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REVIEW ARTICLE

The Medical Officer of Health: A review of contemporary history, functions and declining relevance in Nigeria

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Keywords

Medical Officer of Health; Public Health; Primary Health Care; Nigeria

ABSTRACT

Background: A medical officer of health (MOH) is the implementer of the public health laws and Primary Health Care (PHC) programmes of a district, county or local government. This review examines the historical functions of the MOH, current challenges and decline in its relevance in Nigeria.

Findings: The functions of a MOH include environmental health duties; organization of annual reports on the health status of the local population; disease notification and food safety. Whereas, contemporary history, reveals a stepwise adoption of the appointment of medical officers of health in the United Kingdom (UK) in the late nineteenth century, the reverse has been the case in Nigeria after its introduction in 1927. This may have contributed to the current weak health system and abysmal health indices in Nigeria.

Conclusion: The office of the MOH has lost its relevance in the Nigeria health system and in the implementation of PHC at the grassroots. Efforts should be made at all levels to reverse policies that are largely inimical to the implementation of PHC at the grassroots through the MOH. Also, policies that will empower Community Health Physicians across the country to be engaged at the community level should be encouraged, especially by PHC regulatory agencies in Nigeria.

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INTRODUCTION

A Medical Officer of Health (MOH) or District Medical Officer is a senior government official of a health department or agency, usually at a municipal, county/district or regional level, appointed by a local or national authority to be in charge of its health policy.[1] This post is held by a physician who serves to advice and leads a team of public health professionals such as environmental officers and public health nurses on matters of public health importance.

Under the British Metropolitan Act of 1885, an MOH refers to the Chief Medical Officer in the municipal or local government level who implements public health laws within the area.[2] The MOH is the custodian of public health and preventive medicine and his responsibilities practically remain the melting point of community medicine.[3] The origin of the MOH dates back to 1847, with

the appointment of Dr William Duncan in Liverpool. This action resulted in a remarkable improvement in the health and well-being of the people of Liverpool and other counties/local government in Great Britain which appointed medical officers of health to take charge of their public health. It subsequently had global acceptance because of its merit. Some of the major duties and responsibilities of the MOH in the mid-19th and early 20th century included; environmental health duties and provision of safe water and basic sanitation; preparation and presentation of annual reports on the health status of the local population; disease notification and food safety.

However, over the past 170 years, there have been several changes and shift in paradigms in the functions of an MOH and in the practice of public health.[4] In the first quarter of the 20th century in the United Kingdom (UK) for instance, the functions of the medical officers of health were expanded to include provision of immunization, nutrition and maternal and child health services.[5] Some of the changes over the years also included the formation of community medicine subspecialty from the Association of Medical Officers of Health in 1972 in the UK , and the formation of disciplinary public health from the statutory medical officers of health positions in Australia [5,6]

Beyond the origin of the MOH, the nature of appointment/engagement of the MOH varies from one country to another. The engagement options based on societal needs include: full -time MOH, who carries out school health inspection, in addition to his statutory roles; part-time medical officer of health, who is also engaged in general practice and the assistant medical officers of health, who in addition to their statutory roles, also act as MOH to more than two local sanitary authorities. The part-time appointment of MOH was particularly the most predominant form in Britain between the mid-twentieth century and early 21st century. [7] These options are influenced by socio-economic, development stages and the predominant forms of diseases (whether communicable or non-communicable) of these countries.[8]

The recent emphasis on the need for local rather than global action in combatting diseases has brought MOH to focus once more.[9] Its role and function is required more than ever before in strengthening health systems globally[5,10,11] This paper critically explores the historical trends in the functions of an MOH from a global perspective, its current challenges and decline in relevance in Nigeria.

Origin/contemporary history

The contemporary history of the MOH is best traced to the early nineteenth century, when the British government responded to the poor public health conditions associated with the nineteenth century industrial revolution. This landmark achievement began with the appointment of the first medical officer of health (MOH), Dr William Duncan, in Liverpool, in 1847.[12] This

followed Edwin Chadwick's report on the sanitary condition of the working population of Great Britain; which requested that medical officers were urgently needed for health promotion and the prevention of disease in 1842.[6,10] This recommendation was empowered by the Liverpool Sanitary Act of 1846; which states that:

"*It shall be lawful for the said Council to appoint, .., a legally qualified medical practitioner, of skill and experience, to inspect and report periodically on the sanitary condition of the said borough, to ascertain the existence of diseases, more especially epidemics increasing the rates of mortality, and to point out the existence of any nuisances or other local causes which are likely to originate and maintain such diseases and injuriously affect the health of the inhabitants of the said borough…" (Liverpool Sanitary Act, 1846, Section 122.)*

The act also influenced the subsequent appointments of Dr John Simon and Sir Henry Littlejohn in London and Scotland, respectively in 1848.[3] In 1856, 48 medical officers were appointed in various cities in the UK. In 1875, after the Royal Sanitary Commission of 1870 and subsequent Public Health Acts of 1872, over 1000 medical officers of health were appointed across various districts in the UK.[8] The appointment of MOH was later divulged to the local authorities between 1875 and 1974. Moreover, during this period similar achievements were recorded in Australia. In 1885, John Ashburton Thomson was appointed the first MOH and Chief Medical Inspector of the New South Wales Board of Health in Australia. His appointment was of immense influence to the support staff in the acquisition of diplomas in public health in Australia.[13]

These 19th century historical milestones were preceded by earlier recordings on ancient ideas of sanitation by Hippocrates and Epicurus in 400 and 300 BC, respectively. Whereas Hippocrates thought that causes of diseases were related to food and air and that plenty of fresh air and barley water could act as cure. Epicurus stated that the mind was manifest in flesh and blood and that man ought to maintain it in perfect condition in holistic care.[2] They were said to have been influenced by the rules and regulations of the mosaic laws; with respect to notification of infectious diseases, disinfection, disposal of refuse matters, and unwholesome food.[2] This was followed by a long era of sanitary darkness during the Middle Ages.

On the other hand, some people believe that the office of the MOH and community medicine probably originated from the activities of statutory public health in Venice in 1374. Public health specifically denotes specialization in health profession concerned with the prevention of diseases; and its scope basically involve protective health activities, early diagnosis and treatment of diseases as well as the promotion of health. The origin of public health is traced to the establishment of sanitary and quarantine laws by the ruling class in Venice and their enforcement by sanitary police; which ultimately helped in the prevention of diseases around this

period. However, this development underwent numerous paradigm shifts from the sanitary environmental and statutory public health to the creation of the office of the MOH, by the activities of Edwin Chadwick and his colleagues in 1847 and 1848. Moreover, the office of the MOH was consolidated through the creation of the district health system and community nursing and midwifery in Liverpool by William Rasthborn in 1859.[3]

The passion shown by the early medical officers of health to alleviate the wretched conditions in which so many of the poor lived was unquestionably the impetus that resulted in the remarkable changes recorded during the mid-nineteenth century. However, there was a decline of this drive between 1948 and 1974, with the introduction of the National Health Service (NHS) in Britain. The medical officers of health were reported to have failed on their feet, concerning health education, community services and social work within the defined area; and this resulted in gradual loss of their relevance particularly in 1974.

Furthermore, with the conquering of communicable diseases; improved living conditions, increases in non-communicable diseases and with changes in the cultural setting of Britain, the very essence of small defined areas (communities) as a geographical group of persons with uniform cultural characteristics literally stopped; and this affected to a great extent the approach to disease prevention and control in Great Britain. In fact this decline in the authorities of the medical officers of health resulted in the termination of most their responsibilities, apart from environmental duties.[5,10]

In Nigeria, the appointment of Dr Isaac Ladipo Oluwole in 1925 as a MOH was preceded by the passage of the Public Health Ordinance in Lagos. This Ordinance, which consisted of a series of regulations to improve sanitation and disease control in the city of Lagos became very necessary because of the persistence of insanitary conditions across the suburbs of the city[14] Dr Oluwole re-organized the sanitary inspection procedures in Lagos and was able to overcome the bubonic plague around that period in the first quarter of the 20th century. But the implementation of these rules was hampered by lack of personnel to complement his efforts. Nevertheless he founded the first school of hygiene in Nigeria; which trained sanitary inspectors.[14]

Historical significance of public health laws and health policies on MOH in Nigeria

The public health laws of various states, health policies and health development plans between 1927 and 2018 had minimal impact in the functions of the MOH in Nigeria[15] The public health ordinance and health regulations passed in Lagos in 1917 for instance was replicated in several other states in Nigeria with time.[14] This had very minimal impact in the functions of MOH in these states because of their failure to fully institutionalize the ordinances. The development plans and health policies made

between this period were the only documents that revealed the conscious efforts of government towards the office and functions of the MOH. They include: the first colonial development plan (1945-1955); the second colonial development plan (1956-1962); the first national development plan (1962-1968); the second national development plan (1970-1975); the third national development plan (1975-1980); the fourth national development plan (1981-1985); the first national health policy and the first strategic health development plan (1988- 2010).[16]

The national development plan of 1954 was the first document in Nigeria that empowered medical officers of health apart from the public health laws of various states. The main thrust of the development plan was to expand rural health service delivery.[16] It empowered the MOH to supervise the rural hospitals, dispensaries, maternities, child welfare clinics and preventive work. This same mandate was again emphasized in third National Development Plan of 1975 and in the fourth National Development Plan (1981-1985). The fourth plan specifically empowered doctors in charge of general hospitals in any rural setting to also supervise the dispensaries, maternities and child welfare clinics. It empowered the medical officers to oversee the sanitation activities within that environment. It was indeed the first attempt at engaging MOH on part-time bases in Nigeria[7]

The Primary Health Care (PHC) Plan and the national health policy of Nigeria were launched in 1987 and 1988, respectively. Part of the objectives of the PHC plan was to accelerate health care personnel development. Also one of the main objectives of the national health policy of 1988 was to establish a comprehensive health care system based on primary health care that provides adequate allocation of resources, which include human resources (including the MOH).[17,18]

The National Primary Health Care Development Agency (NPHCDA) was established in 1992, to ensure sustainability of primary health care in Nigeria. It was established to give full support to the national health policy through the provision of technical support and monitoring of PHC programmes[17] This agency had been involved in the formulation and implementation of several PHC policies in Nigeria and it has produced several guidelines meant for the full implementation of PHC across the country.[19, 20] Indeed, one of the current policies driven by the agency, is the Primary Health Care Under One Roof (PHCUOR) concept, which is meant to reduce fragmentation of PHC services; by reducing the apparent multiple administrative structures (State Ministry of Health, Ministry of Local Government and the Local Government Service Commission and sometimes the office of the Executive Governor). The PHCUOR concept creates the State Primary Health Care Boards (SPHCB) or State Primary Health Care Development Agencies (SPHCDA). [21] The guidelines on the implementation of SPHCDA agency recommends a

transformation of the office and functions of the Primary Health Care Coordinator (or MOH) to that of the secretary to the Local Health Authority (LHA) Management team. The secretary to the LHA is expected to supervise health activities at the LGA level and report to the state's executive secretary of the agency. This apparently reduces its authority and relevance within the local government and the entire health system.[21] The Nigeria National Health Act, 2014 (NHA 2014) is one of the current working documents that gives clear directions on health issues in the country. It provides the framework for the development, monitoring and regulations and of Nigeria's health system.[22] Nonetheless, this document and other closely related ones have been quiet about the expected roles and contributions of the MOH to the much desired improvement of the Nigerian health system. [21, 23]

Roles and responsibilities of the MOH

The office of the MOH remains the melting point for the practice and actualization of disciplinary public health or community medicine. Its primary mandate is the implementation of the public health and safety laws of the defined area. In the early twentieth century, when sub -specialization was setting in among the medical officers of health, their responsibilities focused mainly on environmental health and prevention of communicable diseases; hence they covered: water supply, sewage disposal, food control and hygiene; public health aspects of housing; prevention and control of infectious diseases; maternal and child welfare clinics and their attendant health visitors and midwives; tuberculosis dispensaries; venereal disease clinics; school health services and administrations of the local clinics and hospitals.[8,24] Their functions are primarily a reflection of the public health laws and a fulfilment of the Alma-Atta declaration of 1978.

General Administration

Within the context of Public Health Acts across the globe, the MOH directs and takes decisions concerning all administrative issues in the primary health care department.[20] In Nigeria, this started with the passage of the public health ordinance in Lagos in 1917. This ordinance, states among other functions that the Medical Officer of Health takes the responsibility for implementing the public health laws within a defined area.

These administrative functions include: identifying the required number of staff in the primary health care department of the local government area and being a part of the recruitment process; attending meetings as head of department; formulation of annual plan for programmes, in line with the Local Government policies and taking charge of staff welfare in the PHC department.[25]

He prepares the annual budget plan for the primary health care department.[20] and solicits for financial support from within and outside the local government in Nigeria. [25] In Canada for instance, within the

province of Quebec and Ontorio, the MOH is defined in legislation to have a Chief Executive Officer (CEO)-type responsibility for the regional public health division/unit. He is expected to contribute actively to the analysis of and decision-making on issues for the entire health system. [26]

Environmental health/Sanitary Inspection

The MOH carries out the inspection of premises; abates nuisances within such jurisdiction[1] and supervises sanitary conditions of areas to which he is appointed. These were actually the main reasons for the appointment of the first MOH, Dr William Duncan in 1847 in Liverpool. He was indeed concerned about the squalid housing and environmental conditions of his patients at the Parliament Street Dispensary and made courageous efforts to solve it. The ability to prevent diseases is related to the responsibility to initiate sanitary measures and maintain the execution of the public health laws.[8] This is often accomplished through the sanitary inspectors who engage in the inspection of food exposed for sale and the condemnation of unsound food and the formulation of penalty against such [3] The role of the medical officer of health on sanitation issues attained global recognitions in the late 19th and early 20th centuries; such that it became compulsory for Colleges and Universities training sanitary inspectors to have medical doctors; especially medical officers of health in their training teams[2].

Prevention and control of endemic and epidemic diseases

The MOH investigates the causes, origin and distribution of infectious diseases. He is also primarily involved in the prevention and control of disease outbreaks within the defined territory [17, 27]

Family Health Services

This is currently divided into maternal, child health and family planning services, and is particularly carried out in conjunction with the community/visiting nurse. This specialty in public health was introduced in 1859 by William Rathbone in Liverpool. The community nurse carries out all the nursing duties in public health within a district; which is usually made up of about 2,000 people. The district nurse is responsible for the day-to-day public health needs of the community. She reports and consults the MOH on duties that are beyond her competence and professional discipline.[3]
Maternal and child care services were incorporated into the functions of the MOH in Nigeria in 1926 by Sir Isaac Oluwole. These services included: school health programmes; which involved vaccination; regular inspection of school children; improvement of their personal hygiene and school environment. Some of these services which were initially provided only at the dispensaries in Lagos State, were later modified to include home visits.[14]

Daily out-patient care of common ailments

In Nigeria and several other developing counties, the MOH provides out-patient care

for common ailments in the primary healthcare centers or comprehensive health care centers. [28] These are usually cases that may have been referred from the dispensaries, health post or health clinics by the nurses, midwives or community health extension workers. These ailments include: malaria, pneumonia and diarhoea. Other less common conditions include cardiovascular diseases, musculo-skeletal, genito-reproductive and ophthalmologic problems.[17]

Monitoring and Evaluation

This is one of the major roles that brought the leadership role of the MOH to the limelight in the 2nd half of the 19th century. During that period, monthly and annual reports on the population health were compiled and sent to the relevant national authorities. This contributed in no small measure to the effective decline in infectious diseases between 1872-1914 and is it has remained a major function of the MOH. [4]

Health Education

This role was popularized by the campaigns carried out through the print media, lectures and domestic visits in the late 19th century, in Britain. Although the production and distribution of pamphlets was popularized by Dr William Duncan, it was further strengthened in 1948 with the grass roots work of Robert Wofinden, the MOH of Bristol, who issued monthly health bulletins to local GPs and regularly appeared in the local press and television.[10] Health education and health promotion, under the auspices of MOH in Nigeria is achieved through the instrumentalities of the village and ward health committees. They provide the base for the adoption of healthy life-styles and the participation of people in the maintenance of their health.[28]

Other functions of the MOH

These include supervision of the campaigns against communicable diseases such as mass chemotherapy, e.g. schistosomiasis, onchocerciasis, leprosy, tuberculosis etc.[28]They also include: public health nutrition, and provision of essential drugs.[29] The MOH is also involved in training and re-training of other PHC staff.[17]

The MOH and the current burden of diseases in Nigeria

Primary Health Care and its major actors at the grassroots remain the back-bone of the health system of every country.[30] The current health system of Nigeria, with its poor coordination; especially at the local government level has been adjudged to be very weak, hence its rating as 187 out of 190 in the world health systems. Making it slightly ahead of Democratic Republic of Congo, Central Africa Republic and Myanmar. This is attributable to inadequacy of health centres, personnel and medical equipment and a non-functional surveillance system.[31] Although the 2009 communique of the Nigeria National Health Conference acknowledged lack of clarity of roles and responsibilities among the different levels of government as the main contributor to the poor health status of

Nigeria, [32] the problems may not be with respect to the levels of care alone but also with respect to the roles and functions of the MOH and others coordinating the effective implementation of health policies at the grass-roots. [32] Similarly, an assessment of the poor health status recorded in Nigeria for the past 25 years has been primarily traced to the under-performance of the PHC system. The major contributor to this being the inadequacy or poor performance of the primary health care coordinator (or MOH) and other PHC staff in the local government. [11] These have resulted in persistently poor health indices, such as under-5 mortality rate of 128/1000 live births; infant mortality rate of 69/1000 live births; maternal mortality ratio of 576/100,000 live births and with only about 25% of children fully vaccinated. Nigeria is reported to have one of the world's highest rates of all-cause mortality for children under the age of five years, with health service utilization for treatment for treatment of acute respiratory infection at 35% and diarrhoea at 29%[9, 33]

Decline in relevance of MOH

The mandate of PHC implementation, no doubt primarily rests on the MOH; who doubles as the primary health care coordinator in the Local Government within the Nigeria health system.[17,19] However, the office of the MOH is gradually losing its essence in the scheme of things.

The historical details in Nigeria also clearly show that apart from Lagos which had its public health laws fully functional, other states used medical officers in general hospitals to carry out the public health responsibilities in their areas. Generally, the roles of the MOH in Nigeria has been affected by the periodic changes in the Nigeria health system.[5] For instance apart from the BHSS, which created the enabling environment for MOH to thrive, other health policies, development plans and reforms had very little or nothing to do to enhance it.[34]

Again, the introduction of primary health care under one roof (PHCUOR) in 2011 presents its deleterious effects on the MOH in Nigeria. It sub-summed the office of the district medical officer under the activities of the Local Government Health Authority Management Committee; which is relatively nominal in the scheme of things.[23] This is particularly compounded by inadequate provision for its salaries from the basic health care provision fund.[22] Also, preliminary reports on the relevance of the MOH and LGA health authorities in the concept of PHCUOR has revealed that the office of MOH have been reduced to a mere appendage to the State Primary Health Care Development Agency.[21]

It is pertinent to add that in 2006, environmental health technicians pulled out of the PHC department in several states in Nigeria, and this resulted in the ceding of the environmental function to the newly created department of environment. This indeed is contrary to the foundation laid by William Duncan in Liverpool, which was also replicated by Sir Isaac Oluwole concerning Lagos in the early 20th century.[8,

[14] This anomaly also absolves the MOH from taking full responsibility for disease prevention and control within the defined environment. Furthermore, the gradual disregard for the MOH, makes it very unattractive to specialist and disciplinary community physicians to take appointments as medical officers of health after their training. [5, 21, 23] All in all, the declining relevance of the MOH in Nigeria apparently mimics the historical rise and fall of the British MOH between 1872-1914 [10] but its peculiarity is in the depth across the country and the timing of the decline.

Conclusion

The MOH is the main implementer of the public health laws of the society and has contributed immensely to the reduction of diseases globally.

However, there is a gradual decline of its relevance in Nigeria, which mimics the experiences of the MOH in Great Britain between the first and third quarters of the 20th century. This decline is particularly made worse by continuous disregard for the office of the MOH by national health reforms and policies, especially the recent concept of PHCUOR.

Recommendations

Efforts should be made at all levels, especially by the PHC regulatory agencies, the Association of Public Health Physician of Nigeria (APHPN) and the Society of Public Health Professional of Nigeria (SPHPN) to reverse policies that are largely inimical to the implementation of PHC at the grassroots through the MOH.

Again, the regulatory agency of PHC should urgently ensure that the environmental component of PHC is restored and environmental health technologist re-assigned to work under the MOH especially in states where it has been balkanized. This is the best way to prevent recurrent outbreak of communicable diseases which may be related to unsanitary conditions.

The Association of Public Health Physicians of Nigeria, should as a matter of urgency, through the Ministry of Health initiate a programme where the MOH or a disciplinary public health physician must be a part of the training teams of various schools of health technologies across the country. This will enhance the capacities and skills of their students in diseases prevention and outbreak response.

Policies that will empower Community Health Physicians across the country to be engaged at the community level either as full-time or part-time medical officers of health should be initiated or re-awakened. In addition, policies concerning the implementation of PHCUOR should be modified to give sufficient autonomy to the MOH at the grassroot level.

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