

OPTIMIZING HEALTH CARE DELIVERY SERVICES IN NIGERIA: USING THE ANALYTIC NETWORK PROCESS (ANP)

OKPOKPO UKAIJI GODWIN

Centre for Management Development Shangisha, Lagos-Nigeria

e-mail: gokpokpo@gmail.com Tel:2348168748368

FASHOTO STEPHEN GBENGA

Department of Mathematical Sciences, Redeemers University, Mowe Ogun State Nigeria

e-mail: gbengafash@yahoo.com Tel:2348058845034

ABSTRACT

Nigeria is a large, well-populated and developing country in the sub-Sahara Africa. Given its low pace of development, economic and social vices, and ineffective and inefficient public policies and programmes, health sector development has become a very big challenge. The consequences of this are low life expectancy, diseases, debility and morbidity. Health reforms and policies have been lopsided against the majority and against finding solutions for the most common diseases. The thrust of this paper is thus to adapt a veritable tool for decision making towards influencing optimal policy for the health sector. The Analytic Network Process or Analytic Hierarchy Process is found highly invaluable in this regard. The research shows that primary health ailments are commonest amongst the citizenry, and hence should be given greater attention. Hospitals generally in Nigeria should be well equipped. Local Government owned health centers should be supported with adequate funding and health personnel supply, as they are nearest to the people. Policies should be put in place to reduce brain drain particularly of the medical personnel. More importantly, Federal and State Governments must support health programmes and promote safe health culture through sensitization and improved health/ hygiene education.

Keywords: optimization, health care, policies, network.

1. Introduction

The health status of a nation is an indicator of the level of its citizens' well-being. An individual health standard is good if such a person enjoys good state of mind, mental and body. "The major indices of good health status for a nation or place include: presence of health facilities and personnel, low mortality rate, high life expectancy, adherence to modern medicine, controlled birth rate, absence of communicable diseases, and low debility and morbidity" **Uduje Michael Ejiofor** (2013).

The demand for health care services in Nigeria has increased tremendously. The reasons for this include: high population (about 160 million), rising poverty which have reduced calorie intake,

therefore causing malnutrition and general debility; poor supply of water and bad sewage system, which have exacerbated the spread of water borne diseases (dysentery, diarrhea, typhoid etc); poor electricity causing rise in pollution from the use of generators leading to deaths from carbon monoxide and general stress; high unemployment leading to high dependency ratio on the few employed inducing expenditure-income gap stress; and high incidence of social insecurity including militancy, kidnapping, terrorism by religious extremists, robbery, and hooliganism. There are maternal problems, such as underage pregnancies, baby factories, widowed homes, abandoned orphans, etc. “Nigeria has the highest incidence of Sickle Cell Disorder (SCD) in the world with about 100,000 babies born annually with the disorder” (Baba Inusa, 2013).

However, government is responding to health problems in Nigeria through health sector reform programmes, but this is surely inadequate. The reform process and programmes are fraught with problems such as: lopsidedness in favour of the urban areas; greater development of the secondary and tertiary health services, but only in terms of equipment, but without enough personnel and drugs; low attention to primary health care which dominate health demand; too low budget to the health sector; National Health Insurance Scheme (NHIS) only available for the public servants, leaving out the teeming population in the semi-formal and informal sectors; poor acceptability and accessibility of health programmes particularly in the rural areas due to poor sensitization, illiteracy and religious dogmas. There is also the problem of leaving primary health care services in the hand of the local government level where human capacity, funding and capable leadership are lacking.

2. Review of Related Studies

Study reviews will focus on relevant subject matters that would lend support to the understanding of the health service structure in Nigeria as well as help to respond to the general and specific objectives of the study. Main issues include: **Health Status in Nigeria; Demand and Supply of Health Services; Health Care Expenditure and Financing; Recent Health Sector Reforms in Nigeria; and some Empirical Studies.**

3. Objectives of the study

The study adopts a unique approach (the Analytic Network Process –ANP)), which tends to consider all necessary criteria relevant for policy decision alternatives toward reforming the Nigerian health sector. “*The AHP/ANP is a decision making approach involving structuring multiple choice criteria into hierarchy, assessing the relative importance of the criteria, and in*

relation to alternatives based on their overall ranking” Oyatoye E.O. (2008). Specific objectives include:

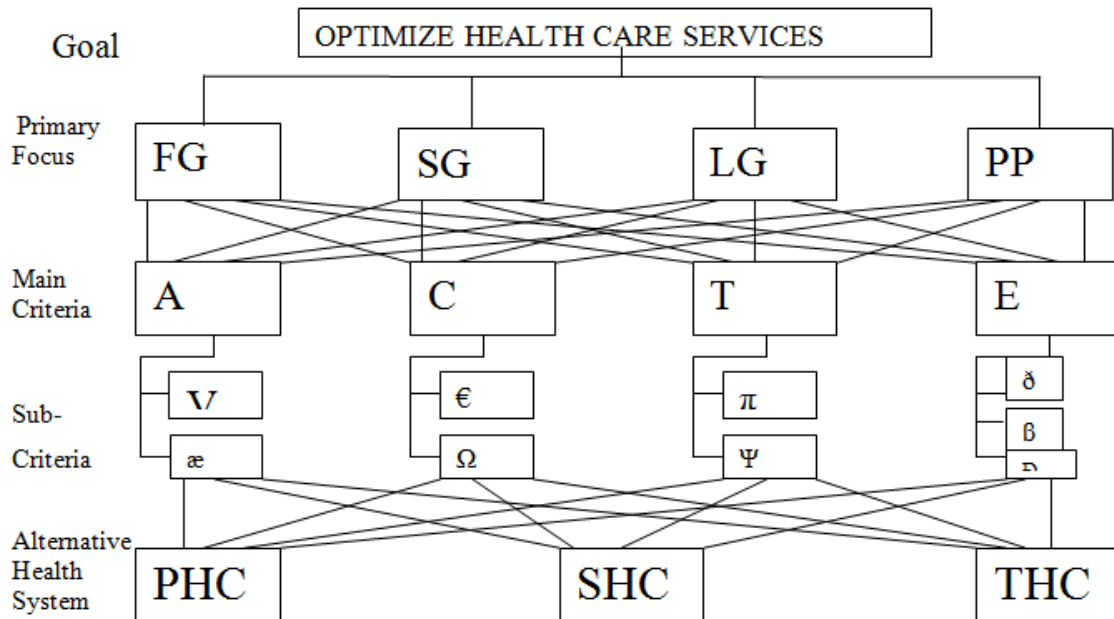
- i) Critically evaluate the performance of the present health system of Nigeria
- ii) To examine the nature and scope of health service demand in Nigeria
- iii) To examine the structure, functions and effectiveness of the health system
- iv) To demonstrate an efficient and effective policy decision approach with respect to sharing health care responsibilities among the three tiers of government including the private health care providers.

4. Methodology

The thrust of this study is to ensure the optimization of health care services in Nigeria through strategic decision to promote primary health care services, secondary health care or tertiary health care. The ANP problem formulation for this research work entails:

- i) Overall Goal: Optimizing Health Care Services Delivery in Nigeria*
- ii) Criteria: Access...A, Cost...C, Technology... T, Efficiency...E*
- iii) *Sub- Criteria: **Access (A)**-Availability...V, Easy Access...æ; **Cost (C)**- Price of health services...€, Cost of providing health services...Ω; **Technology (T)**- Technology Cost...π, Local Input Content ...Ψ; **Efficiency (E)**- Curative Strength...δ, Preventive Strength...β, Effectiveness in Delivery...Đ*
- iv) *The alternative policy decisions that would generally optimize health care service delivery are: (1) Expansion and financial strengthening of institutions providing Primary Health Care (PHC) Services Delivery (2) Expansion and financial strengthening of institutions providing Secondary Health Care (SHC) Services Delivery (3) Expansion and financial strengthening of institutions providing Tertiary Health Care (THC) Services Delivery.*

A Hierarchy of Health Service Providers for the Optimization of Health Care Service Delivery in Nigeria



The model for this research work has five levels:

- Level I: The goal, which is, optimize health care service delivery
- Level II: The primary focuses are the health service providers
- Level III: The main criteria considered necessary to achieve the goal
- Level IV: The sub-criteria considered in the decision process to achieve the goal
- Level V: The alternatives to be used to achieve the goal.

The objective question is, which of the health care system (Primary, Secondary, or Tertiary) should attract greater funding and expansion, and by which provider(s) to optimize health care service delivery?

5. Data Model

To have a nation-wide view of the study, Survey will be conducted in six states in the six geopolitical zones. They include: Lagos (Western zone), Delta (South-South zone), Anambra (South East zone) Kaduna (North West zone), Abuja (North Central zone) and Bauchi (North East zone). The study will consider the opinions of staff in the health ministries, staff in some health service delivery institutions (Public and Private Hospitals), as well as patients (individuals) found in the health institutions during the survey. A total sample of 360 respondents will be chosen using

quota sampling technique. Questionnaire will be administered to staff of Federal and State health ministries, health officers from the various tiers of health provider institutions and patients found in such health institutions. The questionnaire contains sections A and B. Section A contains 11 questions each focused on respondents' personal data, while section B (common to both groups) have the ANP structured questions focused on the subject matters.

6. Limitations

Like every other research efforts, limitations are inevitable. The major limitations encountered during this research work are: i) ANP structured questionnaire is often difficult to comprehend and respond for non-operation researchers. Much time was spent to train and guide the field questionnaire administrators and respondents. ii) Poor research culture of the average Nigerian led to uncooperative attitudes and slow response, thus questionnaire administrator has to make repetitive efforts.

7. Conclusion

Nigeria has poor health status given the prevalence of communicable diseases, terminal diseases, and consequent low life expectancy. The nation needs strengthening of health policies that would ensure rapid development of the Primary health care system, particularly at the Local Government level saddled with such responsibility. There should be increased budgetary provision and capacity building for the health sector particularly at the Local Government level.

8. Key References

- Baba Inusa, (2013) A seminar on Health Status in Nigeria, Vanguard News, p. 46, Jan 14th. 2014
- Mbanefor and Soyibo (2000)- Lecture note on Health Economics in Nigeria, University of Ibadan, Nigeria.
- Rexford E. Santerra and Stephen Neun (2000): Health Economics, Theories, Insight and Industry Studies, Harcourt College Publishers.
- Multi-Criteria Analysis: Survey and New Direction- European Journal of Operations Research, North Holland Publishing Company.
- National Decision Making for Primary Health Care- A Study by the UNCEF/WHO Joint Committee on Health Policy (WHO, 1981).
- Oyatoye E.O. (2008): Lecture Note on Multi-Criteria Decision Process & Analytic Hierarchy Process, University of Lagos-N igeria.

Uduje Michael Ejiofor (2013): Planning for Community Health, Symposium for National Population Commission, Abuja-Nigeria.