

**Review Paper**

Integrating Traditional Medicine Practice into the Formal Health Care Delivery System in the New Millennium–The Nigerian Approach: A Review.

*Egharevba, Henry Omoregie¹; Ibrahim, Jemilat Aliyu¹; Kassam, Chakji Danjuma² and Kunle, Oluyemisi Folashade¹

¹Department of Medicinal Plant Research and Traditional Medicine, National Institute for Pharmaceutical Research and Development (NIPRD), Abuja, Nigeria.

²Department of Pharmacognosy, School of Pharmacy, University of Jos, Jos, Plateau State, Nigeria.

*Corresponding Author: Egharevba Henry Omoregie.

Abstract

The use of traditional medicine, especially the pharmacological aspect, is on the rise globally. While the developed world has found ways of making huge socioeconomic gains through robust integration plan, there appears to be a huge challenge among the developing country towards realizing such gains through greater access and utilization of traditional medicine, which paradoxically supplies most of the population healthcare need. Due to the negative stigma attached to this form of medicine, integrating traditional medicine into the formal healthcare delivery system continues to suffer a lot of criticisms. Though most of the issues raised to affirm the seemingly inadequate status of traditional medicine and the absolute undesirability for its integration into the formal healthcare delivery are compelling, but they are not insurmountable. This review reassessed the historical development of traditional medicine practice in Nigeria, the challenges of its integration into the formal healthcare delivery system, and the way forward for ensuring a sustainable integration. The proposed solutions and recommendations would be a valuable reference material for the government of Nigeria and other stakeholders in developing a more holistic implementation plan for TM integration into the formal healthcare system.

Key words: Herbal medicine development, Healthcare delivery system, Integration, Nigeria, Traditional medicine.

Introduction**The concept of Traditional Medicine (TM)**

The term “Traditional (indigenous) Medicine” describes medical knowledge and practice systems which were developed over centuries within various societies before the era of modern medicine. The terms ‘Ethno medicine’, ‘Native medicine’ and ‘Folk medicine’ are sometimes used to refer to Traditional Medicine (TM) (Sofowora, 1993). The WHO described Traditional Medicine as the total combination of knowledge and practices, whether explicable or not, used in the diagnosis, preventing or eliminating a physical, mental or social disease and which may rely exclusively on past experiences and observations handed down from generation to generation, verbally or in writing (WHO 1978, 2005). In most part of Africa the concept of traditional medicine encompasses such knowledge on the original concept of nature as including the material world, the human environment, whether living or dead, and the metaphysical forces of the universe. Thus, Traditional medicine has also been defined as health practices, approaches, knowledge and beliefs incorporating plants, animals and mineral-based medicines, spiritual therapies, manual techniques and exercises, applied singly or in combination, to treat, diagnose and prevent illness or maintain well-being (Sofowora, 1993). Traditional medicine is practices in one form or the other all over the globe and different societies has couched names for their respective practices. Such names include Ayurvedic medicine, Unani medicine, Kampo medicine, acupuncture, Ifa, Juju, etc., (Ameh *et al.*, 2010). Other forms of cultural practices often used in connotation with traditional medicine practice include ritual rites and incantations (Sofowora, 2008).

The custodian of traditional medicine practice in a community is usually referred to as traditional healer. A traditional healer can be described as a person who is recognized by the community in which he lives as competent to provide health care by using medicinal plants/vegetable, animal and mineral substances and certain other methods. His methods are based on sociocultural and religious backgrounds as well as knowledge, attitudes and beliefs that are prevalent in the community regarding the causes of diseases and disabilities, and the maintenance of the physical, mental, spiritual and social well-being of the people (Sofowora, 1993).

History of Traditional Medicine

Traditional medicine practice is as old as mankind and started with the use of herbs for the management of ailments by early men. Records exist in Asia, Europe, South America and Africa about the early use of medicinal plants in the management of different conditions. For instance the pharmacopoeia of emperor Shen Nung of China between 2730 and 3000 B.C., included the use of *chaulmoogra* oil from *Hydnocarpus* Gaertn species in the treatment of leprosy. The most established records of ancient use of medicinal plants in Africa is that of the use of the seeds opium poppy (*Papaver somniferum* L.), castor oil (*Ricinus Communis* L.) and

Ebers papyrus as far back as 1500 B.C. in Egypt (Sofowora, 2008). Acupuncture has been practice by the Chinese since the Stone Age and has spanned over 2000 year. Astrology in medicine was introduced by the herbalist, Culpeper in the seventeenth century. Medical history has it that many great medical philosophers of old practiced herbal medicine as a skill in their trade. Such philosophers include Hippocrates' (460 B.C.), Theophrastus of Athens (370 B.C), Pliny the Elder (A.D. 23), Dioscorides (A.D. 60), Galen (131 A.D.), St Columba (A.D. 563) and Avicena (A.D. 980) (Sofowora, 2008). These physicians laid the foundation of the development of ancient traditional medicine to western medicine. The first organized Medical School in Europe was that at Salerno, and thrived from A.D. 1090 to 1275. (Sofowora, 2008). The history of traditional medicine in ancient ethnic Nigeria as in most West African countries is shrouded in cultural myths and folklore tales most of which have not been well documented. It is however obvious from traditional relics and folklores that these ethnic communities used one form of traditional medicine or the other since the ancient days.

Development of Modern Health Care Delivery System in Nigeria

According to Asuzu (2004), a health system is an organizational framework for the distribution or servicing of the health care needs of a given community. It is a fairly complex system of interrelated elements that contribute to the health of people in their homes, educational institutions, work places, the public environments (social or recreational) and the psychological environments as well as the directly health and health-related sectors. The health care system in Nigeria has experienced several transformation from the basic traditional health care delivery system that existed in the pre-colonial era in the different ethnic communities to the present day western-type or orthodox health care system in our post-independent era. This transformation did not however eliminate or reduce the practice of traditional medicine but rather a growth in the use of orthodox medicine from a non-existent standpoint. Though Nigeria became a geopolitical entity following the amalgamation of the Northern and Southern protectorate by the British Government in 1914 (HERFON, 2006), the development of the now orthodox medical practice in the country could be traced back to the 15th century during the trans-Atlantic trading activities across Atlantic coast and the Sahara. However, major impact probably started in the 1861 when Lagos was annexed to Britain and 1906 when the Southern Protectorate was merged with Lagos colony.

The development of the western-type health care system in Nigeria closely followed the pattern of the geopolitical development of the Nigerian state and started as a unitary health service system by the central government of the colonial era of 1940s, and gave a limited framework for development up till 1951. This was followed by regionalization in the 1950s (1954-1959) when the regional governments ran independent or parallel health care systems along with the federal government. The regional era was the transition period leading to the independent and the post-independent era of 1960 and beyond, respectively (HERFON, 2006).

The early pre-colonial era witnessed health care based mainly on community and linguistic differences as obtained in old traditional folkloric practices. Thus, the over 350 ethnic groups practiced their respective traditional and cultural rites in the delivery of health care services. Personal hygiene was important, and expertise on preventive, curative and rehabilitative medicine was a highly regarded skill. Notable among these expertise include traditional birth attendants (TBAs), bone setters, mental rehabilitation practitioners, general herbalist who treats infectious and inflammatory diseases, infertility, impotence, etc., (HERFON, 2006). These practices were also intermingled with witchcraft, spiritism and sorcery. The expertise was regarded as secret and was passed down within families members as inheritance. This period was followed by the period of free informal trade with Europeans, leading to the colonial era. During the free trade era which was characterized by slave trade, the slave could only access medical service on board the slave-ship. Historic records indicate that western medical care first came to Nigerian territory in the Benin District in the second half of the 15th century, by the Dutch West Indies Company, but it was only available to the trading staff in their outpost and not to the indigenous African population. No hospital was built on the mainland until the later part of 19th century (HERFON, 2006).

The development of health care services during the colonial era was basically in two fronts. These include establishment of health care facilities and training and development of human resources. The modern medical services first introduced by the traders and later sustained by religious missionaries were distributed in the areas of activities of these missions. These activities were later regulated or taken over by the colonial government, and the hospitals later metamorphosed into nursing homes and general hospitals (Schram, 1971). The Army Medical Corp (AMC) set up by Lord Lugard in Lokoja during the first world war of 1914-1918 pioneered government medical services in Nigeria and gave birth to a uniform medical service. Between the First and early post second world war period, development in educational institutions and training of medical professional grew rapidly. A ten-year development plan put forward in 1946 led to the establishment of the Ministry of Health which was saddled with the responsibilities of coordinating health services and the development of the health sector throughout the country (HERFON, 2006).

With the gaining of independence in October 1960, Nigeria became a member of the World Health Organization, and upon becoming a Republic in 1963, she became a full member of the United Nations Organization. From one central and three regional governments at independence, the country has grown to one central government, thirty-six (36) state governments and the Federal Capital Territory of Abuja, and seven hundred and seventy-four (774) local governments, with the three tiers having concomitant and concurrent constitutional responsibilities for the provision of health care services. The three tiers also fragmented health services into primary, secondary and tertiary levels of services/providers. The distribution of service providers and facilities were uneven and the responsibilities were operated within a policy framework that were not clearly articulated and defined. This created staid gaps in the system. In order to ensure a reasonable measure of intra- and inter-sectional cohesion in the different sectors, the National Council on Health (NCH) was established.

Following the Alma Ata Declaration of 1978, which laid the foundation for primary health care as a scheme for universal access to health care by year 2000 and the recommendation for developing countries to adopt indigenous health technologies in order to meet the set target (WHO and UNICEF, 1978), serious attempts were made at reforming the health systems since the 1980s. Thus the National Health Policy of 1988, which was based on the principles of primary health care provision, was implemented (Asuzu, 2004). Other notable policies were the establishment of the National Programme on Immunization (NPI) in 1989, National Primary Health Care Development Agency (NPHCDA) in 1992, National Health Insurance Scheme in 1999, the adoption of millennium development goal (MDGs) in 2001, institution of the health sector reform programme (HSRP) of 2004, which metamorphosed into the National Strategic Health Development Plan (NSHDP) of 2008, etc. Although the new plan seemed elaborate and focused on improving governance, strengthening health system management, health information management, human, material and infrastructure resource management, reducing disease burden, promoting healthy lifestyle and effective collaboration with partners, and strengthening basic and operational research, implementing this huge plan had being very challenging in the face of dwindling financial resource, poor resource management and poorly trained manpower. It is believed that most of the post independent reforms put too much emphasis on infrastructure far over human capital development (HERFON, 2006).

Although the post-independent era developed and implemented several policies and health reform plans a lot of issues are still in their embryonic stage of solution. Nigeria with a population of over 170 million people currently has about fifty-nine (59) tertiary health institutions comprising of University Teaching Hospitals and Federal Medical Centres, 3,303 Secondary health institutions made up of General Hospitals, and 20,275 Primary Health Centres. Despite the progress made since the beginning of this millennium, it is estimated that over 80% (about 86%) of Nigerians still lack access to orthodox medicine and rely almost exclusively on traditional medicine (Adefolaju, 2014).

Traditional Medicine Development in Modern Nigeria

It is estimated that about 86% of Nigerians use traditional medicine, and over 200,000 traditional medicine practitioners (TMPs) are believed to be in Nigeria, most of which practice independently with no means of official identification (Holmstedt, 1972; Komolafe, 1999; Adefolaju, 2014). The National Association of Nigerian Traditional Medicine Practitioners (NANTMP) formed on 19th December 2006 has only 146 registered members (NANTMP, 2015). Given this scenario, traditional medicine could not have been fully integrated into the formal national health system. Although medicinal plants are the primary source of remedies used in therapy by traditional healers, and such herbal products could readily be standardized to acceptable extent in comparison with orthodox drugs, but there exist other challenges like ethical issues such as the unstandardized and widely varied mode and nature of the practice, poor or lack of documentation of activities and procedures, secrecy of procedures and practice, involvement of metaphysical or esoteric procedures, etc. There are also sustainability and ownership considerations. The Nigerian government in recognition of the numerous challenges in the full integration of traditional medicine into the formal national health system developed a number of programmes especially in the 1980s-90s. The government had set up various research committees and institutes or agencies for scientific verification of claims and proof of safety and efficacy, organized training workshops on Good Manufacturing Practice (GMP) and Good Agricultural Practice (GAP), sponsored Ethnobotanical and ethno-medical research and medical properties of local herbs, organized conferences on biodiversity and conservation, intellectual property protection, standardization, clinical trials of herbal drugs, international conference and seminars on traditional medicine, etc. (Omotayo, 1999; Gamaniel, 2005; Kunle, 2009; Ameh *et al.*, 2010; Egharevba, 2012).

The large body of knowledge gained in the 1970s led to further development of the practice with the Federal Government setting the standards and policy while the States implement. The Federal Ministry of Health (FMOH) also constituted a National Investigation Committee on Traditional and Alternative Medicine (NICTAM) in 1984, which recommended the establishment of Traditional Medicine Board in all the States of the Federation to regulate the practice of traditional Medicine in their respective domain. This recommendation was later endorsed by the National Council on Health, the highest health-policy making body in the country, in 1994. Some State governments established State Traditional medicine Board in 1980s to regulate and control the registration, training and practice of traditional medicine (TM) in the State. From 1997 to 2000s various National Health Plans and policies contained a section for traditional medicine development and integration into the health care system. The National Traditional Medicine Development Programme (NTMDP) was established in 1997 with a technical working group (Omotayo, 1999). The National Agency for Food and Drug Administration and Control (NAFDAC), established in 1993, was mandated to regulate the production, distribution and use of herbal medicine. The Agency had since developed the criteria and guidelines for the evaluation, standardization and registration of herbal products for the Nigerian market (NAFDAC, 2006; Ameh *et al.*, 2010). The Federal Government through the National Science and Technology Act CAP 276 (25) of 1987 established the National Institute for Pharmaceutical Research and Development (NIPRD) to promote research in herbal remedies, including scientific validation of claims and standardization of herbal products. NIPRD became operational in 1989 (FRN, 1987; Ameh *et al.*, 2010). The Nigerian Natural Medicine Development Agency (NNMDA) was also established in 1997 to promote TMPs training and encourage documentation of traditional knowledge and TMPs collaboration with researchers in establishing efficacy claims (WIPO, 2010). Some Universities developed new curriculums including courses in traditional medicine and related areas, for instance the University of Ife's "Village Chemist" was dedicated to the development of herbal product and traditional medicine (Elujoba, 2013). Most of these Agencies successfully implemented their mandate within the constraint of available resources and skill. For instance, NIPRD has developed several phytomedicine from local medicinal plant in collaboration with TMPs. Notable among this is NIPRISAN, an anti-sickling drug, which was launched in 2006. As at 2014, NIPRD

also had over six phytomedicines at various stages of development and commercialization, NNMDA and the Village Chemist had developed herbal teas and supplements as well as antimalarial phytomedicines. Some of these agencies also organized various conferences and instituted research collaborations in TM. Example is the 2004-2008 NIH collaboration with NIPRD on TB Drug Discovery research from traditional remedies, Green Chemistry Workshop in 2008, Research Continuum in Natural Products Drug Discovery in 2009 (Ameh *et al.*, 2010).

The role of international organizations like the World Health Organization (WHO), United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Industrial Development Organization (UNIDO) in the 1970s-90s cannot be underplayed. The declaration of 2000-2010 as the decade for African Traditional Medicine (ATM) by the Organization of African unity (OAU) (now African Union, AU) in July 2000 at a Summit in Lusaka, Zambia, also propelled the development of TM in most African countries including Nigeria. Although only China, Democratic People Republic of Korea, Republic of Korea, Vietnam and India have reached the level proposed by WHO, Nigeria is among other nations like Brazil and Ghana seriously pursuing the TM integration target level of WHO and currently have inclusive status for the TM in their health care systems (WHO, 2001a,b, 2003, 2006; Adefolaju, 2014).

Artemisinin Development Company (ADC) now Nigerian Medicinal Plant Development Company (NMPDC) was also established in 2005 to promote the cultivation and development of artemisinin from locally grown *Artemisia annua* for malaria treatment. Its mandate was later expanded to include utilization of research findings on Nigerian medicinal plants in the promotion of cultivation and processing for value addition in order to improve health indices through integration of herbal medicines into the national healthcare delivery system, and consequently enhance the living standards of our people, through jobs and wealth creation, while ensuring conservation and sustainable environment (NMPDC, 2015). In May 2006, the Federal government inaugurated a Committee on the Promotion, Development and Commercialization of Nigerian Herbal Medicine Products. Non-governmental organizations like Bioresource Development and Conservation Programme (BDPC) established by Prof. Maurice Iwu also played significant role in bio-prospecting and documentation of indigenous resources (Gideon, 2009). The African Network for Drugs Diagnostics Innovation (ANDI) anchored by WHO was formed in 2008 to promote regional collaboration in research and development, and the Nigerian Herbal Pharmacopoeia was also published in 2008 (FMOH, 2008). In August 2006, the government prepared the traditional medicine policy after wide consultation with stakeholders and this led to the drafting of the bill for the establishment of Traditional Medicine Council of Nigeria. However, this bill for an Act which would create the enabling environment for integration is yet to be signed into law (HERFON, 2006; Lambo, 2007; Adefolaju, 2014).

Forms of Traditional Medicine Practiced in Nigeria

Traditional medicine practice is a broad subject with various forms and therapies such as herbal medicine, massage, homeopathy, mud bath, music therapy, wax bath, reflexology, dance therapy, hydrotherapy, mind and spirit therapies, dieting, spinal manipulation, psychotherapy, bone setting, delivery by traditional birth attendants, circumcision by traditional surgeons, traditional medicinal ingredient dealers (Safowora, 2008). All these forms of practices could be found in modern Nigeria due to intercultural breeding and awareness from other parts of the world, but not all could be integrated due to regulatory challenges. However, those recognized as having potential for full integration into the formal health systems include herbal medicine, bone setting, mental health, traditional birth attendance and sale of traditional medicine ingredients (Batta, 2012).

Herbal Medicine

Practitioners of herbal medicine are called herbalists and they use mainly herbs and medicinal plants parts like roots, stem, leaves, barks, flowers, fruits, and seeds in their treatments. Some herbalists sometimes add animal parts (small whole animals or parts, and insects) and mineral substances (e.g. clay, stones, etc.). Such herbal preparations may be offered in different forms. They can be in powder form for internal and external applications, liquid form as infusion or decoction, pastes and soups. With the increase awareness of available technologies, some herbalists have developed their products into standard formulations such as tablets and capsules and syrups. NAFDAC is working with most of these TMPs to ensure the regulation the production and use of these products (NAFDAC, 2006). Currently, the government through NAFDAC, NIPRD and the universities is working toward verification and standardization of selected herbal remedies of proven efficacy against endemic tropical diseases for inclusion into the national Essential Drug List (EDL).

Bone Setters

Bone setting is the art of repairing fractures and other orthopedic injuries. It is recognized to have attained a level of success comparable to that in orthodox medicine in Nigeria for simple fractures and dislocations. Traditional bone setters are those knowledgeable in the art and skills of setting broken bones in the traditional way, using skill to see that bones unite and heal properly. An interesting aspect of the bone setter's approach is the selection of a chicken whose leg would be broken and reset. The fracture caused in the chicken is treated alongside that of the patient at the same time and in the same way. This is usually used to determine the time the patient's fracture would heal, and the time to remove the wrapped splints and clay cast. Bone setters are often capable of arresting the deterioration of gangrenous limbs that may lead to amputation. The integration of this practice is still very challenging in view of the fact that it has not received the cooperation of the orthodox practitioners who use latest technology of X-ray scan in managing their treatment. Most compound and complex fracture are also not easily managed by these TMPs and such fractures are

usually referred when it is too late. There is a growing recommendation for these TMPs to be trained in these technologies so as to integrate them in their treatment. It is believed that modern TMPs who would be trained in the Universities may be able to bring this to adequate reality.

Traditional Psychiatrists

A traditional psychiatrist specializes mainly in the treatment of lunatics and those with mental disorders. Lunatics are usually restrained from going violent by chaining them with iron or by clamping them down with wooden shackles. People with mental disorders who are violent, particularly those that are believed to be demon– possessed, are usually caned or beaten to submission and then given herbal hypnotics or highly sedative herbal potions to calm them. Such herbal preparations include extract of the African plant with calmative property as *Rauwolfia*. Treatment and rehabilitation of people with mental disorders usually take a long period.

Traditional Birth Attendants (TBAs)

The World Health Organization defines a Traditional Birth Attendant (TBA) as a person who assists the mother at child birth and who acquired her skills of delivering babies by herself or by working with other birth attendants. In the Northern part of the country, TBAs are females only due to religious beliefs, where as in other parts of the country both males and females are involved. TBAs occupy a prominent position in Nigeria today as between 60-85% of births delivered in the country and especially in the rural communities are by TBAs. They know how to diagnose pregnancy, confirm it and determine the position of the growing fetus. They also provide pre–natal and post–natal care and so combine successfully the duties of the modern–day mid-wife. Experienced TBAs will massage and press on the abdomen and work on the fetus when there is difficult labour. It may be necessary to wash the womb or the vulva a few days before delivery, using some plant preparations now known to have muscle relaxant properties.

Traditional Medicine Ingredient Dealers

These dealers, who are more often women, are involved in buying and selling of plants, animals and minerals used in making herbal preparations. Some of them, who indulge in preparing herbal concoctions or decoctions for the management or cure of feverish condition in children or some other diseases of women and children, may qualify to be referred to as TMPs. The regulation of these dealers is usually through the local board or registered associations, who monitor the activities of their members.

Traditional Surgeon

Surgery in traditional medicine is being discouraged due to the fatalities and the unstandardized nature and somewhat unhygienic environment of practice, which may lead to complication. However, some of these practices still occur even in the urban areas and in the villages. Hence the TMPs are been trained on good hygiene practice and surgical ethics in some of the simple procedures like ear-piercing, etc. Such trainings include the ethics of using needle and sharp objects, patients and practitioner protection from infections, etc. The various forms of surgery identified in traditional medical care include:

1. *The Cutting of Tribal Marks*: Traditional surgeons usually cut tribal marks into the cheeks, bellies, etc., and charred herbal products are usually rubbed into these bleeding marks to effect healing. Sometimes these are done by family members and not professional or practicing TMP.
2. *Male and female circumcision*: The seemingly simple surgical operations are carried out with the aid of special knives and scissors by trained and experience surgeon TMP. Blood–letting operations and wounds that result from these operations are usually managed by applying fluid from snail body or pastes prepared from plants.
3. *Removal of Whitlow and abscess or pus*: Diseased toes, fingers, etc., are usually cut open to drain bad fluid and allow better aeration and application of treatment therapy.
4. *Other surgeries*: The cutting of the uvula is also widely practiced. It is believed that this practice can protect the patient from various infections of the pharynx and the respiratory system. Traditional surgeons in the northern part of Nigeria are versed in cutting off the upper end of the throat flap commonly referred to as epiglottis for the treatment of many illnesses. The traditional surgeon performs his skill without the aid of X- rays and with only little knowledge of anatomy. Others are piercing of ear lobes, extraction of tooth, and performance of amputations. Occasionally there are amputations performed with ‘anesthesia. Usually, the patient is sent to sleep with a strong narcotic concoction and the amputation done with a very sharp knife. The excision has to be achieved with the very first stroke. The stump is packed with a suitable herbal preparation and healing usually occurs within few weeks.

Practitioners of Therapeutic Occultism

These practitioners include diviners or fortune tellers, who may be seers, alfas and priests, and use supernatural or mysterious forces, incantations, may prescribe rituals associated with the community’s religious worship and adopt all sorts of inexplicable things to treat various diseases. They can receive telepathic messages, consult oracles; spirit guides etc., and performs well where other traditional healers and orthodox doctors fail. Their activities include making prayers, fasting, citing and singing of incantations, making invocations, and preparing fetish materials to appease their gods. The guide to treatments used by these practitioners includes magic stones, cowries, kola nut, divining rods, key or sticks, etc., which are usually thrown to the ground. Sounds or shapes so produced are read and interpreted. Some take replies of messages in a pool or glass of water, while other creates human molds with which they employ the act of voodoo.

Level of Integration of Traditional Medicine Practice in the Nigerian Health Care Delivery System

Integration of traditional medicine practice in the health care delivery system involves combining both practices to work together in order to improve the healthcare delivery system. It encompasses the deployment of both TM and orthodox practices in the official healthcare delivery system of a country. China and India are examples of countries in which integration of TMP has been deemed very successful. The practice in China is a complete combination of both orthodox and traditional medicine. In India, the traditional and orthodox medicines are practiced side by side.

In Nigeria however, apart from some NAFDAC regulation by accreditation of manufacturing facilities/premises and ensuring safety of packaged herbal products sold in the market, the integration of traditional medicine in the healthcare system is still very low. The government through the Federal Ministry of Health (FMOH) and some international development partners have undertaken some selected training of TMPs and public awareness. This has been done through several TM forums and African Traditional Medicine Day Celebrations (Ameh *et al.*, 2010). The awareness generated has helped in improving orthodox practitioners' perception/acceptance of TM practice as an important strategy in increasing accessibility in the face of increasing cost of orthodox medicine. The training has also increase the skills of some TMPs on GAP and GMP. Thus, Nigeria currently maintains an inclusive status for TM practice where practitioners are allowed to practice their trade without much restriction and enforcement of regulations is weak. There is no government owned traditional or herbal hospital or clinic.

Herbal Homes and Clinics in Nigeria

With the approval of the TM Policy for Nigeria 2007, several privately owned herbal homes and clinics has become more vibrant and visible in the medical space. Among such organizations include Pax Herbal Clinic and Research Laboratory at Ewu, Edo State, Nigeria, Winners Diagnostic Centre Garki II, Abuja, Queens Herbal Spa in Abuja, Benin and Port-Harcourt, etc. Most of these herbal clinics produce herbal products which they registered with NAFDAC. Other clinics and homes exist but most are regulated by the local boards and TMPs Association. However, they operate as small informal herbal homes or clinic. The challenge in Nigeria is how to integrate TM into the formal hospital such that patients have access to TMPs services in a government hospital or accredited herbal clinics as obtained in China, India, Japan, South Korea and some other countries who have advanced their integration.

Challenges of Integration of TM in Nigeria

Although, traditional medicine practice has been accepted by most countries in the world and its integration into the healthcare delivery system achieved in other countries, it is worth mentioning that the processes leading to the integration are not easily attained. The following are some challenges of integration of traditional medicine into the healthcare delivery system.

Ethical Issues in TM

A major challenge in the utilization of TM in Nigeria lies in the largely unstandardized nature of the practice. There is no proper record of the TM providers in Nigeria and all of them operate outside the conventional health system, and their modes of practice vary from one locality to another. Due to poor quality products and lack of standards, the potency of herbal products/services varies from one batch/service to the other for the same treatment. The lack of scientific proof of efficacy and safety for most of the remedies, the lack of standardized diagnostic skills, tools or procedures and the seeming unconcerned attitude of TMPs to address these issues remains a huge challenge.

Sustainability of TM

The biodiversity conservation of medicinal plants which is considered the major raw material for TM practice is at risk since many of its practitioners do not consider such as important. Some of the plants species are already endangered in some localities. Hence the practice(s) requiring such plants have become unsustainable (Gamaniel, 2005; Egharevba, 2012).

Documentation of TM Practice

A lot of useful information has perished with aged originators due to lack of organized record keeping and documentation. Most traditional medicine practitioners in Nigeria regard the medicine they use as their personal property and conduct their practices under strict confidence. Hence, documentation of medicinal uses of plants is becoming increasingly urgent because of the rapid loss of natural habitat. This would prevent many of the medicinal plants and other genetic materials becoming extinct before documentation (Gamaniel, 2005; Herfon, 2006).

Ownership Issues

Traditional knowledge often has a cultural context, a collective ownership, and is constantly evolving. This knowledge includes medicinal materials, rituals and practices, agricultural practices, ecological considerations, music, dance, poetry, stories, artistic endeavors and spiritual expressions. Currently, traditional or indigenous knowledge has little or no national protection, as do other intellectual properties such as literary creations which is protected by copyright or inventions which is protected by patents. The challenge of ensuring protection or getting benefits to property rights owners where such rights are divulged are yet to be totally solved. This has created suspicion and mistrust between TMPs and researchers who need such information to be able to do proper researches (Kunle, 2009; Egharevba, 2012).

Political Instability

The frequent change of government policies in Nigeria also contributes to the difficulty in integration of TM in the health care delivery system. Once there is a change of government, laudable and worthwhile projects of previous government are sometimes discarded in preference to the new regime's 'perceived' priorities. Hence, there is no continuity or where it exists, it is always very fragile.

Tribalism and religion

The diverse ethnic groups and religion are constraints in the advancement of traditional medicine. Individuals from a particular ethnic group will prefer to patronize the traditional healer from their own ethnic group. In addition, some people would prefer to patronize a traditional healer of their faith. Some religions that believe traditional medicine is always fetish and should not be patronized by their followers also create a huge challenge.

Attitude of Orthodox Practitioners

The negative stigma associated with traditional medicine among orthodox practitioners over shadow all the aspects including the otherwise beneficial pharmacological aspects such as herbal medicine. This is not entirely their fault as they are only responding to their professional training. The introduction of courses in TM into the curriculum of undergraduate, postgraduate and professional continuing education may correct this anomaly (Egharevba, 2012).

Poor Packaging and Promotion Strategy

Although there are generally some form of restriction on the kinds of promotion allowed for healthcare products, a better strategy to educate the public on their use and the packaging of HM as dietary supplements as obtained in the US and EU countries may change some perspective about HM.

Solutions to Challenges of TM integration in Nigeria

Education & enlightenment

Both the public and the practitioners of traditional medicine and orthodox medicine need to be educated on TM and the integration process. The TMPs should also be trained on modern good/best practices such as good hygiene, good agricultural practice (GAP), good clinical practice (GCP), good manufacturing practice (GMP), and other training that could widen their knowledge on diseases and how they could improve on their method of diagnosis, treatment and preparation of remedies. The orthodox practitioners should also be taught on useful aspects of TM or HM. There should be an awareness campaign to enlighten and guide the public towards changes in the existing pattern (WHO 1978). The educated practitioners should be encouraged and given the necessary supports.

Standardization of TM Practice

Proper handling and sustainable use of medicinal plants should be encouraged to ensure that materials are collected from the same environment in order to mitigate variation in material constituents that could arise from environmental variation. Thus, in addition to programmes and guide being put in place for practice regulation and control, product quality control, etc., biodiversity conservation programme should be developed and the TMPs sensitized and trained to support such programmes. The TMPs should be trained on sustainable collection, harvesting and use of medicinal plants and other natural raw materials used in their practice. Biotechnology should be deployed to support the standardization and conservation process. The method of preparation (extraction, decoction, maceration, infusion, etc.) must be generally acceptable and standardized by all practitioners. Registration of TMPs with their association and accreditation of their premises/practice by their council, who should monitor activities of accredited practitioners, should be implemented strictly.

TM IPR Policy

A TM-specific IPR policy should be developed that will guarantee adequate protection and compensation for intellectual property of indigenous traditional medicine practitioners. A scheme should be put in place to sensitize and encourage the TM to embrace the IP policy that would be developed.

Government commitment

Government should ensure stability in governance and continuity of policies in TM development and integration. This may be possible when there is a strategic national TM plan that span from 5-10 years to which different government regimes should be mandated to work with by way of legislation.

Benefits of TM Integration and the way forward

Traditional medicine practice in Nigeria is probably on the increase in spite of the great advances in orthodox medicine. The reasons experts adduced to this include that of affordable access, ease of access, positive perception, current world disposition, cultural beliefs, belief on better tolerance or low side-effect or adverse reactions, etc. The benefits of integration cannot be over emphasized for instance it is expected to guarantee greater access to healthcare delivery for people in the low income countries. The usually pleasant patient-specific diagnosis and treatment procedures usually employed by TM practitioners may improve doctor-patient relations and trust if integrated into the orthodox practice. Financing of herbal medicine may become easier for government since integration may

enable better financing through NHIS. Other benefits of integration may include inclusion of indigenous herbal products in the national drug list, deployment of better technologies in TM practices, development of new drugs for orthodox use, exposition and censoring of myths which cannot be scientifically substantiated, empowerment of the local populations who are farmers and custodians of these medicinal plants and knowledge, development of medicinal plant plantations and creation of mass employment.

Though the government of Nigeria developed a policy in 2007, a close look at the policy shows just a framework or guide for venturing into the integration process. The detailed activities of proposed committees, programmes and some of the councils were not spelt out. Hence most of these committees, programmes and councils have either not taken off, or lacked direction and impact and have gone moribund. The Traditional Medicine desk in FMOH has continued to push for the execution of some of these activities but the obvious lack of support by the orthodox staff of the Ministry most of whom have not been well sensitized and trained on TM management and integration, has slowed down the process. In order to successfully integrate TMP in the healthcare delivery system, the following issues should be of major consideration:

1. Organizing the TMPs into well-defined local Associations or Cooperatives.
2. Registration and Certification of every TMP with the local Association or Cooperative as we have for Hospitals and Clinics, Pharmacy Shops and Patent Medicine Stores.
3. Issuance of Annual Practice License to registered TMPs.
4. Establishment of a National TM Council (NTMC), separate from the Nigerian Medical and Dental Council (NMDC), to set standards, monitor activities of members and issue/renew annual practicing license. The council should comprise representative of TMPs Association, NMDC, NHIS, FMOH, etc.
5. Supporting the NTMC to undertake regular training of practicing TMPs on best practices especially in the use of simple technologies for their activities, and to organize annual national TM conference/Workshop for training of TMPs, addressing ethical issues in practice and sensitization of the orthodox practitioners and the public.
6. Developing and implementing a framework for financing TM practice/service through a health insurance scheme like the NHIS.
7. Developing and introducing HM into the curriculum of all Medical school in the country. Such curriculum should span up to three years. This will help train and sensitize young orthodox medical practitioner on TM integration.
8. Establishing the department of Herbal Medicine in all schools of Pharmacy across the country.
9. Creating a consulting section in all government Hospitals for herbal medicine practitioners where patients can access such services if they so desire
10. Strengthening agencies like NIPRD to help NAFDAC in the research and standardization of Herbal medicine products meant for the Nigeria and international Market.
11. Strengthening NIMR and NIPRD to undertake clinical trials of herbal products with proven efficacy and safety for inclusion into the National Drug List.
12. Identifying or designating specific hospital/sites for clinical trial of HMs.
13. Strengthening NMDC and NIPRD in collaboration with the local communities and farmers, to establish plantations of medicinal plants with proven efficacy, safety and widely used, to support demand and mass production of herbal products from such plants. This will help in biodiversity conservation.
14. Convening an expert/stakeholders' meeting as a matter of urgency and to develop a detailed document for implementing the integration process. Such document should identify clearly defined goals, objectives, activities, output, outcomes, indicators, milestones, timelines, responsible body/persons, etc.

Conclusion

The current role of traditional medicine practice in the health care delivery system cannot be over-emphasized. It is reported that 60-85% of the population of every developing country relies on traditional or indigenous form of medicine. The wider acceptability of traditional medicine practice among the people of the developing country is apart from the affordability and accessibility, due to their beliefs that it is the wisdom of their forefathers which also recognizes their socio-cultural and religious background. If the third and fourth Millennium Development Goals (MDG) must be achieved by 2018, then more attention has to be given to this informal sector involved in the health care delivery at the grass root. Despite the challenges faced in the integration of traditional medicine practice in the healthcare delivery system, it is worth pursuing for the benefit of the general populace.

References

- Adefolaju, T. (2014) Traditional and Orthodox Medicine System in Nigeria: The Imperative of a Synthesis. *American J Health Res* 2(4):118-124
- Ameh, S.J., O.O. Obodozie, M.S. Abubakar, M. Garba. (2010) Current phytotherapy -An inter-regional perspective on policy, research and development of herbal medicine. *J Med Plant Res.*; 4(15):1508-1516.
- Asuzu, M.C. (2004) The necessity for a health systems reform in Nigeria. *J Community Med & Pry Health Care* 16 (1): 1-3
- Batta, H.E. (2012) Press Coverage of Traditional Medical Practice in Nigeria. *J Commun* 3(2): 75-89.

Egharevba HO. *Traditional Medicine in Nigeria in the next Decade*. In: FMOH 2012 Edition of the African Traditional Medicine Day (A Decade of African Traditional Medicine Day: What Impact?), organized by the Federal Ministry of Health, Abuja, Nigeria, on 30th August 2012.

Elujoba, A.(2013).Standardization of Herbal Medicinal Product. HerbFest Abuja, 2013. Available at: <http://www.intercedd.com/download/Day%20-%20-%20Standardization%20of%20Herbal%20Medicinal%20Products%20-%20Prof.%20Elujoba.pdf> accessed 22.04.2015.

FRN (Federal Republic of Nigeria). (1987) National Science and Technology Act CAP 276. Federal Government Press, Lagos.

Gamani, K.S. (2005) Ownership and sustainability issues of Botanical Medicine. *Ethnobot. Res & App* 3:017-023

Gideon, E.C. (2009) Digitization, Intellectual Property Right and Access to Traditional Medicine Knowledge in Developing Countries – The Nigerian Experience. International Development Research Centre (IDRC), Ottawa, Canada.

HERFON (Health Reform Foundation of Nigeria). (2006) Nigerian Health Review. 2006. Kembim Press Ltd., Ibadan.

Holmstedt, B. (1972) The Ordeal Bean of Old Calabar: The Pageant of *Physostigma venenosum* in Medicine. In: Swain, T. ed. *Plants in the Development of Modern Medicine*. Cambridge: Harvard University Press.

Komolafe, K. (1999) Clinical Management of Patients by Traditional Medicine Practitioner. In: National Training Workshop on Traditional Medicine for Traditional Medical Practitioners organized by NIPRD, FMST, NAFDAC, Art & Culture and University of Jos.

Kunle, O.F. (2009) Modes of Compensation in Exchange for Indigenous Knowledge: A Case Study of the Federal Capital Territory, Abuja, Nigeria. *Ethnobot Leaflets* 13: 1140-47.

Lambo, E. (2007) Traditional Medicine Policy for Nigeria 2007. Federal Ministry of Health, Abuja, in collaboration with WHO, Geneva.

NAFDAC. (2006). Guideline for the regulation and listing of herbal medicines and related products. Abuja: Document number NAFDAC/RR/006/00.

NANTMP (2015) available at www.nantmp.org.ng/about-us Accessed: 22.04.2015.

NMPDC (2015) Available at: https://www.facebook.com/pages/Nigerian-Medicinal-Plants-Development-Company-NMPDC/185343978221183?sk=info&tab=page_info Accessed 23.04.2015

Omotayo, R.K. (1999) Traditional Medicine Development Program: An update on the Establishment of the Federal Traditional Medicine Board. In: National Training Workshop on Traditional Medicine for Traditional Medical Practitioners organized by NIPRD, FMST, NAFDAC, Art & Culture and University of Jos.

Schram R. (1971) *A history of the Nigerian Health Services*; Ibadan: Ibadan University Press.

Sofowora A. (1993) *Medicinal plants and traditional medicine in Africa*. Spectrum Books limited and Safari Books (export) limited.

Sofowora A. (2008) *Medicinal Plants and Traditional Medicine in Africa*. 3rd Ed., Spectrum Books Limited Ibadan, Nigeria.

WHO and UNICEF. (1978) *The Alma Ata Declaration on Primary Health Care*. Geneva: World Health Organization.

WHO. (1978) The promotion and development of traditional medicine. Report of a WHO meeting, WHO Technical Report Series No. 622. World Health Organization, Geneva.

WHO. (2001a) Legal status of Traditional Medicine and Complementary Alternative medicine: A worldwide Review. World Health Organization, Geneva.

WHO. (2001b) Promoting the Role of Traditional Medicine in Health systems. A strategy for the African Region. Harare: 2001 Resolution (AFR/RC50/R9) and Resolution (AFR/RC/50/R5), World Health Organization. Regional office for Africa.

WHO. (2003) Resolution WHA56.31. Traditional Medicine. In: Fifty-sixth World Health Assembly, 19-28 May 2003, Geneva.

WHO. (2005) National policies on traditional medicine and regulation of herbal medicines. Report of a WHO global survey. World Health Organization, Geneva.

WHO. (2006) National policy of traditional and complementary /alternative medicine. WHO working group meeting on integration of traditional medicine into National Health Systems. Geneva: WHO Headquarters.

WIPO (World Intellectual Property Organization). (2010) Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. Sixteenth Session, Geneva, May 3 to 7, 2010. WIPO/GTRK/IC/16/INF/7, WIPO Geneva.