

Challenges of hospital management and healthcare service administration of infertility: in Nigeria A perspective

Onianwa I.E.^{1,2*}, Otutu M.O.¹, Nwose E.U.^{1,3}

¹Department of Public & Community Health, Novena University Ogume, Nigeria

²Medical Department, Federal college of Education Technical Asaba, Delta State, Nigeria.

³School of Health & Medical Sciences, University of Southern Queensland, Australia.

***Correspondence:** Ifeoma Onianwa, ²Medical Department, Federal college of Education Technical Asaba, Delta State, Nigeria. Email: evelynifeoma52@gmail.com; Tel: +2348037939102.

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Abstract

Background: Infertility is a public health problem affecting millions of people in Nigeria. It is the inability to conceive without a contraceptive, unprotected sex, among couples of reproductive ages.

Objective: To explore the current challenges of hospital management of infertility and provision of quality healthcare services to affected individuals that attends fertility clinic in Nigeria.

Methodology: Narrative review study, using the scale for the quality assessment of narrative review articles (SANRA) principle. Scoping review method was used to identify literatures on infertility and its management in Nigeria. The search platforms were PubMed and google scholar in April 2025. Focus was on infertility management and administration of healthcare services with 7-thematic syntax comprising management of health services organization, healthcare system, health law, health economics, strategic planning and marketing, human resource management and quality management.

Results: There is lack of specialized fertility clinics and trained personnel in health care system. Major health care system challenge in Nigeria includes poor funding and staffing, limiting accessibility and affordability of fertility services to some clients, including limited access to assisted reproductive technologies (ART). Challenges facing infertility management include healthcare law that provides for out-of-pocket payment for healthcare. Stigmatization of the affected couple leads to psychological distress.

Conclusion and Recommendations: There is need for improvement in hospital management and health care services administration for infertility in Nigeria. Establishment of more specialized fertility clinics, affordability of the ART services, training for health care professionals and attractive welfare package.

Keywords: *Infertility, Management, healthcare.*

1.1 Introduction

Infertility is defined as the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse. It is a health challenge that affects male and female reproductive system. It affects millions of people with impact on individuals, families and communities mainly in developing countries; it is a global issue (Abebe, 2020). Infertility affects 10% of the world's population (WHO, 2024).

Infertility is in increase in Nigeria and most times because of high cost of some treatment. Infertile couples are mostly offered conventional forms of treatment – ovulation induction and tubal surgery (Menuba, 2014).

Infertility is also inability to conceive without contraceptive measures, with regular unprotected sex(). Infertility is a road block on the journey to parenthood, it affects millions of couples worldwide, approximately 85% of infertile couples have an identifiable cause, 15% unidentifiable cause; ovulatory disorders has approximately 25% of infertility, 70% of women with ovulatory disorder has polycystic ovary syndrome (PCOS) (Carson, 2021).

Infertility synonymously can be called sterility, which occurs in prolonged time of unwanted non-conception; in appropriate cases, after six unsuccessful cycles of fertility focused coitus will show couples with significant infertility issues (Gnoth, 2005). It is estimated that 8-12% of reproductive aged couples worldwide experience infertility, males are responsible for 20 – 30% of infertility cases while factors that affects each gender includes hypogonadotropic, hypogonadism, hyperprolactinemia, disorders of ciliary function, cystic fibrosis, infections, systemic diseases and lifestyle related factors (Vander Borgh, 2018).

Infertility affects one in six i.e. approximately 17% of couples; and it is ranked as the fifth highest serious global disability (WHO, 2023). The increasing prevalence of medical disorders such as obesity, smoking contributes to the occurrence of diabetes, hypertension, hypothyroidism and life style diseases such as infertility (Deshpande, 2019). Infertility is a multifactorial problem and need to be seen and treated according to the context of local population affected, it is not only a medical challenge but also psychologically and financially affects couples (Deshpande, 2019).

Infertility affects psychological, physical, mental and medical life of the affected couple (Adebisi, 2025). It can affect the relationship of a couple and their quality of life especially in developing countries like Africa, Nigeria (Adlani, 2025).

1.2 Causes of infertility

Causes of infertility are categorized as follows:

- Male factor
- Female Factor
- Unexplained factor
- Combined Factor

1.2.1 Female factors: Infertility in female can be attributed to some factors which includes tubal disorder, uterine disorder, hormonal disorder, ovarian disorder, life style factors e.g. excessive smoking, excessive alcohol, ovarian disorder (WHO, 2024). Female age is the most important determinant of prognosis of female fertility management, and fertility declines as early as the age of 32 years, late child bearing is after the age of 35 years (Deshpande, 2019). In female infertility, PCOS and tubal pathology were the most common causes contributing 46% and 33.8% respectively and worldwide PCOS is the most common cause of female factor in infertility, tubal factor may be due to PID (pelvic inflammatory disease) thereby early detection and treatment of infection is very essential in prevention of infertility (Despande 2019). Hormonal causes of female infertility involve ovulatory disorder due to the dysfunction of the hypothalamic – pituitary ovarian axis (HPO-axis) (Luciano, 2013).

Liu stated that the major cause of infertility in women is fallopian tube obstruction (Liu, 2015). In a study, the most common identifiable factors of infertility include ovulatory disorders 25%, endometriosis 15%, pelvic adhesions 12%, tubal blockage 11%, hyperprolactinemia 7%, other 11% (Adebisi, 2025).

Infertility caused by PCOS is due to disorder in developing mature follicle, leading to anovulation (Adebisi, 2025). WHO recognizes hyperprolactinemia as one of the leading causes of infertility in female, high level of prolactin suppresses hypothalamic GnRH secretion leading to low luteinizing hormone, leading to oligomenorrhoea and amenorrhea, endometriosis is a growth of endometrial

tissue outside the uterine cavity; it affects 10% - 15% of reproductive aged women and about 40-50% of women with endometriosis has infertility (Adebisi, 2025).

Pelvic inflammatory disease (PID) caused by infection of the lower pelvic region causes pelvic/tubal adhesion which leads to infertility, Uterine factors include fibroids, uterine septum, congenital uterine abnormality (Adebisi, 2025).

Three primary complications of infertility treatment are multiples pregnancy, ectopic pregnancy and ovarian hyperstimulation syndrome (Adebisi, 202%).

1.2.2 Male infertility: Infertility in male refers to inability of a man to impregnate a woman after 12 months of regular and unprotected sexual intercourse; male factor is responsible for about 40 – 50% of all infertility cases in Nigeria, though it can vary from one region to the other (Uadia, 2015). Causes of Male infertility includes obstruction in reproductive tract, hormonal disorders, genetics, testicular failure, abnormal sperm function and environmental / life style factors which includes diet, smoking excessively, excessive alcohol intake, obesity, cultural behaviors, environmental toxin e.g. pesticides used in farm and industries radiations and toxic elements (WHO 2024; Uadia 2015; Emakpae 2015).

Environmental factors – chemicals like pesticides, radiation, carbon monoxides, sulphordioxide, nitrogen oxide (introduced into the atmosphere through vehicle exhaust and industrial emission) which causes DNA fragmentation and abnormal sperm parameters (Uadia, 2015).

Age – Fertility peaks and declines as age increases. In men fertility declines from 35 years, after 40 years of age semen DNA damage increases as well as poor sperm parameters, in dieting food rich in antioxidants are good for fertility, Genetics due to anti-sperm antibodies & aflatoxin (Uadia, 2015).

Management of male infertility can be through effective counseling, hormonal therapy, antioxidant, surgical intervention may be used also; however, the prognosis depends on the duration of infertility, age, the result of the seminal analysis and the fertility status of the partner (Agarwal *et al.*, 2014, Odammel, 2019). Male infertility in Nigeria is handled with discretion to protect man's dignity, women mostly assumed to be the cause of infertility in marriages; however, the major cause of infertility in Nigeria is infection: Sexual Transmitted Diseases and post arbortal and puerperal sepsis, the problem is not restricted to women (Akinloye, 2011).

1.2.3 Unexplained infertility (UI): This refers to a diagnosis made in couples in whom standard investigations results are normal (Siristatidis, 2002). Unexplained infertility can only be diagnosed after excluding common causes of infertility using standard fertility investigations which include semen analysis, assessment of ovulation and tubal patency test, and standard fertility evaluation will fail to identify an abnormality in about 15% to 30% of infertile couples (Gelbaya, 2014).

Unexplained infertility is a diagnosis of exclusion, no cause of infertility may be identified in the investigation of the couple, thereby no specific treatment is directed (Abdallah, 2020). The treatment is directed at improving chances to conceive and standard clinical practice in this involve intrauterine insemination, ovarian stimulation and invitro fertilization (IVF) and is a prognosis-based approach to reduce exposure of the couples to unnecessary procedures (Wang, 2020). In unexplained infertility, evaluation fails to identify a specific cause of infertility, thereby making the treatment not directly specific on a particular factor but on prognostic chance and approximately 10-30% of couples according to global fertility studies experiencing infertility receive diagnosis of unexplained infertility (Mahabbat, 2024).

1.2.4 Combined factors of infertility: Combined infertility factors occurs when both male and female contribute to the factors affecting achieving pregnancy. Combination of female and male factors include ovulatory disorders with abnormal semen, were the most common combination, also can be tubal infertility combined with abnormal semen (Deshpande, 2019).

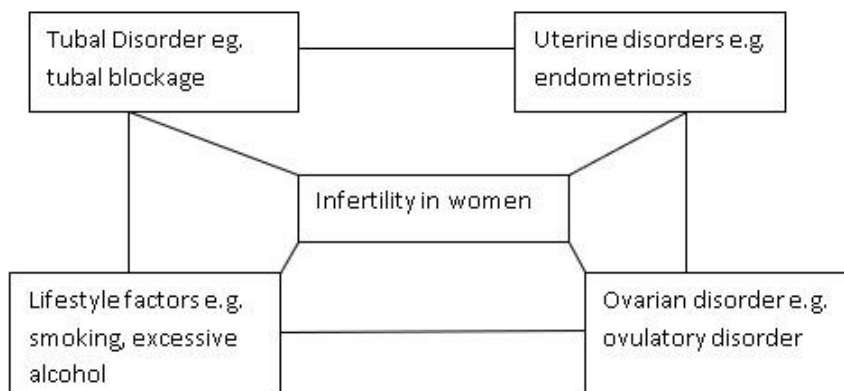


Fig 1: Causes of infertility in women (WHO, 2024; Deshpande, 2019)

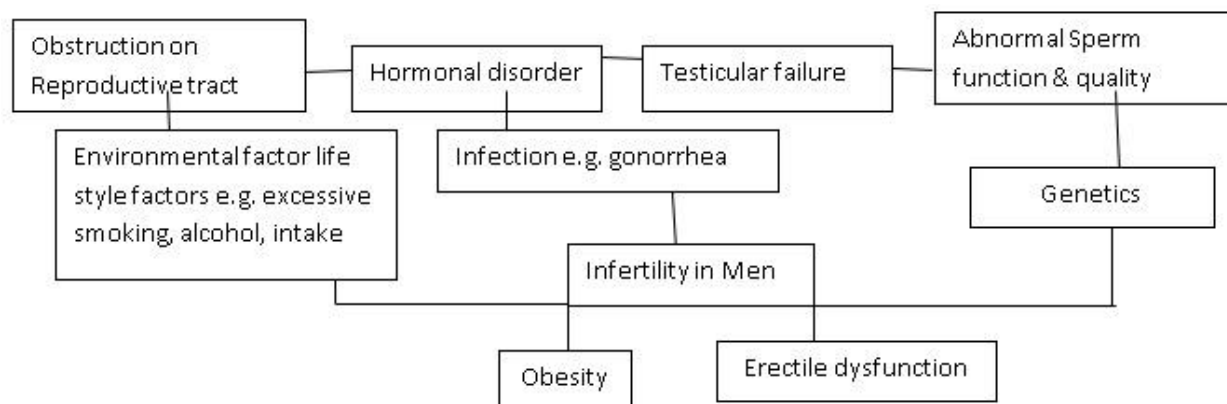


Fig 2: Causes of male infertility (WHO, 2024; Emakpae, 2015; Uadia, 2015)

1.3 Types/effect/consequence of infertility

There are two types of infertility

- Primary infertility refers to couples who have not been pregnant
- Secondary infertility: refers to couples who have been able to get pregnant at least once, but unable to repeat (Abebe, 2020).

1.3.1 Effect of infertility: The effect of infertility on the family cannot be overlooked in this study. Infertility has significant negative social impacts on the lives of infertile couples, it is particularly on women who frequently experience violence, divorce, social stigma, emotional stress, depression, anxiety and low self-esteem (WHO, 2024).

In a study of 15 participants, they reported experience of negative emotional and psychological impact of infertility, their infertile state brings social, psychological effect on their relationships which includes social stigma (Esan, 2022). Infertility affects both mental and physical health of the infertile couple; it is a challenging hurdle to which leads to shame, embarrassment, despair, fear, financial pressure, feeling guilt and blame, may also arise especially where a partner has been diagnosed as the primary cause of infertility (Abdoli, 2025).

Men experience less stress compared to women in cases of infertility; women are more affected by the psychological effect and marital intimacy is higher infertile couples compared to infertile couples (Abdoli, 2025). In psychological issues the infertile couple experience which is worst on the infertile women includes stress, anxiety, depression, diminished self-esteem, decline sexual

satisfaction, reduced quality of life, marital dissatisfaction, frustration and anger which affects her relationship with others (Bakhtiyar, 2019).

1.3. 2. Consequences of infertility

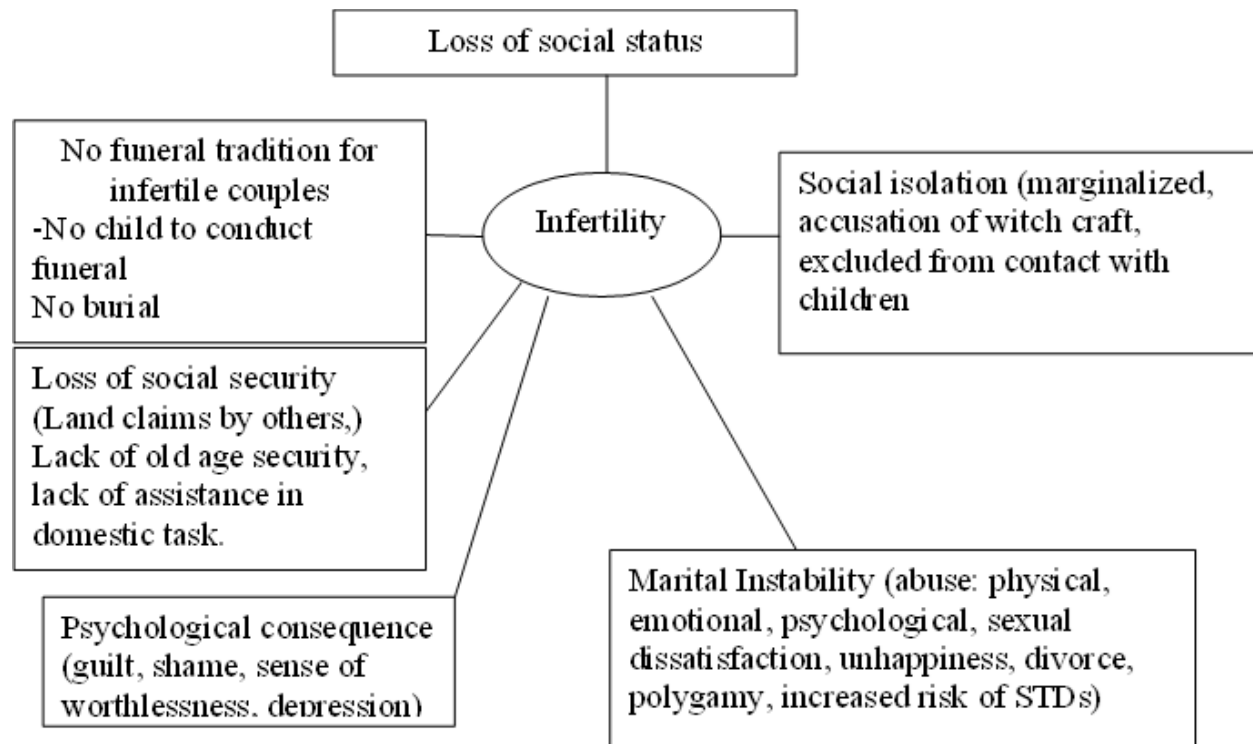


Fig 3: Psychological consequences of infertility in Nigeria (Rouchou, 2013; Ombelet, 2008).

🌟 Case scenario 1: There was a case where a woman visited her husband brother that the wife put to birth, they refused her access to touch the child, this is just because she was childless. She was depressed, traumatized for that, she managed and gave them her gift and left in tears. She was told that all their property belonged to them because she has no child. All these were challenges of couples with infertility issues in Nigeria.

In Nigeria, the prevalence of primary infertility is 5% and secondary infertility is 8% (Tolulope, 2022).

Infertility has a global health challenge but with much impact on developing countries like Nigeria, persistent challenges such as socio-cultural stigma, reduced access to specialized care, high treatment cost hinders effective management (Al- Woraf, 2024). There is need for a whole range of strategies in infertility management this may include expanding access to health care, advocating for policy changes, reproductive health education should be promoted, ensuring medication availability, reducing stigma and fostering collaborations, with these Nigerians can make significant impact in infertility management which will help to promote physical, emotional and social well-being of the affected couples.

Hospital management system focuses on improved profitability, improved administration and efficient patient care (Nishanthan, 2022). This is through goal-oriented functions of the organization managers. However, in management of infertility improved care to the affected is very important, being sensitive to their health and emotional need as they visit the clinic for health care.

2.0 Management of health service organizations

Health management can be defined as the practice of providing leadership, management and direction to organizations that provide health services and to different units within those organizations; Health care management is centered around three main concepts; effectiveness, efficiency and equity (Valiotis, 2025). Functions of the health managers are planning, organizing, staffing, controlling, directing, risk-assessing and decision making (Darr, 2015).

Health Management can be on individual level, community level and facility level, however effective health management at all this level can lead to positive health outcomes and such enhances public health (Valiotis, 2025). Health managers have vision of good health and ensure that their organizations improve in the quality of services to their patients, increases financial strength and in efficiency (Valiotis 2025).

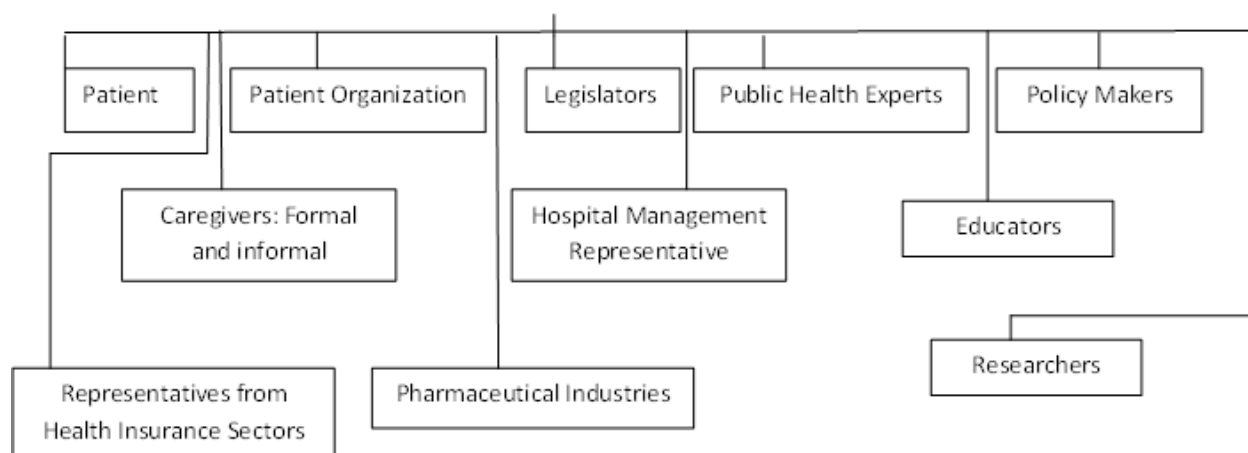


Fig 4: Healthcare ecosystem (Valiotis, 2025)

Health Management encompasses the entire health ecosystem, and they all work together for achieving sustainable health outcome (Valiotis, 2025). Healthcare services in Nigeria are organized through a three-tiered system, this involve tertiary health services which includes university teaching hospitals, federal medical centers organized by Federal Government; Secondary health services managed by state government e.g. general hospitals, comprehensive and primary health services are health Centre's, managed by local government (Abimbola, 2011). These three-tier government are organized by federal ministry of health and social welfare, dedicated to improving the health and well-being of all Nigerians, ensuring accessibility, affordability and quality care for all citizen (Oguchi, 2018).

In management of infertility, all tiers of healthcare system can be involved in the primary health care, secondary, tertiary institutions all are to have the vision to reduce infertility, making the services accessible and affordable. The problem of infertility seems to be seen as of low priority compared to the effective and efficient health resources (available) allocation by Federal government and international donors sponsoring research and/or service delivery in public health (Akinloye, 2011).

- Case scenario 2: Management of infertility in Nigeria health care services has cost limitation for some people of low class to assess. A case of a couple that married for some years without a pregnancy, they complained of financial constraint in assessing health

facilities even after being encouraged by their religious leader, yet they decided to resort to herbal treatment for the woman. It was not long she become seriously sick, was rushed to hospital only to be diagnosed kidney failure.

✚ Case scenario 3: Again in management of Healthcare services, it is important that the health facilities should be accessible in the aspect of the road and the means of transports, Mrs. B was married for 10 years without a child; a day came that she started bleeding heavily, the means of taking her to hospital was a problem because she could not trek; however before neighbors could arrange for the means to take her to hospital she has lost much blood, when they got to the nearby health Centre, she was referred to general hospital (Secondary tiers) before they could get there, she was gasping and died of bleeding due to fibroid. Furthermore, in management of health care services it is also important that the health personnel and managers are efficient as that is one of the visions in healthcare service delivery.

✚ Case scenario 4: There was a case of mismanagement due to the incompetence of the health personnel; a woman was married for years without a child, she was sent out of the marriage, she later remarried, was attending fertility clinic in an establishment, she reported to the health Centre nearby of severe abdominal pains which could not be alleviated with pain relief, she was later referred, after some investigations, they decided to conduct surgery in which they found out ectopic pregnancy with much loss of blood seen when she was opened up, however before they could get blood ready for transfusion, for she needed more than what was available. She gave up, there was no early intervention. It is important that the management system in Nigeria should beef up facilities in respect to treatment of infertility and its complication. The problem of infertility in Nigeria received comparatively little attention until recently (Akinloye, 2011).

However, Adegbola reported that infertility is public health problem in Nigeria and in a study, it was found out that there was high rate of discontinuation of health care visit by the client (Adegbola, 2013).

In a study, at the two tertiary health institution in Enugu, South east Nigeria, it was found out that there is high prevalent rate of infertility and prognosis of the form of treatment (Conventional) was

poor, thereby there is need for improvement in facilities for managing infertility; including artificial reproductive technology (ART) e.g. IVF, should be made available, accessible and affordable (Menuba, 2014). Furthermore, in another study, it was found out that after management and follow up of 1948 couples in an establishment, treatment failed in 59.9% and succeeded in 40.1% of cases; the pregnancy outcome was low because of the conventional treatment given could not attack the cause of the infertility thereby the importance of ART (Orhue, 2008).

Management of infertility in primary health care service can be the first opportunity to address the inability to conceive (Adlani, 2025).

3.0 Nigeria health care system

Inadequacy of health services and persistent low-quality services in public facilities has today affected the health facilities in Nigeria, thereby giving a face lift to private sectors, making it an unavoidable choice for consumer of health services in Nigeria (Lewis, 2023).

In Nigeria health care system, there are both private and public health providers, and health care provision is simultaneously the responsibility of the three tiers of the government; in which Federal Government formulates health policies through the Federal Ministry of Health (FMOH) and manages tertiary health care which provides specialized services (Welcome, 2011). Secondary health care system is managed by state ministry of health and PHC is at villages, district & LGA about 55% of the populations lives in the Urban areas; about 70% of the health care is provided by private vendors ,30% by the government; over 70% of drugs dispensed are substandard (Welcome, 2011). Health care system in Nigeria has suffered rapid deterioration, notwithstanding Nigeria's strategic position in Africa, it is still under- resourced with regard to the health care system, health facilities which include the health personnel, medical equipment and health centers are not adequate for the health care delivery in Nigeria especially in rural areas (Welcome, 2011). Fertility clinic is yet to be well established in some locality in Nigeria.

🌐 Case scenario 5: There was a case in one of the state in this Nation where a pregnant woman(after fertility care) was in labor and went to the primary health care where she has been attending prenatal care, got there everywhere locked, met a lady who ought to be a health personnel though the cadre was not declared, told the woman to go back though the woman in labor pleaded with her, she sent her away and locked the gate, it was on the way,

she could not continue and was assisted by the passerby and the baby came out before she was taken to the nearby private hospital, the health personnel did not know she was covered by a camera by a passerby and could not deny it. The system is sick and needed strong interventions and policies that will help to eradicate this down-falls.

However, the Nigerian policy makers over health care system have various reforms going on to address all these odds in health care system but some are yet to be implemented in the state and local government levels.

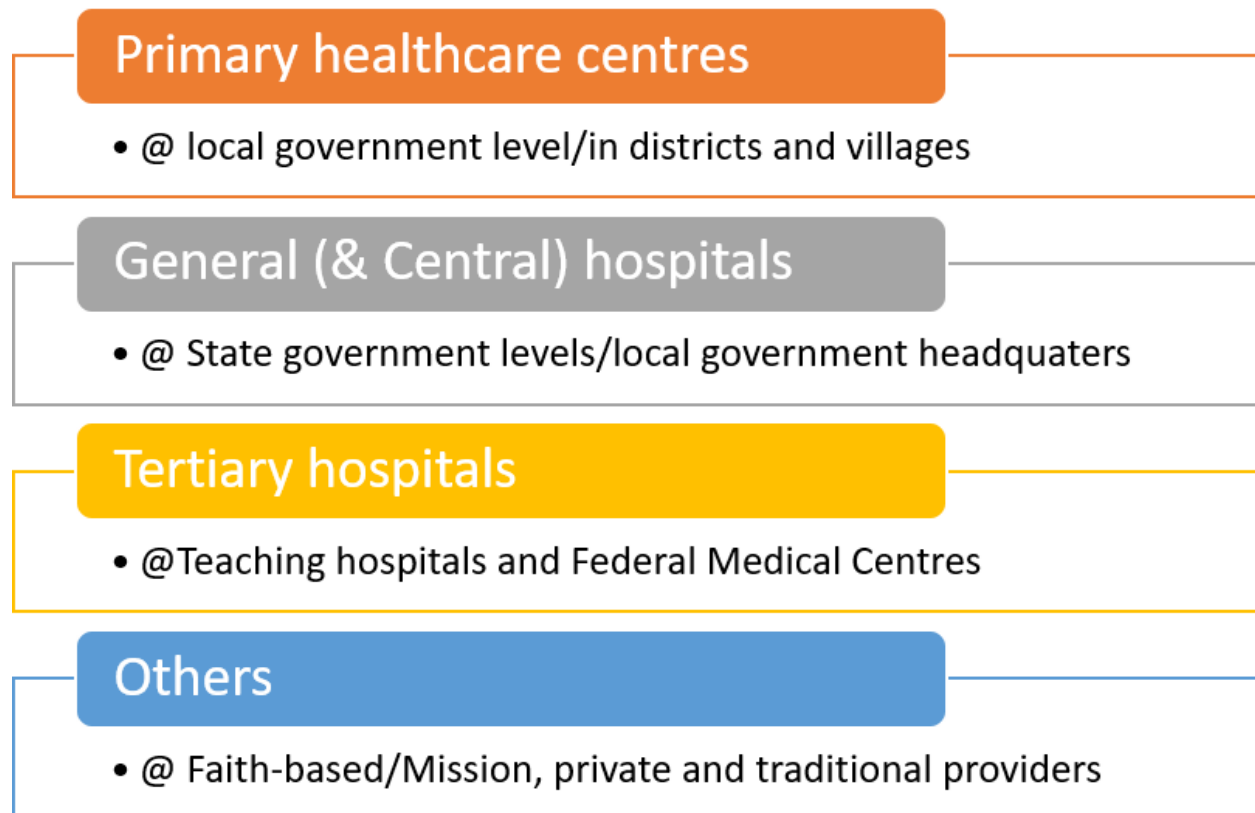


Fig 5: Levels of healthcare system in Nigeria (Welcome, 2011)

The role of health in societal and economic development cannot be overemphasized, thereby many nations have invested meaningfully in creating health system that are accessible, efficient, equitable to serve their populace, efficient, equitable to serve as a benchmark for assessing and

comparing national healthcare system, it includes health infrastructure, workforce, service accessibility, administrative governance and population health outcomes (Josiah, 2024).

There is need for improvement in health system quality of care in Nigeria by healthcare adequate funding, transparency in fund management, human resource development through training and retraining, adequate remuneration, development of infrastructure and addressing disparities in healthcare.

There are some reforms in Nigeria health system with the aim of addressing the public health challenges; they include National health insurance scheme (NHIS), National Immunization coverage scheme (NICS), Midwives service scheme (MSS), Nigeria pay for performance scheme (P4P), all these are to ensure access to quality health care services (Aregbeshola, 2019).

Health professionals are significantly important component of healthcare systems, they are to deliver effective, efficient and quality health services; the role of the health professionals in the advancement of National health system cannot be overemphasized (Enabulele, 2016).

3.1 Major healthcare system challenges

Major challenges in healthcare system are:

- poor funding
- poor quality services
- inadequate facilities and lack of modern tools
- fund misappropriation
- staffing (poor staffing
- substandard pharmaceutical products.
- lack of consumables and materials e.g. protective wear like hard gloves, face mask, detergents, water supply

The above challenges contributed to low job satisfaction, demotivation and a desire to leave the profession or leave the country (Josiah, 2024). Nigeria healthcare system faces a major challenge in financing and quality care to their populace and there is need for improvement in healthcare funding, quality of care and out of pocket payment accounting for up to 79% healthcare expenditure for the average Nigeria (Josiah, 2024).

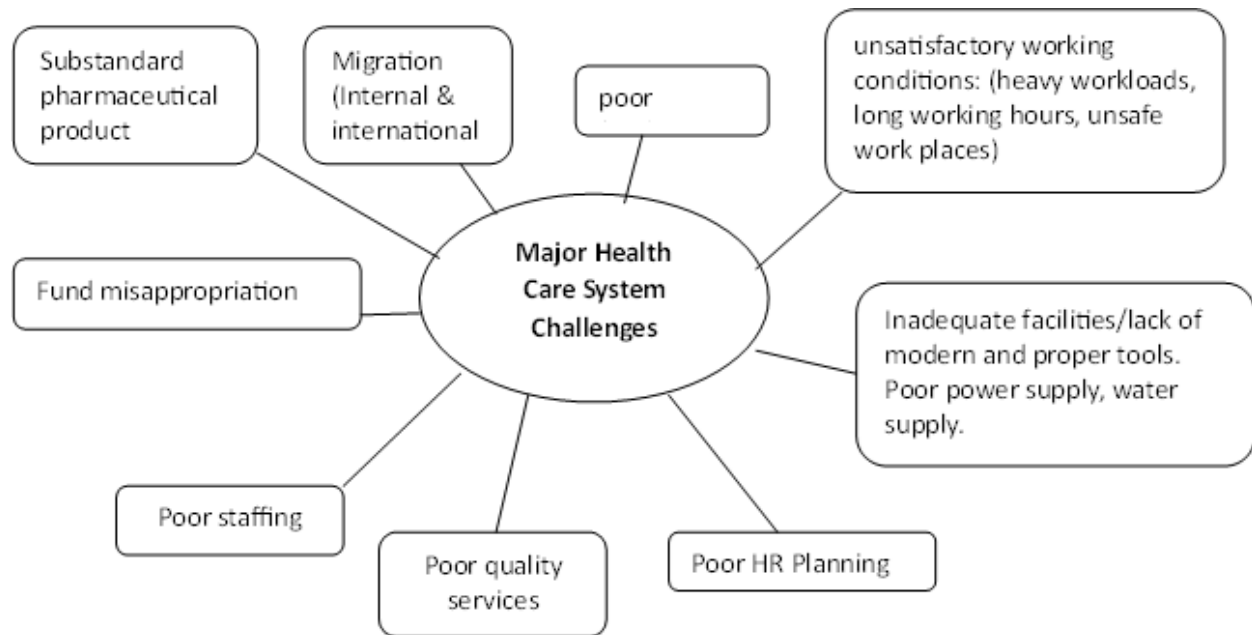


Fig. 6: Major healthcare system challenges (Josiah, 2024; Oduwusi, 2018).

3.3 Challenges of Nigeria healthcare system

3.3.1 Surveillance: Healthcare system in Nigeria is not yet well developed, there is inadequate surveillance system, however, in these modern days, to achieve substantial success in health care in Nigeria, there is need for adequate routine surveillance in the system, medical intelligence and adequate management (Welcome, 2011).

3.3.2 Poor Funding: A good financing system is essential for the effective performance of a country's healthcare system. There are many health systems around the world, mostly those in lower- and middle-income countries that suffer long existing challenges in funding of health system which include underfunding, lack of accountability and wastefulness making the system ineffective (Madu, 2023). Nigeria is one of the countries that is suffering much set back in the healthcare system because of finance.

Furthermore, today infertility which is one of the public health problems because of its effect on the society is of increase because of poor funding. Some of the infertile couples that attends fertility clinic could not assess some care e.g. ART because of financial constraints, and many are unable to conceive for the cause of infertility could not be effectively managed with the conventional fertility treatments available in Nigeria (Adewunmi, 2022; Ezeome, 2023).

✚ Case scenario 6; However, some resort to traditional healers or private sectors in which there are lots of quackery. There was a couple that suffered sub fertility, however, she went to hospital and was diagnosed of fibromyoma and advised for surgery, they could not afford it, thereby she resorted to a private sector that accepted to bill less, she went for the treatment, but after some days was complaining of severe abdominal pains, she was taken to FMC for it was a case of emergency, there she was diagnosed Anemia, Septicemia and Uterine hemorrhage due to puncture for she said the health personnel introduced an instrument through her vagina, possibly for curettage and the uterus was punctured. She was poorly managed, but she went there because of lack of finance. Moreover, she was lost to death after few hours in the health establishment.

Adequate funding will reduce the cost of treatment and make healthcare accessible for all. Financing the health system of a country, determines the extent of reaching universal health coverage, because it determines whether the health services available are affordable to the common man (Uzochukwu, 2015).

Nigerian Healthcare financing system is through different sources like out-of-pocket payments, tax revenue, health insurance and donor funding (Uzochukwu 2015). There is need for it to be reviewed and find other source that can help so that health services can be made affordable to the people that need it, irrespective of the class. Out-of-pocket payments for funding health care are among the highest in the world with government low contributions to health (Josiah, 2024, Madu, 2023) thereby increasing financial hardship and hinders access to quality care among those of low class (Josiah 2024, Madu, 2023). This poses great challenge in infertility management, making it difficult for some to access fertility care.

In Nigeria healthcare system, poor funding was identified as a major challenge. National health insurance scheme (NHIS) covers only a small percentage of Nigerians, leaving many uninsured.



Fig. 7: Factors that contribute to poor funding (Adeloye, 2017).

3.3.3 Inadequate healthcare facilities and lack of modern and proper tools: In a study, it was reported that inadequate facilities, lack of modern and proper tools are major problems in healthcare delivery, these includes inadequate infrastructures, diagnostic equipment, medications (Josiah, 2024).

✚ Case scenario 7; For example a woman was diagnosed of secondary infertility for she had a child and could not conceive again, after much investigations it was found out there was a forgotten suture needle in her body; she has been having pains, however explorative laparotomy was booked in one of the tertiary institution, the surgery was conducted, but could not bring the needle out, said they could not because they do not have the modern instrument that would have been used till today she could not conceive again. Lack of modern facilities needed in most fertility clinics in Nigeria is one of the major problems to effective fertility care, studies have consistently identified inadequate access to fertility services and the high cost of ART as major barriers to infertility treatment in Nigeria (Ezeome, 2023).

Poor power supply in Nigeria is also a major problem in healthcare delivery. Nigeria faces an energy crisis that constraints health care services delivery, particularly in rural areas where health facilities lack reliable access to electricity (Ilogogie, 2025). Healthcare infrastructure in Nigeria is insufficient and under developed to care for over 200 million citizens, and 30% of the population

with infertility in Nigeria (Dattijo, 2016). Infertility affects one in six couple; thereby much is needed for adequate care. Most healthcare Centre's lack modern medical equipment and advanced technology, drug shortages, power failure, lack of clean water supply, overcrowding with outdated facilities, poor maintenance of the existing facilities (Okoebor, 2022).

3.3.4 Poor staffing: Nigeria produces many health personnel yet today still lack professional in healthcare system. It has a serious shortage of doctors, nurses, and other specialists due to brain – drain, trained professionals migrate to abroad for better salaries, this leaves millions of Nigerians without sufficient medical care and over 50% of Nigerian doctors work in foreign countries (Umar, 2025). This migration was triggered by poor salary, poor welfare, lack of appropriate health facilities, poor governance, and also insecurity in the nation (Adeloye, 2017).

In a study, it was reported that in African in which Nigeria is one, inadequate human resources have 34.29% of the challenges in the healthcare system; poor budgetary allocation to health 30%, and poor leadership and management has 8.45% (Oleribe, 2019).

There is need to improve on health workers wages and welfare to enable them to be retained and also work with job satisfaction. However, though the Nigeria health system is weak, but it can be reformed by improved funding of the healthcare system and development of the infrastructure, expanding health insurance coverage, intervention of the governance to stop “Brain drain” and improve in staffing by adequate incentives, salaries and security in the work environment (Umar, 2025).

4.0 Health law

Critical gaps exist in the country's health laws, making it difficult to implement the strategies proposed in the new policy. Nigeria must strengthen its health system by the government (Madu, 2023).

Nigeria health law is managed by the National Health Act (NHA) of 2014, was signed into law on October 31, 2014, which provides a legal framework for the regulation, development and management of Nigerians health system and set standard for rendering health services in Nigeria and for related matters (Enabulele 2016). National health Act of 2014 is divided into seven various sections: Establishment of the Nation health system, Health establishment and technologies, Right and obligations of users and healthcare personnel, National health research and information

system, human resources for health, establishment of national blood transfusion services and regulations and miscellaneous provision (NHA, 2014). NHA defines and provides a framework for standard and regulation of health services, without prejudice to extant professional laws; the law encompasses both private and public health services providers (NHA, 2014).

The management of infertility in Nigeria is governed by various health laws and regulations, which aims at ensuring provision of safe and effective treatment options for couples striving to conceive. According to NHA, 2014 section 26 (1) confidentiality, all information given by the health service user relating to their predicament, treatment and their stay in the health establishment is confidential. Some of these health facilities users may not have told their spouse whole information but they do give to health personnel, for they know it will enhance their treatment.

✚ Case scenario 8; However, we are to keep it confidential not for open discussion in the family. There was a case where a man brought his intending wife with severe abdominal pains, after investigations, it was found out that there were severe infections, suspecting termination of pregnancy, when the surgery(laparotomy) was conducted, the abdominal cavity was filled with pus, however, with adequate management she made it but the marriage could not continue; the intending husband actually cared for her during the period of admission. Later, after they had been discharged the man came back to see the doctor, the information he gathered marveled him and the marriage could not continue, because of the fear that some damages may have been incurred that may hinder conception.

✚ Case scenario 9: Again there was a case of infertility where a couple presented in the fertility clinic and it was found out after investigation that the man has azoospermia and much burden of the challenge has been on the woman, this is due to the Africa tradition in which, infertility is always caused by woman factor; the man insisted that the wife should not be informed of the result; this secret was maintained; it was not disclosed to the wife. This is because there was no consent for that. According to section 27, the health worker has access to the health records of a user but only to disclose it for legitimate purpose within the scope of his/her duties where it is in the interest of the user, so in above, though the health personnel were aware of the challenge but could not disclose it to the family.

Section 40 is on National Health Insurance Scheme (NHIS) which is to ensure the widest possible scope for the health insurance scheme throughout the federation (NHA2014). This is very important in Nigeria health system, however, it has not gained much ground in the rural areas; also, it has not been able to cover assisted reproductive technology which is very expensive in Nigeria and could not be achieved by people of low income who suffers infertility. Thereby increasing the burden of infertility. Section 42 “The minister, with the concurrence of the National Council shall determine guidelines that will enable the state ministries and local governments to implement programs for the appropriate distribution of health providers and health workers” (NHA 2014). This health law is very important, adequate distribution of health providers to both state and local governments including villagers are important. In some rural areas, the structure of health Centre is there, but no health care provider. This is because it is in a remote area. There should be equity in this distribution with measures to ensure the compliance. People in the rural areas need also to be cared for. However, in Nigeria Health Laws, there is no direct laws specially addressing infertility especially on the aspect of ART e.g. IVF (invitro fertilization) and surrogacy, in practice, this can lead to ethical and legal challenges for health care providers and patient, for both the health personnel and the patient for fertility clinic need to be protected (Ahiakwo, 2026).

5.0 Health economics: Health economics is a component of public health that provides information to decision makers on the effective and efficient use of available resources to maximize health benefits; it deals with the production and consumption of healthcare services in relation to efficiency and effectiveness, economic ideas and methods, considering its impacts on the health of people (Barbu 2023).

Millions of people are affected by infertility, around 17.5% of the adult population, about 1 in 6 world wide experience infertility showing the urgent need to increase access to affordable, high quality fertility care for those in need of it (WHO, 2023). Thereby considering the large population affected, management of infertility poses a level of economic burden on individuals, families and the health care system as a whole, health economic thereby plays a crucial role in understanding the costs and benefits associated with various strategies in management of infertility and in informing policy decisions to maximize resource allocation and accessibility of care to the couples with infertility issues (WHO, 2023).

In the cause of infertility, bilateral occlusion of fallopian tubes is the most common cause which can be potentially treated by ART (Assisted reproductive technology) like IVF (Invitro-fertilization) and cannot be afforded by most people from developing countries like Nigeria, this is because new reproductive technologies are either unaffordable or inaccessible for people of low income; (Ombelet, 2008). However, one of the key challenges in management of fertility in Nigeria is the high cost of ART like IVF; this is expensive for many, in which some could afford it, thereby leading to disparities in accessibility of the care due to socioeconomic factor. The substantial economic burden associated with infertility treatment highlights the need for health economics to guide the planning and delivery of reproductive health services, ensuring that infertility care is accessible, equitable and affordable especially for populations at the grassroots (Dyer, 2012).

✚ Case scenario10; There was a case in which due to the high cost of infertility management, the economic burden on the family was much, thereby the couple has to dispose their building went to rent apartment. This is for them to afford ART like IVF; however, the IVF was not successful and no resources to try more. This was so demoralizing, they were depressed, emotionally traumatized and stigmatized.

Childless couple mostly women are frequently neglected, discriminated, with domestic violence, polygamy, stigmatization which leads to psychological and social challenges, though is a non-monetary cost but should be taken into account in economic evaluations of management of infertility strategies in Nigeria (Ombelet, 2008). Furthermore, it is the responsibility of Nigeria health system to provide accessible, quality and affordable health costs, in developing countries like Nigeria, infertility quality care is often lacking, and OOP (out of pocket) is a means of treatment, thereby causing additional financial burden in addition to the socio-economic burden in the Nation (Dyer, 2012). Infertility increases health cost, also causes economic instability at both the family and societal levels due to the high cot of the treatment and financial burden of out -of -pocket means of payments (WHO, 2023).

Health economics can inform decision making on the allocation of resources (both human and material resources) for infertility clinic in a broader form in health care system. This can involve having a budget impact assessment, cost effectiveness analyses and policy makers involvement in

achieving efficient and effective infertility care, which may involve measures for prevention of infertility which includes reproductive health education and reproductive health counseling, this can help to reduce the prevalence of infertility and its costs (WHO, 2023).

6.0 Strategic planning and marketing

Strategic planning is a valuable tool that can be used to improve healthcare delivery, it plays a crucial role in health care services delivery in Nigeria, in which the health sector is facing numerous challenges which limits the achievement of quality care and universal health coverage difficulty (Olaitan, 2022). Strategic planning plays an important role in improving quality of healthcare service, increases job satisfaction and commitment and increase profitability in the health care service (Gathmyr, 2024). The quality of healthcare services rendered to those that need it, helps in improving the well-being of the citizen, reducing economic burden on both individual, families and government. Strategic planning in Nigeria entails addressing major challenges of the health care system like infrastructure deficits and high cost of accessing medical treatment.

Strategic planning means asking where an organization wants to go and what it hopes to achieve, then charting a path to get there; by defining the goals, vision and mission of the healthcare organization; and a strategic plan to keep management responsibilities simple, measurable, achievable and relevant (Clarke, 2019). It is a way of mapping out activities in response to the existing one with patient-centeredness, ensuring efficiency, effectiveness, affordability and sustainability. It involves goal-setting agenda. Strategic planning is all-encompassing of critically checking of the organizational strengths, weaknesses, opportunities, threats and set effective strategies that will enable the healthcare system to be effective considering the users. Marketing is a process of communicating value to customers and managing customer relationship in ways that benefits the organization, it entails strategies and function of promoting a product or service to the customer (Adedeji, 2014). The product or service here is the service rendered by the healthcare providers to the patient who is the customers. The need for strategic marketing is for achieving quality care to the patient which will make them to be loyal. This entails improving on the communication skills between healthcare provider and the patients, also doctor – patient relationship should also improve. Health care marketing is the process which involves having knowledge of the needs and wants of the target market (which is the patient) (Adedeji, 2014). It

also involves the marketer (health care provider), the customer (patients), the product (the health care services), the organization which is the hospital.

An effective marketing approach involves analysis of patient's needs; finding out latent needs of the patient and offering new health service that patient has not asked for (Purcarea, 2019). Marketing plays a crucial role in assisting health care providers to create, communicate and provide value to their target market (the patients). The core of the market strategy in the health care service is represented by the quality of service rendered to the health consumer (Purcera, 2019). Healthcare consumer is very important in health care delivery. Satisfaction of the patient needs is the main objective of any healthcare organization and it is important that their needs and expectation are known by the health care provider.

An effective healthcare marketing strategy promotes loyalty from patients, enhances the patients experience, attracts new patients, and builds the healthcare organizations brand (Purarea,2019). This increases the organization revenue. Strategic planning and marketing are very important in management of infertility in Nigeria. strategic planning which involves setting up the goals, mission and vision on how to manage infertility issues and the strategic marketing involves adequate communication skills in which quality product are to be delivered to the patient with the in-depth knowledge of the patient's needs; having focus of the consumer accepting the service and becoming loyal. This demands good communication skills.

A woman having infertility issues went to hospital to access treatment, however, could not because of the attitude of the health personnel that attended to her; she said, in the consulting room there was no privacy, up to three person enters same time and hears the conservation; this was embarrassing, even when she asked question of what was confusing her, there was no good reply, the health personnel may have his reasons but it was not in the favor of patient privacy. However, she left and changed to another hospital where the health providers she met encouraged her of favorable outcome of their care. She attended the clinic few months, had surgery myomectomy, conceived and had her child. She was the one telling others about the hospital, how they cared for her, even the day of her delivery, the consultant was about going out but could not but stayed behind because the baby was a precious baby, delivered the child through successful caesareans sections. This woman is the healthcare service consumer which now believed in the hospital, was

telling others about the hospital. She encourages so many to go there, thereby actualizing one of the visions of the planners to increase the number of their patient, thereby increasing the income of the establishment. What the hospital uses in their marketing is effective communication by the staff of the organization, patient centeredness in their care, your health status is their concern, always ready to interact with their patients, in which through that they get some information which helps them in strategizing in the care of the patient. This is to achieve the organization goals.

7.0 Human resources management in health care service

Human resources management is managing employees of an establishment or organization to achieve a set goal or objectives; it involves effective and efficient utilization of personnel through a set of functions (Opatha, 2021). It deals with management of people in work organizations.

Human resources management can be defined as planning, organizing, directing, controlling of procurement, development, compensation, integration, maintenance and separation of human resources to the end that individual, organizational and social objectives are achieved (Gupta, 2024). It involves effective management of people in an organization so that they may contribute to the organization's success, employee performance is being maximized to achieve strategic objectives.

8.0 ROLES OF HRM (HUMAN RESOURCE MANAGEMENT)

The success of an organization depends on the employee; thereby effective management of personnel is very important in an organization; the welfare of the employee has to be considered to maximize the productivity and in meeting up with the vision of the organization (Gupta, 2014). The key function of human resources management is the ability to put right the people in the right jobs at the right time, that is human resources allocation according to the organization strategic goals (Qin, 2023). WHO stated that health care systems cannot work without health workers, also improving the coverage of health services and achieving the right to the high standard of health depends on the availability, accessibility, acceptability and quality of health personnel (WHO, 2016). Human resources is a crucial element in healthcare system whether skilled personnel e.g. health professionals, unskilled personnel like hospital cleaners all should be managed to maximize productivity and also achieve the organizational goal.



Fig 8: Roles of HRM (Gupta, 2014)

In health care system, human resources management plays an important role in management of infertility. Efficient human resources management improves quality care, increases productivity, support the training and development of healthcare professionals. Human resources management in health care system enables effective healthcare service delivery through adequate staffing, staff performance monitoring, evaluation and compensation; effective human resources management has great impact in efficient health services in management of infertility and also improve the performance of health workers (Oduwusi, 2018). HRM deals with the development of both workers and the organizations.

In Nigeria, shortage of competent healthcare providers is the greatest challenge confronting the healthcare system, this is due to poor infrastructure, poor remuneration; nurses, physicians and other healthcare professionals migrate to developed countries (Oduwusi, 2018). This thereby leads to constraint in health personnel in Nigeria, in which it is very important that human resource management, staff welfare and statutory salary should be enforced. Creating adequate job opportunity with job security, attractive welfare package will help to improve quality care among people with infertility. imagine a situation where in an organization, many doctors and nurses left

the establishment in pursuit of greener pasture, outside the country, Nigeria, the standard of care declines due to high work load on the remaining ones. Moreover, training of the remaining health providers is very important, for more modern technology will be used instead of the conventional treatment for the clients of fertility clinic.

The functions of HRM in healthcare services is majorly on the development of both health workers and non-health workers in both private and public health sectors this is to maximize productivity and improve quality (Oduwusi, 2018). HRM ensures competent workforce in an organization. HRM in healthcare system ensures competent Healthcare providers in both private and public sectors. Competency in health care service delivery is the bedrock of health providers practices.

8.0 Quality management (QM)

This focuses on ensuring quality care to patient and improving processes. Improving the quality of services at public sector will increase the number of clients belonging to low socioeconomic class, which will help in reaching them with quality of health services (Dodwad, 2013).

HRM talks about workforce while QM talks about the quality of care provided by the health workers which are among the workforce. Quality management in health care is a very important requirement in health sector and is delivered by the health practitioners in allied health services – optometry, midwifery, psychology obstetrics, nursing etc., quality health care system means one that is accessible, appropriate, available, affordable, safe, efficient and patient related (Agarwal, 2018). The quality of services provided to the patient is very vital, Healthcare service is determined by the patient satisfaction which is based on the expectations of the patient; quality of the service provided is one of the key factors that patients consider important when choosing a place for care ((Agarwal, 2018). The important of high-quality standards and quality care in health care system cannot be over emphasized. Many clients have lost their lives in health facilities due to poor quality healthcare services. In the management of infertility in Nigeria, quality of service is very important, quality care improve patronage, announces the organization. Infertility with its effects on the affected needed quality care in the management which will help positive outcome.

A client narrated her experience in one of the public sector hospitals. She went to clinic because of the issue of infertility. The health practitioners that treated her was considerate with empathy, communicated with her efficiently, cared for with respect, examination was thorough and she was

treated, collected her drugs from the pharmacy without much delay went home, was willing to keep to her appointment, which affected the outcome positively, she conceived after few months. Quality care in the management of infertility reduces emotional stress, depression due to stigmatization. Healthcare must be safe, effective, equitable, timely, patient centered, achieving these brings in quality management, the quality can be assessed by 5D's – Death (mortality), disability (Morbidity), disease (persistent or resolution following treatment), discomfort (the process of providing medical care) and dissatisfaction (the patients experience during the process of providing care) (Selbach, 2023).

Quality management in healthcare can be referred to as the administration of systems design, policies and process to minimize or eliminate harm while optimizing patient care and outcome, (measure data from 5D's after managing a case like infertility and make changes, recommendation and optimize care (Selbach, 2023). The 4 main component of quality management are quality planning, quality assurance, quality control and continuous improvement; focuses on customer satisfaction and improve organizational performance (Aggarwal, 2019).

Recommendations:

Infertility treatment can be incorporated in the insurance scheme which should be accessible to the general mass, not only those in the city. There is need for health law policy specially on infertility in Nigeria considering the cultural and religious management of infertile couples. It should be directed in removing the stigmatization and some cultural norms e.g. in a family where a man married and they were childless, their kindred will begin to possess their property e.g. land, buildings when they were still alive, this can be so demoralizing. There is need for such law that will protect such people even their property, they should be given liberty to will it out to the person they desire. There should be direct health laws addressing Assisted reproductive technology e.g. invitro fertilization and surrogacy for both health care providers and the patient to be protected. ART treatment should be subsidized to be affordable to both socio-economic classes.

9.0 Conclusion

The management of infertility in Nigeria faces a complex and challenging difficulty for healthcare managers and the healthcare providers. Lack of adequate infrastructures, resources and professionals in many healthcare facilities over the country has limited the effective delivery of

infertility services in Nigeria, also cultural belief, stigmatization and poor access to information about infertility further compound the challenges faced by individuals seeking for fertility care in fertility clinic in Nigeria.

Moreover, there have been positive development in recent years such as the establishment of special Centre for fertility clinics and introduction of Assisted reproductive technology (ART). However, there is still needs for improvement on the quality care, accessibility, and affordability of fertility services in Nigeria. Furthermore, there is also need for healthcare system managers to address these challenges by advocating for increased training of healthcare professionals, funding, good remunerations package, welfare packages, implementing policies, non-government organization, including private sector stakeholders to collaborate to ensure comprehensive and sustainable approach to managing infertility in Nigeria.

The efficient and effective management of infertility in Nigeria needs a multi-faceted and holistic approach that addresses the various cultural, social and economic factors that contribute to the prevalence of infertility in Nigeria. It is very important that health care system managers should implement evident based strategies, improvement in the quality of care and adequate funding for it will help to improve the outcome of people affected by infertility. Out-of-pocket (OOP) accounting for up to 79% of health care expenditure for the average Nigerian should be reduced by making insurance scheme available for all especially those in rural areas, this will help to reduce the individual challenges and increase the positive outcomes among those attending fertility clinic in Nigeria (Josiah, 2024).

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