

## Sustaining the fight against medical quackery and false health information through a proficient community health care system in Nigeria

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### Abstract

Medical quackery and false health information are two basic challenges that constitute a significant threat to effective delivery of health care services to meet the basic health needs of the people. In Nigeria, several lives and millions of naira are lost annually as a result of medical quackery and false health information. More grave and worrisome is the fact that, the public confidence and trust for the national health care delivery system is also affected by the activities of quacks and peddlers of false health information. To curtail medical quackery and the spread of false health information, the individuals and families in the community should have unhindered access to basic medical services and accurate health information. This is crucial, because medical quackery thrives when there is gap between the health care system and consumers in the community. The health care workers that bridge the health care services and information gap in the community are the community health practitioners. Community health practitioners are professionally trained and positioned as frontline public health personnel that provide health care services to meet the basic health needs of the population. This review that is focused on empowering the community health workers with basic skills to fight medical quackery and false health information, is considered in these perspectives. Meaning of medical quackery, false health information and its various dimensions, fraudulent medical practices and implications to Nigerian health system, scope of medical quackery in Nigeria, potential dangers of medical quackery in Nigeria, community health practice and the practitioners. The review further highlighted the professional blueprint that could strengthen the community health system to curb medical quackery in Nigeria and suggested the way forward in the fight against medical quackery.

**Keywords:** Community health practitioners; Health False Information; Information; Medical Quackery; Quackery

### 1 Introduction

Medical quackery is a major public health issue that has created great concern for stakeholders in the health sector and the nation at large. It has caused grave problems to the country's health care delivery system leading to increased morbidity and mortality rates. Medical quackery strives and manifested mostly through fraudulent medical practices and misinformation which has been a major challenge with multiple dimensions in our national health care delivery system in contemporary time.<sup>16</sup> Quackery is virtually in all professions in Nigeria. Cases of quackery and fraudulent practices occur across a wide range of disciplines. We could have cases of fake pilot, priests, engineers, academics, bankers but becomes so confronting and worrisome when identified in the health care system, because of the immense trust, the community places in those looking after the health of the public.

Quackery is associated with false claims and untrue messages that are usually sweet and ignorantly convincing their preys in deceit. As noted by [11], the problem of medical quackery was once considered as a problem limited to developing and low-income countries but has now become global, touching countries from North America, Europe

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through to sub-Saharan Africa, south-east Asia and Latin America. Medical quackery is everywhere in society; however, it flourishes mostly at the rural hard to reach areas. The perpetrators are in both urban and rural areas, although more active in the rural areas and the highly populated ghettos and slums in the urban areas. They exhibit their deceptive tactics with subtlety, making it very difficult for their victims to detect. They often claim to have cure for virtually all medical conditions [13]. It is a practice that sells false hope. Medical quackery has kept thousands of care seekers from seeking for evidence-based remedies for treatable health conditions. Their preys are often persons who have complicated chronic medical conditions with a frightening prognosis.

The new trend is that medical quacks has shifted strategies by using the internet and the various social media platforms to share their unproven and unscientific claims to the unsuspecting members of the public. False information spread faster than accurate information and have negative effects on the health care system and the community [4]. This has made the fight against medical quackery more difficult. The socio-economic challenges of medical quackery are enormous. It is estimated that several millions of naira are loss due to medical quackery. Several lives are also loss as a result of medical quackery. Businesses are short down due to medical quackery. Medical quackery can as well build up distrust among community against the health care system. To comprehensively address the challenges associated with this dreadful muster, it is necessary to unmasked it with a view to exposing its true nature and characteristics that will help to curtail or stop the activities of quacks and win the fight.

Although medical quackery is flourishing and very difficult to manage, one of the best approaches that can relatively curtail its prevalence is to strengthen the health care providers at the community level with sufficient capacity and competence to be able to provide evidence-based health care to satisfy the health needs of the individuals and family in the community. By their training as community-based health care providers, the community health practitioners are well positioned to bridge the knowledge gap that could exist between the health care delivery system and the community members that gives the quacks the platform to operate [1]. The community health practitioners can reach residents with the basic healthcare services where they live, eat, play, work, worship and sleep. In the rural undeserved communities, community health practitioners have direct contact with the community and have knowledge, capacity and the training to actually communicate with the community members to have a change of attitude and behaviours concerning health issues. Their work specification requires them to reside in the community they serve, and this gives them the unique platform to bring accurate information to members of the community [12]. Strengthening them with support and competence through policies and provision of critical resources will encourage them to successfully fight the battle against medical quackery in its several dimensions

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## 2 Meaning of Medical Quackery

Quackery is the false claim that is usually sweet and ignorantly convincing some unexpected individuals in the community. According to [14], quackery is always characterized by aggressive promotion. They are beautiful and fascinating but usually deceptive. Quackery is promoted by quacks. Quacks are individuals that through pretense and falsehood represent the knowledge, skill and professional competence that they never possess [19]. They are dishonest and outright liars. Quacks flourish virtually in all professions in Nigeria. The activities of quacks are palpable in the health sector, teaching, civil service, food industry, business sector, engineering and even religion. Quacks promote all forms of false health information and perpetrate fraudulent medical practices.

Medical quackery is succinctly described as a situation where an untrained, unqualified, unskilled and incompetent individuals claim to possess basic knowledge, skill and ability to render medical and surgical treatment when indeed their profession is false and misleading [15]. This is the promotion of unsubstantiated treatment or other forms of medical benefits that are not scientifically proven. Quackery promotes unsubstantiated procedures that are devoid of a scientifically plausible rationale. The claims of medical quacks are doubtful, but unfortunately can cause some individuals to reject the actual medical treatment from a legitimate medical professional. Medical quackery is mostly propagated as unsubstantiated information or message and practices or procedures that are not plausible [17]. Unsubstantiated means, a claim that has not been proven or disproven by science. Plausible means that, the claim makes sense given the facts already established, and it is the opposite of doubtful or implausible. The perpetrators of quackery misrepresent and position themselves before the public as having the required skills or knowledge that qualifies them as professionals in that field.

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## 3 False Health Information and its Various Dimensions

Health misinformation is an aspect of false information. False information can be broadly classified as misinformation and disinformation. False information is information in the public domain which accuracy is not proven scientifically

and has the potential to mislead the public [6]. Misinformation is false or inaccurate information disseminated without the intention of deceiving the public. It is a false or misleading information shared with no deliberate intention of misleading the public. It can also be used to describe an unintentional mistake, such as inaccurate dates and other important information about a health issue. Individuals propagate misinformation may believe it is true, useful or interesting and have no malicious intent towards the public. Disinformation is the sharing of false, inaccurate, or misleading information deliberately created to deceive the public. The individuals who share the disinformation spread it with full knowledge of its falsehood [6]. The information is deliberately manipulated as part of an agenda to deceive and harm the public. Good example was the wide believe that COVID-19 was created by scientist in a Lab in Wuhan China.

Misinformation and disinformation are not new phenomena, but their unprecedented spread has been enabled by the internet and social media [5]. Their motives could be economic gains, ideological, religious, political support or a social agenda. The major difference between misinformation and disinformation is the content of the falsehood, but the knowledge and intention of the sender. Other very important aspects of false include infodemic and mal-information. Infodemic is an overabundance information, including false and misleading messages that could make it difficult for people to make decisions on how to sustain good health status at a given point in time. The concept of infodemic was made popular during the COVID-19 pandemic, and it includes rumours, stigma, and conspiracy theories that often lead to fear, anxiety uncertainty and confusion among individuals and families in the community [8,9]. Mal-information is also an aspect of false information, that is based on the truth but is often over-exaggerated in a manner that mislead and causes potential harm to the health of the public.

Medical misinformation and disinformation can erode the community's trust on public health thereby making it harder for health care workers to perform their duties in the community. They can cause harm, which may include threats to decision-making processes as well as health, environment or security. False health information is not only an academic nuisance, but is threat to the overall well-being of society [7,10]. It has the potential to seriously undermine credibility of public health. It is only when health misinformation and disinformation are recognized as societal threats and proportionately initiate strategic measures to curb the tide, that the negative impact of false health information on public health could be minimized and de-escalated.

### **3.1 Fraudulent Medical Practices and Implications to Nigerian Health System**

Fraudulent health practices are unethical and deceptive practices in the health care delivery system engaged by health care providers and other unskilled and untrained individuals to deceive the public for undeserved personal gains and benefits. Fraudulent health practices can be committed by healthcare providers, patients and others who intentionally deceive the health care system to receive unlawful benefits or gains [11,18].

Individuals that deceive the health care system for their personal benefits are guilty of medical fraud.<sup>12</sup> There are several forms of health care frauds, but the most common and costly ones within the Nigerian health care space are the ones committed by dishonest service providers, who are maliciously eager to make money at all cost.

- False and intentionally misleading statement to patients.
- Submitting false bills or claims for service provided.
- Falsifying medical reports or records.
- Lying about credentials or qualifications.
- Submitting service for payment that was never done. Fraudulent service claims.
- Kick back of various dimensions in the health care system.
- Drug related fraudulent practices (Drug pricing frauds, counterfeit drug frauds and drug diversion frauds)
- Performing unnecessary treatment or procedures with the intent of making more money from the patients.
- Purposely misdiagnosing a patient so that they can be billed expensively.
- Providing health care beyond the scope of your professional area of specialty, which include non-utilization of the Standing Orders and other treatment protocols as community health practitioners.
- An untrained and unskilled individual claiming and practicing as a qualified professional in the medical field.
- A health care provider publicly advertising himself and services is unethical and fraudulent.
- Providing substandard, unregistered, unlicensed and falsified medical product to the public is fraudulent.

These fraudulent practices cost the nation millions of naira each year and resulting to higher out-of-pocket expenses for consumer [19]. Medical quackery is a thriving business in Nigeria and many factors have been identified to be responsible. The World Health Organization in 2022 classified Nigeria as one of the countries in the World with high risks of medical quackery. Others listed in the report include Kenya, Ghana, Tanzania, India and Pakistan.

The leading factors that encourage medical quackery to thrive in Nigeria include; Poverty and economic difficulty, ignorant of modern medical options, lack of political will to fund health, insufficient health man-power, inequitable distribution of health care service, poor regulatory frame-work and supervision, attitude of health care professionals, exponential increase in internet connectivity especially the social media, internal distrust and discord among health practitioners, and illiteracy and religious considerations [18].

## 4 Scope of Medical Quackery in Nigeria

Medical quackery was once discussed as a problem limited to developing and low-income countries, but now it has become global, touching countries from North America, Europe through sub-Saharan Africa, south East-Asia and Latin America. As the public become more enlightened about their activities, they also become more elaborate, relying on nonscientific procedures and strategies using the internet to convince their victims [14]. The scope of medical quackery will be viewed in three perspectives for proper understanding.

- Medical quackery through the internet (Online Quackery)
- Quackery outside the Main-stream Health System
- Quackery among Health Professionals

### 4.1 Medical Quackery through the Internet (Online Quackery)

The new trend of medical quackery is that, the quacks use unregulated websites, social media platforms and smart phone applications to share their falsehood to the public. These pages and groups have great impact on public health, because the multitudes of followers deceitfully and ignorantly see them as authorities in the medical field [9,11]. They daily post information about health care tips, remedies and products that are not proven and accurate. Online quacks are mostly individuals without medical background. Discussed below are some of their methods;

#### 4.1.1 *Miracle cures*

This is a treatment scam that covers a whole range of services (remedies) that promises instant and complete relief to some very serious medical conditions, which appears to be legitimate. They are promoted through Facebook pages and WhatsApp platforms. They promise quick and easy remedies for critical medical conditions such as cancer and even HIV/AIDS.

#### 4.1.2 *Weight Loss Products*

These individuals also advertise and sell variety of weight controlling products such as restrictive diet, revolutionary exercise or fat busting devices, pills, patches and creams that may not provide sustained remedy. These products are always supported by various forms of unrealistic promises of weight loss without any extra-exercise or diet modification.

#### 4.1.3 *Fake Online Pharmacies*

Although there are legitimate online pharmacies, there are also fake online pharmacies that are promoted by quacks. The legitimate online pharmacies have address, logo and other unique features of identifications. The fake online pharmacy operators use the internet and spam emails to offer drugs and other medical services at very cheap prices without the need for prescription from health professionals.

#### 4.1.4 *Free Trial Offers*

One very common strategy of the quacks using the internet space is the offer of free trial for medicines, supplements, or other forms of treatment.

### 4.2 Medical Quackery outside the Main Stream Health Practice

Medical quackery commonly seen outside the main stream health practice is grouped into two main categories which include alternative medical practice and unskilled health practitioners.

#### 4.2.1 *Complementary and Alternative Medical Practice*

Complementary medicine is the practice of using alternative medical options along with standard medical treatment, but is not considered to be standard treatment by itself. Alternative medicine refers to any form of medical practice that falls outside the mainstream healthcare. They are not considered to as standard medical practices. Some are based on

theories that contradict established science on how the human body works while others are based on supernatural or superstitious explanations. The practitioners of alternative medicine may sometimes have basic medical skills through training from a conventional training institution, but their claims are often without scientific evidence. The effectiveness of their procedures of healing has not been established using scientific methods [19]. Some include herbal medicine, acupuncture, body manipulation, special dietary supplements, mind-body therapies, energy healing etc.

#### 4.2.2 *Unskilled Health Practitioners*

This group includes the traditional native doctors, traditional bone setters, patient medicine sellers, and TBAs. They combine experience and spiritual powers as potential remedies to the health challenges of their clients and patients. Some of them claim to have cured all health problems. They have no formal regulatory body that supervises their operations; hence they are let loose into the society, sustaining medical quackery in various dimensions. The patient medicine sellers are very notorious in the rural areas, sometimes procuring unsafe abortions and formed the major outlets for fake, falsified and substandard drugs.

### 4.3 **Quackery among Health Professionals**

Issues of medical quackery are also very common among the health professionals. Trained health professional practicing out of scope with the intent of making gains by deception is quackery.

#### 4.3.1 *Commercial Medicine Syndrome*

This is the practice of over diagnosing and prescription for the treatment of common diseases with the intention of getting more money from the patients.

#### 4.3.2 *Non-Specialists Doctors Acting as Specialists*

Claiming to be a specialist without the required training in a given specialty is an act of medical quackery. Relying on some specialist skills acquired while working in a general hospital and start practicing as a specialist a clear example of medical quackery.

#### 4.3.3 *Playing the Doctor's Role Syndrome*

It is common practice in Nigeria, where other health professionals assume the role of the medical doctors deceitfully. They prescribe and treat patients with that fake identity. In a typical rural area PHC workers, including community health workers and nurses often feigned as doctors' making diagnosis and prescribing drugs. The male health worker is often mistaken as doctors, and the female as nurse. They also hide their true identity from the patients.

#### 4.3.4 *Practicing without a Genuine or Expired License*

A health worker is professionally trained, certified and licensed by a regulatory body to practice health in a given country. Any individual that does not fulfill any of the above is a quack. Also note that a health worker cannot practice with an expired license.

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## 5 **Potential Dangers of Medical Quackery in Nigeria**

Medical quackery poses a great burden on the health professions, patients and the health care delivery system [15]. The following are some dangers of medical quackery.

- Its waters down the respect for the health professionals. The people may lose confidence in the credible services and care provided by the health care delivery system.
- Medical quackery can cause harm to the patients. The quacks deceitfully divert patients and clients from seeking proper medical diagnosis and treatment from the legitimate health professionals. This will lead to avoidable medical complications and even death.
- Substandard and falsified medical products can significantly contribute to antimicrobial resistance and other forms of drug related complications.
- It makes people to pay more than expected to health care services. Many of these unapproved treatments and products are very expensive. Patients will still spend more money for proper medical treatment, after unnecessarily spending to obtain the quack services.

## **6 Enablers of Medical Quackery in Nigeria**

Medical quackery is a thriving business in Nigeria and many factors have been identified to be responsible. The World Health Organization in 2022 classified Nigeria as one of the countries in the World with high risks of medical quackery [18]. Others listed in the report include Kenya, Ghana, Tanzania, India and Pakistan. The leading factors that encourage medical quackery to thrive in Nigeria include;

### **6.1 Poverty and Economic Difficulty**

The wide spread poverty in the country makes people to likely seek out cheaper and low-cost health care options even though the risk involve is visible. The quacks are cheap and serve as an alternative for the poor.

### **6.2 Ignorant of Modern Medical Options**

Some segments of the population are ignorant of several orthodox health care options, thereby promoting the use of traditional or alternative health care which might sometimes be harmful to their health.

### **6.3 Lack of Political will to Fund Health**

The current short fall in health care funding is another enabling factor of medical quackery. Adequately funding the healthcare system by the provision of equipment, infrastructure, facilities and better remuneration will ensure accessibility, affordability and availability of health care services to all segments of the community. If health care delivery system is not improved especially at the local level, quackery thrives.

### **6.4 Insufficient Health Man-Power**

The level of insufficiency in human resources for health experienced currently in Nigeria can also create an opportunity for quacks to thrive. In many rural hard-to-reach communities where health care workers are not feasible, the quacks thrive in their fraudulent practices.

### **6.5 Inequitable Distribution of Health Care Service**

If health care services and facilities are not equitably distributed to meet the health needs of all the communities undermining the geographical location, there will be a health care delivery gap which may conveniently be filled by the quacks.

### **6.6 Poor Regulatory Frame-work and Supervision**

Regulatory institutions in the health care sector are empowered by law to ensure that services received by the public are not substandard and not falsified. Quacks thrive if these frame-works are weak and no serious supervision.

### **6.7 Attitude of Health Care Professionals**

The attitude and behaviour of health care providers can sometimes force patients to go to these quacks who may be friendly in their approach and cheap. The quacks can sometimes give them services for credit. Many Nigerians still chose local birth attendants over hospital delivery due to the perception they are friendly and spend less.

### **6.8 Exponential Increase in Internet Connectivity especially the Social-Media**

Easy access to online content, especially the smart phones has accelerated quackery through fraudulent health practices and misinformation. Misleading health practices are easily promoted through the use of the social media platforms.

### **6.9 Internal Distrust and Discord among Health Practitioners**

Infighting among the various health care professionals will provide the quacks privilege to thrive in their fraudulent practices.

### **6.10 Illiteracy**

Persons with low level of health literacy are the potential targets of the quack medical practitioners in the community. This group of individuals may not have the ability to comprehend health information presented to them at a particular point time. They may not also possess the potential to comprehensively evaluate medical claims or articulate evidences

of quackery in the community. The forgoing makes them susceptible to misleading health promises and fraudulent medical practices.

## 7 Community Health Practice and the Practitioners

Community health practice is an aspect of public health that is basically concerned with the prevention of diseases, promotion of health and efficiency through adequate community participation, which will lead to improved quality of life. Its programmes and services are structured to protect and promote the health of individuals and families in the community. Community health is a broad term generally refers to the organized efforts of all agencies (both private and governmental) in the community that are directed towards promoting health and preventing diseases [1]. These efforts are tailored towards identifying the totality of health problems and needs of the community with appropriate remediation measures. It is a community-based care that is concerned with the health of the whole population and the prevention and treatment of diseases through the active involvement of the community.

Nigeria operates a generalist community health care system that has three cadres of community health practitioners, and they include Junior Community Health Extension Workers, Community Health Extension Workers and Community Health Officers. Community health practice started in Nigeria around 1940s, when the early missionaries trained community members with basic health care procedures to manage the health problems of the community members in order to conveniently augment their health man power [31]. Community health practice was first incorporated into the national health care system as part of the health component of the third national development plan that lasted from 1975 to 1980. Specifically in 1978 community health programme started through the Basic Health Service Scheme which was aimed at increasing the proportion of the population receiving health care from 25% to 60% and to correct the imbalance in the location of health institutions and between preventive and curative medicine [32].

This planned period saw the training of different cadres of auxiliary health care workers including community health aids, community health assistants, community health supervisors, who were posted to deliver health services in the rural communities where more than 70% of the national population resides. It was in the fourth national development plan from 1981 to 1985 that saw a major restructuring in community health practice in Nigeria that gave birth to the current nomenclature of JCHEW, CHEW and CHO [31, 33]. Primary health care is structured in a manner that gives the community health practitioners the responsibility to successfully implement more than 80% of its components in accordance with guidelines stipulated in the national health policy [20]. In Nigeria, today it is very obvious to note that, community health through primary health care forms the backbone of the national health care delivery system. As affirmed by [27], the provision of critical health care services to the rural underserved hard to reach population is enormous, requiring passion and tenacity. One group of public health professionals that are into this consistently is the community health practitioner.

Community health practitioners are trusted and respected members of the community who are trained with medical competence, who work for pay or as volunteers. According to [36], the various healthful activities of community health care are carried out by community health workers. Community health practitioners are front-line public health workers who are trained, certified and licensed to provide promotive, preventive, curative and rehabilitative health care services to the individuals and families in the community [32]. The community health practitioner is a member of a community who is carefully chosen and given requisite training in a conventional college of health technology or university to provide basic health care services to members of the community as part of the primary health care system. They are professionally trained to study a given community with the aim of identifying its health problems through a process of community diagnosis and apply globally acceptable measures and principles to solve these problems [28]. They are salaried health care providers in the primary health care system, providing health care services based on Ward Minimum Health Care Package at the Health Post, Primary Health Clinic and Primary Health Care Centers. The ward minimum health care package services include control of communicable diseases, child survival services, maternal and new born care, nutrition, non-communicable diseases prevention, health education and community mobilization.

They usually mobilize community, provide health education and deliver clinical services. Their functions are categorized into clinical, administrative and community-based functions [29]. The mode or channels of service delivery for the community health practitioner include periodic out-reach at temporary or fixed points, health care facilities, special campaigns, house-to-house, and community meetings. Nigeria also has some informal community health care providers working in both private and public sector mostly as volunteers that are categorized under CORPs (*Community Resources Persons*). These include TBAs and other volunteer community-based care providers [22].

### 7.1 Community Health Practitioners as Front-line Public Health Workers in Nigeria

The community health practitioner plays a crucial role as front line public health workers in Nigeria, and there is the pertinent need to invest and empower them with the required capacity to fight against medical quackery. Over the past decades, the crucial role of community health system has been recognized by government at all levels and even NGOs [23]. The activities of community health workers especially at the rural areas, where access to health care services is limited have resulted in significant improvement in the country's health care outcomes. In sub-Saharan Africa where insufficient health manpower often diminishes the provision of health care delivery, the community health practitioners fill the void in the rural communities, providing care and saving lives.

As respected and responsible members of the community, trained to provide essential health care services, community health workers serve as a bridge between the community they service and the formal health care delivery system. They are often the first point of contact for individuals seeking health care services. They are potentially positioned to educate the community on prevailing health issues and make basic health care services accessible, available and acceptable to all segments of the population. They are trained to identify and diagnose common health problems, administer basic treatment and refer patients to appropriate levels of care when necessary. They also assist in identifying health risks and guide community members on preventive measures like proper hygiene practices, immunization and nutrition.

One fundamental strength of the community health practitioners is their ability to establish trust with their host communities. The community health practitioners have a deeper understanding of the culture and traditions of the communities which makes them integrate effectively and build strong relationship with community members. This relationship enables them to offer more effective and culturally appropriate health care services that could result to better health indices. Community health practitioners can conveniently bridge the critical gap in human resources for health and positively impact on the health of individuals and families in the community and hence could be leveraged in the fight against medical quackery [29]. The foregoing necessitates a sustained strengthening of the community health system with appropriate competence and critical support to fight and win the war against medical quackery in Nigeria.

### 7.2 Critical stakeholders that Sustain Community Health Practice in Nigeria

These are both governmental and non-governmental agencies that can mobilize resources for the community health practitioner to build up the necessary capacity to be able to fight medical quackery at the community level where majority of the activities of the quacks are carried out. These institutions can provide technical support and policy frame-work, mobilize resources, and trainings that can place the community health practitioner in the appropriate path of effective service delivery.

- Community Health Practice Regulation Board of Nigeria
- National Primary Health care Development Agency
- State Primary Health care Boards
- National Association of Community Health Practitioners of Nigeria
- Donor Agencies and Development Partners such as WHO, UNICEF, and World Bank etc.
- Civil Society Organizations (CSOs)
- Institutions of higher Learning
- Other professional associations and regulatory bodies like NMA, NAFDAC, PCN, CAC etc.

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## 8 Strengthening the Community Health Systems to Curb Medical Quackery in Nigeria

The crucial role played by the community health workers in the health care delivery system of the country cannot be over emphasized. As key frontline public health providers, with a close relationship with the community, they are well-positioned to provide appropriate health information that can help in the fight against medical quackery [23]. To be able to win this fight, the community health worker must be empowered. The following areas are very critical for the community health practitioner to create any impact in the fight against medical quackery in Nigeria

### 8.1 Training and Capacity building

A well-coordinated training strategy is crucial to ensure community health practitioner acquire the necessary competency to perform their work effectively [3]. The search for knowledge is lifelong and as such community health workers should consciously dedicate quality time in reading journals that are focused on contemporary health issues, professional textbook and magazines. Attending workshops conferences and seminar is also another way of building capacity and competence. Training the community health practitioners on how to detect misinformation is very cardinal



in combating this menace. They must learn how to critically evaluate the accuracy of health information and able to correct misinformation. To be able to detect and differentiate credible information from false information, the community health practitioners must first learn how to spot it and the following points are recommended.

- *Consider the Source:* Are they reputable in the health care work. Is there any contact. Author's credentials, their intension.
- *Read Beyond the Headlines.* Dig deep into the content itself. Affirm if the information supports its claim.
- *Examine Supporting Sources:* A credible story will have back up fact from a credible source.
- *Review of Dates:* Ensure the information is current. People often share contents that are several years old that are not current
- *Ask an Expert:* If you can't affirm the credibility of any story related to health care get an expert's opinion.
- *Use of Fact Checking Sites:* You can visit some fact checking websites like healthFacts, HealthFeedback.

## 8.2 Adequate Staffing

Investing in the training of community health workers is a fundamental pillar to creating strong health care delivery system. Government should invest more on the community health system by training, engaging and deploying more community health practitioners to provide basic and essential health care service to members of the community [29]. Employment of more CHWs will ultimately strengthen the health care system to fight the menace of medical quackery, by providing unhindered access to qualitative healthcare for citizens especially the hard-to-reach underserved population at the rural areas [21].

Available records from the Community Health Practice Registration Board of Nigeria (CHPRBN) reveal that, from inception till date; just less than 300,000 community health workers are trained, which is grossly inadequate for a country like Nigeria with a population of more than 200,000,000 people [3]. This number is also far less than the threshold of 4.45 per 1000 population required to achieve the United Nations Sustainable Development Goals. The number of community workers engaged should be in accordance with the number of households in the community. One community health worker to 50 house-holds ratio is ideal to displace the presence of medical quacks in the community.

## 8.3 Result Oriented and Strategic Community Engagement

Engaging the community to secure their participation in health care matters is fundamental in building trust and connecting the link between the community and the health care delivery system. The community health practitioners understand and are knowledgeable about the environmental, and social-political factors and inter personnel networks in the community [35]. As health advisor and group support facilitators, they can engage the community through advocacy and town hall meetings aimed at helping them to meet their health and social needs. Through these community engagements platforms, the community health worker can address some false health information trending in society that can significantly affect the health delivery system [3].

This is can consolidate the trust between the community and the public health system and increase access to accurate health information that is critical in the drive to stamp out medical quackery. Community-based health care platforms such as home visiting, and outreach service should be given desired attentions by the community health workers [24]. This will also break the chain of communication between the community members and the quacks.

## 8.4 Adequate Regulatory Framework and Supervision

Regulatory bodies like the Community Health Practice Regulation Board and National Association of Community Health Practitioners of Nigeria have a crucial role to play in regulating the professional activities of the community health workers. This can be in form of integrated supportive supervision. Community health workers require on-going supervision and support at all levels of the health care delivery system [25]. Proper supervision enables community health practitioners to increase their skills and maximize their role within the primary health care team. There should be a disciplinary frame-work that will ensure community health workers comply with ethical regulations in the provision of health services in the community. The CHPRBN and NACHPRN should put in place a functional disciplinary mechanism that could sanction CHPs who are involved in woeful practices that could be characterized as fraudulent medical practice. This will guide against fraudulent medical practices among the community health workers.

## 8.5 Appropriate Utilization of ICT

The use of digital tools can enable community health practitioners provide better services and more timely care by supporting decision-making and helping to identify at risk patients more quickly. The use of technology and media platforms can help the community health workers to share accurate health information to the community members

[26]. Mobile applications that can help empower community health workers to effectively screen, treat, and refer patients for a range of conditions by using smart phones equipped with the application should be designed and made available. Collaboration with other health professionals in other specialties is also very possible through the use ICT.

### 8.6 Provision of Essential Resources and Funding

The availability of financial and other resources is very essential and crucial for the success of a community health programme [30]. Enough money should be allocated to the community health system so as to make their services feasible for all members of the community. Salaries and allowances of community health workers should be paid regularly. Availability and accessibility of Standing Orders. Funding through the provision of commodities and essential items such as kits, equipment, tools like android phones and ICT devices.

## 9 Conclusion

As revealed in the review, medical quacks propagate their fraudulent health practices mostly through misinformation and disinformation. The practice of medical quackery and the steady spread of false health information is a great challenge to the delivery of health care services in the community. Quackery flourish progressively in environments where pronounced health care gap exists between the health care system and the community. Hence empowering the community health care worker with appropriate capacity to cement the health care gap in the community that provide the platforms for the quacks to operate is very necessary. Empowering the community health practitioners is the responsibility of the government, NGOs, and other cooperate organizations and institutions in the community. The review highlighted a comprehensive blueprint to empower the community health practitioners, which include recruitment of adequate health man power to sufficiently meet the health needs of individuals and families in the community.

### 9.1 Way Forward

To build and sustain the trust and confidence of the community towards the community health system that could encourage them to visit and utilize the health care services provided at the health facility with a view to alienating the quacks from the health care delivery system, the following are very essential.

- The community health workers must always be in their duty post (their primary place of assignment). Behaving otherwise will create the opportunity for the quacks to fill the health care gap.
- Credibility is another aspect of the trust building. Every health information shared to the community by the community health practitioners must be verified, accurate and not falsehood.
- Be proud and contented as a community health practitioner anywhere, anytime and provide basic and essential health care services within the context of your training.
- Don't cover up quackery. Report any fraudulent health practice to the appropriate authority for necessary actions.
- Fight quackery in all its dimensions and not your professional colleagues.

## Compliance with ethical standards

### *Disclosure of conflict of interest*

There is no conflicting interest to be disclosed.

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