Public Health Research
Anibor et al. Afr Chron Res Pub J 2025 1(1):82-111
Article URL: https://researchpubjournals.org/?post=1483

Hospital management and healthcare services administration of immunization: The case of tuberculosis

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Received: 10/08/2025
Revised: 17/08/2025
Accepted: 15/09/2025
Published: 23/09/2025

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Abstract

Background: The effective administration of immunization services is critical to achieving public health goals, reducing vaccine-preventable diseases, and improving overall population health. This involves some intersection of hospital management and healthcare service administration in the context of immunization delivery. There is always need to enhance public health outcomes through effective immunization strategies and management practices.

Aim: To provide an update on how hospital management and healthcare service administration influence the planning, coordination, and execution of immunization programmes. This is with a view to advance how immunization programmes could improve.

Methodology: This was narrative literature review study, using the SANRA framework. Two sources of data were published literatures and ministry of health documents in Nigeria. The focus of review were on hospital management (encompassing operational management, quality assurance, financial management, human resource management and strategic planning); healthcare services administration of immunization (including programme development, policy implementation, data management, community outreach and coordination of services. Qualitative analysis was by thematic review.

Results: On hospital management there is poor supply chain in the operational management. The quality assurance review identified adverse events and low programme effectiveness. This further evidenced in lack of training in terms of human resource management and regular updates for healthcare providers to drive compliance to policies. On healthcare services administration, there is issue of data management being inadequate data collection and reporting systems amongst others.

Conclusion/Recommendation: Several issues surrounding hospital management and healthcare services administration of immunization that can impact effectiveness and public health Effective immunization programme could improve through regular training for healthcare stakeholders and adoption of best practices.

Keywords: strategic planning, quality, health economics, financial management

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INTRODUCTION

Hospital management and healthcare services administration of immunization is the organization of hospitals/healthcare facilities towards ensuring effective and efficient delivery of immunization services to the populace and it involves a wide range of activities as enumerated below. In the case of tuberculosis (TB), the administration of TB immunization programmes within the framework of hospital management shows that by effectively planning, managing resources, ensuring compliance, engaging communities, and evaluating outcomes, healthcare administrators can play a significant role in controlling and preventing TB.

The World Health Organization (WHO) policy on TB infection control recommends four levels of protection: an overarching managerial level, administrative control, environmental control, and personal respiratory protection. Similarly, because of the well-known occupational risk to HCWs from TB, the U.S. Centers for Disease Control and Prevention (CDC) have recommended in their guidelines that all health care settings should have a TB infection control program. This should be designed to ensure prompt detection, airborne precautions, and treatment of individuals who have suspected or confirmed TB disease1 and should be based on a three-level hierarchy of controls, including administrative, environmental, and respiratory protection. The first and most important level of this hierarchy is administrative control. Its goals are to prevent HCWs, other staff, and patients from being exposed to TB and reduce the transmission of infection by ensuring rapid diagnosis and treatment of patients and staff with TB (Jo, 2016). Thus, the managerial and administrative control of TB is as important as the clinical aspect.

In Nigeria, tuberculosis (TB) is overseen by the National Tuberculosis and Leprosy Control Programme (NTBLCP) within the Federal Ministry of Health and it collaborates with various partners and stakeholders to control TB, leprosy, and Buruli ulcer. This program focuses on reducing the burden of TB, leprosy, and Buruli ulcer, with a tiered structure at the federal, state, and local government levels. The NTBLCP is structured at the federal, state, and local government levels, with the federal level responsible for policy development and the local level for operational implementation. In a study aimed at assessing tuberculosis infection

control practices and barriers to its implementation in Ikeja, Nigeria, findings from the focus group discussions showed weak managerial support, poor funding, under-staffing, lack of space and not wanting to be seen as stigmatizing against tuberculosis patients as barriers that hindered the implementation of TB infection control measures (Kuyinu et al., 2016). Thus, emphasizing the importance of managerial control of TB.

1. MANAGEMENT OF HEALTH SERVICES ORGANIZATIONS

The health care managerial skills apply equally to all health care organizations. Once you have mastered managing a skilled nursing facility, it is an easy step to managing other long- and short-term-care health care organizations. This is true because, due to the myriad of regulations, managing a nursing facility is the most complex managerial position in health care. No matter what health care organization one is managing, good decision making is the key ingredient for success (Allen, 2023).The skilled administrator of a nursing facility is a person capable of organizing the resources and finances available to best meet the needs of the residents. In successfully accomplishing this, the administrator makes innumerable decisions of which management is decision-making. What the administrator does for the nursing facility is make decisions (management) about what ought to happen in the facility (Allen, 2023). Thus, the basic functions of administrators/managers of health organizations are:

- ***Forecasting*** (projecting trends into the future). The administrator forecasts the economic, social, and political environment expected for the facility and the resources that will be available to it.
- ***Planning*** (deciding what is to be done). The administrator decides what is to be accomplished, sets short- and long-term objectives, then decides on the means to be used for achieving them.
- ***Budgeting*** (deciding acceptable costs). All facilities must operate on plans that have been translated into budgets that are realistic, yet functional.
- ***Organizing*** (deciding the scheme of the organization and the staffing it will require). The administrator decides on the structure the organization will take, the skills that

will be needed, and the staff positions and their particular duties and responsibilities. This includes coordinating the work assignments, that is, the interrelationships among the departments and their workers.

- ***Staffing*** (the human resources function). The administrator attempts to find the right person for each defined job.
- ***Directing*** (providing daily supervision employing good communication, people, and skills). The administrator provides day-to-day supervision of subordinates, makes sure that subordinates know what results are expected, and helps the staff to improve their skills by training, supervision.
- ***Evaluating*** (comparing actual to expected results). The administrator determines how well the jobs have been done and what progress is being made to achieve the organization's goals as stated in its policies and plans of action.
- ***Controlling Quality*** (taking necessary corrective actions). The administrator revises policies, procedures, and plans of action and takes necessary personnel actions to more nearly achieve the facility goals. Over time, the administrator writes many "plans of correction" for corporate and the many agencies that survey the facility.
- ***Innovating*** (an effective administrator is always an innovator). The administrator develops new ideas, combines old ideas to form new ones, searches for useful ideas from other fields and adapts them, and acts as a catalyst to stimulate others to be as creative.
- ***Marketing*** (identifying and attracting the persons to be served). The administrator ensures that the facility identifies the group(s) of persons to be served and successfully attracts (to the extent marketplace realities will allow), and serves the residents it seeks.

The management of health services organizations (HSOs) plays a pivotal role in the planning, implementation, and evaluation of immunization programs. Effective immunization delivery hinges on strategic leadership, efficient resource utilization, workforce training, cold chain management, community engagement, and monitoring systems. In HSOs, immunization services are typically

integrated into broader primary healthcare structure. Leadership and governance ensure policy alignment with national immunization schedules, often guided by entities such as the World Health Organization (WHO) and national health ministries.

To be effective, immunization services must be designed and delivered in a way to reach populations who need them, irrespective of who they are and where they live. Effective national immunization systems must have clear plans based on a vision of the future and a step-by-step process on how the vision will be translated into reality. Such plans are structured around eight topics that go beyond vaccine licensure and recommendations, including management, financing, logistics, human resources, service delivery, vaccine supply and quality, disease surveillance, advocacy and communication. The cold chain system is the backbone of any immunization program and consists of a network of equipment, material, people, processes, and financial resources that enable safe transportation of vaccines from the factory to the point of administration to the patient. Immunization service delivery includes any strategies and activities for delivering immunization service to a target population. Introduction of a new vaccine in a country program requires coordinated decision-making, considering the burden of disease, the characteristics of the respective vaccine and the capacity of the immunization system to deliver it. Adverse Events Following Immunization is another key component as documentation of vaccine safety is crucial for trust in a vaccination program. Scientifically valid and timely burden-of-disease surveillance as well as vaccine uptake data are core functions of any vaccination program and needed for information of the public and for timely actions (Saidu, 2021).

The National Tuberculosis and Leprosy Control Programme (NTBLCP) was established in 1989 by the Government of Nigeria to coordinate TB and leprosy control efforts in Nigeria. Its key functions include establishing and coordinating national strategies, developing policies, ensuring quality service delivery, and providing technical support at reducing the burden of TB, drug-resistant TB, and TB/HIV in the country. The NTBLCP also focuses on awareness creation, community participation, and promoting access to diagnosis and treatment. Its mandate was further expanded to include Buruli ulcer control in 2006 (Technical Guidelines |

NTBLCP | National Tuberculosis & Leprosy Control Programme. Evaluation of the NTBLCP of Nigeria to identify challenges and prospects for reducing the burden of tuberculosis (TB) in Nigeria was found to have sub-optimal Directly Observed Treatment Short course (DOTS) population coverage with shortage of skilled TB health workers at Primary Health Care (PHC) level. There were shortfalls in TB laboratories and quality assurance services with weak integration of TB and Human Immunodeficiency Virus (HIV) services. Multidrug-resistant (MDR) TB care services were fledgling and funding for TB control was inadequate. Also identified were weak Advocacy, Communication and Social Mobilization (ACSM) and Public-Private-Mix (PPM). There was poor implementation of TB infection control strategies in health facilities (Otu, 2013).

The World Health Organization (WHO) has a mandate to develop and disseminate evidence-based policy, norms and standards for tuberculosis (TB) prevention, diagnosis, treatment and care. Hence, the WHO Global TB Programme performs regular reviews of evidence and assessments of country needs for policy updates across the cascade of TB prevention and care. TB guidelines and operational handbooks are now organized under five modules: prevention, screening, diagnosis, treatment and comorbidities, vulnerable populations and people-centred care (TB Guidelines). Throughout the year, the Global TB Programme continued to update its repository of WHO recommendations relevant to TB care on its WHO *endTB Guidelines* website (WHO ETB Guidelines).

The International Union Against Tuberculosis and Lung Disease (The Union) is a century old global membership based, scientific organization headquartered in Paris with the stated goals to "improve health for people in low- and middle-income Countries". The Union focuses its work in three areas of lung health: Tuberculosis control, Tobacco Control, and other communicable and non-communicable Lung diseases. The Union organizes the annual Union World Conference on Lung Health, the largest annual meeting on lung health in the world, manages the International Journal of TB and Lung Disease, and implements various funded projects and activities across the world (“Who We Are,”)

KNCV Nigeria is a National Non-Governmental Organization dedicated to

the fight against Tuberculosis. It is the implementing agency for USAID Nigeria TB LON Project which focuses on locally generated solutions to provide TB prevention, screening, diagnosis, treatment and notification, while addressing stigma and discrimination. The TB LON region 1 and 2 project which is implemented by KNCV TB foundation Nigeria is to expand the provision of and increase access to TB services among formal and informal health providers through the engagement of the private sector, umbrella and local chapters of health and allied professional organizations, faith-based institutions, communities and civil society. The project is targeted at increasing the number of tuberculosis (TB) cases that are detected, treated and notified to 437,895 within the five year grant implementation period 2020 to 2025 and implemented across 14 states in Nigeria (We Fight against TB in Nigeria - KNCV Nigeria); Bauchi, Kaduna, Katsina, Kano, Nasarawa, Plateau, Taraba, Anambra, Akwa Ibom, Benue, Cross River, Delta, Imo and Rivers State. The project's four intermediate results are as follows;

- Improved access to high-quality, person-centred TB, DR-TB, and TB/Human Immunodeficiency Virus (TB/HIV) services;
- Strengthened TB service delivery platforms;
- Reduced TB disease transmission and progression and
- Accelerated TB innovations with improved impact on program implementation

2. HEALTH ECONOMICS

As Morris, Devlin Parkin and Spencer (2012) put it: *Health economics is the application of economic theory, models and empirical techniques to the analysis of decision-making by individuals, health care providers and governments with respect to health and health care.* This definition of economics above includes the term to produce, emphasizing that economics deals with both health and health care as a good or service that is manufactured, or produced. All production requires the use of resources such as raw materials and labour, and we can regard production as a process by which these resources are transformed into goods. The inputs to this productive process are resources such as personnel (often referred to as labour), equipment and buildings (often referred to as capital), land and raw materials. The output of a process using health care inputs, such as health care professionals, therapeutic materials and clinics, could be an amount of health care

of a given quality that is provided (Principles of Health Economics Including: The Notions of Scarcity, Supply and Demand, Distinctions between Need and Demand, Opportunity Cost, Discounting, Time Horizons, Margins, Efficiency and Equity | Health Knowledge)

Health economists seek to understand the role stakeholders, such as patient, health care providers, government agencies, and public organizations, play in health care spending (What Is Health Economics and Why Is It important?). It focuses on allocating resources to improve health outcomes, assess the cost-effectiveness of healthcare services and analyse healthcare markets. It also evaluates the costs and benefits of medical treatments, interventions and public health policies — ensuring the efficient use of resources. The goal is to optimize healthcare delivery while maximizing health benefits for individuals and populations alike (Green & Venkataramani, 2022)

Roles played by stakeholders in health economics:

Patient – The patient plays a critical role in driving health care spending, for both themselves and others. By choosing one prescription or treatment over another, opting for elective surgery, or using too much or too little care, individual patients can significantly impact supply, demand, and pricing for the entire system.

Healthcare provider – While the patient serves as the demand side of the equation, health care providers serve as the supply side. What services and treatments providers choose to offer and how much they charge for them are typically directly related to the patient's demands. Yet, several other factors may influence this decision as well.

Government agencies and public organizations – Health insurance is a means for individuals, employers, and society at large to manage costs related to health care. Ensuring stable insurance markets requires a thorough understanding of risk and risk pools. The design of employee benefits packages can be an effective means of controlling health care costs by forcing individuals to make more efficient decisions about their care. For example, an insurance plan which features high deductibles can serve to prevent frivolous spending while still ensuring protection in the face of medical emergencies.

Key components of health economics include:

i. Cost-Effectiveness Analysis – Evaluating the costs and benefits of different healthcare interventions to determine which provide the best value for money.
ii. Healthcare Financing – Understanding how healthcare is funded, including insurance models, government funding, and out-of-pocket expenses.
iii. Demand and Supply – Analyzing factors that influence the demand for healthcare services and how these services are supplied by providers.
iv. Policy Evaluation – Assessing the effectiveness of health policies and programs in achieving desired health outcomes.
v. Health Outcomes Measurement – Evaluating the impact of healthcare interventions on health status, quality of life, and economic productivity.
vi. Resource Allocation – Making decisions about how to allocate limited healthcare resources to maximize health benefits across populations.

Overall, health economics aims to inform decision-making in healthcare by providing a framework for understanding the trade-offs involved in health interventions and policies (McPake et.al., 2020)

With regards to immunization, the early cost studies from the 1980s showed that costs per fully immunized child varied widely, depending on the delivery strategy used (fixed facilities, mobile services or mass campaigns), the local costs of personnel, and vaccine procurement and distribution. One generally accepted average cost for fixed facilities in low-income countries was US$ 15 per fully immunized child for the traditional antigens of the Expanded Programme on Immunization (EPI)—BCG (Bacille Calmette-Guérin), diphtheria–tetanus–pertussis (DTP), polio and measles vaccines. Although it was known that the cost per dose of newer vaccines was significantly higher than those of traditional vaccines and presented more of a challenge to developing countries in terms of financing, less was known about the additional operating costs (cold chain, storage, additional service delivery costs, social mobilization, etc.) of incorporating these vaccines into immunization programmes (Zhou et. al.,2014)

The economic impact of tuberculosis come from the size of the problem and from the fact that in developing countries the majority of those affected are in the economically active segment of the population. Women who suffer from TB are often less likely to be detected and treated than men. Although tuberculosis is commonly thought to be a disease of the poor, this is not exclusively the case. Although the poor are more likely to suffer from the disease, a significant proportion of those infected are literate, have considerable education, and earn good incomes. The substantial non-treatment costs of TB are borne by the patients and their families. These are often greater than the costs of treatment to the health sector. The largest indirect cost of TB for a patient is income lost by being too sick to work. Studies suggest that on average three to four months of work time are lost, resulting in average lost potential earnings of 20% to 30% of annual household income. For the families of those that die from the disease, there is the further loss of about 15 years of income because of the premature death of the TB sufferer. When a woman suffers from TB, additional losses may result. The household loses the activities that the woman routinely performs in the household: cooking, cleaning, childcare, and managing the activities of the household (Lim).

3. NIGERIAN HEALTHCARE SYSTEM

Nigeria's healthcare system is characterized by its multi-tiered structure, involving the Federal, State, and Local Government levels, as well as the private sector. The Federal Government focuses on tertiary care and policy formulation, while State Governments primarily provide secondary care and coordinate primary healthcare at the local level. Local Governments manage local health committees and community mobilization.

The foundations of Nigeria’s healthcare system were established during the colonial period and solidified in the first decades following independence. In the early 20th century, medical institutions such as the University College Hospital (UCH) in Ibadan emerged as shining examples of medical sophistication. UCH, which was founded in 1948, became the first teaching hospital in Nigeria and attracted some of the best minds in medicine from both within the country and abroad. It was one of the most modern healthcare facilities in the country, drawing patients not only from

Nigeria but also from surrounding African nations and beyond. Not long after, the Lagos University Teaching Hospital (LUTH), founded in 1962, emerged as another pillar of Nigeria's healthcare system. By the 1960s and 1970s, Nigeria's leading teaching hospitals, including UCH, LUTH, and the University of Nigeria Teaching Hospital (UNTH) in Enugu, were known not just in Nigeria but across Africa for their advanced medical practices. These hospitals became a source of national pride and symbolized Nigeria's promise of medical excellence. These institutions were equipped with modern medical technologies, which allowed them to perform complex surgeries and specialized treatments that many African countries could not provide at the time (Adeloye et.al., 2017; Aregbeshola B.S. ,2021).

The 1970s marked a period of rapid development for Nigeria's healthcare system, with the establishment of several other notable hospitals like the Jos University Teaching Hospital (JUTH) and the University of Benin Teaching Hospital (UBTH). JUTH, established in the 1970s, became an important healthcare institution in the northern region of Nigeria, serving not only the people of Jos but also patients from neighbouring states and countries. The hospital's role in training medical professionals and offering specialized care was integral to the healthcare system's growth during this period.

Nigeria made significant investments in medical education, producing some of the most highly skilled doctors, surgeons, and nurses in Africa. Public hospitals in Nigeria became centres of excellence, where advanced procedures were routinely carried out, attracting not only Nigerians but also patients from neighbouring countries. Nigeria's healthcare system was widely recognised for its capacity to deliver high-quality care, often at a fraction of the cost of more developed nations. This made the country an attractive destination for medical tourism, with individuals from other parts of Africa and even the Middle East travelling to Nigeria for treatment. As medical tourism grew, Nigeria's healthcare system became a regional hub for quality medical care. The country's reputation for providing high-quality treatment at relatively affordable prices encouraged patients from across Africa and even the Middle East, to seek medical attention in Nigerian hospitals (Adeloye et.al., 2017; Aregbeshola B.S. ,2021).

This influx of international patients brought additional revenue to the country and

helped to develop the medical infrastructure further. Healthcare professionals were motivated by the desire to contribute to a growing and dynamic sector. At the same time, the government actively supported medical research and innovation, ensuring that Nigeria stayed at the forefront of medical advancements. This culture of excellence, fuelled by both the public and private sectors, allowed Nigeria to punch above its weight in the global healthcare arena, positioning itself as a leader in medical care for much of the 20th century.

During this golden era, Nigerian healthcare institutions were not only able to provide high-quality services but were also recognized globally for their contributions to medical education and innovation. The country's success in producing world-class doctors, nurses, and medical researchers was a testament to its commitment to healthcare and the importance placed on medical education and practice. Nigeria's healthcare system set a standard that many African nations aspired to reach(Adeloye et.al., 2017; Aregbeshola B.S. ,2021).

The decline of Nigeria's healthcare system can be traced back to a number of interconnected systemic issues that have plagued the sector- and nation- for decades.

One of the foremost issues contributing to the decline is inadequate health infrastructure and poor facility management. The country's healthcare facilities, especially in rural areas, lack modern equipment, inadequate maintenance, and overcrowding. Many government hospitals are housed in dilapidated buildings lacking essential infrastructure, such as reliable electricity and clean water, which are critical for safe medical services.

Along with inadequate facilities, human resources management has been a critical factor in the sector's decline. The health sector in Nigeria suffers from a shortage of qualified professionals, including doctors, nurses, and specialists. A combination of brain drain, poor working conditions, and a lack of professional development opportunities has resulted in many trained healthcare workers seeking employment abroad.

Nigeria faces one of the highest doctor-to-patient ratios in the world. In rural states like Benue and Katsina, reports from 2015 indicated that a single doctor was serving populations of over 20,000 people, a glaring disparity when compared to developed countries where doctors can attend to fewer patients per day. This severe

understaffing has led to burnout among medical personnel who are already overworked in underfunded institutions. These conditions often force healthcare professionals to seek better opportunities abroad or leave the profession entirely, worsening the shortage of qualified medical practitioners(Adeloye et.al., 2017; Aregbeshola B.S. ,2021).

Moreover, the low remuneration for healthcare workers has further contributed to the decline. A study published by the World Health Organization in 2018 found that healthcare workers in Nigeria earn far less than their counterparts in other countries, even in the region. This disparity in compensation, coupled with the high cost of living in Nigeria, has led to the mass migration of trained professionals to countries where they can earn a better living. This wage gap has been a key factor in exacerbating the brain drain, as many healthcare workers pursue opportunities abroad in search of better pay and working conditions.

Another significant contributor to the decline of Nigeria's healthcare system is the lack of sustainable and equitable healthcare financing. Despite the growing population and increasing demand for medical services, the Nigerian government has consistently underfunded the health sector. The National Health Insurance Scheme (NHIS), introduced to provide affordable healthcare for citizens, needs to be more utilized, with millions of Nigerians needing more financial protection to access healthcare. In 2019, Nigeria's health expenditure was just 3.7% of its GDP, far below the World Health Organization's recommended minimum of 5%. This underfunding has resulted in the widespread inability of public hospitals to provide adequate services. For instance, in 2017, it was reported that the Lagos University Teaching Hospital (LUTH) faced severe financial constraints, with unpaid staff salaries, insufficient medications, and limited patient care resources.

This lack of financial support has created a system where citizens must rely on out-of-pocket expenses for medical treatment. The high cost of healthcare in Nigeria has made it unaffordable for a significant portion of the population, particularly the rural poor. As a result, people often avoid seeking medical care until conditions become dire, leading to unnecessary deaths from treatable diseases(Adeloye et.al., 2017; Aregbeshola B.S. ,2021).

A key symptom of the failure to allocate adequate resources to the healthcare sector is the widespread corruption within the system. Corruption in the healthcare sector takes many forms, from misallocating funds for medical equipment and facilities to hiring unqualified personnel. Additionally, illiteracy and lack of awareness about healthcare have worsened the situation. Many Nigerians, particularly those in rural areas, do not fully understand the importance of preventive care, vaccinations, or early disease detection. This lack of knowledge leads to delayed diagnoses, poor health outcomes, and unnecessary deaths. For example, Nigeria has one of the highest rates of maternal mortality in the world, with many women dying from complications during childbirth due to a lack of prenatal care or access to skilled birth attendants. Lack of awareness about basic health practices, such as proper sanitation and hygiene, has also contributed to the persistence of diseases like cholera, which continues to devastate communities across Nigeria, particularly in the northern regions.

The absence of integrated disease prevention, surveillance, and treatment systems has been another major setback for Nigeria's healthcare system. There is no cohesive framework to manage public health crises, and the lack of early detection systems has resulted in slow responses to outbreaks of diseases like Lassa fever, Ebola, and cholera. For example, during the 2014 Ebola outbreak, Nigeria was able to contain the virus relatively quickly, but the country's health system's response to future outbreaks remains fragmented. Nigeria remains vulnerable to local and global health threats without a coordinated approach to healthcare delivery and disease surveillance.

Finally, there is the issue of limited access to essential medicines and medical supplies. Due to poor governance and corruption in the pharmaceutical sector, essential drugs often fail to reach the public. Hospitals and clinics frequently run out of life-saving medications like vaccines, antimalarials, and antibiotics, forcing patients to seek alternatives in the black market. The supply chain for medicines is fragmented, with many drugs being sold under suboptimal conditions, such as exposure to heat or moisture, which compromises their effectiveness. This shortage of essential supplies further worsens the situation for those who can afford to seek treatment, as even when they do find the right medications, they may not

be of the required quality (Croke & Ogbuoji 2024; Adeloye et.al., 2017).

Nigerian Healthcare system concerning TB is centred on the National Tuberculosis and Leprosy Control Programme (NTBLCP). Nigeria has the highest TB burden in Africa. The disease kills 268 people in the country every day. Yet TB cases are under-reported, increasing the high risk of transmission. It is estimated that one missed case can transmit TB to 15 people in a year (*Intensifying New Initiatives for TB Case-Finding in Nigeria | WHO | Regional Office for Africa*). The gap in case detection is mostly among children, due to some health workers at facility and community level not sufficiently skilled to detect childhood TB, as well as a lack of awareness among families and communities. TB services are also not fully integrated into routine children's health services, such as nutrition and immunization programmes. To intensify TB case-finding in the country, Nigeria's National Tuberculosis, Buruli Ulcer and Leprosy Control Programme, and its partners including World Health Organization (WHO), have been implementing various innovative strategies, including a TB drive across the 36 states and Federal Capital Territory. A special childhood TB case-finding testing week was conducted in May 2023. According to provisional data, over 361 000 TB cases were reported in Nigeria in 2023, 9% of these in children. Overall, this marked a 26% increase in the number of cases compared with 2022.

Community sensitization is carried out in communities with a high burden of TB, guided by the data and a hotspot mapping tool. Community health workers collaborate with local community organizations to engage community gatekeepers, conduct community entrance meetings and engage community mobilizers to assist with active case-finding. WHO has supported the national TB programme to adopt evidence-based strategies for case-finding, including training health workers? During 2023 and the first three months of 2024, with funding from The Global Fund to Fight AIDS, TB and Malaria, WHO has trained 242 health workers to improve TB case detection, reporting and treatment of patients across five states.

Furthermore, WHO has facilitated the roll out of the six-month treatment regimen for drug-resistant TB, and is currently piloting the use of a "treatment decision" algorithm. This aims to standardize clinical assessment and decision-making to

enhance TB case detection among children (Mirzayev et.ai.,2021)

The WHO 2019 Global TB Report revealed the poor detection rate of 24% in Nigeria with only 20% of health facilities able to provide TB services. It was estimated that 20% of TB cases in Nigeria are estimated to be attributable to malnutrition, 12% to HIV, 3% to diabetes and 1% to alcohol use disorder. Stigmatization, lack of GeneXpert analyzers, poverty and other factors contribute to the country's persistently high TB prevalence. Despite Nigeria accounting for the high burden of a disease that is preventable and treatable, it still has a 70% funding gap in programmes meant to curb its spread (Ogunniyi et al., 2024).

4. HEALTHCARE LAW

Healthcare law encompasses the legal framework governing healthcare services, patient rights, and the responsibilities of healthcare providers. It addresses issues such as medical ethics, public health policies, and the regulation of healthcare professionals and institutions. It is a set of rules regulating the promotion and protection of health, health services, the equitable distribution of available resources, and the legal position of all parties concerned (namely, patients, health care providers, health care institutions, and financing) and monitoring bodies (Szynkowska & Pawlaczyk, 2014) .

Health law in Nigeria refers to the legal framework that governs healthcare delivery, medical ethics, public health policies, and the rights and responsibilities of healthcare providers and patients. It encompasses legislation, regulations, and case law that guide the administration of healthcare services, the protection of public health, and the enforcement of medical standards. The legal framework for health law in Nigeria is derived from various sources, including the 1999 Constitution of the Federal Republic of Nigeria, statutory laws, international treaties, and common law principles.

Key aspects of healthcare law include:

- **Regulation of Healthcare Services:** Healthcare law sets rules and standards for the delivery of healthcare services, ensuring quality and safety. Healthcare regulations play a fundamental role in protecting patient safety and ensuring the delivery of high-quality healthcare services. It establishes standards and guidelines that healthcare providers must adhere to, covering areas such as patient care, medication safety, infection control, and medical equipment standards. By enforcing

these regulations, governments and regulatory bodies aim to prevent medical errors, improve patient outcomes, and maintain trust in the healthcare system. It also serves to safeguard the rights and interests of patients, including privacy and confidentiality. These regulations grant individuals control over their health information, regulate the sharing and disclosure of sensitive data, and empower patients to make informed decisions about their healthcare. Additionally, healthcare regulations address issues of accessibility and affordability, aiming to ensure healthcare services are available to all individuals, regardless of their socioeconomic status or insurance coverage. By promoting equity and fairness in healthcare delivery, regulations prevent discrimination, ensure equal access to care, and reduce health disparities (Asamoah, D.,2025). Key aspects include licensing and registration of healthcare professionals, regulation of healthcare facilities, and the establishment of bodies like the National Health Insurance Authority (NHIA) to oversee health insurance. The National Health Act of 2014 provides the overarching legal framework, while various regulatory bodies like the Medical and Dental Council of Nigeria (MDCN) and the Pharmacists Council of Nigeria (PCN) enforce standards within their respective domains.

In outbreak situations, the quarantine act of 1926 which provides the legal backing for compulsory health interventions, including TB testing and immunization if the public is at significant risk and the Nigeria Data Protection Regulation (NDPR), 2019 which governs how patients' data and records are securely handled and stored are worth mentioning.

- **Patient Rights:** It protects patients' rights, including the right to informed consent, access to medical records, and the right to refuse treatment. Patient Bill of Rights is a document that provides patients with information on how they reasonably expect to be treated during the course of their hospital stay. They simply provide goals and expectations for patient care. Doctors and nurses have the obligation to provide quality care in accordance with prevailing standards. They are to involve their patients in the decision-

making process. If Medical Practitioners fail to provide the minimum standard of care or fail to obtain a patient's informed consent before taking a specific course of action and if the negligence harms the patient, this may constitute medical malpractice or criminal medical negligence and can be subject of lawsuits (Bamidele et. al., 2025). The right of the patient, the responsibility of the patients and the healthcare provider are well spelt out in the Patient Bill of Rights document.

- **Medical Ethics:** Healthcare law addresses ethical dilemmas in healthcare, such as end-of-life decisions, reproductive health, and research involving human subjects. It is a branch of ethics that deals with the moral principles and values that guide the practice of medicine. It focuses on the obligations of healthcare professionals to patients and the wider community, ensuring that medical decisions and actions are aligned with ethical considerations. Key principles include beneficence, non-maleficence, autonomy, and justice. Medical ethics is particularly relevant in decisions regarding involuntary
treatment and involuntary commitment. There are several codes of conduct such as the Hippocratic Oath discusses basic principles for medical professionals. This document dates back to the fifth century BCE. Both The Declaration of Helsinki (1964) and The Nuremberg Code (1947) are two well-known and well respected documents contributing to medical ethics (Weise, 2016).
- **Public Health:** It includes laws and policies related to public health, such as disease prevention, health promotion, and environmental health. A number of emerging global concerns, including HIV/AIDS and women's health issues, including rape and other forms of violence against women, brought the intrinsic connection between health and human rights to the forefront of international policy concern beginning in the late 1980s and early 1990s. Of particular importance was a pioneering human rights approach to the global HIV/AIDS pandemic adopted by WHO in the late 1980s. It is widely recognized that this novel emphasis on the linkage between public health and human rights law had a ground-breaking impact in that it compelled governments to be publicly accountable on an international

stage for their actions against persons living with HIV/AIDS. Ultimately, this innovative global political approach to public health issues publicly highlighted for the very first time the underlying legal responsibility of governments to protect and promote the health of their populations and has served as a forerunner for increasingly widespread links between human rights and other public health issues (Szynkowska & Pawlaczyk, 2014)

- **Healthcare Institutions:** Healthcare law regulates healthcare institutions, such as hospitals and clinics, ensuring they meet quality standards and comply with regulations. The healthcare law an acts in Nigeria include The 1999 Constitution of Nigeria, The National Health Act (NHA) 2014, The Public Health Act, The Child Rights Act (2003), The Medical and Dental Practitioners Act, The Pharmacists Council of Nigeria (PCN) Act, The National Agency for Food and Drug Administration and Control (NAFDAC) Act and The National Health Insurance Authority (NHIA) Act (2022), The Quarantine Act (1926).

Healthcare laws regarding immunization vary by location but generally aim to protect public health by ensuring high vaccination rates. These laws often mandate vaccinations for school entry or specific professions, while also allowing for exemptions based on medical, religious, or philosophical reasons in some jurisdictions. The goal is to balance individual freedom with the collective benefit of herd immunity, which protects those who cannot be vaccinated. In Nigeria, the National Health Act and the Child Rights Act provide a framework for the right to health and immunization, while state-level laws in some areas mandate childhood vaccinations. The country also has a National Policy on Immunization and participates in the global Expanded Programme on Immunization (EPI).

In Nigeria, tuberculosis (TB) prevention, testing, treatment, and care are governed by a mix of legal and policy frameworks, but there's a lack of specific TB legislation. The National Tuberculosis and Leprosy Control Programme (NTBLCP) plays a central role in managing TB, and while it provides free treatment at public facilities. Nigeria has made significant strides in integrating human rights into TB control efforts. However, notable gaps and challenges exist, particularly in operationalizing legal protections and

establishing dedicated TB legislation. An analysis of Nigeria's TB legal landscape reveals several complexities and highlights areas needing immediate intervention for effective prevention, treatment, and control of the disease. Continued legal advocacy and legislative reforms are essential to enhance protections and ensure legal remedies and accountability mechanisms for people affected by TB(Bamidele et. al., 2025).

5. STRATEGIC PLANNING & MARKETING

Strategic planning and marketing in healthcare involve developing comprehensive plans to achieve organizational goals, improve patient engagement, and enhance brand visibility. This includes identifying the organization's current state, defining its desired future, and creating a roadmap to reach that endpoint, while also focusing on effective marketing and branding efforts to attract patients and promote services. Strategic planning in health care involves a comprehensive analysis of the organization's strengths, weaknesses, opportunities, and threats. This analysis is used to identify areas of improvement and develop strategies to help the organization achieve its goals. The strategies developed during the planning process are usually organized into a formal plan that guides the organization's activities over the next several years (Thorndike et al., 2022). Strategic planning is important in health care for three reasons. First, it helps health care organizations adapt to changes in the health care environment. Health care is a rapidly evolving field, organizations that fail to adapt to changes are at risk of falling behind. Secondly, strategic planning helps organizations align their resources with their goals. Health care organizations have limited resources, and they must use them effectively to achieve their objectives. Thus, by engaging in strategic planning, health care organizations can identify their most critical needs and allocate resources accordingly, ensuring they achieve the greatest impact. Thirdly, strategic planning helps organizations set priorities and make difficult decisions. Health care organizations are often faced with difficult choices, such as deciding which services to continue to offer and which to discontinue. By engaging in strategic planning, health care organizations can weigh the pros and cons of various options and make informed decisions that align with their long-term goals (Thorndike et al., 2022)

The specificity of healthcare marketing is that there are services and markets but no money equivalent. This means the effectiveness of its application can be found in the image of a healthy population, the detection of a chronically ill category of people, ensuring the treatment of ill people by going through the whole rehabilitation process, professional reintegration, social reintegration of ill people, etc. The application of marketing in the field of healthcare was imposed by the problems in the health of the society. An effective marketing approach involves in-depth investigation of the patients' needs, identifying latent needs and offering new health services that patients have not explicitly requested (Purcarea, 2019)

The digital revolution has delivered numerous changes to the healthcare industry. Nowadays, most people can access health and well-being information instantly, giving them more options than ever before. In fact, patients rarely feel compelled to visit even the healthcare facility closest to them. The healthcare landscape is full of choices, so you could have a hard time attracting new patients if you don't market your facility. However, with a sound healthcare marketing plan, you can improve your reach, get more patients coming in, and keep them thinking about your brand. Enumerated below are some strategic healthcare marketing plan (*How to Make a Healthcare Marketing Plan 2024*)

Step 1: Conduct a SWOT analysis

Step 2: Define your target market

Step 3: Establish SMART goals

Step 4: Discuss and analyse key marketing strategies

Step 5: Stay ahead of the competition

Step 6: Set your budget

Step 7: Establish KPIs (key performance indicators)

Strategic planning and marketing in immunization involves the deliberate development and execution of policies, goals, and action plans that aim to achieve high immunization coverage, equitable access, and sustainable health outcomes. It requires coordination among government agencies, donors, health workers, and communities. This is often referred to as health communication and social mobilization and is essential for building public trust, dispelling myths, and increasing vaccine uptake. Seven vaccine marketing strategies identified to curb vaccine hesitancy (Haider et.al. 2025) which is fast becoming a global crisis are:

- Shift your perspective – To reach your audience, you need to understand their perspective. Especially when you don't share that point of view.
- Answer vaccine-related questions – Fear is rooted in uncertainty. Combat fear of the unknown by answering common questions about immunization in your vaccine campaign e.g Can the vaccine make me sick or otherwise cause injury?
- Debunk myths about vaccination – address common myths that stem from misinformation.
- Make information easy to understand – by keeping the content short, avoid jargons, translate the numbers to stories.
- Focus vaccine campaigns on the benefits – that matters to the target population.
- Power of influence – People listen to other people who carry influence in the society.
- Prioritize at-risk population – Certain demographics are at a greater risk of contracting preventable illnesses or experiencing more severe symptoms or complications, target these specific populations in vaccine marketing e.g children, People with disabilities, Immunocompromised people, People living in high-density areas.

Strategic planning for tuberculosis (TB) involves developing a comprehensive plan to address the TB epidemic, encompassing various interventions and strategies. This planning process should be guided by national authorities and stakeholders, and it aims to align with global and national targets, while mobilizing domestic and external resources for TB control. Marketing in this context involves communicating the importance of TB prevention, diagnosis, and treatment, and engaging communities to promote healthy behaviours and access to services.

National Strategic Plan for TB involves the following: (*Global Programme on Tuberculosis & Lung Health*)

- A National Strategic Plan (NSP) for TB guides national authorities and stakeholders on how to comprehensively address the TB epidemic through interventions within the health sector and in other sectors.
- It outlines the overall goal, strategies and interventions prioritized by national health authorities and stakeholders and

provides guidance on how these are coordinated across various sectors.

- It translates global, regional and national commitments into national and subnational targets and activities to be implemented to achieve these targets, and provides the basis for mobilization of domestic and external resources for the TB response.

Benefits of Strategic Planning – Strategic planning is the process of developing an NSP. This process should preferably be part of the overall national health sector planning process and should contribute to universal health coverage (UHC), and to addressing the broader determinants of TB through collaboration between programmes and sectors within and beyond the health sector (Ogbuabor & Onwujekwe,2019)

6. HUMAN RESOURCES MANAGEMENT

The foundation of any healthcare system is its people, the caregivers and support staff directly responsible for patient outcomes and satisfaction levels. Healthcare human resources teams are responsible for hiring and onboarding those people, fostering a positive and compassionate workplace culture, helping employees advance their careers, and ensuring their organizations and their people comply with a host of safety, privacy, training, and other policies and regulations. To face these tough challenges amid severe staffing shortages, rampant employee burnout, and rising labor costs, healthcare HR teams need to develop thoughtful, innovative programs and policies(Mohamed & Hameed, 2015).

Human Resources Management (HRM) in healthcare focuses on effectively managing the workforce to ensure quality patient care and organizational success. This includes recruitment, training, performance management, compensation, and retention strategies, all tailored to the unique needs of the healthcare industry. It plays an indispensable role as it enables effective healthcare service delivery through staff performance monitoring and evaluation, compensation as well as recruitment of competent employee (Oduwusi, 2018).

HR groups in healthcare organizations are responsible for typical HR functions, such as recruiting, hiring, and advising senior management on the pay and benefits packages needed to attract and retain the best talent. Healthcare HR teams also face particularly difficult challenges that are unique to the industry. They're responsible for communicating and tracking numerous federal and state government regulations

covering certifications, safety, privacy, and other areas. They're hiring in an industry where competition for talent is particularly fierce and candidates have many other options. They oversee a workforce that faces stressful situations on a daily basis and requires physical safeguards and mental health support. They collaborate with IT to protect the privacy of patient and employee records. They work with managers to adjust staff scheduling processes to reduce burnout, and they develop programs that improve patient satisfaction and deliver positive patient outcomes—for example, by designing compensation and bonus systems that align pay with performance improvements and patient outcomes. Healthcare HR teams must deal with complex government regulations and union contracts, as well as steadily rising labor costs. They also face unique challenges related to physical safety, work stress, and understaffing. It's critically important that these teams help their organizations navigate these challenges (Mohamed & Hameed, 22015).

Human Resources Management (HRM) in Immunization involves effectively managing the workforce to ensure efficient and successful vaccine programs. This includes planning, recruitment, training, performance management, and addressing workforce gaps to optimize immunization service delivery. Vaccination campaigns require significant human resources. The number of teams needed is based on the size of the target population, the expected output per team and the optimal campaign duration (Mohamed & Hameed, 2015).

In tuberculosis control, health workers' calibre and adequacy largely determine program quality and efficiency, as workers consume the bulk of running costs and manage the other resources. The World Health Organization (WHO) *Global Plan to Stop TB 2006 – 2015* acknowledges that the main human resource issues affecting tuberculosis control are insufficient quality, quantity and distribution of health workers. According to the Stop TB Partnership, $US 250 million is required annually to provide training and technical support to tuberculosis endemic regions. Training of health workers is an important strategy for improving health workers' productivity. Poor performance may be a result of health staff not being sufficient in numbers, or not providing care according to standards, and/or not being responsive to the needs of the community and patients. Apart from training, other influences on productivity of health workers in tuberculosis control

include personal and lifestyle-related factors, living circumstances, adequacy of preparation for work during pre-service education; health-system related factors such as human resources policy and planning; job satisfaction related factors such as financial remuneration, working conditions, management capacity and styles, professional advancement and safety at work. These factors constitute a 'productivity mix', of which tuberculosis training is an important component (Awofeso et al., 2008).

The global targets for tuberculosis (TB) control were postponed from 2000 to 2005, but on current evidence a further postponement may be necessary. Of the constraints preventing these targets being met, the primary one appears to be the lack of adequately trained and qualified staff (Mohamed & Hameed, 2015).

7. QUALITY MANAGEMENT

In healthcare, quality management refers to the administration of systems design, policies, and processes that minimize, if not eliminate, harm while optimizing patient care and outcomes. The objective of quality management is to ensure that a particular product, service, or organization will consistently fulfil its intended purpose. To achieve this, there is a constant collection of data and alterations in process to create an optimal product or service that fulfils its intention and satisfies the consumer. Further data is then collected to ensure that no additional changes are necessary. Quality management systems (QMS) are tools used to implement quality management and organize, standardize, and improve activities involving a product or service aimed at customers. By measuring outcomes and effects of different factors via data collection, issues within the system are identified, and evidence-based medicine and resources are used to develop or alter processes to improve the quality of care. Information is then collected regarding new outcomes to determine if the changes were beneficial or if other alterations are required. The ultimate goal is to achieve consistent, high-level care with minimal morbidity, mortality, disease, discomfort, and high patient satisfaction while meeting or exceeding all six of the IOM domains (safe, effective, patient-centred, timely, efficient, and equitable care) (Seelbach & Brannan, 2023).

In recent years, six domains have been identified by Institute of Medicine that help to achieve a high degree of quality; health care must be safe, effective, patient-

centred, timely, efficient, and equitable. Meeting all these domains is at the core of quality management. "Safe" pertains to preventing harm to patients stemming from the care they are receiving. "Effective" uses evidence-based care with the correct utilization of resources. "Patient-centred" refers to care that is receptive and considerate of the patient's inclination, needs, and values to guide all clinical decisions. "Timely" focuses on preventing delays in care. Efficient" relates to minimizing or avoiding waste of resources such as supplies and time. Lastly, "equitable" indicates providing care to all patients regardless of characteristics such as appearance, socioeconomic status, and values. The success of health care in achieving these quality domains can be measured by collecting data and evaluating "the five D's:" death (mortality), disability (morbidity), disease (resolution or persistence of disease following treatment), discomfort (the process of providing medical care) and dissatisfaction (the patient's experience during the process of providing care) (Seelbach & Brannan, 2023).

However, the domain of patient-centred care was explored in a study into the complexities of primary healthcare (PHC) in Nigeria and effects on patients' safety across four PHC facilities in Enugu state in southeast Nigeria, given the inherent complexities of the health system as one with many nonlinear and dynamic components, the safety of patients could be affected. Therefore, there is the need to study these complexities to manage them toward optimal service delivery. The study findings show that the PHC system in the study area performs sub optimally, which implies poor management of the complexities of the system such that patients are highly susceptible to harm (Uzochukwu et al., 2023).

Quality management for immunization services depends on three central foundations to flourish (Manyazewal et.al.,2018), and they include:

- Quality immunization services depend on the broader ***health system*** to ensure optimal vaccination. This includes: governance, leadership and financial commitment to make vaccines accessible and affordable; a trained workforce to deliver vaccination; essential commodities and supplies reaching the last mile; information and data systems to monitor vaccinations systematically

and identify service gaps; and integrated service delivery platforms.

- Quality immunization services require a strong focus on *empowering and engaging people – patients, families, communities, and the health workforce*. To improve demand and ensure trust in immunization services, families and communities should be engaged in planning, design, implementation, and evaluation of these services.
- Third, quality immunization services must be supported by and work alongside other health interventions. When planning for quality improvements, linkages with these health interventions must be carefully considered to enhance integration and maximize synergy to increase vaccination uptake. Immunization can provide an effective platform for delivering other essential primary health care services.

TB experts are increasingly acknowledging that expanding diagnosis and treatment coverage alone will not suffice for "building a TB-free world", and that high-quality health systems are essential . After an individual develops active TB, they must navigate a long and complex process of care-seeking, diagnosis, linkage to care, treatment initiation, notification to national TB programs, and follow-up. TB is therefore a condition that is particularly sensitive to the quality of health systems. A recent study estimated that half of TB deaths in 2016 were due to poor-quality care while the other half resulted from non-utilization of the health system. Poor-quality care is now an equal barrier to reducing TB mortality than insufficient access to care (Arsenault et al., 2019).

CONCLUSION

Hospital management and healthcare services administration of immunization aims to provide insights into optimizing immunization services within hospital management frameworks to enhance public health initiatives. To effectively achieve this, the organizational structure of healthcare system, effective management strategies for delivering immunization services, including resource allocation and staff training, measuring and improving the quality of immunization services, ensuring that they meet healthcare standards and patient needs and examination of existing policies and regulations that govern

immunization practices and their implications for hospital administration are imperative,

ACKNOWLEDGEMENT

The expanded abstract of this paper has been peer-reviewed and accepted for presentation at APHTReS conference 2025. The supervisory guidance of Prof Uba Nwose is hereby appreciated.

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