI: 0.119–24.814), but these findings were not statistically significant ($p = 0.689$ and $p = 0.691$ respectively).

In terms of profession, compared to physicians (reference category), nursing and rehabilitation professionals had slightly lower odds of positive perception (OR = 0.93, 95% CI: 0.277–3.119), while diagnostic and laboratory professionals also showed lower odds (OR = 0.656, 95% CI: 0.204–2.107). Pharmaceutical and nutrition professionals had slightly higher odds of positive perception (OR = 1.169, 95% CI: 0.208–6.573). However, none of these associations were statistically significant ($p > 0.05$).

Regarding years of experience, respondents with 1–5 years (OR = 0.747), 6–10 years (OR = 0.567), and >10 years (OR = 0.656) all showed lower odds of positive perception compared to those with less than 1 year of experience. However, these associations were not statistically significant ($p = 0.578$, 0.172, and 0.281 respectively).

For department, Emergency and Outpatient Services showed no significant difference in perception compared to Clinical Medical and Surgical departments (OR = 1.08, 95% CI: 0.492–2.370, $p = 0.848$). However, respondents in the Diagnostic and Laboratory Services were significantly more likely to have positive perception towards team-based care (OR = 2.505, 95% CI: 0.922–6.808, $p = 0.017$), while those in Allied Health and Public Health Services were

significantly less likely to have positive perception (OR = 0.586, 95% CI: 0.138–2.496, $p = 0.047$).

**SECTION D: FACILITATORS AND BARRIERS TO EFFECTIVE TEAM – BASED
CARE**

Table 11: Facilitators and Barriers to Team-Based Care among Respondents (N = 418)

Statement	True n (%)	False n (%)	I don't know n (%)
My undergraduate/postgraduate training adequately prepared me for team-based practice	323 (77.3)	66 (15.8)	29 (6.9)

Lack of adequate time for joint professional training affects teamwork skills	293 (70.1)	88 (21.1)	37 (8.9)
Heavy workload and long working hours make collaborative care difficult	362 (86.6)	49 (11.7)	7 (1.7)
Poor physical layout of hospital/units hinders communication	349 (83.5)	45 (10.8)	24 (5.7)
Lack of clear organizational policy is a barrier to implementation	367 (87.8)	22 (5.3)	29 (6.9)
Resource constraints affect ability to practice team-based care	398 (95.2)	12 (2.9)	8 (1.9)
Professional hierarchy prevents open communication	344 (82.3)	58 (13.9)	16 (3.8)
Lack of mutual respect and trust is a major barrier	371 (88.8)	37 (8.9)	10 (2.4)
Personal motivation and attitude influence participation in team-based care	313 (74.9)	86 (20.6)	19 (4.5)

The findings on facilitators and barriers to team-based care among respondents showed a generally strong recognition of both institutional and interpersonal factors influencing teamwork.

Regarding preparedness for team-based practice, the majority of respondents reported that their undergraduate or postgraduate training adequately prepared them for team-based care, with 323 (77.3%) indicating “True,” while 66 (15.8%) reported “False” and 29 (6.9%) were unsure.

In relation to training opportunities, 293 (70.1%) of respondents agreed that lack of adequate time for joint professional training sessions (e.g., doctors and nurses training together) affects teamwork skills, while 88 (21.1%) disagreed and 37 (8.9%) were unsure.

A large proportion of respondents, 362 (86.6%), identified heavy patient workload and long working hours as a barrier to effective collaborative care, while 49 (11.7%) disagreed and 7 (1.7%) were unsure.

Similarly, 349 (83.5%) of respondents agreed that poor physical layout of hospital units, such as lack of shared workspace, hinders spontaneous team communication, while 45 (10.8%) disagreed and 24 (5.7%) were unsure.

Institutional policy was also widely recognized as a barrier, with 367 (87.8%) of respondents indicating that lack of a clear organizational policy on team-based care affects implementation, while 22 (5.3%) disagreed and 29 (6.9%) were unsure.

Resource constraints were identified as the most prominent barrier, with 398 (95.2%) of respondents agreeing that insufficient equipment and staff shortages affect the ability to practice effective team-based care, while 12 (2.9%) disagreed and 8 (1.9%) were unsure.

In addition, 344 (82.3%) of respondents agreed that professional hierarchy and power dynamics prevent open communication among team members, while 58 (13.9%) disagreed and 16 (3.8%) were unsure.

Similarly, 371 (88.8%) of respondents reported that lack of mutual respect and trust between professional groups is a major barrier to team-based care, while 37 (8.9%) disagreed and 10 (2.4%) were unsure.

Finally, 313 (74.9%) of respondents agreed that personal motivation and attitude significantly influence participation in team-based care, while 86 (20.6%) disagreed and 19 (4.5%) were unsure.

CHAPTER FIVE

DISCUSSION

The study conducted in University of Benin Teaching Hospital (UBTH) involved 418 clinical staff, with nearly half of respondents aged 35 years and above. This age distribution suggests that

most participants were experienced healthcare professionals who had spent several years in clinical practice. The predominance of mid-career and older staff is relevant to team-based care, as professional maturity and clinical exposure may enhance collaboration, communication, and shared decision-making within multidisciplinary teams. Female respondents constituted the majority, which may be attributed to the high representation of nursing and rehabilitation professionals, professions traditionally dominated by females. Gender composition within clinical teams may influence communication styles, teamwork dynamics, and participation in collaborative care models.

The Benin ethnic group formed the largest proportion of respondents (39.5%), followed by Igbo (22.5%) and Yoruba (15.1%), reflecting both the indigenous population of the study area and the diverse workforce typical of tertiary health institutions. Similarly, most respondents were Christians (92.1%), consistent with the religious distribution in southern Nigeria. Cultural and religious diversity within the workforce may shape interpersonal relationships, professional interactions, and perceptions toward collaborative practice.

Regarding professional background, Nursing and Rehabilitation Professionals (45.0%) and Physicians (43.8%) constituted the majority of participants, indicating strong representation of frontline clinical staff who are directly involved in team-based patient management. Most respondents had 1–5 years of professional experience (36.4%), suggesting an active workforce combining early-career enthusiasm with experienced practitioners. The majority worked in Clinical Medical and Surgical departments (66.0%), settings where multidisciplinary collaboration is essential, making them well positioned to provide informed perspectives on knowledge and perception of team-based care within the hospital.

The findings of this study demonstrated a generally high level of knowledge of team-based care among clinical staff at the University of Benin Teaching Hospital. Almost all respondents correctly understood that team-based care involves collaboration among healthcare professionals from different disciplines working with patients toward shared goals. Similarly, a large majority recognized the role of teamwork in reducing medical errors, improving patient outcomes, promoting open communication, and encouraging staff to speak up about patient safety concerns. These findings suggest strong awareness of core principles of collaborative practice within the study setting.

This finding is consistent with a study done in Saudi Arabia amongst clinical staffs across hospitals and reported that healthcare professionals exposed to interprofessional practice environments demonstrated high conceptual understanding of team-based care and its impact on patient safety.²⁸ It also supports a study conducted in Australia amongst 20 adults who were living with at least one chronic condition and demonstrated that clinicians widely acknowledged teamwork and communication as essential components of quality healthcare delivery.²⁹ Similarly, a systematic analysis among healthcare professionals found that hospital staff who routinely worked within multidisciplinary teams exhibited strong knowledge of collaboration principles and safety communication strategies.³⁰ However, this contrasts with a systematic review which reported gaps in understanding of teamwork concepts among hospital staff in settings where formal interprofessional education was limited. This was due to entrenched hospital hierarchies where doctors still make all the decisions, which creates a big public health problem because poor teamwork causes communication gaps that put patient safety at risk.³¹

Despite overall good knowledge, important misconceptions were identified. Only about two-thirds recognized that patient preferences and values represent the central focus of team-based

care. Furthermore, many respondents incorrectly believed that the primary goal of team-based care is cost reduction and that physicians remain solely responsible for decision-making. Similar hierarchical perceptions were done among four different cross-occupational teams and it demonstrated that traditional professional boundaries often persist despite increasing promotion of collaborative practice.

This also supports findings in a 60-year-old Canadian primary care clinic, which showed that role misunderstanding and physician-centric decision models remain barriers to effective teamwork. Role clarity gaps were also evident, as many respondents underestimated nursing roles, misunderstood situation monitoring, and believed team leadership must always be physician-led.³²

The position paper by the American college of Physicians states that the physician must remain the leader of patient-centered care to prevent role ambiguity and promote clinical accountability.³³

However, a systematic review which focused on hospital environment and units demonstrated improved role understanding and communication in institutions with structured team training programs, suggesting that targeted education may address these misconceptions.³⁴

Overall, majority of respondents demonstrated good knowledge of team-based care, indicating a favourable foundation for collaborative practice. The good knowledge level may reflect exposure to multidisciplinary clinical environments typical of tertiary hospitals. Similar good knowledge levels were reported in a study done in Southwest China among teaching hospital staff, where daily interprofessional interaction enhanced teamwork awareness.³⁵ Conversely, a systematic review done among students and practitioners in medical and allied health professions reported

poor knowledge levels among healthcare workers without structured interprofessional learning exposure.

Knowledge of team-based care did not differ significantly across age, gender, ethnicity, religion, profession, years of experience, or department. This suggests that understanding of teamwork principles is relatively uniform across the workforce. Comparable findings were reported in a study done across the United States among 345 behavioral health providers working in primary care settings and found that demographic characteristics were not strong determinants of teamwork knowledge among healthcare professionals.³⁶ Similarly, a study conducted in Ontario found that collaborative competence was influenced more by organizational culture than by individual sociodemographic factors.³⁷ However, this contrasts with another study done in Ontario among 988 healthcare providers which showed higher teamwork knowledge among younger professionals exposed to modern interprofessional educational curricular.³⁸

Logistic regression analysis further confirmed that most sociodemographic variables were not significant predictors of knowledge, reinforcing the idea that team-based care awareness cuts across professional and personal backgrounds. Notably, staff in Allied Health and Public Health Services demonstrated significantly higher odds of good knowledge compared to other departments. This may be explained by the inherently multidisciplinary nature of allied and public health practice, which emphasizes coordination, prevention, and collaborative decision-making. Similar observations were made in a study done in the United States which reported stronger collaborative competencies among allied health professionals due to routine interprofessional engagement.³⁶

The findings of this study revealed generally positive perceptions of team-based care among clinical staff in the University of Benin Teaching Hospital. Most respondents agreed that team

functioning within their units was effective, particularly regarding shared responsibilities, accountability, information exchange, and operational efficiency. A large proportion also perceived leadership within teams as effective, with supervisors encouraging staff participation in decision-making, resolving conflicts, modelling appropriate teamwork behaviors, and ensuring availability of resources. These findings suggest the presence of a supportive organizational environment that promotes collaboration and coordinated patient management.

This observation is consistent with the study done in South Africa among Senior Management Teams within the hospital environment and demonstrated that effective leadership and shared accountability significantly improve team performance and patient safety outcomes in hospital settings.³⁹ Similarly, a systematic review reported that healthcare teams characterized by clear communication, leadership support, and coordinated workflows tend to achieve higher efficiency and better clinical outcomes.⁴⁰ The findings also support a study done in Pakistan among interdisciplinary healthcare professionals which identified supervisory engagement and inclusive decision-making as critical drivers of successful multidisciplinary teamwork.⁴¹ However, this contrasts a study done in Netherlands which highlighted persistent communication breakdowns and leadership hierarchical gaps within some hospital teams despite structural collaboration policies.⁴²

Perceptions of mutual support were also largely positive, with many respondents indicating that staff assist colleagues during periods of high workload, provide constructive feedback, caution one another about potential risks, and advocate for patients even when opinions differ from senior staff. These findings highlight psychological safety within teams, where members feel empowered to contribute actively to patient care. This supports the study done in Indonesia among multidisciplinary health professionals who identified psychological safety as a key

determinant of effective teamwork and learning within healthcare organizations.⁴³ Similarly, a study conducted at Duke University Hospital, North Carolina among healthcare workers reported that mutual support and peer assistance are associated with improved staff morale and patient outcomes.⁴⁴ However, fewer respondents reported requesting assistance when overwhelmed, suggesting lingering hierarchical or cultural barriers to help-seeking. Comparable challenges were described in a qualitative case study approach among nurses working in acute care settings –who noted that professional autonomy and hierarchy may discourage staff from openly seeking support despite working within teams.⁴⁵

Communication practices were perceived positively overall, with most respondents agreeing that patient information is communicated clearly, shared promptly among staff, and explained to patients and families using understandable language. Effective communication is widely recognized as the foundation of team-based care. These findings align with a systematic review which demonstrated that structured communication significantly improves coordination and reduces adverse events in healthcare settings.⁴⁶ Similarly, a narrative review done emphasized that timely information sharing and use of common professional language enhance collaboration across disciplines. Conversely, The Joint Commission (2015) reported that communication failures remain a leading contributor to sentinel events globally, indicating that continued reinforcement of communication practices remains necessary even in settings with generally positive perceptions.

Overall, majority of respondents demonstrated a positive perception of team-based care, indicating strong acceptance of collaborative practice among clinical staff. This finding is consistent with a study done in Japan among healthcare professionals which reported favorable attitudes toward interprofessional teamwork among healthcare professionals in teaching hospitals

due to frequent multidisciplinary interaction.⁴⁷ However, a study done in Netherland observed less favourable perceptions in settings where interprofessional collaboration was not formally integrated into routine practice.⁴⁸

Perception of team-based care did not differ significantly across age, gender, ethnicity, religion, profession, years of experience, or department, suggesting that positive attitudes toward teamwork are broadly shared across the workforce. Comparable findings were reported by a systematic review which found that demographic characteristics were poor predictors of teamwork perception, with organizational culture exerting stronger influence.⁴⁹ This contrasts a systematic analysis among healthcare professionals which reported more positive teamwork perceptions among younger professionals trained under modern interprofessional education frameworks.⁵⁰

Logistic regression analysis further confirmed that most sociodemographic and professional factors were not significant predictors of perception. However, departmental differences emerged as important determinants. Staff in Diagnostic and Laboratory Services were significantly more likely to have positive perceptions of team-based care, possibly due to the collaborative nature of diagnostic processes requiring continuous interaction with multiple clinical teams. Similar observations were made in a study done which reported stronger teamwork orientation among professionals whose roles inherently depend on interdepartmental coordination. Conversely, respondents in Allied Health and Public Health Services were less likely to report positive perception, which may reflect variations in team integration, communication structures, or leadership engagement within these units.

The findings on facilitators and barriers to team-based care show that staff generally possess adequate foundational exposure to teamwork principles, with most respondents reporting that

their training prepared them for team-based care. This suggests that competency development begins appropriately at pre-service and postgraduate levels. However, the practice of team-based care is strongly constrained by multiple systemic and organizational barriers.

The most prominent barrier identified was resource limitation, particularly insufficient equipment and staffing shortages, indicating that workforce and material deficits significantly hinder collaborative practice. Heavy workload and long working hours further compound this challenge by reducing time and capacity for effective team interaction. These findings align with a study done among interprofessional healthcare workers which reported that staffing shortages and workload pressure negatively affect teamwork and patient safety outcomes in hospital settings.⁵¹ Institutional factors also played a major role, with respondents highlighting lack of clear organizational policy on team-based care and poor physical layout of hospital units as key barriers.

Interpersonal and cultural issues were also strongly evident, particularly professional hierarchy, poor mutual trust, and communication barriers across cadres. These findings are consistent with a qualitative case study approach done in United Kingdom among multidisciplinary frontline healthcare teams and demonstrated that entrenched professional boundaries often undermine teamwork despite individual willingness.⁵²

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CONCLUSION

This study revealed that clinical staff at University of Benin Teaching Hospital demonstrated good knowledge of team-based care, with the majority correctly understanding its collaborative nature, importance of communication, mutual support, and its role in improving patient safety and clinical outcomes. However, important knowledge gaps were identified, particularly regarding patient-centred decision-making, shared leadership, professional roles, and misconceptions related to hierarchical responsibility within healthcare teams.

The study further showed that most respondents had a positive perception of team-based care. Clinical staff generally perceived teamwork as effective, with favourable views regarding team functioning, communication and information sharing, leadership support, situation monitoring, and mutual assistance among colleagues. These findings indicate an overall readiness among healthcare professionals to engage in collaborative practice.

Knowledge and perception of team-based care were not significantly associated with most sociodemographic characteristics, suggesting that awareness and attitudes toward teamwork cut across age, gender, profession, years of experience, and religious or ethnic background. Departmental affiliation emerged as the only significant predictor, indicating that work environment and clinical context may influence exposure to collaborative practice.

Despite the positive findings, several institutional and interpersonal barriers to effective team-based care were identified, including heavy workload, inadequate staffing and resources, absence of clear organizational policies, limited opportunities for joint professional training, professional hierarchy, and lack of mutual trust among professional groups.

RECOMMENDATIONS

TO THE FEDERAL GOVERNMENT THROUGH THE FEDERAL MINISTRY OF HEALTH

1. To develop and implement a national policy promoting team-based care as a standard model of healthcare delivery across tertiary health institutions in Nigeria.
2. To incorporate team-based care principles into national healthcare quality improvement and patient safety frameworks.
3. To support nationwide interprofessional education and collaborative practice training for healthcare professionals.
4. To provide adequate funding aimed at improving staffing levels, infrastructure, and resources required for effective multidisciplinary collaboration in hospitals.
5. To promote continuous professional development programs focusing on communication skills, shared decision-making, and collaborative leadership in healthcare settings.

TO PROFESSIONAL REGULATORY BODIES AND HEALTH TRAINING INSTITUTIONS

[Medical and Dental Council of Nigeria (MDCN), Nursing and Midwifery Council of Nigeria (NMCN), Pharmacy Council of Nigeria (PCN)]

1. To integrate team-based care competencies into undergraduate and postgraduate curricula of all health professional training programs.
2. To encourage joint clinical training sessions involving multiple health professions to strengthen interprofessional collaboration early in professional development.

3. To include teamwork, communication, and collaborative practice competencies as core requirements for professional licensing and re-certification.
4. To promote simulation-based and interdisciplinary clinical learning experiences that enhance mutual understanding of professional roles

TO THE MANAGEMENT OF UNIVERSITY OF BENIN TEACHING HOSPITAL (UBTH)

1. To develop clear institutional policies and guidelines supporting the implementation of team-based care across all clinical departments.
2. To organize regular interprofessional workshops, seminars, and continuing education programs on teamwork and collaborative practice.
3. To address professional hierarchy barriers by promoting inclusive decision-making and shared leadership within clinical teams.
4. To improve staffing strength, availability of equipment, and supportive work environments that facilitate effective teamwork.
5. To create shared workspaces and structured communication platforms that enhance coordination among healthcare professionals.
6. To establish monitoring and evaluation mechanisms assessing team performance and collaborative practice outcomes.

TO DEPARTMENTAL HEADS AND CLINICAL UNIT LEADERS

1. To encourage open communication, mutual respect, and trust among members of multidisciplinary teams.
2. To promote regular team briefings, debriefings, and case review meetings aimed at improving coordination of patient care.
3. To ensure equitable participation of all healthcare professionals in clinical decision-making processes.
4. To provide supportive supervision that models positive team behaviour and conflict resolution practices.

TO CLINICAL STAFF

1. To actively participate in interprofessional collaboration and shared responsibility in patient management.
2. To maintain open communication and feel empowered to speak up regarding patient safety concerns.
3. To demonstrate mutual support by assisting colleagues during high workload situations and seeking help when necessary.
4. To engage in continuous learning aimed at strengthening teamwork, communication, and collaborative clinical practice.

5. To foster respect for the roles and contributions of all professional groups involved in patient care.

TO FUTURE RESEARCHERS

1. To conduct multicentre studies assessing team-based care practices across different healthcare institutions in Nigeria.
2. To explore the impact of team-based care on patient outcomes, healthcare efficiency, and staff satisfaction.
3. To evaluate interventions designed to improve interprofessional collaboration and reduce barriers such as professional hierarchy and workload constraints.
4. To undertake longitudinal studies assessing changes in knowledge, perception, and practice of team-based care over time.

REFERENCES

- Njoku DB, Al-Gheethi A, Bala JD, Ahmad A, Yahya A, Ibrahim MY, et al. Challenges of interprofessional teamwork in Nigerian healthcare. *J Healthc Eng.* 2020;2020:1-11. doi:10.1155/2020/8883286.
- Shan L, Yu H. The importance of teamwork in health care industry [master's dissertation]. Coventry: University of Warwick; 2019. Available from: <https://core.ac.uk/download/pdf/337784728.pdf>
- World Health Organization. Framework for action on interprofessional education and collaborative practice. Geneva: World Health Organization; 2010. 64 p. Report No.: WHO/HRH/HPN/10.3. Available from: <https://www.who.int/publications/i/item/framework-for-action-on-interprofessional-education-collaborative-practice>
- Mohammed E, McDonald WG, Ezike AC. Teamwork in health care services delivery in Nigeria: a mixed methods assessment of perceptions and lived experiences of pharmacists in a tertiary hospital. *Integr Pharm Res Pract.* 2022;11:33-45. doi:10.2147/IPRP.S331041.
- Slawomirski L, Klazinga N. The economics of patient safety: from analysis to action. Paris: OECD Publishing; 2022 Aug 12. 64 p. (OECD Health Working Papers; no. 145). doi:10.1787/761f2da8-en.
- Obeta MU, Etukudoh NS, Dan MI. Challenges of inter-professional teamwork in Nigerian healthcare. In: Stoyanova S, editor. *Interpersonal relationships*. London: IntechOpen; 2021. Available from: <https://www.intechopen.com/chapters/74566>. doi:10.5772/intechopen.95540.

- ~~Panagioti M, Khan K, Keers RN, Abuzour A, Phipps D, Kontopantelis E, et al. Prevalence, severity, and nature of preventable patient harm across medical care settings: systematic review and meta-analysis. *BMJ*. 2019;366:14185. doi:10.1136/bmj.14185.~~
- ~~Rodziewicz TL, Houseman B, Vaqar S, Hipskind JE. Medical error reduction and prevention. [Updated 2024 Jul 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK499956/>~~
- ~~Gunderson CG, Bilan VP, Holleck JL, Nickerson P, Cherry BM, Chui P, et al. Prevalence of harmful diagnostic errors in hospitalised adults: a systematic review and meta-analysis. *BMJ Qual Saf*. 2020;29(12):1008-18. doi:10.1136/bmjqs-2020-011441.~~
- ~~De Rezende H, Melleiro MM, Marques PAO, Barker TH. Interventions to reduce patient identification errors in the hospital setting: a systematic review. *Open Nurs J*. 2021;15(1):109-21. doi:10.2174/1874434602115010109.~~
- ~~Adeloye D, David RA, Olaogun AA, Auta A, Adesokan A, Gadanya M, et al. Health workforce and governance: the crisis in Nigeria. *Hum Resour Health*. 2017;15(1):32. doi:10.1186/s12960-017-0205-4.~~
- ~~Mohammed E, McDonald WG, Ezike AC. Teamwork in health care services delivery in Nigeria: a mixed methods assessment of perceptions and lived experiences of pharmacists in a tertiary hospital. *Integr Pharm Res Pract*. 2022;11:33-45. doi:10.2147/IPRP.S331041.~~
- ~~Pervaiz M, Sharif N, Zunaira, Tasneem S, Jabeen R. Assessment of knowledge about teamwork among nurses. *Biol Clin Sci Res J* [Internet]. 2024 Nov 15 [cited 2025 Jun 1];2024(1):1284. Available from: <https://besrj.com/ojs/index.php/besrj/article/view/1284> doi:10.54112/besrj.v2024i1.1284~~

- ~~Osman IM, Mohamud FA, Hilowle FM, Sahal SM, Hassan H, Mohamud RYH, et al. Attitudes of nurses and physicians towards nurse-physician interprofessional collaboration in a tertiary hospital in Somalia. *J Multidiscip Healthc.* 2025;18:319-32. doi:10.2147/JMDH.S511008.~~
- ~~Iyoke CA, Lawani LO, Ugwu GO, Ajah LO, Ezugwu EC, Onah P, et al. Knowledge and attitude toward interdisciplinary team working among obstetricians and gynecologists in teaching hospitals in South East Nigeria. *J Multidiscip Healthc.* 2015;8:237-44. doi:10.2147/JMDH.S82969.~~
- ~~Szafran O, Kennett SL, Bell NR, Green L. Patients' perceptions of team-based care in family practice: access, benefits and team roles. *J Prim Health Care.* 2018;10(3):248-257. doi:10.1071/HC18018.~~
- ~~Soko TN, Jere DL, Wilson LL. Healthcare workers' perceptions on collaborative capacity at a Referral Hospital in Malawi. *Health SA.* 2021;26:1561. doi: 10.4102/hsag.v26i0.1561.~~
- ~~Mohammed E, McDonald WG, Ezike AC. Teamwork in health care services delivery in Nigeria: a mixed methods assessment of perceptions and lived experiences of pharmacists in a tertiary hospital. *Integr Pharm Res Pract.* 2022;11:33-45. doi:10.2147/IPRP.S331041.~~
- ~~Shin H, Seo JY, Choi ES, De Gagne JC. Facilitators and barriers to multidisciplinary teamwork in adolescent and young adult oncology care: a descriptive qualitative study. *J Multidiscip Healthc.* 2025;18:917-32. doi:10.2147/JMDH.S501077.~~
- ~~Degu T, Amsalu E, Kebede A, Adal O. Inter-professional collaboration and associated factors among nurses and physicians in specialized public hospitals, the northwest, Ethiopia: mixed method multi-centered cross-sectional study. *BMC Health Serv Res.* 2023;23:286. doi:10.1186/s12913-023-09200-5.~~

~~Okorie C, Atiti S. Exploring interprofessional collaboration in the Nigerian healthcare system: a qualitative study of the experiences of doctors, nurses and pharmacists. J Interprof Care. 2021;35(5):715-723. doi: 10.1080/13561820.2020.1803225.~~

~~Ekpenyong A, Akpan N, Ior L, Ugandua J, Agada P. Teamwork in health care services delivery in Nigeria: a mixed methods assessment of perceptions and lived experiences of pharmacists in a tertiary hospital. Integr Pharm Res Pract. 2022;11:1-12. doi: 10.2147/IPRP.S331041.~~

~~National Population Commission (NPC). 2016 population estimates for states in Nigeria. Abuja: NPC; 2017.~~

~~Edo State Government. Investment opportunities in Edo State [Internet]. Benin City: Edo State Government; 2022 [cited 2025 Jul 6]. Available from: <https://invest.edostate.gov.ng/opportunities/>~~

~~National Population Commission (NPC). Nigeria population projection 2023. Abuja: NPC; 2023.~~

~~Soluap. 3 major ethnic groups in Edo State: Binis, Esan and Afemai [Internet]. 2023 Oct 27 [cited 2025 Jun 18]. Available from: <https://soluap.com/3-major-ethnic-groups-in-edo-state>.~~

~~Kashgain. Languages in Edo State [Internet]. 2024 Jan [cited 2025 Jun 18]. Available from: <https://kashgain.com/languages-in-edo-state/>~~

~~University of Benin Teaching Hospital. About UBTH [Internet]. Benin City: UBTH; 2021 [cited 2025 Jun 13]. Available from: <https://ubth.org/about-us>.~~

~~AlMaghthawi, M.A., Al Sayed, H.A.A., Al Nafai, A.K.A., Hawbani, Y.A., Alharthi, A.D. and Alhejaili, E.A.S., 2024. Patients' and Professionals' Differing Perspectives on Healthcare Management. Journal of International Crisis and Risk Communication Research, 7(S11), p.333.~~

- Davidson, A.R., Morgan, M., Ball, L. and Reidlinger, D.P., 2024. Patients' experiences of and roles in interprofessional collaborative practice in primary care: a constructivist grounded theory study. *Primary health care research & development*, 25, p.e24.
- Rodrigues, B.B., da Silva Moreira, S.G.B., Gondim, M.A.M., Lopez, A.S.Q., de Souza Peres, R., Lima, A.R., Morais, Y.R.V., Souza, M.M.S., Duarte, A.C.L., Chaves, G.A.V.B. and de Souza Silva, R., 2025. Effective Communication Between Multiprofessional Health Teams: Practical Strategies to Ensure Patient Safety and Quality of Care. *Revista de Gestão Social e Ambiental*, 19(4), pp.1-12.
- Schilling, S., Armaou, M., Morrison, Z., Carding, P., Bricknell, M. and Connelly, V., 2022. Understanding teamwork in rapidly deployed interprofessional teams in intensive and acute care: A systematic review of reviews. *Plos one*, 17(8), p.e0272942.
- Darcis, C., Pigeon, M.A. and Mou, H., 2025. Family physicians' power and team-based care: Lessons from a 60-year-old primary care clinic. *Social Science & Medicine*, 383, p.118248.
- Crowley, R., Pugach, D., Williams, M., Goldman, J., Hilden, D., Schultz, A.F., Beachy, M. and Health and Public Policy Committee and the Medical Practice and Quality Committee of the American College of Physicians, 2024. Principles for the physician-led patient-centered medical home and other approaches to team-based care: A Position Paper from the American College of Physicians. *Annals of Internal Medicine*, 177(1), pp.65-67.
- Cucolo, D.F., de Campos Oliveira, J.L., Rossit, R.A.S., Mininel, V.A., Perroca, M.G. and Silva, J.A.M.D., 2024. Effects of interprofessional practice on nursing workload in hospitals: A systematic review. *The International Journal of Health Planning and Management*, 39(3), pp.824-843.

- Zhong, X., Zeng, X., Zhao, L., TaoChen, Min, X. and He, R., 2023. Clinicians' knowledge and understanding regarding multidisciplinary treatment implementation: a study in municipal public class III grade A hospitals in Southwest China. *BMC Medical Education*, 23(1), p.916.
- Joshi, T., Budhathoki, P., Adhikari, A., Poudel, A., Raut, S. and Shrestha, D.B., 2022. Team-based learning among health care professionals: a systematic review. *Cureus*, 14(1).
- Khan, A.I., Barnsley, J., Harris, J.K. and Wodehis, W.P., 2022. Examining the extent and factors associated with interprofessional teamwork in primary care settings. *Journal of Interprofessional Care*, 36(1), pp.52-63.
- Shezi, B.M., 2024. Impact of collective leadership of the senior management teams on patient safety, quality of patient care, and overall hospital performance in eThekweni (South Africa). University of Johannesburg (South Africa).
- Enahoro, A., Osunlaja, O., Maha, C.C., Kolawole, T.O. and Abdul, S., 2024. Reviewing healthcare quality improvement initiatives: Best practices in management and leadership. *International Journal of Management & Entrepreneurship Research*, 6(6), pp.1869-1884.
- Bibi, R., Sabri, G., Hussain, S., Malik, S. and Raziq, R., 2025. Understanding Teamwork Dynamics and Collaboration Challenges among Interdisciplinary Teams in Critical Care Nursing Practice. *Mader-e-Milat International Journal of Nursing and Allied Sciences*, 3(2), pp.144-162.
- Stoel, M., 2025. Healing Collaboration: Barriers and Improvement Strategies in Healthcare Management (Master's thesis).

- Alsenany, S.A., Alnazawi, A.A., Alnazawi, O. and El-Sayed, A.A.I., 2026. Determinants of psychological safety in simulation-based learning among health professions students: A cross-sectional study. *Clinical Simulation in Nursing*, 112, p.101905.
- Gosselin, T., Pickett, L., Oliver, J. and Gross, M., 2025. Caring for each other: an evaluation of a peer support program for nurses and health care workers. *Journal of Nursing Care Quality*, 40(2), pp.181-186.
- Ominyi, J., Agom, D. A., & Beryl, N. A. (2025). Nursing Autonomy and Evidence-Based Practice in Acute Care: Navigating Power and Promoting Collaboration. In *Nursing Forum* (Vol. 2025, No. 1, p. 9343933). Wiley.
- Falade, I.M., Gyampoh, G.K.S., Akpangbo, E.O., Chika, O.C., Obodo, O.R., Okobi, O.E., Aguguo, J.C. and Chukwu, V.U., 2024. A comprehensive review of effective patient safety and quality improvement programs in healthcare facilities. *Medical Research Archives*, 12(7).
- Tripathy, S.K. and Khan, S., 2025. Structured Communication in Orthopaedic Practice: Strategies for Safer Surgical Outcomes. *Indian Journal of Orthopaedics*, pp.1-11.
- Ohara, J., Ohta, R. and Sano, C., 2025. Perspectives on Team-Based Care in Family Medicine: A Mixed-Methods Study on Interprofessional Collaboration in a Hospital Setting. *Cureus*, 17(3).
- Teuwen, C., van der Burgt, S., Kusurkar, R., Schreurs, H., Daelmans, H. and Peerdeman, S., 2022. How does interprofessional education influence students' perceptions of collaboration in the clinical setting? A qualitative study. *BMC medical education*, 22(1), p.325.

~~—Almost, J., Wolff, A.C., Stewart-Pyne, A., McCormick, L.G., Strachan, D. and D'Souza, C., 2016. Conflict management in nursing: A concept analysis. *Journal of Advanced Nursing*, 72(9), pp.2012-2024.~~

~~Grand-Guillaume-Perrenoud, J.A., Cignacco, E., MacPhee, M., Carron, T. and Peytremann-Bridevaux, I., 2025. How does interprofessional education affect attitudes towards interprofessional collaboration? A rapid realist synthesis. *Advances in Health Sciences Education*, 30(3), pp.879-933.~~

~~—Alsabri, M., Boudi, Z., Lauque, D., et al. (2022) 'Impact of teamwork and communication training interventions on safety culture and patient safety in emergency departments: a systematic review', *Journal of Patient Safety*, 18(1), pp. e351-e361.~~

~~Gifford, R. (2022) 'Working together in emergency care? How professional boundaries influence integration efforts and operational performance', *International Journal of Operations & Production Management*, 42(13), pp. 54-81.~~

APPENDIX
APPENDIX I
QUESTIONNAIRE

**ASSESSMENT OF THE KNOWLEDGE AND PERCEPTION OF TEAM BASED CARE
AMONG CLINICAL STAFF IN TERTIARY HOSPITAL**

S/N _____

I am a 600-level medical student at the University of Benin, Benin City. This questionnaire is designed to assess the knowledge and perception of team - based care among clinical staff in tertiary hospital. All information given will be treated as confidential. Kindly answer all questions as best as you can. Please mark and fill in any areas as appropriate. Thank you.

SECTION A : SOCIO – DEMOGRAPHIC DATA

1. Age in years (as at last birthday): _____
2. Gender: Male [] Female []
3. Ethnic group: Benin () Hausa () Yoruba () Igbo () Others (Specify)

4. Religion: Christian () Islam () Others (Specify)

5. Profession: Medical Doctor (Resident/Registrar/Consultant) [] Nurse/Midwife [] Pharmacist
[] Medical Laboratory Scientist [] Physiotherapist [] Other (Intern, Specialist nurses, Chief/
Principal Nursing Officer, etc) : _____

6. Years of Clinical Experience:

Less than 1 year [] 1 – 5 years [] 6 – 10 years [] More than 10 years []

7. Department/Unit (e.g., Medicine, Surgery, Paediatrics, Accident and Emergency, etc.):

SECTION B: Knowledge of Team-Based Care

Instructions: For each statement, please tick: True, False, or I Don't Know.

Knowledge of Team-Based Care Concepts

8. Team-based care involves multiple healthcare providers from different disciplines working collaboratively with the patient to achieve shared goals? True [] False [] I don't know []

9. The primary goal of team based care is strictly to reduce hospital costs? True [] False [] I don't know []

10. In team-based care, the physician is solely responsible for all decision-making? True [] False [] I don't know []

11. Effective team-based care reduces the risk of medical errors and improves patient outcomes?
True [] False [] I don't know []

12. Situation Monitoring refers to the process of individual team members watching only their own tasks to avoid errors? True [] False [] I don't know []

13. Mutual Support is a core competency that involves anticipating and helping other team members with their workload? True [] False [] I don't know []

14. Briefs (planning sessions) and Debriefs (review sessions) are essential communication tools?
True [] False [] I don't know []

Knowledge of Team Roles and Functions 15. Team leadership must always be performed by a physician?

True [] False [] I don't know []

16. A benefit of team based care is the reduction of medical errors and improvement of patient safety? True [] False [] I don't know []

17. The effectiveness of a team is reduced if all members clearly understand their roles and responsibilities? True [] False [] I don't know []

18. Nurses' roles in team-based care are limited to only medication administration and physical care? True [] False [] I don't know []

19. Pharmacists' input in the team helps in medication reconciliation and reducing adverse drug events? True [] False [] I don't know []

20. All clinical staff, regardless of their seniority, should feel comfortable speaking up about a potential patient safety concern? True [] False [] I don't know []

21. The primary focus of team-based care is the patient's preference and values? True [] False []
I don't know []

SECTION C: PERCEPTION OF TEAM BASED CARE

For each statement, tick: Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

S/N	Team Function	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
22	The skills of staff overlap sufficiently so that work can be shared when necessary.					
23	Staff are held accountable for their actions.					
24	Staff within my unit share information that enables timely decision making by the direct patient care team.					
25	My unit operates at a high level of Efficiency					
	Team Leadership	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
26	My supervisor/manager considers staff input when making decisions about patient care.					
27	My supervisor/manager					

	ensures that adequate resources (e.g., staff, supplies, equipment, information) are available					
28	My supervisor/manager resolves conflicts successfully.					
29	My supervisor/manager models appropriate team behavior.					
30	My supervisor/manager ensures that staff are aware of any situations or changes that may affect patient care.					
	Situation Monitoring	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
31	Staff effectively anticipate each other's needs					
32	Staff monitor each other's performance					
33	Staff exchange relevant information as it becomes available					
34	Staff meet to re-evaluate patient care goals when aspects of the situation have changed.					
35	Staff correct each other's mistakes to ensure that procedures are followed properly.					
	Mutual Support	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
36	Staff assist fellow staff during high workload					
37	Staff request assistance from fellow staff when they feel overwhelmed					
38	Staff caution each other about potentially					

	dangerous situations					
39	Feedback between staff is delivered in a way that promotes positive interactions and future change.					
40	Staff advocate for patients even when their opinion conflicts with that of a senior member of the unit.					
	Communication	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
41	Information regarding patient care is explained to patients and their families in lay terms					
42	Staff relay relevant information in a timely manner					
43	When communicating with patients, staff allow enough time to answer questions					
44	Staff use common terminology when communicating with each other					

SECTION D: FACILITATORS AND BARRIERS TO EFFECTIVE TEAM – BASED CARE

Instructions: For each statement, please tick: True, False, or I Don't Know.

Curriculum/Training Factors

45. My undergraduate or postgraduate training adequately prepared me for team – based practice?

True [] False [] I don't know []

46. Lack of adequate time for joint professional training sessions (e.g., doctors and nurses training together) affects my teamwork skills? True [] False [] I don't know []

System and Organizational Factors

47. Heavy patient workload and long working hours make collaborative care difficult to implement? True [] False [] I don't know []

48. Poor physical layout of the hospital/units (e.g., lack of shared workspace) hinders spontaneous team communication? True [] False [] I don't know []

49. Lack of a clear organizational policy on team – based care is a barrier to its implementation?
True [] False [] I don't know []

50. Resource constraints (e.g., insufficient equipment, staff shortage) affect the ability to practice effective team – based care? True [] False [] I don't know []

Interpersonal Factors

51. Professional hierarchy and power dynamics prevent open communication among team members?
True [] False [] I don't know []

52. Lack of mutual respect and trust between different professional groups is a major barrier?
True [] False [] I don't know []

53. My personal motivation and attitude significantly influence my participation in team – based care? True [] False [] I don't know []

|

APPENDIX II
INFORMED CONSENT FORM

**TITLE OF RESEARCH: KNOWLEDGE AND PERCEPTION OF TEAM-BASED CARE
AMONG CLINICAL STAFF IN TERTIARY HOSPITAL**

NAMES AND AFFILIATIONS OF INVESTIGATORS:

Osahon Osasumwen Dorothy

Department of Public Health and Community Medicine,

University of Benin Teaching Hospital,

PMB 111,

Benin City,

Edo State.

Email:

PURPOSE OF RESEARCH: To assess the knowledge and perception of team – based care among clinical staff in tertiary hospital in Benin City, Nigeria while identifying the factors that facilitate or hinder its effective implementation.

PROCEDURES INVOLVED IN THE STUDY: In this study, questions will be asked regarding the knowledge, perception and factors affecting team-based care among clinical staff.

CONFIDENTIALITY: All data collected will be treated with utmost confidentiality. Clinical staff who volunteer to participate in this study will be given a unique study number, and data will be collected. Participants' information will be stored safely secured by codes in computers using only the study identification number. All those handling data will not at any time reveal participants' identity.

FINANCIAL COMPENSATION: There shall be no monetary compensation for participation in this study.

VOLUNTARY PARTICIPATION: Your participation in this study is entirely voluntary. If you desire to withdraw from this study at any time, no punitive measures will be meted against you for your withdrawal. Your refusal to participate or withdraw from the study will not involve any negative consequences or loss of benefits to which you are otherwise entitled.

RISK: It is not expected that any harm will come to you because of your participation in this study. The study does not entail any activity that would harm you.

BENEFIT: The study will help to assess the knowledge and perception of team-based care among clinical staff in tertiary hospital.

FINANCIAL SPONSORSHIP: The study will be sponsored by the principal investigator.

The underlisted will be contacted in case you have any investigation to make.

Osahon Osasumwen Dorothy:

Department of Public Health and Community Medicine,

P M B 1111,

Benin City,

Nigeria.

Email: dorryosahon12@gmail.com

Cell-+2348033037796

OR


Ethics and Research Committee,

University of Benin Teaching Hospital

Cell-+2347063331337

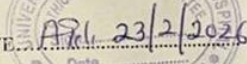
APPENDIX III


ETHICAL APPROVAL


 **HEALTH RESEARCH ETHICS COMMITTEE (HREC)**
UNIVERSITY OF BENIN TEACHING HOSPITAL
P.M.B. 1111 BENIN CITY NIGERIA Telephone: 052-600418 Website: ubth.org

CHIEF MEDICAL DIRECTOR Prof. (Mrs) I.N Ize-Iyamu
DIRECTOR OF ADMINISTRATION Jlm Uwadie, Esq
CHAIRMAN Prof. (Mrs.) Antoinette N. Ofili

HREC OFFICE:
Committee email: ubthresearchethics@gmail.com
Registration Number: NHREC-UBTH-HREC/24/12/2022B

PROTOCOL NUMBER: ADM/E 22/A/VOL. VII/1486549127283
PROPOSAL TITLE: "KNOWLEDGE AND PERCEPTION OF TEAM BASED CARE AMONG CLINIC STAFFS IN UNIVERSITY OF BENIN TEACHING HOSPITAL"
PRINCIPAL INVESTIGATOR(S): OSAHON DOROTHY
DEPARTMENT/INSTITUTION: DEPARTMENT OF PUBLIC HEALTH AND COMMUNITY MEDICINE, SCHOOL OF MEDICINE, UNIVERSITY OF BENIN, BENIN CITY, EDO STATE, NIGERIA
DATE CONSIDERED: FEBRUARY 23RD, 2026
DECISION OF THE COMMITTEE: APPROVED
THIS APPROVAL DATES 23/02/2026 TO 22/01/2027, IF THERE IS DELAY IN STARTING THE RESEARCH, PLEASE INFORM THE HREC SO THAT THE DATES OF APPROVAL CAN BE ADJUSTED ACCORDINGLY
REMARK:
CHAIRMAN: PROF. (MRS) A.N. OFILI SIGNATURE & DATE: 
SUPERVISOR (S): PROF OBEHI OKOJIE, DR MOKOGWU NDUBUISI
DECLARATION BY INVESTIGATOR(S):
PROTOCOL NUMBER (please quote in all enquiries)
Note that no participant accrual or activity related to this research may be conducted outside of these dates and you are to furnish the committee with the research activities at the completion of the study. All informed consent forms used in this study must carry the HREC assigned number and duration of HREC approval of the study. In multiyear research, endeavor to submit your annual report to the HREC early in order to obtain renewal of your approval and avoid disruption of your research. No changes are permitted in the research without prior approval by the HREC except in circumstances outlined in the Code. The HREC reserves the right to conduct compliance visit your research site without previous notification.

Signature & Date:  28/02/2026

 ubthresearchethics@gmail.com Registration Number: NHREC/24/01/2020

APPENDIX IV

PLAGIARISM CLEARANCE FORM

INTELLECTUAL PROPERTY & TECHNOLOGY TRANSFER OFFICE (IPTTO)
Vice Chancellor's Office
University of Benin
PMB1154, Benin City, Nigeria

CLEARANCE FORM

DATE: 11/05/2026

NAME: OSATO N DOROTHY

MATRIC NO: ME51607480

DEPARTMENT: MEDICINE

FACULTY: MEDICINE

SESSION OF GRADUATION: 2024/2025

DIRECTOR
DATE: _____
IPTTO
Head of BENIN IPTTO