KNOWLEDGE, PERCEPTION, AND BARRIERS TO TASK-SHIFTING AMONG PRIMARY HEALTHCAREHC WORKERS IN BENIN-CITY

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A ONE YEAR PROJECT PRESENTED TO

DEPARTMENT OF PUBLIC HEALTH AND COMMUNITY MEDICINE, SCHOOL OF MEDICINE, COLLEGE OF MEDICAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY, EDO STATE, NIGERIA

IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY (MB.BS) DEGREE IN UNIVERSITY OF BENIN, BENIN CITY, EDO STATE, NIGERIA

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UNIVERSITY OF BENIN

MAY~~ARCH~~, 2026

DEDICATION

This work is hereby dedicated to the Almighty God and Father of our Lord Jesus Christ, Who in His infinite mercy saved us and continually keeps us until the perfect day. It is also dedicated to my mother and my entire family, who continually bear the torch keeping me going in this journey.

DECLARATION

I hereby declare that this project work titled **'KNOWLEDGE, PERCEPTION, AND BARRIERS TO TASK-SHIFTING AMONG PRIMARY HEALTHHCARE WORKERS IN-~~EGOR LOCAL GOVERNMENT AREA,~~ BENIN-CITY'** is original and was carried under the supervision of PROF OBEHI OKOJIE and DR. NDUBUISI MOKOGWU and has not been published elsewhere for the award of a degree or certificate.

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——CERTIFICATION

This is to certify that this research work titled **'KNOWLEDGE, PERCEPTION, AND BARRIERS TO TASK-SHIFTING AMONG PRIMARY HEALTHCARE~~HC~~ WORKERS IN BENIN-CITY'** 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 **OWOEYE PAUL OLUWAFEMI** with matriculation number **MED1807490.**

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TABLE OF CONTENTS

LIST OF ABBREVIATIONS

CHO – Community Health Officer

CHEW – Community Health Extension Worker

FGN – Federal Government of Nigeria

FMOH – Federal Ministry of Health

HCPs – Health Care Providers

HCWs – Health Care Workers

HIV – Human Immunodeficiency Virus

HRH – Human Resources for Health

JCHEW – Junior Community Health Extension Worker

LMICs – Low- and Middle-Income Countries

MO – Medical Officer

NHMIS – National Health Management Information System

NMW – Nurse-Midwife

NSHW – Non-specialist Health Workers

PHC – Primary Health Care

RM – Registered Midwife

RMNCH – Reproductive, Maternal, Newborn and Child Health

RN – Registered Nurse

SDGs – Sustainable Development Goals

SHW – Specialist Health Workers

TB – Tuberculosis

TS – Task-Shifting

TSTF – Task-Shifting Task-Force (where applicable)– Non-specialist Health Workers

WHO – World Health Organization

OPERATIONAL DEFINITION OF TERMS

Barriers to task-shifting

Factors that hinder the successful implementation of task-shifting, including structural, administrative, cultural, competency-based, legal, or logistical constraints.

Community Health Officer (CHO)

A mid-level health professional trained to supervise primary health care activities and provide community-level health services.

Community Health Extension Worker (CHEW)

A frontline health worker trained to deliver essential PHC services including health promotion, maternal and child care, and basic clinical tasks.

Health Care Workers (HCWs)

All categories of personnel involved in delivering health services, including doctors, nurses, midwives, CHOs, CHEWs, JCHEWs, pharmacists, lab scientists, and others.

Human Resources for Health (HRH)

The workforce responsible for health services delivery, planning, and management.

Junior Community Health Extension Worker (JCHEW)

An entry-level health worker who supports CHEWs and other PHC staff in routine service delivery.

Knowledge of Task-shifting

The level of understanding PHC workers have regarding the concept, guidelines, roles, and responsibilities associated with task-shifting.

Low- and Middle-Income Countries (LMICs)

Countries classified by the World Bank based on economic indicators, often facing health workforce shortages.

Medical Officer

A qualified and licensed medical doctor employed by the government or an organization and is responsible for diagnosis, treatment and overall medical care of the patients, as well as the supervision of health services and personnel within a health facility, or public health programme

National Primary Health Care Development Agency (NPHCDA)

Nigeria's federal agency responsible for strengthening PHC systems, including workforce development and task-shifting initiatives.

Nurse-Midwife (NMW)

A registered nurse with additional training in midwifery responsible for maternal, newborn, and reproductive health services.

Perception of Task-shifting

PHC workers' attitudes, opinions, beliefs, and overall outlook towards the acceptability and effectiveness of task-shifting in PHC settings.

Primary Health Care (PHC)

Essential health care made universally accessible to individuals and families in a community through their full participation, and at a cost that the community and country can afford, using practical, scientifically sound and socially acceptable methods and technology.

Reproductive, Maternal, Newborn and Child Health (RMNCH)

A broad range of health services focused on improving health outcomes for mothers, newborns, and children.

Task-Shifting (TS)

A systematic process of delegating tasks from more specialized health workers (e.g., medical doctors) to cadres with shorter training (e.g., nurses, CHEWs, JCHEWs) to improve access to care and service coverage.

Task-Sharing

A collaborative approach where tasks are distributed across different health cadres, allowing overlapping roles to improve efficiency and service delivery.

ABSTRACT

Background: Task-shifting in primary healthcare was an initiative long adopted by the Federal Ministry of Health to assist in ensuring human resource maximization for universal health coverage especially across domains of reproductive, maternal, child health, family planning, and high prevalence communicable illness like tuberculosis and malaria. Despite its potential, only some states have adopted and begun implementation of the strategy, and among states that have adopted it like Edo State, the necessary assessment to understand the implementation level, acceptance, integration status and concerns of health workers about it locally, is limited.

Aim: This study assessed the knowledge, perception and barriers to task-shifting among primary healthcare workers in Benin-City.

Methods: A descriptive cross-sectional study was conducted among 120 healthcare workers selected using a multistage sampling technique. Data were collected using a structured, self and interviewer administered questionnaire covering socio-demographic characteristics, knowledge, perception, barriers and enablers to task-shifting. Data were analysed using SPSS version 27.0. Univariate analysis summarised means, frequencies, and percentages. Bivariate analysis using chi square tests determined associations between socio-demographic factors and respondents' knowledge and perception. Binary logistic regression identified independent determinants of good knowledge and perception. Statistical significance was set at $p < 0.05$.

Results: A total of 120 respondents participated, with a mean age of 35.9 ± 8.6 years, with females being 112 (93.3%), males 8 (6.7%). Those who demonstrated good knowledge were 37 (30.8%), and those with poor knowledge 83 (69.2%). Receiving training on task-shifting was

found to be statistically significant and associated with knowledge, as those with prior training had good knowledge (59.9%) record than those without (17%) (χ^2: 21.455; $p < 0.001$).

Perception of task-shifting was mixed, as good and poor perception were almost equally distributed at 59 (49.2%) and 61 (50.8%) respectively. Age was significantly associated with perception, and was also a significant predictor of knowledge, with increasing age associated with reduced likelihood of positive perception (OR = 0.927; p = 0.024). Workers with 5 – 9 years of experience were also less likely to have positive perception of task-shifting (OR = 0.165, 95% CI: 0.031–0.872, p = 0.034).

The barriers to task-shifting encountered most by respondents were inadequate training and knowledge gaps (mean score: 3.99 ± 1.19), lack of clear job description or role boundary (3.74 ± 1.28), inadequate supervision or monitoring (3.64 ± 1.28), lack of incentives or recognition (3.54 ± 1.33), resistance from higher cadres, shortage of staff and related issues were also mentioned as challenges/barriers.

The enablers reported were adequate training, and supportive supervision (3.90 ± 1.42), availability of clear policy guideline (3.93 ± 1.42), teamwork and collaboration among cadres (3.77 ± 1.41), support from management and policy makers (3.79 ± 1.41).

Conclusion: Primary healthcare workers in Benin-City had predominantly poor knowledge of task-shifting and the national task-shifting policy, coupled with mixed perception of task-shifting. Inadequate knowledge or training among staff, lack of clear job descriptions or roles, inadequate supervision or mentoring, lack of incentives or recognition were the identified barriers, while adequate training and supportive supervision, provision of policy guidelines, teamwork and inter-cadre collaboration, and support from management and policy makers were named among

enablers. There should be concerted efforts to improve knowledge and perception of task-shifting through training and adequate supervision provision; this will also remove barriers to task-shifting.

CHAPTER ONE

INTRODUCTION

1.1.BACKGROUND OF THE STUDY

Task-shifting involves rational redistribution of tasks among health care workers. With task-shifting, appropriate specific tasks are moved from highly qualified health workers to health workers with shorter and fewer qualifications for a more efficient use of the available human resources for health.[1] This idea was originally designed to address the issue of insufficient health care delivery and poor access to health that were noted to have been largely fostered by shortage of specialist health workers (SHWs) in the system. Allowing non-specialist health workers (NSHWs) to take on some tasks originally handled by an SHW has been proven to be effective in meeting the unmet health service gap in affected countries. The concept of task-shifting has been adopted by the Nigerian government as an effective method of addressing the shortage and misdistribution of health care workers in the country, in order to significantly reduce the poor health outcomes that the nation has been recording due to these problems[1]. This move contained in the 2014 National Task-shifting and Task-sharing Policy thus offered a means for the national health of the country to be improved. [1]

There are indeed many areas of improvement in the health of the country that task-shifting provides a means to achieve. For example, with Nigeria's poor population-to-economic-growth imbalance, family planning remains a largely important health service that the relevant nationals ought to have access to, however only 11% of Nigerian women use any modern method of contraception. Long-acting reversible contraceptives being highly effective and user satisfying remains inaccessible to many. Reports show that among the many barriers to accessing this

service for eligible women, insufficient skilled health providers of this service remains the most difficult to address – and the good news is that task-shifting has been proven to address this challenge, thus reducing the indirect maternal mortality cases that unmet contraceptive need can cause.[2] Multiple beneficial healthcare outcomes of task-shifting have been hinted at too from various sources, which include among others, in the detection and prevention of pregnancy complication and non-communicable disease by NSHWs.[3,4]

Nigeria's primary health care sector in particular is most crucial to the health of the nation. The World Health Organization has stated that 80-90% of an individual's health needs in a lifetime can be met through primary healthcare system[5], further demonstrating the need for a well-staffed, properly functional primary healthcare system. Therefore, the primary health care system is important in consideration of the subject and implementation of task-shifting.

Nigeria's primary health care system is being managed by the National Primary Health Care Development Agency (NPHCDA) established in 1992. As at July 2025, there are 26,500 Primary Health Care (PHC) facilities in Nigeria, but only 1,965 level 2 functional PHCs in Nigeria. Level 2 functional PHCs offer a wider range of healthcare services beyond basic care, including specialized treatments, diagnostics, minor surgeries, and emergency care, typically with more advanced medical equipment and trained personnel. [6] This points to the crucial shortage of resources and trained personnel in Nigeria's PHC centres generally.

Since the 2014 task-shifting policy was released, there have been several research to understand the usefulness of the measure following its adoption, and numerous studies have demonstrated its benefit. A scoping review spanning published results on various reputable medical research catalogue from the inception of the task-shifting concept in healthcare to February 2022, found that in low and middle income countries, of which Nigeria is one, some cancer control services

for patients such as screening, education, and diagnosis was as effective when passed from physicians to non-physician health workers as when physicians handled this alone, clearly corroborating the importance of fully integrating task-shifting into the health industry especially in these understaffed places. [7]

Though the Nigerian state has very plausible and well-proven advantages that motivated them to task-shifting, the practice, the undertaking, the execution of this strategy at the most needed points of service, the primary health care centres does not seem to be as it should be. A research done in 2023 reported that only fifty-seven percent of the thirty-six states in Nigeria, and the Federal Capital Territory, have adopted and implemented the policy – and even with these states adopting the policy, the environment and outlook of implementation vary from state to state based on differences in stakeholder's knowledge and perception of the idea, some of which may prevent successful implementation and integration of this framework. [8]

In Benin-city, Edo State, the utilization of public health care facilities, particularly primary healthcare facilities, is prevalent. Upon this background rests the need to investigate the knowledge, perception and barriers to the implementation of task-shifting in our primary health care centre staff in order to accentuate the established practice of task-shifting in these facilities, and so improve the lives of the majority of people generally.

STATEMENT OF THE PROBLEM

KNOWLEDGE GAPS OF HEALTHCARE WORKERS ON TASK-SHIFTING

Recommendation 4 of the Task-shifting and Task-sharing Policy (TSTS) points out that Human Resources for Health (HRH) situational analysis will be done in order to identify gaps in service provision, understand the extent in which task-shifting is already taking place among other

checks. [1] Studies have indicated possible misrepresentation, misuse and resistance to task-shifting among healthcare workers. Such resistance has~~ve~~ been reported by researchers who mentioned the continuing negative view of SHWs to NSHWs. [8, 9] Some of these assumptions may thrive on unclear/insufficient demonstrable understanding of the benefit of task-shifting, especially at the primary healthcare level. The situational analysis being unavailable has ~~fueled~~fuelled this growing resistance and has also further made the healthcare system shortfalls unobjectively assessable and addressable, further deepening the lack of trust and hope of the public for the improvement of the Nigerian healthcare set-up. Such mistrust continues to be vented out in more and more professional body conflicts echoing in public spaces.

This situation is not ideal and has been caused by the unavailability of appropriate assessment of the knowledge gap of the health workers.

LACK OF LOCAL UNDERSTANDING OF PERCEPTION OF TASK-SHIFTING FOR POSSIBLE IMPROVEMENT

Task-shifting policy in Nigeria was originally put together to help the health resource shortage, and mal-distribution that the nation faces, especially at the primary healthcare level in the build-up of efforts towards meeting the Universal Health Coverage (UHC) goal, as well as the Millenium Development Goals (MDGs) 4, 5 and 6, which goals are still relevant for Nigeria as a country today despite the MDG deadline being past.[1] Understanding the role of primary healthcare service delivery efficiency, the Federal Ministry of Health repeatedly stated its interest on the application of this policy at the grass root level. Following the institution of the plan, execution of the policy and feedbacks on the progress of implementation or adoption were expected to be regularly assessed. [1]

As we look at the dynamics of the system, an understanding of the task-shifting system for primary healthcare centres which would highlight areas for improvement has not been available locally. The perception of local healthcare workers regarding the concept is poorly reported or unavailable. The effect has been little to no intervention for proper management of task-shifting in our primary healthcare facilities. The initial goal of maximizing human resources for meeting national health goals and wellness is thus forestalled or put at an unwanted slow pace.

DEARTH OF DATA ON LOCAL BARRIERS TO TASK-SHIFTING

From the design, the task-shifting policy adopted in Nigeria is expected to be adopted by states and spread to the grassroots, the primary healthcare centres, and put in place to increase their productivity; however one cannot go through the history of task-shifting in Nigeria and have no moment of wonder on the diminishing vigour this task-shifting solution seems to have suffered since its official adoption nationally in that only just above 50% of the states in Nigeria have adopted this policy.[8] Consequently, the expected mobilization by the government towards cutting out the embargos and stoppages to this policy implementation and progressive standardization have been largely limited. Different reasons may be there for this lag, but more pertinent is their identification and sorting-out. The challenge for the nation is increasing and more people are getting frustrated with the national situation of healthcare delivery. Both healthcare workers and other citizens are getting deeply depressed over the situation, and an urgent solution to these barriers for a more impactful healthcare system is wholly necessary.

JUSTIFICATION

This research is about investigating the knowledge, perception and barriers to task-shifting among primary healthcare workers in Benin-City.

As was mentioned earlier that a situational assessment for progressive development of the task-shifting system and health care system was proposed in the National Task-shifting policy. This assessment could not have been without an assessment of adequacy of knowledge of the policy or framework by various healthcare workers. This has been mentioned in literature as being associated with successful implementation of a policy. Sadly, there are largely few or no clear record of this important contextual implementation environment, in states across the nation, that is, in particular now, how informed healthcare workers, particularly non-physicians such as nurses, pharmacists, Community Health Extension Workers (CHEWS), pharmacy technicians or technologists, laboratory technicians, and others about the TSTS policy. Previous researches related to the knowledge of this task-shifting policy among health workers in Edo State and Benin-City are unavailable, while the closest to this addressed of meaning and rationale among policy makers themselves, and not the healthcare workers.[9] This has made it difficult to have a clear view of the level of awareness and understanding of this initiative, and its projected practice among primary healthcare workers of all cadres for better healthcare delivery. The study therefore intends to assess the knowledge of primary healthcare workers in Benin-City about task-shifting, in order to address this gap.

Associated with knowledge is perception. When primary healthcare workers of various cadres have a positive perception of task-shifting as a healthcare delivery solution, acceptance and implementation success would increase, following their buy-in and adoption as part of a person-centred approach model of implementation. This appropriate perception should be in primary healthcare workers, both old workers, as well as the new ones coming in; therefore, purposeful analysis of the perception of healthcare workers, particularly primary healthcare workers on the task-shifting policy is very necessary. Existing literature on perception of task-shifting among

healthcare workers have been largely from works targeting its usage on specific health problems such as hypertension, human immune virus infection, to name but a few.[10-12] A more inclusive overview of the idea based on multiple healthcare services was carried out on a larger scale among many low-and-middle income countries providing little locally utilizable data for policy evaluation and practice here in Benin-City, as far as perception of task-shifting among healthcare workers is concerned. This existing bareness of our knowledge on the perception of primary healthcare workers in Benin-City on Task-shifting and Task-sharing on the core healthcare services which the policy expects to be covered here in Nigeria necessitated and instigated the rationale behind this research. This study hopes to provide empirical evidence on perception of task-shifting among PHC workers, and so guide implementation success and consequently, the projected better health outcomes.

Varying level of implementation has been reported on task-shifting, contrary to the expected surge in its use nationally. This necessitates the need to question the likely causes of this resistance or barriers, as well as identifying relevant enabling factors that would promote the adoption of the practice of task-shifting among healthcare workers. Previous efforts made to understand barriers to task-shifting employed the method of investigating the policymakers, rather than the healthcare workers themselves. The importance of obtaining the healthcare workers' experience as regards the factors preventing their practice of task-shifting is most-relevant for a more concrete set-out of objective plans to improve on their practice context and environment. This study hopes to identify the barriers and enablers to task-shifting especially among primary health care workers in Benin.

Little or no research has endeavoured to evaluate the knowledge of healthcare workers on task-shifting, especially various primary healthcare workers of different cadres, to give ~~an empirical~~

~~evidence~~empirical evidence of how informed primary healthcare workers about the existence, purpose and general provisions of task-shifting. This approach would give a more comprehensive review of PHC workers regarding task-shifting, thus informing better policy interventions.

Also, this study intends to understand the perception, set-out the primary healthcare workers' testimony on barriers to task-shifting that they face in their practice at a more local level. Also possible enablers locally will be sorted. Existing literature on barriers to task-shifting have been at wider fronts and sometimes simply focusing on policymakers' perspectives on the barriers. This study will provide a more localized and more integrated evidence on barriers to task-shifting.

Furthermore, this study will help to contribute to the body of literature on this subject.~~,.~~

RESEARCH QUESTIONS

1. What is the level of knowledge of primary healthcare workers in Benin-City about task-shifting and the national task-shifting policy or guidelines?
2. What are the perceptions of PHC workers in Benin-City towards task-shifting and its influence on healthcare service delivery?
3. What barriers and enablers influence the implementation of task-shifting among PHC workers in Benin-City?

GENERAL OBJECTIVE

To find out the knowledge, perception, barriers and enablers to task-shifting among primary healthcare workers in Benin-City

SPECIFIC OBJECTIVES

1. To assess the level of knowledge of PHC workers in Benin-City regarding task-shifting and the national task-shifting policy
2. To determine the perceptions of PHC workers in Benin-City toward task-shifting and its influence on healthcare service delivery
3. To identify barriers and enablers influencing the implementation of task-shifting among PHC workers in Benin-City

CHAPTER ~~2~~TWO

LITERATURE REVIEW

2.1. Introduction

Primary healthcare all over the world is of great importance. According to the World Health Organization (WHO), about 75% of the desired health outcomes of the SDGs could be achieved with optimal primary healthcare.[13] Scaling up the primary healthcare system for effectiveness has therefore always been a concern. Primary healthcare seeks quality care for every member of the society, including promotion, prevention, treatment, rehabilitation and palliative care, in a method and means that will be as close and as feasible to the people's environment.[13]

With the issue of dearth of specialist healthcare workers globally, especially in the low-and-middle-income countries, as well as with the increasing burden of HIV patients management, the WHO brought up the task-shifting strategy to address this and other health needs, especially at the primary healthcare level, in the year 2008.[5] This issue is still relevant today, especially in Nigeria, with a poor doctor-patient ratio of 1:9803 as at 2022.[14] The original task-shifting idea from the WHO has been adopted by the Nigerian state, with the nation's task-shifting policy being designed and published in 2014, amended in 2018.[1]

2.2. The National Task-shifting and Task-sharing Policy

The National Task-shifting and Task-sharing Policy of Nigeria was drawn with the aim of improving access to effective and evidence-based essential health services in Nigeria, especially at the primary healthcare level, as part of the effort towards a healthier and better country.[1] It had two priority areas in focus:

1. Reproductive health, Maternal, Child and Newborn health (RMNCH)

2. Tuberculosis, Malaria, and HIV

These were chosen due to the very bad statistics coming from poor health services along these lines, such as the high maternal mortality ratio, and Under-5 Mortality Rate. Also, the then rising number of HIV patients in need of ART, as well as morbidity and mortality figures from malaria.

The policy gave a total of 23 recommendations for the purpose of implementation of task-shifting by health institutions across the country. Recommendations 1-4 were about adopting the policy in Nigeria as a public health initiative. They highlighted the consensual and harmonious health workers and regulatory bodies participation in the set-up, as well as mentioning that task-shifting is an interim measure to be carried out alongside other measures to increase the number of skilled health workers in the nation; Recommendations 5 and 6 were on creating an enabling regulatory environment for implementation of the policy, including evidence based review and possible creation of mid-level cadres that can sustain the healthcare service system in different fronts for national health achievement; Recommendations 7-12 were about ensuring quality of care in the task-shifting framework, including setting out the necessary standard, education, certification and supervision needed for NSHWs to carry out the tasks shifted to them effectively. The assessment of this quality assurance was also; Recommendation 13-15 were on ensuring sustainability, noting the need to give financial incentives to all health workers involved in the work; Recommendations 16-22 were about the organization of clinical care services within the task-shifting system, clearly giving the allowance of various non-physician healthcare workers to carry out various tasks previously assigned to physicians based on the tabular organization of various clinical duties under the two priority areas, so far as those workers get trained to carry

them out. ~~Finally~~Finally, Recommendation 23 on the service delivery model at the community level, in that it can be suited to the best model workable in their peculiar circumstances.

Apart from the recommendations made, the document also included the various healthcare workers expected to function at the service delivery front, and the various tasks expected of them to incorporate under the new task-shifting initiative system. The various health care workers include:

Medical Officers, Nurses, Midwives, Community Health Extension Workers, Village Health Workers/Community Owned Resource Persons (CORPs) for the duties under priority area 1, which is Reproductive Health, Maternal, Child and Newborn health. Under the Tuberculosis, Malaria and HIV management priority area 2, the workers include all the ones listed under priority area 1, and the following in addition: Pharmacists, Pharmacy Technicians, Laboratory Scientists, Laboratory Technicians, Laboratory Assistants, Medical Records Officers (MRO), Medical Record Assistants (MRAs), Community Health Workers (Community Health Officers, Junior and Senior Community Health Extension Workers).[1]

2.3. Knowledge of Tasking-shifting among PHC Workers

The question of national implementation starts first with the evaluation of how informed the primary healthcare workers of all cadres are on the national task-shifting policy, its guidelines, the rationale for it and the scope of it.

In a 2018 qualitative cross-sectional study –in Norway titled Factors perceived to influence implementation of task shifting in highly specialized healthcare: a theory-based qualitative approach, involving both doctors and nurses as respondents, it found that the knowledge of task-shifting and its rationale was a significant factor influencing its practice among healthcare

workers, further revealing the necessity to explore on the knowledge of healthcare workers on the concept of task-shifting.[15] It however may not be an empirical picture of the true state of task-shifting in our local environment here.

Again, in another study in the form of a scoping review by Okoroafor et al. on studies involving health workers' knowledge or understanding of the purpose of task-shifting, cutting across multiple sub-Saharan countries in Africa published in 2023, found that health-workers-attributed task-shifting rationale was divided among many reasons ranging from addressing health workers shortage, maximizing various health workers utility, increasing access to various health services in different places especially at the rural areas.[16] This study assessed knowledge of rationale in the participants in different African countries, thereby giving a broad idea of what health workers know about task-shifting. It did not however assess the knowledge of the healthcare workers on areas beyond the reason, to analyze their knowledge of the quality assurance provisions and other components of the national policy.

This same hiatus was present in a 2017 case study report by B.S.C Uzochukwu on Primary Health Care System in Nigeria where qualitative assessment of the state of the Nation's PHC system was made, and finding of task-shifting was reported to have been done to address the health workers shortage.[16] It however did not discuss the knowledge of primary healthcare workers on the national task-shifting policy, to give what health workers know yet on the topic.

In a ~~2017~~ qualitative cross-sectional research titled Exploring stakeholders' perception of task-shifting strategy for hypertension control in Ghana: a qualitative study done in 2017, involving 81 participants (healthcare workers and stakeholders), with the aim of exploring stakeholders' perception on an ongoing evidence-based task-shifting strategy for hypertension (TASSH) in 32 community health facilities and district hospitals, it found that these stakeholders were aware of

the TASSH policy. The study further investigated their knowledge of the reasons, benefits and drawbacks of the scheme. In contrast, knowledge of Nigerian task-shifting and task-sharing policy (TSTS) has not been readily available on primary healthcare workers within the country. A local study here in Nigeria assessing the knowledge of healthcare workers on TSTS policy aligned or narrowed it to Physicians' perception of the policy in relation to hypertension management.[17] The real knowledge of our primary healthcare workers on the TSTS policy, its purpose/reasons for institutionalization, benefits and general nature or provisions in it still needs further investigation.

In another 2023 cross-sectional studyy ~~by~~ featuring qualitative response analysis from some 20 healthcare policy makers in Nigeria, titled Barriers, promoters, and strategies for improving task shifting and task sharing implementation in Nigeria: qualitative perspectives of policymakers, it was recorded that some health care workers had only informal knowledge of task-shifting mixed with misconceptions on the nature of the scope, rationale and approach to making the process a win for the healthcare system.[8] This hints strongly on misrepresentation of the solution due to inadequate knowledge of the health workers on the policy statement and their roles in it. ~~The~~ One of the research gaps here is the quantitative assessment of the knowledge of various cadres on their different work roles, as the study only gave qualitative evidence that may not also be safely applied to the local context of ~~Egor,~~ Benin-City as a representation of the state of task-shifting, especially in the primary healthcare sector.

In a 2019 cross sectional study titled Evaluation of Knowledge of Task-shifting and Task-sharing among Nurses in Murtala Mohammed Specialist Hospital Kano, aimed at evaluation of the level of knowledge of task-shifting and task-sharing among nurses in the hospital and had 73 respondents found that only 8.2% could define task-shifting and task-sharing correctly; 61.6%

had never heard of task-shifting before, however, 58.1% understood the need for optimizing human resources for health, and 56.2% had average knowledge of the categories of tasks to be shifted.[25] This study was however not inclusive of various healthcare workers. Also, its estimation may not be translatable to primary health care workers as the nurses were nurses in a tertiary facility.

2.4. Perception on Task-Shifting among PHC Workers

Again, perception is a key aspect of what researches have tried to examine, as it is a key determinant of the uptake and integration of TSTS scheme into the health system. Globally and locally, studies on perception of healthcare workers on task-shifting has both similar and slightly varying results.

In a 2023 thematic analysis on the Perspectives of Health Workers Engaging in Task-shifting to Deliver Health Care in Low-and-Middle-Income-Countries (LMIC): a Qualitative Evidence Synthesis, involving fifty-four studies and between 2394 to 2482 participants in studies up till 2021 with the aim of generating new knowledge on factors that influences people's outlook on the benefits and costs of doing task-shifting, the study found that specialized health workers considered task-shifting as a job steal from them, with a view to getting the less paid cadres to replace them.[18] This perspective is very much affected by misinformation on the nature and framework of task-shifting as the Nigerian TSTS document explains that task-shifting is not job replacement.[1] On the other hand, SHW namely General Practitioners in the Netherlands had a positive view of tasks being shifted to their less specialized counterparts in nursing who had undergone a little more training to be able to assists the doctors during their out-of-hours primary care work, remarking that it made their work smoother and easier, leaving them to concentrate on more important work.[19] This difference in the perception of the specialized health care

workers at primary healthcare levels from the two studies can be attributed to the stronger policy framework in the more positive setting (the Netherlands), as well as the fact that this latter study was a case study unlike the former which was a thematic analysis of largely cross sectional studies of various specialist healthcare workers in different countries.

It is also important to note that a 2024 study in Netherlands, between 359 and 362 nurses participating in this repeated cross-sectional study titled Task-shifting in Dutch Nursing Practice: a Repeated Cross-sectional Analysis of Nurses' Experience, with an aim of exploring how nurses viewed task-shifting effect on their collaboration with physicians, the result of the research showed that nurses increasingly felt that their involvement in task-shifting put them at conflict risk with physicians.[26]

From the above, it is evident that local cross-sectional research to obtain the perspectives of primary healthcare workers among its various cadres is of utmost importance as the same perspectives may be present in the NSHWs in our primary healthcare facilities.

In a more regional and closer study area, in Northern Ghana, a cross-sectional study involving sixty-eight responders, all primary healthcare workers, in 2017 titled Is Task-shifting a Solution to the Health Workers' Shortage in Northern Ghana with the aim of exploring the perception of health workers and implementers of health policy on task-shifting in those local facilities, the finding from the study revealed that most responders saw it as a means to meet the human resources for health (HRH) shortage.[29] This contrasts with the review study in 2023 on the Perspectives of Health Workers Engaging in Task-shifting to Deliver Health Care in Low-and-Middle-Income-Countries (LMIC)[18]. This may be due to the relative number of specialized health workers population across those various health systems compared to this research based on primary healthcare workers in an area with more dire need of health workers generally. There

were also views or perceptions by some of these workers that the task-shifting policy was overburdening them with job roles that were not theirs.

In a 2022 local cross-sectional study here in Nigeria on Physicians' Perception of Task-shifting with Non-physicians Healthcare Workers in Management of Uncomplicated Hypertension involving 1250 physicians, with a view of knowing what physicians think of the TSTS policy with regards to Uncomplicated Hypertension Management, 56.6% agreed on the TSTS policy, and 67.5% believed it could be institutionalized.[17] With focus on primary healthcare workers generally, including the specialized health workers, the perception of these workers on not just hypertension but on more areas of health is what this study focuses on.

2.5. Barriers and Enablers of Task-shifting

In the journal publication work titled Task-shifting and task-sharing in the health sector in Sub-Saharan Africa: Evidence, Success indicators, Challenges and Opportunities, it explained that from numerous studies, lack of trust, responsibility and accountability on the lower cadre workers prevented the SHWs from entrusting them with the tasks that could have been shifted.[20] It also tallied with the finding from the Northern Ghana Cross-sectional research titled Is Task-shifting a Solution to Health Workers Shortage in Northern Ghana, which noted that poor policy environment and even clear legal liability lines were also constituting barrier to task-shifting.[21]

In Netherlands, a 2019 cross-sectional study titled Facilitators and Barriers to Implementing Task-shifting: Expanding the Scope of Practical of Clinical Technologists in the Netherlands, it found that misunderstanding of the training of the Clinical Technologists made it difficult for those more dominant and SHWs to accept them in the health system.[27] This understanding however of the training curriculum may be interpreted on the TSTS policy framework that

recommends additional training and certification for NSHWs to be certified and approved for task-shifting new roles before they can do that. However, the clear picture of this in the Edo and Benin-City context is what this study wants to obtain.

In Ilorin, a study titled Perceived Determinants of Willingness to Implement Task-shifting of Nursing Procedures in Selected Healthcare Institutions, where 250 nurses were assessed on the determinants of willingness of nurses to implement, and the finding revealed that unfavourable hospital policy, work overload, poor supervision and shortage of staffs served as barriers to task-shifting to the lower cadres.[22]

In a 2023 meta-analysis research with the aim of understanding the roles played by mid-level health providers in improving access to primary healthcare services across the world, which surveyed 64 studies across 54 countries found that training of Non-physician Health workers (NPHWs), as well as provision of algorithms and guidelines, will be enablers of task-shifting in primary healthcare.[26] This finding is in tandem with the recommendation of the national task-shifting policy, and was also consistent with the 2023 qualitative meta-analysis study titled perspectives of health workers engaging in task-shifting to deliver healthcare in low-and-middle income countries which also noted supervision mentioned by the workers interviewed as an enabler.[18] More local based perspective will still be necessary so as to identify any location specific circumstance that are facilitators.

CHAPTER THREE

METHODOLOGY

3.1. STUDY AREA

This study wasill be carried out in the primary healthcare centres in Benin City, Edo State, Nigeria.

Edo State is one of Nigeria's 36 states, located in the South-South Geopolitical Zone. Edo State was created on the 27th of August, 1991, from the old Bendel State. It shares boundaries in the north-east with Kogi State, Anambra state on the east, Delta State on the south-east, and Ondo State on the west and north-west.[24]

Benin City is Edo State capital city. It is a fairly flat land, approximately 8.5km above the sea level, covering an area of 1125 square kilometerskilometres, and made up largely of three local government areas: Ikpoba Okha, Egor and Oredo. It is located along latitude 6°44'N and 6°21'N, longitude 5°35'E and 5°44'E. The population of Benin City is 2,044,650 as at 2025.[6,23]

Across these three LGAs, there wereare in total 85 primary health care facilities, 30 in Ikpoba Okha; 37 in Oredo; 18 in Egor LGA.

Workers there included medical officers, nurses, nurse-midwives, community health officers, laboratory technologists, pharmacist, pharmacist technicians, medical record officers, health attendants and other staff members.[6]

3.2. STUDY DESIGN

A descriptive cross-sectional study design will wasbe used in this research

3.3. STUDY POPULATION:

There are various cadres of health workers in the primary healthcare work-force, including medical officers, nurses, midwives, community health officers, community health extension workers, pharmacists, pharmacy technicians, laboratory technicians and others. This study is on the four primary healthcare workers on whom most task-shifting is addressed in the task-shifting policy, viz, medical officers, nurses, midwives, community health officers, senior and junior community health extension workers. Both senior and junior CHEWS will be combined in this study as no distinction was made on them in the task-shifting policy.[1]

In Egor Local Government, the following wasis the population breakdown of these workers:

Medical Officers – 5

Nurses – 48

Community Health Officers – 7

Community Health Extension Workers – 54

Total – 114

In Oredo LGA, it waiis as follows:

Medical Officers – 33

Nurses – 105

Community Health Officers – 26

Community Health Extension Workers – 54

Total – 218

In Ikpoba-Okha, it wais as follows:

Medical Officers – 4

Nurses – 46

Community Health Officers – 22

Community Health Extension Workers – 85

Total – 157

In total, there werearе 489 health workers of the cadres to be studied in Benin-city.

3.4. SELECTION CRITERIA

INCLUSION CRITERIA:

All medical officers, nurses, midwives, community health officers, and CHEWS in Benin-City, who gaive informed consent

EXCLUSION CRITERIA:

All medical officers, nurses, midwives, community health officers, and CHEWS in Benin-City, who werearе on leave.

3.5. STUDY DURATION

This study will spanned through March 2025 to March 2026 (12 months).

- Conceptualization and initial writeup: 5 months
- Data collection: 3 months
- Analysis: 1 month

- Final writeup: 2 months

3.6. SAMPLE SIZE DETERMINATION

The minimum sample size (n) wasill be calculated using the Cochrane formula for a cross-sectional study.

$$n = \frac{Z^2pq}{d^2}$$

Where:

n = Minimum Sample Size.

Z = Standard normal deviate set at 95% confidence interval (1.96)

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

d = desired absolute precision (margin of error) in proportion points

q = The complementary probability

Using p at 0.562 (from the research titled Evaluation of Knowledge of Task-shifting and Task-sharing among Nurses in Murtala Mohammed Specialist Hospital Kano, Kano State (26)), d at 0.05

$$n = \frac{(1.96)^2 \times (0.56) \times (0.46)}{(0.05)^2} = 378.8, \text{ which gives } 379$$

Finite Population Correction: $nfpc = \frac{n}{1 + (n-1)/N}$

There weare 489 health workers of the research population.[24]

$$nfpc\ nFPC = 379/1 + (383/489)$$

=379/1.775=213.5, approx. = 214

Non- response inflation

$$nNfinalfinal = nfpc\ nFPC/\{1 - r\}$$

- **r:** anticipated non- response rate (e.g., 0.10 for 10%)

$$nfinal\ n\ final = 214/0.9 = 237.8 \approx 238$$

Final Sample Size wais 238

3.7. SAMPLING TECHNIQUE

A multistage sampling technique wasill be utilized for this study.

Stage 1: Selection of the respondents across all health cadres. All were will be included and allocated based on the formula:

Number of respondents per cadre = (Total number of workers in the cadre/sampling frame) x sample size.

Medical Officers – (42/489) x 238 = 20.4≈20

Nurses – (199/489) x238 = 96.9≈97

Community Health Officers – (55/489) x238= 26.8≈27

CHEWS – (193/489) x238 = 93.93≈94

20+97+27+94 = 238

Thus, 20 medical officers, 97 nurses, 27 CHO's, 94 CHEWsS wereill be selected for the study

Stage 2: Final Selection of Respondents

The determined number of respondents per health work cadre wereill subsequently be selected across each of the five professional cadres in Benin-City by using a simple random sampling technique to ensure equal chances of being included in the study.

3.8. DATA MANAGEMENT

3.8.1 METHOD OF DATA COLLECTION: A pre-tested structuredstructured, paper-based questionnaire was ill be administered primary healthcare workers at the various PHC centres in Benin City. Prior to participation, the purpose of the study will was be clearly explained to each volunteering respondent before participation, and informed verbal consent wasill be obtained. The questionnaire wasill be self-and-interviewer-administered, and all participants wereill be assured of confidentiality.

3.8.2 TOOLS FOR DATA COLLECTION

A questionnaire containing both open and closed-ended questions in sections A to F are were presented. Section A is was on Biodata. Section B is was on General Knowledge of the National Task-shifting Policy, Section C is was on Perceptions Towards Task-shifting, Section D is was on Knowledge of Tasks Assigned to Each Cadre covering each of the priority areas in the national task-shifting policy, Section E is was on Barriers to Implementation of Task-shifting, Section F is was on Enablers of Task-shifting Implementation.

The questionnaire is was based on the policy recommendations, priorities and organizational recommendation for task-shifting as contained in the National Task-shifting and Task-sharing policy document, and was self-developed using the policy statements, with some assistance of openAI technology, and given for review and proofreading by supervisor.

Section A ~~is~~ on Biodata, showing the socio-demographic characteristics of respondents which may be seen to significantly influence knowledge, perception and barriers/enablers of task-shifting

Section B ~~is~~ on General Knowledge of Task-shifting and the National Task-shifting Policy

Section C ~~is~~ on Perceptions Towards Task-shifting

Section D ~~is~~ on Barriers to Implementation of Task-shifting

Section E ~~is~~ on Enablers of Task-shifting Implementation.

Section F were~~ar~~e open-ended questions

3.8.3 PRE-TESTING

To ensure standardization of the questionnaire, it ~~will be~~was to be pretested using 10% of the initial sample size, and necessary adjustments were to be~~ill be~~ made to ensure cultural appropriateness and optimal understanding based on the feedback received. This ~~will be~~was done in Ovia North East Local Government Area, but was not concluded.~~.~~

3.9. DATA ANALYSIS

Data collected from the questionnaire was~~ill be~~ uploaded into the IBM SPSS (Statistical Package for Scientific Solutions)

1. **Data Management and Entry**

   Completed questionnaires ~~will b~~wase checked ~~daily~~ for completeness and consistency. Data ~~will~~ was ~~be~~ coded and entered into IBM SPSS (Statistical Package for Scientific Solutions, Version 25 or later). Data cleaning ~~will~~ was ~~be~~ performed to identify missing values, outliers, and inconsistencies.

2. Variable Definition and Measurement

2.1 Socio-demographic Variables

Age, Sex, Marital status, Cadre/designation, Years of experience, Facility type, Facility ownership, Training on task-shifting.

2.2 Knowledge of Task-Shifting Policy Scoring:

Correct = 1, Incorrect/Not sure = 0

Total score: 0–19

Categorization:

Good: 15–19

Moderate: 10–14

Poor: 0–9

Dichotomized: Good = 1, Poor/Moderate = 0

2.3 Perception of Task-Shifting

Likert scale (1–5)

Reverse coding applied to negative items

Total score: 10–50

Categorization:

Positive: 38–50

Neutral: 25–37

Negative: <25

Dichotomized: Positive = 1, Not positive = 0

2.4 Barriers

Mean score ≥3.5 = Significant barrier

Mean score <3.5 = Not significant

2.5 Enablers

Mean score ≥3.5 = Strong enabler

Mean score <3.5 = Weak enabler

3. Statistical Analysis

Descriptive: Frequencies, percentages, mean ± SD

Inferential:

Chi-square: Association between categorical variables

T-test/ANOVA: Compare means

Correlation: Knowledge vs perception

Logistic regression: Predictors of knowledge and perception

4. Level of Significance

$p < 0.05$

95% confidence interval

5. Data Presentation

Tables, charts, cross-tabulations

3.10. RESEARCH ASSISTANTS:

Research assistants ~~will~~ were ~~be~~ recruited for the purpose of this study and properly trained on the objectives of the study, ethical considerations, and standard procedures for administering the questionnaire. The assistants ~~will b~~were students from the University of Benin who ~~have~~ had been trained on administering the questionnaire.

3.11. ETHICAL CONSIDERATION

Ethical approval and permission to carry out the study ~~will be~~was obtained from the Ethics and Research Committee of the University of Benin Teaching Hospital. Permission ~~will be~~was taken from the Head of Department of Public Health and Community Medicine, School of Medicine, College of Medical Sciences, University of Benin. Also, permission ~~will be~~was obtained from the Executive Secretary of the Edo State Primary Healthcare Development Agency. Informed consent ~~will also~~was also ~~be~~ taken from the respondents before administering the questionnaires. The respondents ~~will~~ were ~~be~~ informed participation is completely voluntary, and that they could~~an~~ withdraw~~wal~~ at any time without consequence. No monetary incentives ~~will be~~were offered and data ~~will~~ was ~~be~~ anonymized and stored securely.

3.12. LIMITATION OF STUDY

Bias may occur from unintentional participants' poor recall of what they know on questions around the policy. This ~~will~~ was ~~be~~ avoided or reduced by ensuring respondents ~~are~~ were relatively rested before answering.

CHAPTER FOUR

A total of 120 respondents participated in the study and the response rate was 50.42~~100~~%. The results are presented in the following sections in line with the specific objectives.

SECTION A: Sociodemographic characteristics of respondents

SECTION B: Knowledge of task-shifting and the National Task-shifting Policy

SECTION C: Perceptions towards task-shifting

SECTION D: Barriers and enablers of implementation of task-shifting

Section E: Open-ended questions

SECTION A

SOCIODEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Table 1: Sociodemographic characteristics of respondents

Variables	Frequency (n = 120)	Percent
Age group (years)		
<25	11	9.2
25 – 34	38	31.7
35 – 44	51	42.5
≥45	20	16.7
Mean ± SD ~~Age (Age (years)~~	35.9~~2~~ ± 8.6~~2~~	
Sex		
Female	112	93.3
Male	8	6.7
Marital status		
Single	37	30.8
Married	77	64.2
Widowed	3	2.5
~~Divorced~~	~~3~~	~~2.5~~
~~**Recategorised marital status**~~		
~~Ever married~~	~~83~~	~~69.2~~
~~Never married~~	~~37~~	~~30.8~~
~~**Highest qualification**~~		
~~Diploma qualification: Community Health Extension Worker (CHEW)~~	~~47~~	~~39.2~~
~~Diploma qualification: Community Health Officer (CHO)~~	~~10~~	~~8.3~~
~~Registered Nurse/ Registered Midwife (RN/RM)~~	~~36~~	~~30.0~~
~~BSc Nursing~~	~~21~~	~~17.5~~
~~MBBS~~	~~6~~	~~5.0~~
~~**Cadre**~~		
~~CHEW~~	~~47~~	~~39.2~~
~~CHO~~	~~10~~	~~10.0~~
~~RN/RM~~	~~36~~	~~30.0~~
~~BSc Nursing~~	~~21~~	~~17.5~~
~~Medical officer~~	~~6~~	~~5.0~~
~~**Years of experience**~~		
~~< 5 years~~	~~63~~	~~52.5~~
~~5 – 9 years~~	~~13~~	~~10.8~~
~~10 – 14 years~~	~~23~~	~~19.2~~
Divorced~~≥ 15 years~~	3~~21~~	2.5~~17.5~~

The respondents were predominantly middle-aged health workers, with the largest proportion aged 35–44 years 51 (42.5%), followed by those aged 25–34 years 38 (31.7%), while fewer were

aged ≥45 years 20 (16.7%) and <25 years 11 (9.2%). The mean age was 35.9 ± 8.6 years, indicating a relatively mature workforce.

There was a clear female predominance 112 (93.3%), with only a small proportion of males 8 (6.7%), reflecting the gender distribution typical of maternal and primary healthcare settings.

Most respondents were married 77 (64.2%), while 37 (30.8%) were single, and only 3 (2.5%) each were widowed or divorced. Overall, a majority were ever married 83 (69.2%), compared to 37 (30.8%) who had never been married.

eVariables	Frequency (n = 120)	Percent
Highest qualification		
Diploma qualification: Community Health Extension Work (CHEW)	47	39.2
Diploma qualification: Community Health Officer (CHO)	10	8.3
Registered Nurse/ Registered Midwife (RN/RM)	36	30.0
BSc Nursing	21	17.5
MBBS	6	5.0
Cadre		
CHEW	47	39.2
CHO	10	10.0
RN/RM	36	30.0
BSc Nursing	21	17.5
Medical officer	6	5.0
Years of experience		
< 5 years	63	52.5
5 – 9 years	13	10.8
10 – 14 years	23	19.2
≥ 15 years	21	17.5

Table 2: Professional characteristics of respondents

~~The respondents were predominantly middle- aged health workers, with the largest proportion aged 35–44 years 51 (42.5%), followed by those aged 25–34 years 38 (31.7%), while fewer were aged ≥45 years 20 (16.7%) and <25 years 11 (9.2%). The mean age was 35.9 ± 8.6 years, indicating a relatively mature workforce.~~

~~There was a clear female predominance 112 (93.3%), with only a small proportion of males 8 (6.7%), reflecting the gender distribution typical of maternal and primary healthcare settings.~~

~~Most respondents were married 77 (64.2%), while 37 (30.8%) were single, and only 3 (2.5%) each were widowed or divorced. Overall, a majority were ever married 83 (69.2%), compared to 37 (30.8%) who had never been married.~~

In terms of professional qualification, the largest group comprised Community Health Extension Workers 47 (39.2%), followed by Registered Nurses/Midwives 36 (30.0%), BSc Nursing holders 21 (17.5%), Community Health Officers 10 (8.3%), and medical doctors 6 (5.0%). A similar pattern was observed in cadre distribution, with CHEWs 47 (39.2%) forming the majority, followed by RN/RM 36 (30.0%), BSc nurses 21 (17.5%), CHOs 10 (10.0%), and medical officers 6 (5.0%).

Regarding years of experience, over half of the respondents had less than five years of experience 63 (52.5%), while 13 (10.8%) had 5–9 years, 23 (19.2%) had 10–14 years, and 21 (17.5%) had 15 years or more.

Variables	Frequency (n = 120)	Percent
Facility type		
Rural PHC	32	26.7
Urban PHC	88	73.3
Facility ownership		
Public	120	100.0
Received task-shifting training		
Yes	39	32.5
No	81	67.5
Type of training received (n=39)		
Could not recall type~~Nil~~	28	71.8
Nurse to CHEW	2	5.1
PMTCT	2	5.1
Vertical task shifting	2	5.1
Adolescent	1	2.6
Doctor to nurse	1	2.6
Frontline	1	2.6
Immunisation	1	2.6
R.I training	1	2.6

Table ~~32~~: Facility and training characteristics of respondents

Most respondents were working in urban primary healthcare facilities 88 (73.3%), while a smaller proportion were in rural PHCs 32 (26.7%), indicating a predominantly urban service setting. All facilities were publicly owned 120 (100.0%), reflecting the public sector focus of the study.

Regarding capacity building, only about one third of respondents had received task shifting training 39 (32.5%), while the majority 81 (67.5%) had not, suggesting limited exposure to formal task shifting programmes.

Among those who reported receiving training, a large proportion indicated no specific type of training 28 (71.8%), while the remaining respondents reported diverse and relatively low frequency training types, including nurse to CHEW training 2 (5.1%), PMTCT 2 (5.1%), and vertical task shifting 2 (5.1%). Other forms of training such as adolescent health 1 (2.6%), doctor to nurse training 1 (2.6%), frontline training 1 (2.6%), immunisation 1 (2.6%), and routine immunisation training 1 (2.6%) were reported by very few respondents.

SECTION B

KNOWLEDGE OF TASK-SHIFTING AND THE NATIONAL TASK-SHIFTING POLICY

Variables	Frequency (n = 120)	Percent
Awareness of national task shifting and task sharing policy		
Yes	52	43.3
No	48	40.0
Not sure	20	16.7
Knowledge of year of policy introduction		
Yes	22	18.3
No	71	59.2
Not sure	27	22.5
Awareness that policy was developed by Federal Ministry of Health		
Yes	51	42.5
No	42	35.0
Not sure	27	22.5
Knowledge that policy provides task delegation guidelines		
Yes	61	50.8
No	16	13.3
Not sure	43	35.8
Knowledge of policy priority areas (RMNCH, TB, malaria, HIV)		
Yes	67	55.8
No	8	6.7
Not sure	45	37.5
Awareness that policy addresses skilled workforce shortages at PHC level		
Yes	72	60.0
No	7	5.8
Not sure	41	34.2
Exposure to cadre specific roles in policy document		
Yes	34	28.3
No	51	42.5
Not sure	35	29.2
Knowledge that policy defines roles across health cadres		
Yes	57	47.5
No	21	17.5
Not sure	42	35.0
Knowledge of access to policy document within facility		
Yes	27	22.5
No	52	43.3
Not sure	41	34.2

Table 43: Knowledge of task-shifting among respondents

Less than half of the respondents were aware of the national task shifting and task sharing policy 52 (43.3%), while 48 (40.0%) were not aware and 20 (16.7%) were unsure, indicating moderate overall awareness.

Knowledge of the year of policy introduction was generally poor, with only 22 (18.3%) reporting correct knowledge, compared to 71 (59.2%) who did not know and 27 (22.5%) who were unsure.

Similarly, awareness that the policy was developed by the Federal Ministry of Health was limited, with 51 (42.5%) aware, 42 (35.0%) unaware, and 27 (22.5%) unsure.

In terms of policy content, about half of the respondents demonstrated knowledge that the policy provides guidelines for task delegation 61 (50.8%), while 16 (13.3%) did not and 43 (35.8%) were unsure. A slightly higher proportion had knowledge of the policy priority areas such as RMNCH, TB, malaria, and HIV 67 (55.8%), though 45 (37.5%) remained unsure.

Awareness that the policy addresses skilled workforce shortages at the primary healthcare level was relatively higher, with 72 (60.0%) reporting awareness, compared to 7 (5.8%) who were unaware and 41 (34.2%) who were unsure.

However, more specific knowledge of the policy was limited. Only 34 (28.3%) reported exposure to cadre specific roles within the policy document, while 51 (42.5%) had not and 35 (29.2%) were unsure. Similarly, less than half 57 (47.5%) knew that the policy defines roles across health cadres, with 21 (17.5%) unaware and 42 (35.0%) unsure.

Access to the policy document within facilities was also low, with only 27 (22.5%) reporting access, while 52 (43.3%) did not have access and 41 (34.2%) were unsure.

Variables	Frequency (n = 120)	Percent
Initiating antiretroviral therapy for stable HIV clients		
Permitted	59	49.2
Not permitted	27	22.5
Not sure	34	28.3
Administering injectable contraceptives		
Permitted	94	78.3
Not permitted	4	3.3
Not sure	22	18.3
Conducting uncomplicated deliveries		
Permitted	81	67.5
Not permitted	12	10.0
Not sure	27	22.5
Prescribing antibiotics for minor infections		
Permitted	89	74.2
Not permitted	9	7.5
Not sure	22	18.3
Conducting routine antenatal care		
Permitted	92	76.7
Not permitted	7	5.8
Not sure	21	17.5
Treating malaria in adults		
Permitted	91	75.8
Not permitted	6	5.0
Not sure	23	19.2
Initiating management for uncomplicated hypertension		
Permitted	91	75.8
Not permitted	11	9.2
Not sure	18	15.0
Providing HIV counselling and testing		
Permitted	87	72.5
Not permitted	9	7.5
Not sure	24	20.0
Managing diarrhoeal diseases in children		
Permitted	94	78.3
Not permitted	5	4.2
Not sure	21	17.5
Referring complicated cases appropriately		
Permitted	94	78.3
Not permitted	7	5.8
Not sure	19	15.8

Table 54: Knowledge of permitted tasks under task shifting policy among Respondents

Knowledge was highest for routine and primary care tasks. A large proportion correctly identified that administering injectable contraceptives 94 (78.3%), managing diarrhoeal diseases in children 94 (78.3%), and referring complicated cases appropriately 94 (78.3%) were permitted. Similarly, high proportions recognised that conducting routine antenatal care 92 (76.7%), treating malaria in adults 91 (75.8%), initiating management for uncomplicated hypertension 91 (75.8%), and prescribing antibiotics for minor infections 89 (74.2%) were allowed under the policy. Knowledge was also relatively high for providing HIV counselling and testing 87 (72.5%) and conducting uncomplicated deliveries 81 (67.5%).

However, knowledge was comparatively lower for more specialised tasks. Less than half of respondents correctly identified that initiating antiretroviral therapy for stable HIV clients 59 (49.2%) was permitted, while a notable proportion either believed it was not permitted 27 (22.5%) or were unsure 34 (28.3%), indicating uncertainty in more advanced clinical responsibilities.

Across most variables, a consistent proportion of respondents selected “not sure”, ranging from 15.0% to 28.3%, suggesting gaps in clarity and confidence regarding the scope of task shifting roles.

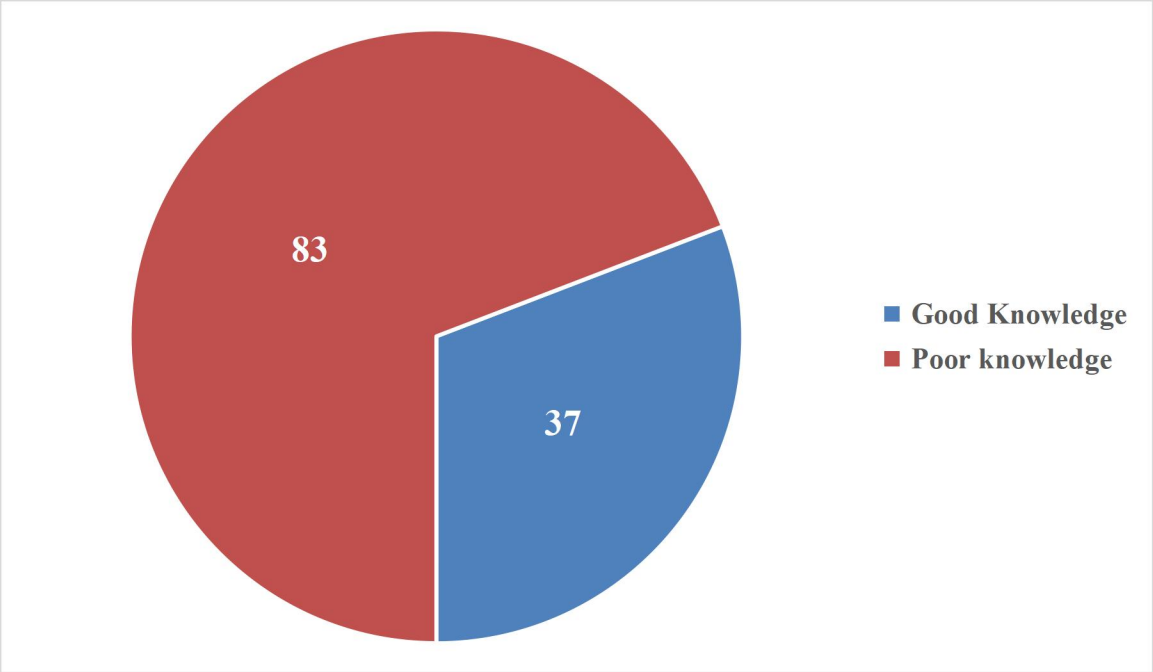


Figure 1: Knowledge of task-shifting and National policy on task-shifting.

In total, 37 (30.8%) respondents had good knowledge, 83(69.2%~~49 (40.8%) had moderate knowledge, while 34 (28.3%~~) had poor knowledge of task-shifting and the provisions of the National Task-shifting policy.

Table 65: Sociodemographic characteristics and knowledge of task-shifting among respondents

Variables	Knowledge		Test statistic	p-value
	Good (n=37) Freq. (%)	Poor (n=83) Freq. (%)		
Age group (years)				
<25	5 (45.5)	6 (54.5)	$\chi^2 = 7.167$	0.067
25 – 34	6 (15.8)	32 (84.2)		
35 – 44	17 (33.3)	34 (66.7)		
≥45	9 (45.0)	11 (55.0)		
Sex				
Female	34 (30.4)	78 (69.6)	$\chi^2 = 0.179$	0.673
Male	3 (37.5)	5 (62.5)		
Marital status				
Ever married	26 (31.3)	57 (68.7)	$\chi^2 = 0.031$	0.861
Never married	11 (29.7)	26 (70.3)		
Highest qualification				
CHEW	15 (31.9)	32 (68.1)	0.910+	0.958
CHO	4 (40.0)	6 (60.0)		
RN/RM	10 (27.8)	26 (72.2)		
BSc Nursing	6 (28.6)	15 (71.4)		
MBBS	2 (33.3)	4 (66.7)		
Cadre				
CHEW	15 (31.9)	32 (68.1)	0.645+	0.975
CHO	4 (40.0)	6 (60.0)		
Nurse/Midwife	10 (27.8)	26 (72.2)		
BSc Nursing	6 (28.6)	15 (71.4)		
Medical officer	2 (33.3)	4 (66.7)		
Years of experience				
< 5 years	19 (30.2)	44 (69.8)	$\chi^2 = 2.272$	0.526
5 – 9 years	2 (15.4)	11 (84.6)		
10 – 14 years	9 (39.1)	14 (60.9)		
Facility type				
Rural PHC	12 (37.5)	20 (62.5)	$\chi^2 = 0.909$	0.376
Urban PHC	25 (28.4)	63 (71.6)		
Received task-shifting training				
Yes	23 (59.0)	16 (41.0)	$\chi^2 = 21.455$	**<0.001***
No	14 (17.3)	67 (82.7)		

+Fisher's Exact Test; *_Statistically significant_

Age group did not show a statistically significant association with knowledge ($\chi^2 = 7.167$, p = 0.067). Among respondents aged <25 years, 5 (45.5%) had good knowledge and 6 (54.5%) had

poor knowledge. In the 25 to 34 years group, 6 (15.8%) had good knowledge and 32 (84.2%) had poor knowledge. For those aged 35 to 44 years, 17 (33.3%) had good knowledge and 34 (66.7%) had poor knowledge, while among those aged ≥45 years, 9 (45.0%) had good knowledge and 11 (55.0%) had poor knowledge.

Sex was not significantly associated with knowledge ($\chi^2 = 0.179$, $p = 0.673$). Among females, 34 (30.4%) had good knowledge and 78 (69.6%) had poor knowledge, while among males, 3 (37.5%) had good knowledge and 5 (62.5%) had poor knowledge.

Marital status also showed no significant association ($\chi^2 = 0.031$, $p = 0.861$). Among respondents who were ever married, 26 (31.3%) had good knowledge and 57 (68.7%) had poor knowledge, while among those never married, 11 (29.7%) had good knowledge and 26 (70.3%) had poor knowledge.

Highest qualification was not significantly associated with knowledge ($p = 0.958$). Among CHEWs, 15 (31.9%) had good knowledge and 32 (68.1%) had poor knowledge. Among CHOs, 4 (40.0%) had good knowledge and 6 (60.0%) had poor knowledge. For RN RM, 10 (27.8%) had good knowledge and 26 (72.2%) had poor knowledge. Among BSc Nursing, 6 (28.6%) had good knowledge and 15 (71.4%) had poor knowledge, while among MBBS holders, 2 (33.3%) had good knowledge and 4 (66.7%) had poor knowledge.

Cadre was also not significantly associated with knowledge ($p = 0.975$). Among CHEWs, 15 (31.9%) had good knowledge and 32 (68.1%) had poor knowledge. Among CHOs, 4 (40.0%) had good knowledge and 6 (60.0%) had poor knowledge. Among nurses and midwives, 10 (27.8%) had good knowledge and 26 (72.2%) had poor knowledge. Among BSc Nursing, 6 (28.6%) had good knowledge and 15 (71.4%) had poor knowledge, while among medical officers, 2 (33.3%) had good knowledge and 4 (66.7%) had poor knowledge.

Years of experience did not show a significant association with knowledge ($\chi^2 = 2.272$, $p = 0.526$). Among those with less than 5 years of experience, 19 (30.2%) had good knowledge and 44 (69.8%) had poor knowledge. For those with 5 to 9 years, 2 (15.4%) had good knowledge and 11 (84.6%) had poor knowledge, while among those with 10 to 14 years, 9 (39.1%) had good knowledge and 14 (60.9%) had poor knowledge.

Facility type was not significantly associated with knowledge ($\chi^2 = 0.909$, $p = 0.376$). Among respondents in rural PHC, 12 (37.5%) had good knowledge and 20 (62.5%) had poor knowledge, while in urban PHC, 25 (28.4%) had good knowledge and 63 (71.6%) had poor knowledge.

However, receipt of task shifting training was significantly associated with knowledge ($\chi^2 = 21.455$, $p < 0.001$). Among those who received training, 23 (59.0%) had good knowledge and 16 (41.0%) had poor knowledge, whereas among those who did not receive training, 14 (17.3%) had good knowledge and 67 (82.7%) had poor knowledge.

Variables	β (regression coefficient)	OR	95% C.I. for OR		p-value
			Lower	Upper	
Age ~~group~~ (years)	0.056	1.058	0.986	1.136	0.118
Sex					
Male*		1			
Female	-1.642	0.194	0.021	1.767	0.146
Marital status					
Ever married*		1			
Never married	0.544	1.722	0.449	6.609	0.428
Highest qualification					
MBBS*		1			
CHEW	0.770	2.160	0.140	33.205	0.581
CHO	1.722	5.594	0.262	119.542	0.270
RN/RM	0.960	2.611	0.150	45.306	0.510
BSc Nursing	1.207	3.344	0.193	57.942	0.407
Years of experience					
10 – 14 years*		1			
< 5 years	0.318	1.374	0.282	6.683	0.694
5 – 9 years	-0.736	0.479	0.059	3.920	0.493
Facility type					
Urban PHC*		1			
Rural PHC	0.535	1.707	0.596	4.892	0.320
Received task-shifting training					
Yes*		1			
No	-2.312	0.099	0.036	0.275	**<0.001****

Table 76: Predictors of good knowledge of task-shifting among respondents

*OR: Odds ratio; CI: Confidence interval; * Reference category; ** $p < 0.05$; $R^2 = 21.4 – 30.1\%$.*

Age was not a significant predictor of good knowledge (OR = 1.058, 95% CI: 0.986–1.136, p = 0.118). Female respondents were less likely to have good knowledge compared to males, though this was not statistically significant (OR = 0.194, 95% CI: 0.021–1.767, p = 0.146).

Never married respondents were more likely to have good knowledge compared to those who were ever married, but this was not significant (OR = 1.722, 95% CI: 0.449–6.609, p = 0.428).

Compared with MBBS respondents, CHEWs had higher odds of good knowledge (OR = 2.160, 95% CI: 0.140–33.205, p = 0.581), CHOs had higher odds (OR = 5.594, 95% CI: 0.262–119.542,

p = 0.270), RN/RMs also had higher odds (OR = 2.611, 95% CI: 0.150–45.306, p = 0.510), and BSc Nursing respondents had higher odds (OR = 3.344, 95% CI: 0.193–57.942, p = 0.407). None of these differences were statistically significant.

Respondents with less than 5 years of experience had higher odds of good knowledge compared to those with 10 to 14 years (OR = 1.374, 95% CI: 0.282–6.683, p = 0.694), while those with 5 to 9 years of experience had lower odds (OR = 0.479, 95% CI: 0.059–3.920, p = 0.493), though both were not significant.

Respondents in rural PHC facilities had higher odds of good knowledge compared to those in urban PHCs, but this was not significant (OR = 1.707, 95% CI: 0.596–4.892, p = 0.320).

However, lack of task shifting training was a strong and statistically significant predictor of poor knowledge. Respondents who had not received training were significantly less likely to have good knowledge compared to those who had training (OR = 0.099, 95% CI: 0.036–0.275, p < 0.001).

SECTION C

PERCEPTIONS TOWARDS TASK-SHIFTING

Variables	n = 120 Freq. (%) SA	A	N	D	SD
Task shifting helps to improve access to healthcare services in PHC settings	48 (40.0)	33 (27.5)	19 (15.8)	8 (6.7)	12 (10.0)
Task shifting reduces the workload of higher cadres	52 (43.3)	31 (25.8)	18 (15.0)	10 (8.3)	9 (7.5)
Task shifting compromises the quality of healthcare delivery	27 (22.5)	26 (21.7)	28 (23.3)	18 (15.0)	21 (17.5)
Task shifting promotes teamwork among PHC workers	46 (38.3)	50 (41.7)	13 (10.8)	1 (0.8)	10 (8.3)
Task shifting allows for better use of limited human resources	43 (35.8)	42 (35.0)	20 (16.7)	5 (4.2)	10 (8.3)
FI ~~f~~eel confident to take on tasks delegated through task shifting	46 (38.3)	46 (38.3)	16 (13.3)	5 (4.2)	7 (5.8)
The current supervision system adequately supports task shifting	31 (25.8)	41 (34.2)	31 (25.8)	6 (5.0)	11 (9.2)
Clients are generally satisfied with services provided through task shifting	28 (23.3)	35 (29.2)	39 (32.5)	9 (7.5)	9 (7.5)
Task shifting creates professional conflicts between cadres	26 (21.7)	22 (18.3)	25 (20.8)	18 (15.0)	29 (24.2)
Task shifting should be sustained and expanded in Nigeria	58 (48.3)	34 (28.3)	17 (14.2)	4 (3.3)	7 (5.8)

Table ~~8~~7: Perception of respondents toward task-shifting

SA = Strongly Agree; A = Agree; N = Neutral; D = Disagree; SD = Strongly Disagree.

Most respondents strongly agreed that task shifting improves access to healthcare services in PHC settings, with 48 (40.0%) strongly agreeing.

The majority also strongly agreed that task shifting reduces the workload of higher cadres, with 52 (43.3%) selecting strongly agree. Similarly, 50 (41.7%) agreed that task shifting promotes

teamwork among PHC workers, while 46 (38.3%) strongly agreed that it improves access to healthcare services.

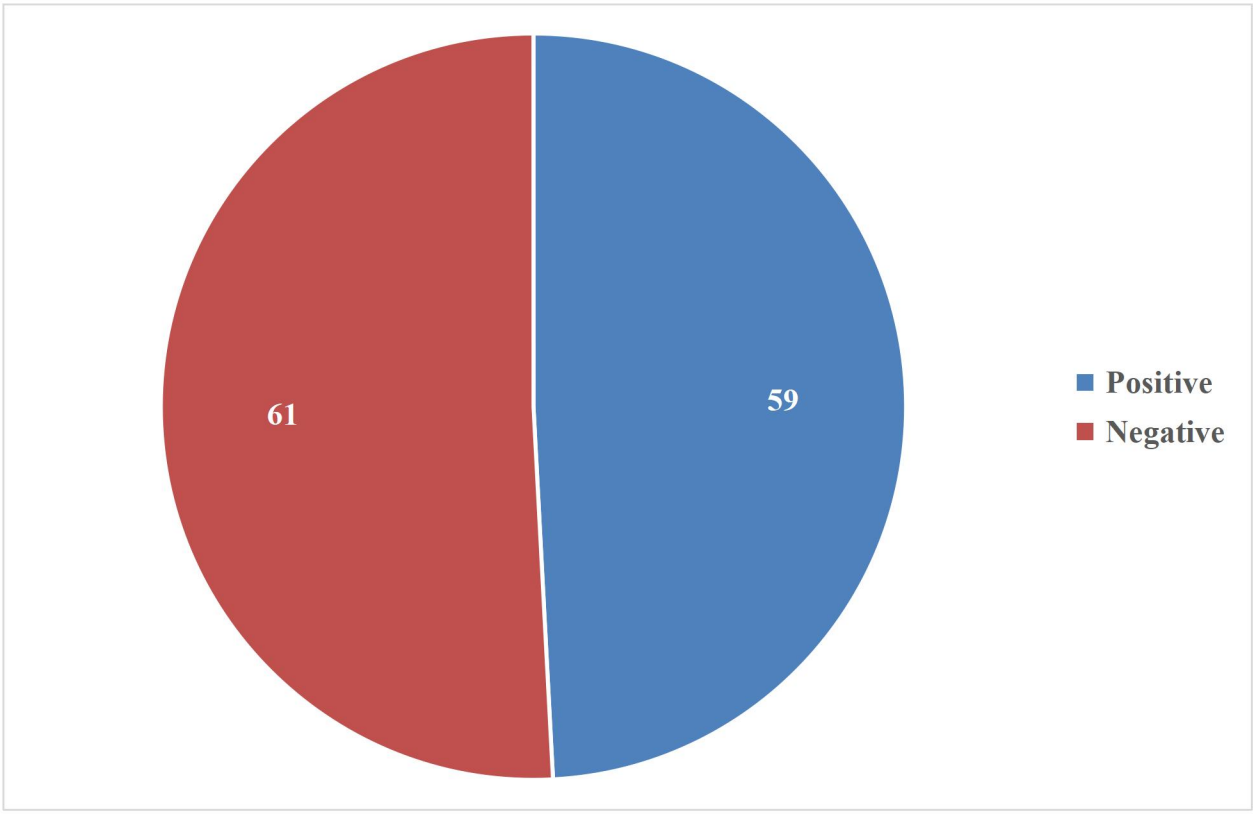
For efficiency in resource use, 43 (35.8%) strongly agreed that task shifting allows better use of limited human resources, and 42 (35.0%) agreed.

Regarding confidence, the highest proportion, 46 (38.3%), strongly agreed that they feel confident to take on tasks delegated through task shifting, with an equal proportion, 46 (38.3%), agreeing.

For supervision, 41 (34.2%) agreed that the current supervision system adequately supports task shifting. On client satisfaction, the highest response was neutral, with 39 (32.5%) indicating neither agree nor disagree that clients are generally satisfied with services provided through task shifting.

Concerning professional concerns, 29 (24.2%) strongly disagreed that task shifting creates professional conflicts between cadres, while 26 (21.7%) strongly agreed with the statement, indicating mixed responses but with strong disagreement slightly more prominent.

Finally, the majority strongly agreed that task shifting should be sustained and expanded in Nigeria, with 58 (48.3%) selecting strongly agree.



~~Figure 2: Respondents' perception of task-shifting~~

~~Majority of respondents, 59 (49.2%) had a positive perception of task-shifting, whereas 52 (43.3%) were neutral, while 9 (7.5%) had negative perceptions toward task-shifting.~~

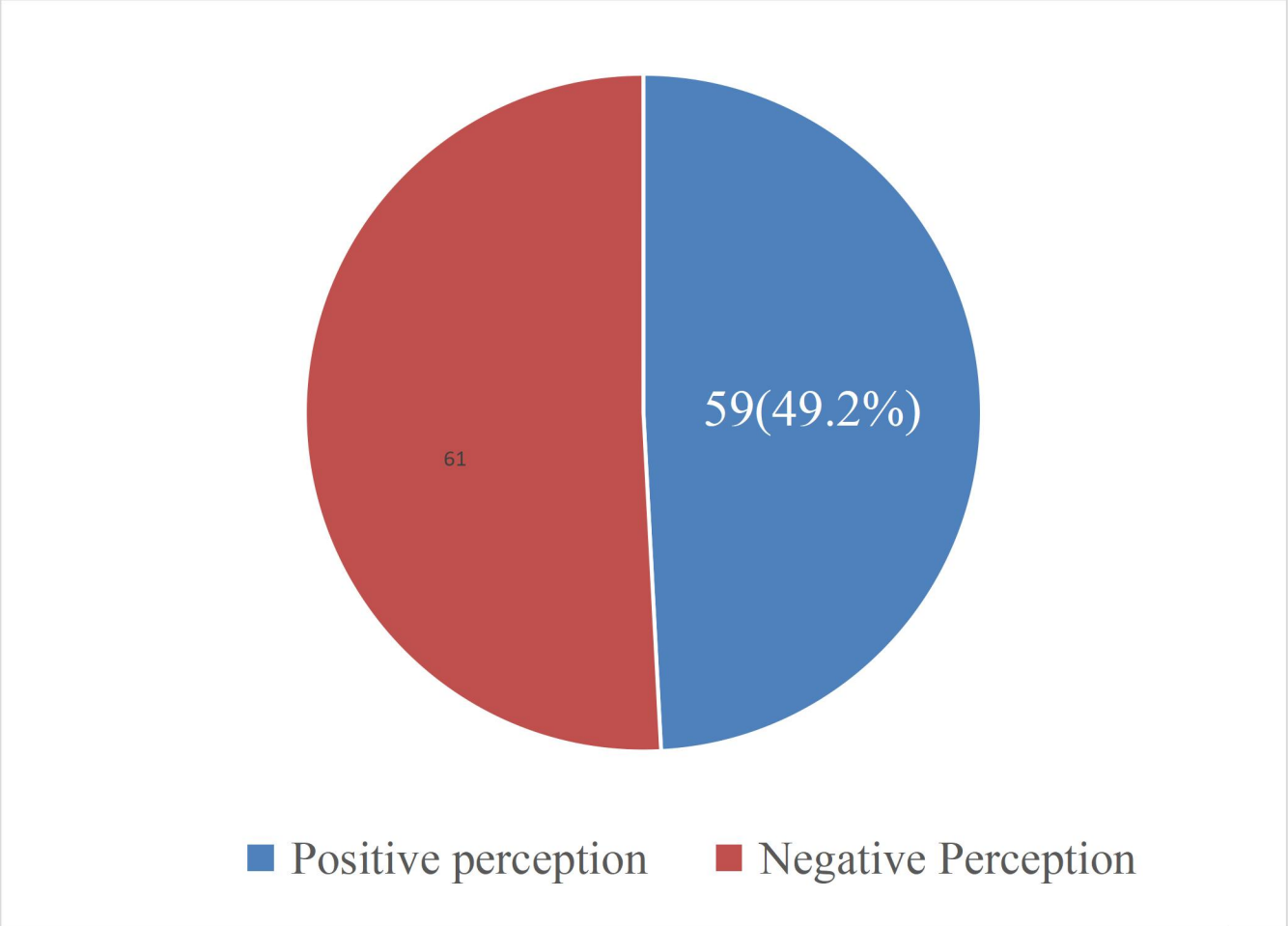


Figure 2: Respondents' perception of task-shifting

Slightly less than half of the respondents, 59 (49.2%) had a positive perception of task-shifting, whereas 61 (50.8%) had negative perceptions toward task-shifting.

Variables	Perception of task-shifting		Test statistic	p-value
	Positive (n=59) Freq. (%)	Negative (n=61) Freq. (%)		
Age group (years)				
<25	6 (54.5)	5 (45.5)	$\chi^2 = 2.035$	0.572
25 – 34	19 (50.0)	19 (50.0)		
35 – 44	27 (52.9)	24 (47.1)		
≥45	7 (35.0)	13 (65.0)		
Sex				
Female	55 (49.1)	57 (50.9)	$\chi^2 = 0.002$	>0.999
Male	4 (50.0)	4 (50.0)		
Marital status				
Ever married	43 (51.8)	40 (48.2)	$\chi^2 = 0.751$	0.433
Never married	16 (43.2)	21 (56.8)		
Highest qualification				
CHEW	25 (53.2)	22 (46.8)	$\chi^2 = 2.861$	0.598
CHO	6 (60.0)	4 (40.0)		
RN/RM	16 (44.4)	20 (55.6)		
BSc Nursing	8 (38.1)	13 (61.9)		
MBBS	4 (66.7)	2 (33.3)		
Cadre				
CHEW	25 (53.2)	22 (46.8)	2.861+	0.598
CHO	6 (60.0)	4 (40.0)		
Nurse/Midwife	16 (44.4)	20 (55.6)		
BSc Nursing	8 (38.1)	13 (61.9)		
Medical officer	4 (66.7)	2 (33.3)		
Years of experience				
< 5 years	33 (52.4)	30 (47.6)	$\chi^2 = 4.311$	0.242
5 – 9 years	4 (30.8)	9 (69.2)		
10 – 14 years	14 (60.9)	9 (39.1)		
Facility type				
Rural PHC	15 (46.9)	17 (53.1)	$\chi^2 = 0.092$	0.838
Urban PHC	44 (50.0)	44 (50.0)		
Received task-shifting training				
Yes	21 (53.8)	18 (46.2)	$\chi^2 = 0.506$	0.560
No	38 (46.9)	43 (53.1)		
Knowledge of task-shifting				
Good	20 (54.1)	17 (45.9)	$\chi^2 = 0.511$	0.555
Poor	39 (47.0)	44 (53.0)		

Table 98: Sociodemographic factors and respondents' perception of task-shifting

+Fisher's Exact Test; *Statistically significant

Across age groups, the highest proportion of positive perception was observed among respondents aged less than 25 years, 6 (54.5%) had a positive perception. ~~35 to 44 years, with 27 (52.9%) reporting a positive perception.~~ Among those aged ~~less than 25 years, 6 (54.5%) had a positive perception,~~ 35 to 44 years, 27 (52.9%) reported a positive perception, while respondents aged 25 to 34 years were evenly split with 19 (50.0%) reporting positive and 19 (50.0%) reporting negative perception. In the ≥45 years group, 13 (65.0%) had a negative perception.

For sex, females had a slightly higher proportion of negative perception, with 57 (50.9%) reporting negative perception, while males were evenly distributed, with 4 (50.0%) positive and 4 (50.0%) negative perception.

Regarding marital status, respondents who were ever married had a ~~higher~~ higher proportion of positive perception, with 43 (51.8%) reporting positive perception compared to 40 (48.2%) negative. Among those never married, 21 (56.8%) had a negative perception.

In terms of highest qualification, CHO respondents recorded the highest proportion of positive perception at 6 (60.0%), after the~~followed by~~ MBBS respondents at 4 (66.7%). However, RN/RM and BSc Nursing respondents had higher proportions of negative perception, with 20 (55.6%) and 13 (61.9%) respectively.

By cadre, CHO and Medical Officers recorded the highest positive perception at 6 (60.0%) and 4 (66.7%) respectively, while BSc Nursing cadres had the highest negative perception at 13 (61.9%).

For years of experience, respondents with 10 to 14 years had the highest positive perception, with 14 (60.9%) reporting positive perception. Those with 5 to 9 years of experience had the highest negative perception at 9 (69.2%).

Regarding facility type, urban PHC workers had equal distribution with 44 (50.0%) positive and 44 (50.0%) negative perception, while rural PHC workers had more negative perception at 17 (53.1%).

Respondents who had received task shifting training had slightly higher positive perception, with 21 (53.8%) reporting positive perception compared to 18 (46.2%) negative, while those without training had more negative perception at 43 (53.1%).

Finally, respondents with good knowledge of task shifting had a slightly higher positive perception at 20 (54.1%) compared to those with poor knowledge, where 44 (53.0%) had negative perception.

Variables	β (regression coefficient)	OR	95% C.I. for OR		p-value
			Lower	Upper	
Age ~~group~~ (years)	-0.075	0.927	0.869	0.990	**0.024****
Sex					
Male*		1			
Female	1.049	2.855	0.244	33.346	0.403
Marital status					
Ever married*		1			
Never married	-0.956	0.384	0.125	1.180	0.095
Highest qualification					
MBBS*		1			
CHEW	-1.443	0.236	0.014	4.082	0.321
CHO	-1.771	0.170	0.007	3.954	0.270
RN/RM	-1.731	0.177	0.009	3.378	0.250
BSc Nursing	-2.065	0.127	0.006	2.474	0.173
Years of experience					
10 – 14 years*		1			
< 5 years	-0.717~~0.135~~	0.488~~1.144~~	0.137~~300~~	1.735~~4.357~~	0.268~~844~~
5 – 9 years	-1.803~~0.952~~	0.165~~386~~	0.031~~072~~	0.872~~2.080~~	**0.034**~~**268~~**
≥ 15	-0.853~~0.852~~	0.427~~2.344~~	0.116~~636~~	18.573~~644~~	0.201~~0.201~~
Facility type					
Urban PHC*		1			
Rural PHC	-0.216	0.806	0.321	2.024	0.646
Received task-shifting training					
Yes*		1			
No	0.123	1.131	0.434	2.946	0.802
Knowledge of task-shifting					
Good*		1			
Poor	-0.358	0.699	0.275	1.779	0.453

Table 109: Predictors of positive perception toward task-shifting among respondents

*OR: Odds ratio; CI: Confidence interval; * Reference category; ** $p < 0.05$; R^2 = 11.111.1 – 14.914.9%.*

Age was a significant predictor of perception, with increasing age associated with a reduced likelihood of positive perception (OR = 0.927, 95% CI: 0.869–0.990, p = 0.024).

Sex was not a significant predictor, although females had higher odds of positive perception compared to males (OR = 2.855, 95% CI: 0.244–33.346, p = 0.403).

Never married respondents had lower odds of positive perception compared to those who were ever married, but this was not statistically significant (OR = 0.384, 95% CI: 0.125–1.180, p = 0.095).

Compared with MBBS respondents, CHEWs (OR = 0.236, 95% CI: 0.014–4.082, p = 0.321), CHOs (OR = 0.170, 95% CI: 0.007–3.954, p = 0.270), RN/RMs (OR = 0.177, 95% CI: 0.009–3.378, p = 0.250), and BSc Nursing respondents (OR = 0.127, 95% CI: 0.006–2.474, p = 0.173) all had lower odds of positive perception, though none were statistically significant.

For years of experience, respondents with 5-9 years had significantly lower odds of positive perception compared with those with 10-14 years of experience~~with less than 5 years~~ (OR = 0.1651.144, 95% CI: 0.031300–0.8724.357, p = 0.034844). Respondents with less than 5 years (OR = 0.488, 95% CI: 0.137 - 1.735, p = 0.268) and those with more than 15 years (OR = 0.4272.344, 95% CI: 0.116636–1.5738.644, p = 0.201) had lower~~higher~~ odds, but these~~ of positive perception, while those with 5-9 years had lower odds (OR = 0.386, 95% CI: 0.072-2.080, p = 0.268), though none~~ were not statistically significant.

Rural PHC workers had lower odds of positive perception compared to urban PHC workers, but this was not significant (OR = 0.806, 95% CI: 0.321–2.024, p = 0.646).

Respondents who had not received task shifting training had slightly higher odds of positive perception compared to those who had training, but this was not significant (OR = 1.131, 95% CI: 0.434–2.946, p = 0.802).

Respondents with poor knowledge had lower odds of having a positive perception compared with respondents with good knowledge, however this association was not statistically significant (OR = 0.699, 95% CI: 0.275 – 1.779, p = 0.453).

Overall, age and years of experience (5 – 9 years) were the only significant predictors. Older respondents and those with 5 – 9 years of experience were less likely to have a positive perception toward task-shifting. All other variables showed no statistically significant associations.

SECTION D

BARRIERS AND ENABLERS OF THE IMPLEMENTATION OF TASK-SHIFTING

Variables	n = 120 Freq. (%)				
	NB	SLB	MB	SB	VSB
Inadequate knowledge or training among staff	8 (6.7)	7 (5.8)	16 (13.3)	36 (30.0)	53 (44.2)
Lack of clear job descriptions or role boundaries	13 (10.8)	7 (5.8)	18 (15.0)	42 (35.0)	40 (33.3)
Resistance from higher cadres	19 (15.8)	7 (5.8)	27 (22.5)	40 (33.3)	27 (22.5)
Inadequate supervision or mentoring	12 (10.0)	10 (8.3)	25 (20.8)	35 (29.2)	38 (31.7)
Shortage of essential drugs or equipment	20 (16.7)	12 (10.0)	15 (12.5)	36 (30.0)	37 (30.8)
Fear of legal or professional sanctions	20 (16.7)	13 (10.8)	29 (24.2)	31 (25.8)	27 (22.5)
Lack of incentives or recognition	12 (10.0)	17 (14.2)	23 (19.2)	30 (25.0)	38 (31.7)
Weak referral and feedback systems	22 (18.3)	16 (13.3)	19 (15.8)	28 (23.3)	35 (29.2)

Table 110: Barriers to the implementation of task-shifting

NB = Not a Barrier; SLB = Slight Barrier; MB = Moderate Barrier; SB = Strong Barrier; VSB = Very Strong Barrier.

For inadequate knowledge or training among staff, the most frequent response was very strong barrier with 53 (44.2%), followed by strong barrier with 36 (30.0%).

For lack of clear job descriptions or role boundaries, 42 (35.0%) identified it as a strong barrier, while 40 (33.3%) reported it as a very strong barrier.

Regarding resistance from higher cadres, 40 (33.3%) reported it as a strong barrier, while 27 (22.5%) identified it as both a moderate and very strong barrier respectively.

For inadequate supervision or mentoring, 38 (31.7%) indicated very strong barrier, while 35 (29.2%) reported it as a strong barrier.

In relation to shortage of essential drugs or equipment, 37 (30.8%) reported it as a very strong barrier, while 36 (30.0%) indicated it as a strong barrier.

For fear of legal or professional sanctions, the highest proportion was moderate barrier with 29 (24.2%), followed by strong barrier with 31 (25.8%) and very strong barrier with 27 (22.5%).

Regarding lack of incentives or recognition, 38 (31.7%) reported it as a very strong barrier, while 30 (25.0%) indicated it as a strong barrier.

For weak referral and feedback systems, 35 (29.2%) identified it as a very strong barrier, while 28 (23.3%) reported it as a strong barrier.

Table 121: Mean scores of perceived barriers to implementation of task shifting among respondents

Variables	Mean ± SD
Inadequate knowledge or training among staff	3.99 ± 1.19
Lack of clear job descriptions or role boundaries	3.74 ± 1.28
Resistance from higher cadres	3.41 ± 1.33
Inadequate supervision or mentoring	3.64 ± 1.28
Shortage of essential drugs or equipment	3.48 ± 1.44
Fear of legal or professional sanctions	3.27 ± 1.37
Lack of incentives or recognition	3.54 ± 1.33
Weak referral and feedback systems	3.32 ± 1.48

Inadequate knowledge or training among staff recorded a mean score of 3.99 ± 1.19, indicating a significant barrier to task shifting implementation.

Lack of clear job descriptions or role boundaries also constituted a significant barrier with a mean score of 3.74 ± 1.28.

Resistance from higher cadres had a mean score of 3.41 ± 1.33, indicating it was not a significant barrier.

Inadequate supervision or mentoring was identified as a significant barrier with a mean score of 3.64 ± 1.28.

Shortage of essential drugs or equipment recorded a mean score of 3.48 ± 1.44, indicating it was not a significant barrier.

Fear of legal or professional sanctions had a mean score of 3.27 ± 1.37 and was therefore not a significant barrier.

Lack of incentives or recognition was a significant barrier with a mean score of 3.54 ± 1.33.

Weak referral and feedback systems recorded a mean score of 3.32 ± 1.48, indicating it was not a significant barrier.

	n = 120 Freq. (%)				
Variables	**VSE**	**SEV**	**ME**	**SE**	**NE**
Adequate training and supportive supervision	62 (51.7)	22 (18.3)	13 (10.8)	8 (6.7)	15 (12.5)
Availability of clear policy guidelines	63 (52.5)	21 (17.5)	16 (13.3)	4 (3.3)	16 (13.3)
Teamwork and collaboration among cadres	51 (42.5)	29 (24.2)	19 (15.8)	3 (2.5)	18 (15.0)
Support from management and policymakers	53 (44.2)	28 (23.3)	17 (14.2)	5 (4.2)	17 (14.2)
Continuous professional development opportunities	49 (40.8)	24 (20.0)	25 (20.8)	7 (5.8)	15 (12.5)
Community acceptance of lower cadre providers	43 (35.8)	25 (20.8)	21 (17.5)	13 (10.8)	18 (15.0)

Table 132: Enablers of task-shifting implementation

VSE = Very Strong Enabler; SEV = Strong Enabler; ME = Moderate Enabler; SE = Slight Enabler; NE = Not an Enabler.

For adequate training and supportive supervision, the majority of respondents identified it as a very strong enabler with 62 (51.7%), followed by 22 (18.3%) who considered it a strong enabler.

For availability of clear policy guidelines, 63 (52.5%) reported it as a very strong enabler, while 21 (17.5%) identified it as a strong enabler.

Regarding teamwork and collaboration among cadres, the most frequent response was very strong enabler with 51 (42.5%), followed by 29 (24.2%) who considered it a strong enabler.

For support from management and policymakers, 53 (44.2%) indicated it as a very strong enabler, while 28 (23.3%) reported it as a strong enabler.

Continuous professional development opportunities were most commonly rated as a very strong enabler by 49 (40.8%) respondents, followed by 25 (20.8%) who considered it a moderate enabler.

For community acceptance of lower cadre providers, 43 (35.8%) identified it as a very strong enabler, while 25 (20.8%) considered it a strong enabler.

Table 143: Mean scores of perceived enablers of implementation of task shifting among respondents

Variables	Mean ± SD
Adequate training and supportive supervision	3.90 ± 1.42
Availability of clear policy guidelines	3.93 ± 1.42
Teamwork and collaboration among cadres	3.77 ± 1.41
Support from management and policymakers	3.79 ± 1.41
Continuous professional development opportunities	3.71 ± 1.38
Community acceptance of lower cadre providers	3.52 ± 1.45

Adequate training and supportive supervision recorded a mean score of 3.90 ± 1.42, indicating it is a strong enabler of task shifting implementation.

Availability of clear policy guidelines had a mean score of 3.93 ± 1.42, also indicating a strong enabler.

Teamwork and collaboration among cadres recorded a mean score of 3.77 ± 1.41, indicating a strong enabler.

Support from management and policymakers had a mean score of 3.79 ± 1.41, indicating a strong enabler.

Continuous professional development opportunities recorded a mean score of 3.71 ± 1.38, also classified as a strong enabler.

Community acceptance of lower cadre providers had a mean score of 3.52 ± 1.45, indicating a strong enabler based on the cut-off point.

SECTION E

~~OPEN-ENDED QUESTIONS~~

Table 154: Understanbding of task-shifting and suggestions for improvement given by respondents

Variables	Frequency (n = 120)	Percent
Understanding of task-shifting ~~(n=76)~~ *		
Delegation of tasks from higher to lower cadres	27	22.5~~36.5~~
Redistribution or sharing of tasks among health workers	15	20.3
Training or task transfer to less specialised staff	9	12.2
Structured healthcare system or policy-guided process	6	8.1
Improving access, efficiency, and workload reduction	5	6.8
Role clarity and cadre-based responsibility	3	4.1
Supervised delegation of tasks	2	2.7
Misconceptions or incorrect interpretations	7	9.5
Ways to improve task-shifting ~~(n=80)~~ *		
Training, retraining and continuous capacity building	28	35.0
Supportive supervision and monitoring	14	17.5
Clear policy guidelines, job descriptions and role clarity	10	12.5
Teamwork, cooperation and communication among staff	8	10.0
Availability of resources and manpower (drugs, equipment, staffing)	7	8.8
Incentives, motivation and management support	6	7.5
Community and patient acceptance of task shifting	3	3.8
Efficiency and service delivery improvement	3	3.8
Proper implementation structure and enforcement systems	1	1.2

Multiple response~~Valid responses~~

Among respondents who provided valid definitions of task shifting (n = 74), the most common understanding was delegation of tasks from higher to lower cadres, 27 (36.5%). This was followed by redistribution or sharing of tasks among health workers, 15 (20.3%). Other responses included training or task transfer to less specialised staff, 9 (12.2%), and misconceptions or incorrect interpretations, 7 (9.5%). A smaller proportion described task

shifting as a structured healthcare system or policy guided process, 6 (8.1%), while improving access, efficiency, and workload reduction was reported by 5 (6.8%), and role clarity with cadre-based responsibilities by 3 (4.1%). Only a few respondents identified it as supervised delegation of tasks, 2 (2.7%).

When asked about ways to improve task-shifting within their facility, the most frequently suggested measure for improving task shifting was training, retraining and continuous capacity building, 28 (35.0%). This was followed by supportive supervision and monitoring, 14 (17.5%).

Other recommendations included clear policy guidelines and job descriptions, 10 (12.5%), teamwork and communication, 8 (10.0%), and adequate resources and manpower, 7 (8.8%).

Fewer respondents highlighted incentives and management support, 6 (7.5%), while community acceptance, 3 (3.8%), service efficiency improvements, 3 (3.8%), and structured implementation systems, 1 (1.2%), were the least reported suggestions.

Variables	Frequency (n = 120)	Percent
Challenges encountered in implementation of task-shifting (n=12074) *		
Inadequate training, knowledge and capacity gaps	20	27.0
Poor supervision, mentorship and implementation support	10	13.5
Resistance from health workers and professional conflict	9	12.2
Workforce shortages, workload and burnout	7	9.5
Incentives, motivation and welfare issues	6	8.1
Poor communication, unclear roles and lack of guidelines	6	8.1
Weak referral, feedback and health system structure	5	6.8
Resource constraints (drugs, equipment, infrastructure)	4	5.4
Quality of care concerns	3	4.1
Patient and community-related challenges	2	2.7
Misuse of roles and professional boundary violations	2	2.7
~~**Additional remarks (n=24) ***~~		
~~Training and continuous capacity building for health workers~~	~~7~~	~~29.2~~
~~Policy clarity, awareness and implementation support~~	~~3~~	~~12.5~~
~~Promote teamwork, communication and collaboration~~	~~3~~	~~12.5~~
~~Incentives and improved welfare for health workers~~	~~2~~	~~8.3~~
~~Positive perception of task shifting effectiveness~~	~~2~~	~~8.3~~
~~Mixed / general positive remarks~~	~~2~~	~~8.3~~
~~Strengthen supervision, monitoring and feedback systems~~	~~2~~	~~8.3~~
~~Community engagement and health education~~	~~1~~	~~4.2~~
~~Ethical conduct, empathy and professional respect~~	~~1~~	~~4.2~~
~~Workload management concerns~~	~~1~~	~~4.2~~

Table 165: Challenges faced in implementing task-shifting ~~in~~ among respondents~~Primary Healthcare facilities~~

Valid responses

Among respondents who reported challenges (n = 74), the most common was inadequate training and capacity gaps, 20 (27.0%). This was followed by poor supervision and implementation support, 10 (13.5%). Other challenges included resistance from health workers and inter cadre conflicts, 9 (12.2%), workforce shortages and burnout, 7 (9.5%), and incentive related issues, 6 (8.1%).

Additional barriers reported were poor communication and unclear role definitions, 6 (8.1%), weak referral systems, 5 (6.8%), and resource constraints, 4 (5.4%). Fewer respondents mentioned quality of care concerns, 3 (4.1%), patient related issues, 2 (2.7%), and professional boundary violations, 2 (2.7%).

Variables	Frequency (n = 120)	Percent
Recommendations for improving task-shifting (n=120) *		
Additional remarks (n=24) *		
Training and continuous capacity building for health workers	7	29.2
Policy clarity, awareness and implementation support	3	12.5
Promote teamwork, communication and collaboration	3	12.5
Incentives and improved welfare for health workers	2	8.3
Positive perception of task shifting effectiveness	2	8.3
Mixed / general positive remarks	2	8.3
Strengthen supervision, monitoring and feedback systems	2	8.3
Community engagement and health education	1	4.2
Ethical conduct, empathy and professional respect	1	4.2
Workload management concerns	1	4.2

Table 17

Some recommendations for improving task-shifting in order of recurrence included training and continuous capacity building for health workers (29.2%), policy clarity, awareness and implementation support (12.5%), promotion of teamwork, communication and collaboration (12.5%), incentives provision and improved welfare for health workers, strengthening of supervision, monitoring and feedback systems, as well as some related comments (8.3% each). Other recommendations included community engagement and health education, ethical conduct, empathy and professional respect and workload management concerns (4.2% each).

CHAPTER FIVE

DISCUSSION

The summary of the results from the study showed that majority of respondents had poor knowledge of task-shifting and the national task-shifting policy. Receiving task-shifting training prior was significantly associated with knowledge of task-shifting, and was also a good predictor of knowledge.

Perception of task-shifting was mixed, as good and poor perception were almost equally distributed. The younger aged workers were also more likely to have better perception of task-shifting. Also, respondents with 5 – 9 years of experience were less likely to have positive perception, and it was a significant predictor.

The barriers to task-shifting encountered most by respondents in were inadequate training and capacity gaps, lack of proper supervision or monitoring, resistance from higher cadres, shortage of staff and incentives related issues.

The enablers reported were training, retraining and continuous capacity building, proper policy clarification and awareness creation on job description or roles under the policy, team work and collaboration between the various health cadres, provision of more resources of health especially man-power, and roll out of incentives for health care workers involved in task-shifting.

~~These findings summarized above are elucidated further in the discussions following:~~

T~~Regarding knowledge, t~~his study found that a considerable proportion of PHC workers had poor knowledge of task-shifting, with only a minority demonstrating good knowledge of the concept and the national task-shifting policy. Additionally, only a limited number of respondents

had received formal training on task-shifting, while those who had received prior training were also likely to have good knowledge of task-shifting.

This finding may be attributed to inadequate dissemination of the national task-shifting policy, lack of structured training programs, and insufficient continuing professional education among PHC workers. Furthermore, task-shifting in many facilities may be practiced informally without proper orientation, leading to superficial or incomplete understanding.

Task-shifting training being associated with good knowledge is also no less a surprise as the advocacy for it, because those trained will know about a concept better than those who have no training.

These findings of poor knowledge and training improving knowledge are similar to a study conducted in Kano (2019) which reported that 61.6% of nurses had never heard of task-shifting and only 8.2% could correctly define it, although some had partial understanding of its rationale.[25]

It is also consistent with a 2023 cross-sectional study among Nigerian health sector stakeholders, which revealed that many healthcare workers had informal knowledge mixed with misconceptions about task-shifting.[8]

However, this contrasts with findings from Ghana, where stakeholders demonstrated better awareness of task-shifting policies and their benefits, suggesting stronger policy dissemination in that setting.[29]

Poor knowledge of task-shifting among PHC workers can lead to improper implementation of the policy, where the desired local appreciation and execution of primary healthcare will be

replaced by unwanted and unlicensed practice and healthcare delivery, due to the relative ignorance of the healthcare workers.

Also, there may be reduced quality of healthcare delivery stemming from the unguided lower-cadre left to task-shift without the delegating superior cadre's owning of the responsibility of supervision and training, in itself, a result of the poor knowledge of this as a policy-propounded task-shifting quality assurance mechanism.[1]

Again, this poor knowledge of task-shifting among the workers can lead to increased risk of professional conflict and role overlap. This in itself seems to be the natural consequence of a space left unfilled by knowledge. The ensuing rivalry would be from lack of understanding that task-shifting is only interim according to the national task-shifting policy recommendations.[1]

Failure to maximize limited human resources for health is another possible consequence

Ultimately, poor knowledge precludes or eliminates the expected effectiveness of task-shifting as a strategy to improve access to care, especially in resource-limited settings.

Regular training and retraining programs on task-shifting policy should be conducted at the primary healthcare level in order to address this problem.

Concerning perception, the study showed a mixed perception toward task-shifting, with approximately equal proportions of respondents having positive and negative perceptions. Perception also varied across cadres, years of experience, and demographic factors, but notably those with younger age were likelier to have good perception of task-shifting than the older group.

The age association may be due to more liberal tendencies of humanity with increasing civilization from older to younger generation.[30]

This contrasts with a 2020 cross-sectional study among nurses in family planning clinics in Southwest Nigeria where older nurses were found to be more willing to task-shift.[28] However, this may not fully be applicable to this study which studied healthcare workers with a broader scope of work to carry out for various health issues and not just family planning. The reverse ideology of being bored about their monotonous duty may well be why older nurses were more willing to delegate tasks to lower cadres unlike the younger ones with a burst of passion for professional engagement and fulfilment.

Demographic associations with perception especially when positive can drive willingness to collaborate among healthcare workers and strengthen the health system.

There should be continued sensitization and education so task-shifting can be integrated more deeply into the health set-up.

Respondents with 5 – 9 years of experience in PHC work were also less likely to have positive perception of task-shifting. This is not a common finding based on existing literature, and plausible reasons can only be based on conjectures.

Work years or work experience was found to influence the health workers relation to task-shifting in Sweden as those with less years of experience were more positive than those with more years of experience.[32]

Positive perception is vital to successful integration of task-shifting in view of the goal of better healthcare delivery in the nation.

Further research along the relationship between years of experience and task-shifting need be explored so deducible and useful improvements to the strategy can be brought out.

The mixed perception seen may be due to inadequate knowledge and misconceptions about task-shifting, as from the study, poor knowledge is also predominant among them. This reflects the close association knowledge and perception often share together, in that perception is often a product of the knowledge one has about things.

Another reason plausible from the study findings is the fear of role encroachment or job displacement among higher cadres, a situation understandably possible if there is no clear-cut description and delineation of task-shifting roles and its temporary position as a primary healthcare strategy for resource poor settings.

Concerns about competence of lower cadres could also be a plausible reason for this poor perception. The assurance or proof to the specialized healthcare workers that the non-specialized colleagues may be well supervised by them enough to take up roles task-shifting suggests may not have been satisfactorily set-out by the overseeing bodies, thus leading to poor perception especially among these higher cadre groups. These proofs are things like success stories from systematic evaluation of utilization of task-shifting at primary healthcare fronts

Lack of proper supervision and structured implementation is another likely cause of this data on perception.

This finding on perception aligns with a 2023 cross-sectional study with a qualitative evidence synthesis, which reported that some specialized health workers perceived task-shifting as "job stealing", particularly when poorly understood.[8]

However, it contrasts with findings from the Netherlands, where general practitioners had a positive perception, noting that task-shifting improved workflow and efficiency.[26]

Locally, a Nigerian study among physicians showed that 56.6% supported task-shifting and 67.5% believed it could be institutionalized, indicating a more favorable perception compared to the mixed views observed in this study.[17]

Perception plays a critical role in policy implementation. Negative or mixed perceptions can reduce acceptance and adoption of task-shifting, thus weakening the ultimate usefulness of task-shifting as a primary healthcare solution for areas with less health resource persons.

It can also lead to inter-cadre conflicts as have been repeatedly mentioned as a challenge to task-shifting reported by respondents in the study.

Mixed perception also affects teamwork and service delivery because of the sluggishness and inhibitions fears of incompetence, resistance and other factors mentioned as likely offshoots of poor knowledge and poor perception.

Mixed perception, summarily, will limit the effectiveness of PHC systems

Efforts to address negative and mixed perceptions such as conduct of sensitization programmes, promotion of inter-professional collaboration, need be carried out more in Benin-City.

Concerning barriers to task-shifting, the study identified several barriers to task-shifting, including inadequate training, poor supervision, shortage of staff and resources, lack of clear policy implementation structures and resistance from higher cadre workers.

Reason for these barriers are likely due to weak health system infrastructure. Health infrastructure comprises equipment, material and software, human resources and composite and

integrating systems for health. A weak health system lacks foundational resources or elements needed to support new roles or interim roles, as the case may be. Even when lower cadre staff want to be involved in task-shifting, without important resources such as drugs, basic equipment and other items which was also noted as a reported challenge by the respondents in this study, the workers evidently would be unable to carry out task-shifted roles.

This is similar to the findings from a similar study done in rural Pakistan which found that weak health system structures did not support task-shifting[31]

Another component of this weak health system is the shortage of human resources at most primary healthcare centres visited, as respondents also noted workforce shortage as a serious challenge they had encountered in the course of their task-shifted roles. There is no one who can do the work of a nurse, doctor and CHEW in a week because there are not enough employed staff, who will still feel motivated to take-on or encourage the full integration of task-shifting into the healthcare system. Again, look at the health clinic headed by a CHEW assigned under task-shifting to carry out new roles like taking uncomplicated deliveries but lacks regular electricity and good water supply; it will prevent the willing workers desiring to take on task-shifting roles from doing so.

Poor policy implementation at facility level is also another plausible reason for these barriers met by workers getting into task-shifting. Consider for example the fact that most of the workers encountered had poor knowledge of task-shifting policy and its new allowances; evidently, there exists clearly a ground to be afraid of delegating tasks to lower cadres. The resistance seen from higher cadres could also stem from this. There cannot be adequate reinforcement of the idea of

task-shifting in PHCs with this challenge. This brings to the fore the linkage between knowledge, perception and ensuing barriers that a negative or poor perception and knowledge can cause.

Absence of structured accountability frameworks could also be a reason for the barriers seen in this study. Accountability means clear roles, performance monitoring, feedback loops, and consequences (both positive and negative). Without this structure, task-shifting integration will predictably fail. When there are no clear line of responsibility and reporting, or when such is not sufficient, so much that respondents indicated poor of task-shifting, then the workers will not feel safe to carry out tasks they feel are not traditionally their role. This hampers supervision as a challenge and a barrier to their practice progress to effectually positioning our primary healthcare system to meet universal healthcare goals. Supervision is key to successful task-shifting.

Without solid accountability structures covering various areas as highlighted, the task-shifting initiative may still be a little distant from its proposed effectiveness for making available universal health coverage in these resource-poor settings.

This finding is consistent with a study in Ilorin, which identified work overload, poor supervision, staff shortage, and unfavourable policies as key barriers to task-shifting.[22]

Similarly, studies across Sub-Saharan Africa reported lack of trust, unclear responsibilities, and weak legal frameworks as major challenges.[9]

Barriers to task-shifting can limit access to essential healthcare services, as lower cadre workers may not safely perform shifted tasks. Patients then necessarily have to see a scarce specialized healthcare worker. Some may however give up entirely and resort to self-management. These barriers can also worsen health workforce shortages as the burnout experienced by workers involved may push them to consider leaving the PHC system. It can also discourage upcoming

healthcare workers who become aware of the situation from having a interest in coming in. These ultimately leads to a reduction in the efficiency of PHC systems and affect the achievement of Universal Health Coverage (UHC).

Multiple and sustained efforts to address the weak health infrastructure system in terms of funding and staffing need to be provided, as well as a good comprehensive supervision system.

Enablers are closely related to the barriers, and those reported in this study include training and capacity development, alongside proper supervision and monitoring; also, availability of clear policy guideline and interpretation, especially at the facility level. Others include adequate resources and manpower, provision of incentives. Teamwork and collaboration among healthcare workers of various cadres was noted as well.

These enablers are not surprising in that the challenges encountered as barriers described above are the focus of these suggested enablers.

These enablers reported are similar to the meta-analysis studies done in 2023 across various countries that found the training of specialized healthcare workers, provision of clear algorithm and guideline for task-shifting roles, and supervision as enablers.[23,18]

Enabling task-shifting makes all the expected benefits of this strategy realizable, and will move the nation's healthcare management state forward. The nation will be healthier with a more effective PHC delivery in place.

These enablers should therefore be taken into account and set-up at PHCs so task-shifting can be better integrated into the healthcare frontline structures of Nigeria especially as we grapple with increasing specialist health workers migration.

CONCLUSION

This study found that the knowledge of task-shifting and the national task-shifting policy among Primary healthcare workers in Benin-City was largely poor.

Also, the perception of the workers in primary healthcare in Benin-City is mixed, as about half have positive~~good~~ perception of the concept while the other half do not share that idea.

Regarding barriers and enablers to task-shifting in Benin-City, inadequate training, supervisory systems, monitoring, man-power shortage, lack of clear policy guideline and job description or roles at the facilities, and lack of incentives were observed as barriers, while proper training and capacity building, provision of good supervision and monitoring, provision of man-power and resources, clear algorithm or policy guideline with good job description under task-shifting and incentivization were seen as enablers.

RECOMMENDATIONS

To the Federal Government through the Federal Ministry of Health and the National Primary Healthcare Development Agency (NPHCDA);

The Federal Ministry of Health in conjunction with the NPHCDA, should:

1. Establish a Mandatory National Task-shifting Competency Licensing System: PHC workers should be given the opportunity to learn and equipped for task-shifting, and may be allowed to perform expanded roles after passing this exam.
2. Create a Digital Task-shifting Operation Dashboard for PHCs Nationwide: On this page, facility managers should coordinate workers to input all tasks and roles done under the task-shifting scope, so data can be available for further improvement and development of the PHC system.

3. Introduce Regular Rural Task-shifting Grant to PHCs in Rural Areas: This will be a means to incentivize workers involved in PHCs to motivate them towards continuing with this good initiative.
4. Develop a National Inter-Cadre Collaborative Practice Framework: This will help to reduce rivalry among health workers.
5. Institutionalize Quarterly Task-Shifting Audits and Feedback Rounds: In order to promote progress assessment and consolidation, this will be very important for the primary healthcare facilities to participate in.

To the Edo State Government through the Edo State Ministry of Health and the Edo State Primary Healthcare Development Agency (EDSPHCDA);

The Edo State Ministry of Health in collaboration with the EDSPHCDA, should:

1. Ensure every task PHC has a simplified task-shifting reference manual
2. Introduce monthly inter-cadre clinical review meetings in PHCs to serve as platforms for bonding and training
3. Deploy rotational supervisory teams composed of higher cadre officers serving different groups of PHCs
4. Teach and train higher cadres periodically on supervisory and delegatory roles in PHC
5. Link promotion criteria to task-shifting competence and collaboration

To Professional Associations for Doctors (Nigerian Medical Association), Nurses (National Association of Nigerian Nurses and Midwives), CHOs (Associates of

Community Health Practitioners of Nigeria) and CHEWs (National Association of Community Health Practitioners of Nigeria);

The healthcare professional associations should:

1. Develop joint interprofessional position statements on task-shifting so their members can be more encouraged into harmonious association with the other cadres for task-shifting.
2. Introduce Professional Mediation Committee for role conflict resolution
3. Develop their independent task-shifting competency verification programmes and encourage members to participate.

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APPENDIX I

Questionnaire: Knowledge, Perceptions, and Barriers to Task-Shifting among Primary Healthcare Workers in Benin-City

Section A: Socio-Demographic Characteristics

1. Age: _____ years
2. Sex: ☐ Male ☐ Female
3. Marital status: ☐ Single ☐ Married ☐ Divorced ☐ Widowed
4. Highest qualification: ☐ MBBS ☐ BSc Nursing ☐ RN/RM ☐ CHEW ☐ CHO ☐ Other (specify): _____
5. Cadre/Designation: ☐ Medical Officer ☐ Nurse ☐ Nurse-Midwife ☐ CHO ☐ CHEW ☐ Other (specify): _____
6. Years of experience in PHC service: ☐ <5 ☐ 5–9 ☐ 10–14 ☐ ≥15
7. Facility type: ☐ Urban PHC ☐ Rural PHC
8. Facility ownership: ☐ Public ☐ Private ☐ Mission
9. Have you received any formal training on task-shifting? ☐ Yes ☐ No
   If Yes, specify type: _____

Section B: Knowledge of the National Task-Shifting Policy or Guidelines

Please tick (✓) one response per item. Options: Yes / No / Not sure

1. I have heard about Nigeria's national task-shifting and task-sharing policy. ☐ Yes ☐ No ☐ Not sure

2. I know when the national task-shifting policy was introduced. ☐ Yes ☐ No ☐ Not sure

3. I am aware that the policy was developed by the Federal Ministry of Health. ☐ Yes ☐ No ☐ Not sure

4. The policy provides guidelines for delegating specific healthcare tasks to different cadres. ☐ Yes ☐ No ☐ Not sure

5. The priority areas of the policy are reproductive, maternal, child, newborn health, and tuberculosis, malaria and HIV management MAINLY ☐ Yes ☐ No ☐ Not sure

6. The policy is meant to address shortages of skilled health workers at the PHC level. ☐ Yes ☐ No ☐ Not sure

7. I have personally read or been briefed on my cadre's roles in the national task-shifting policy document. ☐ Yes ☐ No ☐ Not sure

8. I know that the policy identifies the roles of doctors, nurses, CHOs, and CHEWs separately ☐ Yes ☐ No ☐ Not sure

9. I know where to access or obtain the task-shifting policy document in my facility. ☐ Yes ☐ No ☐ Not sure

Section C: Knowledge of Cadre-Specific Tasks Permitted under the Policy

Tick (✓) whether the policy permits your cadre to perform the task. Options: Permitted / Not permitted / Not sure

1. Initiating antiretroviral therapy for stable HIV clients ☐ Permitted ☐ Not permitted ☐ Not sure

2. Administering injectable contraceptives ☐ Permitted ☐ Not permitted ☐ Not sure

3. Conducting uncomplicated deliveries ☐ Permitted ☐ Not permitted ☐ Not sure

4. Prescribing antibiotics for minor infections ☐ Permitted ☐ Not permitted ☐ Not sure

5. Conducting routine antenatal care ☐ Permitted ☐ Not permitted ☐ Not sure

6. Treating malaria in adults ☐ Permitted ☐ Not permitted ☐ Not sure

7. Initiating management for uncomplicated hypertension ☐ Permitted ☐ Not permitted ☐ Not sure

8. Providing HIV counselling and testing ☐ Permitted ☐ Not permitted ☐ Not sure

9. Managing diarrheal diseases in children ☐ Permitted ☐ Not permitted ☐ Not sure

10. Referring complicated cases appropriately ☐ Permitted ☐ Not permitted ☐ Not sure

Section D: Perception toward Task-Shifting

Rate each statement. Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

1. Task-shifting helps to improve access to healthcare services in PHC settings. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

2. Task-shifting reduces the workload of higher cadres. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

3. Task-shifting compromises the quality of healthcare delivery. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

4. Task-shifting promotes teamwork among PHC workers. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

5. Task-shifting allows for better use of limited human resources. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

6. I feel confident to take on tasks delegated through task-shifting. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

7. The current supervision system adequately supports task-shifting. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

8. Clients are generally satisfied with services provided through task-shifting. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

9. Task-shifting creates professional conflicts between cadres. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

10. Task-shifting should be sustained and expanded in Nigeria. 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Section E: Barriers and Enablers to Implementation of Task-Shifting

Indicate how strongly each factor affects task-shifting implementation. Scale: 1 = Not a barrier/enabler, 2 = Slight, 3 = Moderate, 4 = Strong, 5 = Very strong

Barriers

1. Inadequate knowledge or training among staff 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

2. Lack of clear job descriptions or role boundaries 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

3. Resistance from higher cadres 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

4. Inadequate supervision or mentoring 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

5. Shortage of essential drugs or equipment 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

6. Fear of legal or professional sanctions 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

7. Lack of incentives or recognition 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

8. Weak referral and feedback systems 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Enablers

1. Adequate training and supportive supervision 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

2. Availability of clear policy guidelines 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

3. Teamwork and collaboration among cadres 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

4. Support from management and policymakers 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

5. Continuous professional development opportunities 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

6. Community acceptance of lower-cadre providers 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Section F: Open-Ended Questions

1. In your own words, what do you understand by task-shifting?

2. What do you think could make task-shifting more effective in your facility?

3. What key challenges have you personally faced (or observed) in implementing task-shifting?

4. Any other comments or suggestions:

APPENDIX II

HEALTH RESEARCH ETHICS COMMITTEE (HREC)

UNIVERSITY OF BENIN TEACHING HOSPITAL

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

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Registration Number:
NHREC-UBTH-HREC/24/12/2022B

PROTOCOL NUMBER: ADM/E 22/A/VOL. VII/14865491272127

PROPOSAL TITLE: "'KNOWLEDGE, PERCEPTION AND BARRIERS TO TASK-SHIFTING AMONG PRIMARY HEALTH CARE WORKERS IN BENIN-CITY"

PRINCIPAL INVESTIGATOR(S): OWOEYE PAUL OLWAFEMI

DEPARTMENT/INSTITUTION: DEPARTMENT OF PUBLIC HEALTH AND COMMUNITY MEDICINE, SCHOOL OF MEDICINE, UNIVERSITY OF BENIN, BENIN CITY, EDO STATE, NIGERIA

DATE CONSIDERED: APRIL 7TH, 2026

DECISION OF THE COMMITTEE: APPROVED

THIS APPROVAL DATES 7/4/2026 TO 6/4/2027. 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 7/4/2026

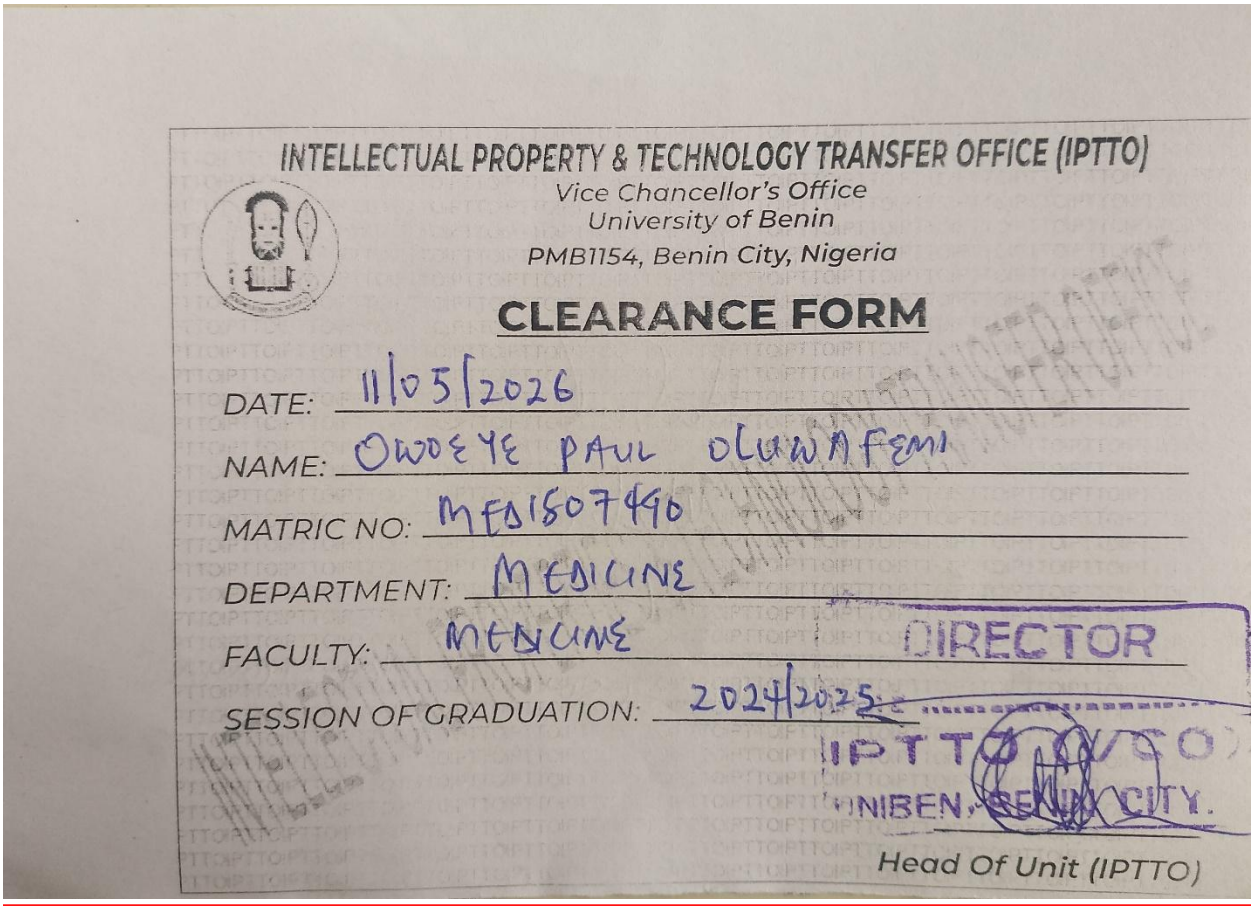
SUPERVISOR (S): PROF OBEHI OKOJIE, DR MOKOGWU NDUBUISI

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 7/4/26

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

APPENDIX III



INTELLECTUAL PROPERTY & TECHNOLOGY TRANSFER OFFICE (IPTTO)

Vice Chancellor's Office
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CLEARANCE FORM

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DEPARTMENT: MEDICINE

FACULTY: MEDICINE

SESSION OF GRADUATION: 2024/2025

DIRECTOR

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Head Of Unit (IPTTO)