



Onchocerciasis Control Policy in Nigeria, 1988- 2015

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ABSTRACT

Policy is a plan of action agreed or chosen by a people; a principle or framework adopted which influences their belief, actions, and operations. Out of 20 million people who suffer from the disease globally, an estimated 8million live in Nigeria. Onchocerciasis has been a public health problem in Nigeria for over three decades leading to disabilities and loss of person-hours with its negative consequences on health and the economy. This article examined the state of onchocerciasis policy in Nigeria since inception. Continuous review and improvement on government policies, strategies, and programmes is a positive step towards attaining a Neglected Tropical Diseases (NTD) free world.

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Introduction

Onchocerciasis is an infection caused by *Onchocerca volvulus*. The disease vector is the black fly of the specie *Simulium damnosum* and *Simulium bovis* and is the most predominant in the West African sub-region. Transmission occurs predominantly near fast-flowing rivers, streams, or waterways where the vectors breed. The introduction of the concept of Neglected Tropical Diseases (NTDs) in Nigeria is aimed at progressively controlling and eliminating the morbidity, mortality, and disabilities through integrated and cost effective programs on or before the year 2020. [1] Onchocerciasis is a disabling tropical disease characterized by skin and eye lesions caused by *Onchocerca volvulus* transmitted by black flies of the genus *Simulium*. Victims are usually visually impaired. In 1974, the World Health Organization (WHO), launched the Onchocerciasis Control Programme in Africa to combat the menace of river blindness in the region predominantly inhabited by farmers who are easily incapacitated by the scourge. The initial programme was predominantly via vector control by spreading insecticides along riverbanks to kill the larvae of *simulium*. Merck & Co. Inc. further modified it in 1987 following ivermectin discovery. A combination of vector control and mass treatment using ivermectin was adopted. The control drive was enhanced to cover 19 countries of Africa from the previous 11 following the birth of The African Programme on Onchocerciasis Control (APOC). Their target was to treat 50 million people infested with filariasis annually by 2010 using free ivermectin by Merck & Co. Inc. This was complimented by other programmes on training, research, and development in tropical diseases by specialized United Nations Agencies, World Bank and World Health Organization (WHO). [1, 3, 13, 15] An estimated 17.7 million people were affected, 500,000 were visually impaired while 270, 000 were blind in 37 endemic tropical countries. The African programme for onchocerciasis control was launched in 1995 to ensure wider coverage. It was targeted towards ivermectin distribution through community sustainable distribution (CSD) approach. Following the elimination of micro filaricides, its use should be continued for 13 – 20 more years to

ensure complete elimination in meso-endemic and hyper-endemic areas.[2] Nigeria occupies 156th position out of 187 countries with data and 187 out of 191 countries in 2000 and a total population of 171, 470 000 victims in 2012. [2,3,4] The population with access to improved drinking water sources in 2011 was 58.5% and total expenditure on health was 5.3% of Gross Domestic Product (GDP). [5, 6, 7, 8].

In 1988, the Federal Republic of Nigeria put up a National Health Policy, a strategy towards actualizing health for all Nigerians that represents the government and peoples collective will. However, implementing the framework has been more challenging. Health summit was organized in Nigeria in 1995 with the view for an urgent change in the health systems and status of the country. The Federal Ministry of Health (FMOH) responded to this and organized a review of the policy in 1996-1997. However, the document was not endorsed officially then. It was endorsed and released as a policy blue print in September, 2004. The entire policy objective was, “To strengthen the national health system such that it will be able to provide effective, efficient quality, accessible and affordable health services that will improve the health status of Nigerians through the achievement of the health-related Millennium Development Goals (MDGs)”. The development context was hinged on the health strategy of New Partnership for African Development (NEPAD), MDGs, economic empowerment development strategies and health sector reforms based on the principle of social justice, equity, and freedom as indicated in the 1999 constitution of the Federal Republic of Nigeria. Against this background was ancillary policies aimed at supporting the main framework for sustainable health reforms in Nigeria. The overall policy objective was to strengthen the national health system to provide efficient, quality, affordable and accessible healthcare services that will improve the health status of Nigerians with the achievement of the health related Millennium Development Goals (MDGs). The major thrusts of the National Health Policy include National Health System and Management, National Health Care Resources, National Health Interventions, National Health Information System, Research and National Health Care Laws. [9,10] In order to achieve the

objective of the national health policy, efforts were made towards tackling disease burdens and pressing health needs of majority of the people through strategic health interventions. One of those interventions is the control of onchocerciasis. This article examined the state of onchocerciasis policy in Nigeria since inception. An appraisal of the operations and present status is vital towards ensuring total prevention and control of the disease burden.

National Policy on Onchocerciasis Control

The national health policy was introduced in 1988 to promote health for all Nigerians while a document containing the onchocerciasis policy as a national health intervention for the control of onchocerciasis as a priority disease was put forward in 2004. The ultimate goal is to eliminate onchocerciasis as a public health problem throughout Nigeria through strengthening of self-sustainable prevention and control programmes in endemic communities. The global target for the elimination of NTDs is 2020. The policy framework marked another milestone in the prevention and control of a disease that has greatly affected and incapacitated the productive and economically viable work force especially those that are predominantly farmers in the rural areas, remote villages and hinterlands. This informed the need for review of the progress made so far in order to transit from control to elimination and prevention. Massive ivermectin (Mectizan) and Albendazole administration to eligible individuals in endemic communities was introduced. [6, 15]

Therapeutic coverage

One of the specific objectives of the onchocerciasis control policy was to achieve and maintain nationwide coverage of a minimum of 65% coverage nationwide by the end of 2012. [10] The initial strategies were mainly prevention and control, which were complimented by plans towards elimination. An estimated 27 million Nigerians distributed in 32 states of the federation live with onchocerciasis. Onchocerciasis is regarded as an endemic disease in Nigeria, accounting for 40% of the global disease burden. Presently, seven endemic states still exist in Nigeria namely: Abia, Anambra, Delta, Ebonyi, Edo, Enugu, and Imo state respectively with an estimated 35 million people to be reached. [11] Preliminary studies carried out in the year 1989/90 revealed that onchocerciasis was present in all the 36 states in Nigeria. [12,14] The problem associated with use of drugs in the control of onchocerciasis will be that of resistance at the long run which is affected by coverage, duration, frequency and susceptibility to adverse effects. This suggests the need for vaccines and step-up on public enlightenment campaigns as veritable tools in disease control. Adebayo suggested that economic status could be a factor since the poor were predominantly affected in most endemic communities and provision of portable drinking water could stem the tide. He recorded a significant difference when he compared communities with river as their source of drinking water/non-drinking water to those without river as their source of drinking/non-drinking water. [16, 17, 18] A study by Manafa and Isamah suggested that many people in southeastern Nigeria are still ignorant of the causes of onchocerciasis. [19] This informs the need for accelerated public enlightenment campaign especially in the endemic communities and areas prone to vector infestation. Nigeria still has 6707 meso-endemic and hyper-endemic communities compared to Uganda, Cameroun, and Mali with 553, 1738, and 1892 of such communities respectively. [19]

Community participation

Stakeholders' involvement is fundamental to the success of any programme targeted towards the people. Nigeria was the first country to use community-directed treatment (CDT) with Ivermectin, which provided the platform for health interventions like onchocerciasis treatment. [20, 21] Ivermectin for treatment of onchocerciasis was introduced in Nigeria in 1991 with the view to eliminating it by 2014 in the 32 endemic states and the federal capital territory (FCT). [22, 23] Community participation helps communities to take responsibility of managing their own health needs and priorities while leveraging on the responsiveness of the health sector. [24, 25]

Partnership for sustainability

Many stakeholders, nongovernmental organizations (NGOs), religious organizations, community based organizations (CBOs), private organizations and international funding agencies collaborate with the government in funding and promoting her policies since the government cannot bear the enormous burden alone. The Federal Ministry of Health (FMOH) plays the coordinating role for effective collaboration and partnership. The FMOH plays a central role while the CBOs and NGOs play peripheral roles in supporting health programmes. The Carter Foundation, Merck & Co. Inc., WHO, APOC, Onchocerciasis Control Programme (OCP), World Bank, United Nations Development Programme (UNDP), United Nations International Children Emergency Fund (UNICEF), Sir Emeka Ofor Foundation, Sight Savers, and a host of others support onchocerciasis programmes in varying degrees. The platform for partnership is information sharing, work force development, integrated planning, collaboration, trust, policy formulation, and development, execution of activities and programmes, monitoring and evaluation. The State and Local Government Miniseries of Health, which are in contact with people at the grassroots, facilitate these activities. [26, 27, 28], The FMOH also carry out inter-sectoral collaboration with other ministries like the ministries of education, agriculture, water supply, information, finance and other agencies to mobilize them for supports in key areas of need. [6]

Capacity building for onchocerciasis policy

The FMOH in Nigeria has intensified efforts through community health workers development to enhance combined drug treatment and capacity building to improve treatment outcomes while utilizing national, state and local/community based approach to combat onchocerciasis. The policies were initiated at the national level while implementation takes place at the grassroots. Schistosomiasis and filariasis are managed alongside onchocerciasis by treatment with praziquantel, albendazole, and ivermectin.

Management Information Systems

The FMOH through the Onchocerciasis Prevention Programme (OPP) in collaboration with the epidemiological division of the Department of Public Health of the FMOH enforce the timely collation of data from the community, local government, and state levels. Data generated are transmitted to the federal level from the state representatives. The FMOH ensures the analysis, interpretation of data and dissemination of relevant information through and to the relevant agencies. There is good understanding between the FMOH and the National Orientation Agency, Federal Ministry of Information and other agencies directly or indirectly related to their operations to facilitate the dissemination of information and mobilization of people from the federal level to the grassroots. The federal government gets the feedback information from facilities from the grassroots back to the national level through the local

government, state agencies, and the state ministry of health. Data are kept manually at the facility levels, local government levels and predominantly manually at the state levels while that at the federal levels they are predominantly stored in electronic forms. The federal government established health data banks at the national and state levels to enhance standardization, corporation, and use of information for improvement of related indices and outcomes. At the local government health authority levels, Monitoring and Evaluation (M & E) officers keep data for proper follow up. [1, 6, 8] Besides health related data on onchocerciasis, health service information that are relevant to health are obtained from other sectors of the government. A good example is the economic planning, and development for data on economic indicators and poverty. The agricultural department provide data on food production, distribution, use and cost of commodities, the public works and urban development department provide information on water supply, housing and environmental sanitation. The education ministry is not left out in the entire operations. The ministry provides information on literacy levels and rates, girl child education and school enrolment. [29,30,31] Contrary to the popular health analysis concept which depended predominantly on the medical model of analysis that considered the biological factors of health determinant, it took into consideration the Africanization of the social determinants of health which shifted emphasis from the dominant medical models that emphasize individuals health outcome, to consider the economic and social status of the people. It is the basis for health and economic development reverse causality concept by Icheoku. He argued that good economic status promote good health outcomes besides the biological angle, and vice versa. [32, 33, 34] The state miniseries of health established health data consultative committees for inter-agency corporation and collaboration in health and health data related matters. However, statutory responsibility for coordination of health data and information lies on the Department of Planning Research and Statistics. [6] To facilitate proper grass root coverage in the collection and transmission of data, the government and donor organizations provide sports utility vehicles, bicycles and essential grass root aids periodically to the onchocerciasis control programme to boost logistics in transversing the remote and difficult terrains that are not usually easily accessible.

Research and Development

In recognition of the fact that no meaningful progress is achievable without research and development, the FMOH in collaboration with some universities, medical research institutes and tropical disease institutes collaborate at different levels in research and development. They collaborate with the federal ministry of education, science and technology, ministry of justice and other relevant ministries to review priorities for health service and biomedical research, content of activities, promotion and financing of research activities and assessment of health technologies. They encourage private sectors collaboration in their activities that promote health and disease control. [6] Research activities are predominantly targeted towards: biomedical and health services, operational research, developmental research, basic biomedical research which seeks to broaden basic knowledge relevant to biology and health; and research on socio-cultural factors which directly or indirectly affect health and health services. Special considerations are given to epidemiological, operational, and developmental research activities.

Conclusion

The onchocerciasis control policy in Nigeria has made positive impacts towards the disease control. However, to attain the vision 2020 goal of eradicating the scourge in Nigeria, a more pragmatic approach coupled with improved funding, follow up and sustainability is vital towards attaining the goal of freedom from onchocerciasis and a neglected tropical disease (NTD) free world.

References

1. WHO Country corporation strategy, Nigeria (2014-2019). WHO Regional Office for Africa, 2014: pp14.
2. WHO Global fact sheet on onchocerciasis, WHO Country office- Nigeria.
3. UNDP Human Development Report 2011.
4. Federal Republic of Nigeria; Nigeria 2013 Demographic and Health Survey; Abuja; National Population Commission, October 2013.
5. Nigeria Multiple Indicators Cluster Survey, 2011 (Main Report, NBS, UNICEF, UNFPA, April, 2013)
6. Federal Republic of Nigeria, Federal Ministry of Health; National Strategic Health Development Plan, Combined 2012 Health Sector Performance Report and 2013 Mid Term Review, Abuja October 2013.
7. Presidential Summit: Declaration on Universal Health Coverage in Nigeria. Abuja, FMOH, 10 March 2014.
8. Federal Republic of Nigeria, Federal Ministry of Health; National Policy and Strategic Plan on Prevention and Control of Non-communicable Diseases, Abuja 2013.
9. Federal Republic of Nigeria, Federal Ministry of Health; National Strategic Health Development Plan Combined 2012 Health Sector Performance Report and 2013 Mid Term Review, Abuja October 2013.
10. Federal Republic of Nigeria , Revised National Health Policy; Federal Ministry of Health Abuja. September 2004.
11. SEOF Foundation. SEOF River Blindness Elimination Commitment in Nigeria; 03 April, 2014.
12. National Onchocerciasis Prevalence Survey Report -Nigeria, 1990.
13. Kale OO. Controlling Onchocerciasis and Other Filarial Infections. Archives of Ibadan Medicine; 3:2:45-47.
14. Oyediran ABOO. Surveillance and Notification of Diseases in Nigeria. A training Manual, Federal Ministry of Health Epidemiological Division, Lagos. Ed. 1988.
15. WHO, Neglected Tropical Diseases, Working Document A66/20, World Health Assembly, Sixty-sixth session, Geneva, 2013.
16. Hess JA., Zhan B, Bonne-Année, S, Deckman, JM., Bottazzi ME, Hotez PJ, Klei TR., Lustigman S and Abraham D. Vaccines to combat river blindness: expression, selection and formulation of vaccines against infection with *Onchocerca volvulus* in a mouse model. International Journal for Parasitology, 2014; 44(9), 637–646.
17. Barry MA., Simon GG. Mistry N, Hotez, PJ. Global trends in neglected tropical disease control and elimination: impact on child health. Archives of Disease in Childhood. 2013; 98(8), 635–641.
18. Adebayo OA. Access to Safe Water - A way to Mitigating Onchocerciasis in Nigeria. Research on Humanities and Social Sciences. 2014; Vol.4, No.26 pp 15-17.
19. Ogenna M and Isamah AN. Local knowledge and attitudes about onchocerciasis in Oji-River local government area of Enugu State, Nigeria. Epidemiology and Infection . 12/2003; 129(3):629-33.

20. The power of integration. UK Coalition against Neglected Tropical Diseases. The Power of Integration: achieving the control and elimination of neglected tropical diseases Meeting Report. May 21, 2013. World Health Agency Report; 2014.
21. Johnson N and Simon B. Sight Savers Elimination of Onchocerciasis, Ten-year strategic fast tracking plan in Sight Savers supported countries 2011 – 2021. 15th November 2011; pp 23.
22. Njebuome N, Ogbu-Pearce P, Okoronkwo C., Igbe M. Controlling onchocerciasis: The Nigerian experience. *The Internet Journal of Parasitic Diseases*. 2014; 4(1).
23. Maikaje DB, Dibal DM., Umar YA, Egbe NE. Investigations on the transmission potentials of *Simulium damnosum* and the risk of human. *Oncocerciasis in Kaduna metropolis, Kaduna State, Nigeria*. *IJMBR* 3; 2015: 1-5.
24. Amazigo U, Okeibunor J, Matovu V et al. Performance of predictors: evaluating sustainability in community- directed treatment projects of the African programme for onchocerciasis control. *Soc Sci Med* 2007; 64:2070-2082.
25. Laura MA, Michelle EM, Psychosocial, and economic evaluation of onchocerciasis: a literature review. *Social Medicine*. 2009; Vol. 31; 4:1 pp8-31.
26. Richards FO Jr, Miri ES, Katarawa M, Eyamba A, et al. The Carter Center's assistance to river blindness control programs: establishing treatment objectives and goals for monitoring ivermectin delivery systems on two continents. *Am J Trop Med Hyg*. Aug 2001; 65(2):108-14.
27. Richards F, Gonzales-Peralta C, Jallah E, Miri E. Community-based distributors in the Delivery of ivermectin: Onchocerciasis control at the village level in Plateau State, Nigeria. *Anta Tropical*. 1996; 61: 137-144.
28. Blackburn BG, Eigege A, Gotau H, et al. Successful integration of insecticide-treated bed Net distribution with mass drug administration in Central Nigeria. *Am J Trop Med Hyg*. Oct. 2006; 75(4): 650-655.
29. Berman PA. National Health Accounts in developing countries: appropriate methods and recent applications. *Health economics*, 1997; 6(1): 11-31.
30. WHO New Approach to Health Statistics. Technical Report Series NO. 599. WHO, Geneva 1977.
31. Adetokunbo OL, Herbert MG. Short Textbook of Public Health Medicine for the Tropics. International student's edition. Georgina Bentliff publishers. Ed 4 (2):11-28.
32. Icheoku HE, Mooney G, Ataguba JE. Africanizing the social determinants of health: embedded structural inequities and current health outcomes in sub-Saharan Africa. *International Journal of Health Services*. 2013. 24
33. Icheoku HE, Leibbrandt M. Demand of healthcare services in Nigeria: a multivariate nested logit model. *African Development Review*. 2003; 15(2/3), 396-424.
34. Icheoku HE. The use of socioeconomic status indicators in the analysis of health inequalities and poverty in Africa. *Journal of International Development*. 2010. 23(7) 1004-1012