

**The Nigerian Academy of Science**  
FORUM ON EVIDENCE-BASED HEALTH POLICY MAKING

**EFFECTIVE PRIMARY HEALTH CARE  
DELIVERY IN NIGERIA**

**WORKSHOP SUMMARY**

**Editors:**

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THE NIGERIAN ACADEMY OF SCIENCE

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**West African Book Publishers Ltd.**



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# Preface

This document is a summary of the presentations and discussions at a workshop entitled *Effective Primary Health Care Delivery in Nigeria* held 20<sup>th</sup> – 21<sup>st</sup> May, 2008 in Abuja, Nigeria, and organized by the Nigerian Academy of Science under the auspices of the Academy's Forum on Evidence Based Health Policymaking. The workshop convened officials from Nigerian ministries, non-governmental agencies, international organizations and academic institutions.

The Forum and the Nigerian Academy thank all those who made presentations at the workshop. The Academy especially thanks the workshop adviser, Prof. Temitayo Shokunbi, who provided support to the Forum and staff on the workshop.

The participants of the workshop were not charged to produce recommendations and conclusions for this report. All statements in this summary are those of the individual workshop participants and are not necessarily the views of the Nigerian Academy of Science or the Forum on Evidence Based Health Policymaking.

This report has been reviewed in draft form by some workshop participants and other individuals in accordance with procedures approved by the Nigerian Academy of Science.



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# Executive Summary

Nigeria has systematically decentralized the delivery of basic services in health to locally elected governments. Primary health care being an entry point into the health system is highly ineffective and has deteriorated due to lack of political will in the country. In 1988, the Federal Government of Nigeria, in collaboration with UNICEF, integrated child survival programmes such as immunization and oral rehydration therapy into the primary health care model. Despite this effort, Nigeria still has high infant and child mortality rates (115/1,000 and 201/1,000 respectively).

The Forum on Evidence-Based Health Policy-Making of the Nigerian Academy of Science (NAS) organized a two-day workshop focusing on primary health care system in Nigeria as an effort geared towards reviving the primary health care system in Nigeria. The workshop with the theme '*Effective Primary Health Care Delivery in Nigeria*' was held in Abuja on Tuesday 20<sup>th</sup> May and Wednesday 21<sup>st</sup> May 2008 and was attended by a cross section of Nigerian academicians, policymakers and relevant professional bodies.

Factors contributing to the decline of primary health care delivery in Nigeria, according to experts at this workshop, include the following:

- A fragmented health system with multiple players
- Lack of trust in lower levels of care by the populace
- Inequitable and inadequate distribution of health personnel
- Poor communication and transport facilities
- Top-down minimal community involvement
- Political/Constitutional impediments
- Stand alone- poor linkage to other tiers of health system

Thematic presentation of papers and discussions at the workshop further explored challenges and possible solutions relating to health policies, community participation, financing of primary health care services, inter-sector collaboration, staff deployment and retention strategies, primary health care service delivery and the typical problems of basic health care needs.

The Nigerian Primary Health Care System (NPHCS) replaced the Basic Health Services Scheme (BHSS), which was incorporated in 1976

into the third National Development Plan of the federal government. The scheme established a three-level hierarchical network of health centres while its activities were mainly carried out by the federal government with little involvement of the state and local governments. However, the NPHCS was aimed at increasing the proportion of the population receiving health care from 25% to 60% with the attendant characteristics of reorientation; equitable distribution of health resources; intersectoral collaboration and community participation. The establishment of the National Primary Health Care Development Agency (NPHCDA) which was passed into law in 1992 by the federal government was intended to create a platform for achieving this lofty goal.

However, despite the subsequent establishment of the ward health system which was primarily to promote active community participation, there still exists a lack of community involvement in planning and implementation. In fact, services are not based on health needs of the community. Delivery of services are also poor due to inadequate and dilapidated physical infrastructure, basic equipments, drugs and supplies and poor information system for evidence based planning and management of PHC. To address these problems, a conference speaker noted that the federal government in improving access to primary health care services has made provision for the construction of model ward primary health care centres nationwide.

Conference speakers and participants however commented that due to the massive violations of the electoral processes, non-elected leaders emerge thus creating a wide gap between the expectations of the community and that of their leaders who rarely involve them in project implementation. The communication gap between the people and that of the leadership at the local government level means that the basic health needs of the community, such as water, education, and a clean environment, remain unmet. The challenge of monitoring and evaluating primary health care services was also discussed.

The inequitable access to primary health services between urban and rural areas, public and private sectors, and the north and south of Nigeria was of concern. They also discussed other possibilities which include re-organizing the National Youth Service Corps programme, to post at least one doctor to each local government area for a year of service.

For maximum efficiency of the workforce in primary health care, participants highlighted the importance of providing incentives and a conducive work environment for operating fully within their capacity. In addition, the indicators for assessing health workforce performance, which include availability, competence, responsiveness and productivity, were discussed by a conference speaker.

The conclusion was that sustainable change within the primary health care system is impossible without specific funding and participation of the community and other stakeholders.



# Introduction

## Primary Health Care in Nigeria

### Definition

Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development, in the spirit of self reliance and self determination.

The above is referred to as the Alma-Ata declaration. It was the collective statement of 134 countries at an international conference hosted by the WHO or UNICEF. It was declared that “Health for All” should be promoted and this would be achieved if it is based on the implementation of PHC.

### PHC in Nigeria

Nigeria is one of the countries that ratified the Alma Ata declaration. Sequel to the Alma Ata conference, a committee on national health policy was set up. The committee chaired by Professor A.O. Lucas, recommended health system based on PHC and linked this to national development goals.

Though the committee’s report was submitted in 1984, it was ignored till 1988 when its recommendations were largely infused into the national health policy.

### Pillars of PHC

Based upon the Alma Ata declaration, primary health care can be said to consist of seven core issues:

1. Foundation of the Health System: PHC is the first level of contact of individuals, the family and community with the national health system. It brings healthcare as close as possible to where people live and

work, and constitutes the first element of a continuing health care process.

2. **Priorities:** This addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative services accordingly.
3. **Science/ Evidence-Based:** PHC should be based on the application of the relevant results of social, biomedical and health services research and public health experience.
4. **Culture Sensitivity/ Social Relevance:** PHC system of health care delivery is a system of socially acceptable methods and technology and it reflects and evolves from the economic conditions and socio-cultural and political characteristics of the country and its communities.
5. **Equity and Social Justice:** This is an integral part of the PHC system, that healthcare should be made universally accessible to individuals and families in the community.
6. **Community Participation:** A system in which the people have the right and duty to participate individually and collectively in the planning and implementation of their health care. This requires and promotes maximum community and individual self-reliance and participation in the planning, organization, operation and control of primary health care.
7. **Sustainability and Self-reliance:** Healthcare should be at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination.

# CHAPTER 1

## Primary Health Care Systems

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Primary health care (PHC), which is supposed to be the bedrock of the country's health care policy, is highly ineffective and has deteriorated due to the lack of investment in personnel, facilities and drugs. The provision of health care at the primary care level is largely the responsibility of local governments with the support of State Ministries of Health and within the overall national health policy. The goal of the national health policy is to bring about a comprehensive health care system, based on primary health care that is promotive, protective, preventive, restorative and rehabilitative to every citizen of the country within the available resources so that individuals and communities are assured of productivity, social well-being and enjoyment of living. Rather, there is a lack of confidence and trust by the public in the health services resulting from the poor state of the facilities and low standards of delivery. This could easily be avoided if the primary health care system goes through a reform.

A PHC-based health system is an overarching approach to the organization of health systems designed to improve population health and maximize equity. Such an approach makes the right to health a guiding principle of the health system, with the health system structures and functions oriented towards achieving equity in health and social solidarity, based on a core set of principles and elements. Primary health care can also act as the basis of the healthcare system by establishing fundamental policies, programmes and priorities that respond to the population health needs. Rather, in Nigeria, a notion of primary health care is seen as a defined set of services, since services should be in accordance with local needs.

For revitalization of the primary health care system to occur, a framework must be developed to recognize the relevance of primary

health care as not only the provision of health services but that effective primary health care is dependent on other health system functions.

Primary health care is an entry point into the health care system but the services at that level alone are not sufficient to adequately cater for the more complex health needs of the populace. Thus health care systems should work in an integrated manner through the development of mechanisms that coordinate care across the entire spectrum of services, including referral systems. This chapter gives an overview of services provided at primary care level, the referral system in primary health care and most importantly prioritizing patients' safety and satisfaction. Lastly it discusses the part traditional medicine plays in primary health care.

## **BUILDING BRIDGES BETWEEN THE LEVELS OF HEALTH SERVICES**

*Dr. Ibrahim Labaran - Director Health Systems Development,  
NPHCDA, Abuja.*

### **Introduction**

The National Health Policy and Strategy to achieve healthcare for all Nigerians, promulgated in 1988, was the first comprehensive national health policy. The policy identified a three-tier structure for the national health delivery system with primary health care as the cornerstone. In selecting primary health care, the policy intent was to use health as a vehicle to promote development while focusing on the major causes of morbidity and mortality that are largely preventive. Sixteen years later in 2004, the document was revised and still maintained the three tier system; the primary, secondary and tertiary levels.

### **The Nigerian Health System**

The Nigerian national health system provides for three tiers of health care; primary, secondary and tertiary and these are managed by the local, state and federal governments respectively. Primary health centres are supposed to be the first point of contact for patients, providing preventive, curative, health promoting and rehabilitative services. Any

patient that cannot be managed at the primary health care level can be referred to other levels of care as appropriate.

At the secondary care level, patients are referred for specialized services from the primary health care level, through out-patient and in-patient services of hospitals for general medical, surgical, paediatrics, obstetrics, gynaecology and community health services. This level also supports peripheral units through regular supervision and provision of technical expertise.

The apex of the health care system in Nigeria is the tertiary level consisting of teaching hospitals and other specialist hospitals which provide care for specific disease conditions or specific groups of patients. In Nigeria, many secondary and tertiary health facilities are crowded with patients that have simple ailments that can be managed at the primary health centres which typically have many idle health care workers. However, there are some services that should be provided at all levels of care such as immunization, antenatal care and family planning.

### **Linkages between Levels of Care – Current Status**

Service delivery brings most people in contact with the health system. Services or interventions are provided at different levels of care with the ultimate aim of reducing morbidity and mortality. Referral allows patients to have contact with different levels of care when the need arises. According to Ojo (1991), referral is “a process by which a health worker transfers the responsibility of care temporarily or permanently to another health professional, social worker or to the community”. The revised National Health Policy (2004, p.12) makes only casual reference to referral. It states:

*“In order to ensure that the primary health care services are appropriately supported by an efficient referral system, Ministries of Health shall review the resources allocated to, and the facilities available at the secondary and tertiary levels whilst high priority shall be accorded to primary health care; within available resources, the secondary and tertiary levels shall be strengthened. The long-term goal is that eventually all Nigerians shall have easy access not only to primary health care facilities, but also to secondary and*

*tertiary levels as required. Particularly, attention shall be placed on the needs of remote and isolated communities that have special logistic problems in providing access to the referral system.”*

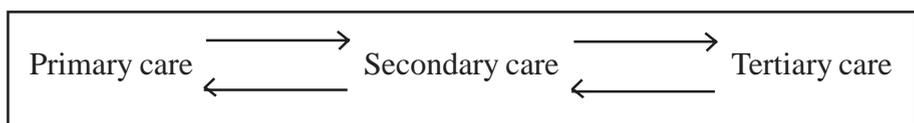
Similarly, the Operational Training Manual and Guidelines for Development of Primary Health Care (p.43-46) provides a schema for a two-way referral system and how it should operate. The Guideline proffers two referral pathways – a normal pathway and another for emergencies. Cases that cannot be effectively managed at a lower level are referred to a higher level of care. In addition, the Operational Manual and Guidelines for PHC Management Information System (p.20) provides a format for referral slips to be used in referring patients to referral facilities and a feedback slip to the originating facility. The Manual (p.51) also captures information on the number of referrals out of a facility (for in-patients). There is little or no evidence on how well the system operates.

The aim of the health policy is to ensure smooth transition of patients from one level of care to another. However, there is no clearly spelt out mode of how this is to be achieved and in practice all the three tiers of health care operate independently. Generally, both providers and patients show little understanding of how the system should operate.

There is paucity of information on linkages between levels of care in Nigeria. Akande (2004) reported that 92.9% of cases seen at University of Ilorin Teaching Hospital (a tertiary referral facility) within a four-week period were without referrals. Patients referred from primary health centres and comprehensive health centres were 5.2% and 2.3% of the cases respectively with the bulk from private clinics (34.3%) and the General Out-Patient Department of the hospital (41.9%).

### **Organizing Referral Services for Improved Service Delivery**

In order to have favourable health outcomes there must be a means of linking or referring patients from one level of care to another and also within each level. The present situation is depicted in the diagram below where each level of care operates independently with minimal linkage:



The desired state is where there is referral and feedback from lower to upper levels and a continuous interaction between the three tiers.

The experiences of other countries, like Nepal, indicate that the following steps are important in developing effective referral systems:

- i. Services to be provided at each level should be identified.
- ii. The lower levels of care should be strengthened with material resources, manpower, and regular supervision to make them attractive to patients.
- iii. Referral protocols, cards, as well as a manual of instruction and guidelines for the referral mechanism should be developed.
- iv. Active supervision and continuing education through feedback on cases and formal in-service training sessions assist in establishing links between the centres.
- v. Establishment of functioning communications network between primary health centres and other higher levels of referral centres.
- vi. Identification of suitable transport mechanisms that will ensure prompt movement of patients to referral facility.
- vii. Referral policies such as charging bypass fees for patients without referrals. Alternatively, the patients in the referral facilities could be separated into two groups – those with referrals and those without. The latter group should be directed to the on site PHC facility while treatment for the former is fast-tracked. For this to be effective there should be public enlightenment on the referral policy and what it hopes to achieve.
- viii. A programme, in the community, with agreed goals and objectives, standard protocols, performance targets and annual or semi-annual review sessions should be established. The link with the referral centre then becomes much more comprehensive than the health centre simply passing on its complicated cases.

Within the Nigerian context, the starting point is to strengthen existing PHC facilities to provide the range of interventions contained in the Ward Minimum Health Care Package. Availability of services at

this level in terms of manpower, equipment and drugs will reduce bypassing of the PHC level. In each ward, a health centre should be identified as the referral facility to serve as first referral centre within the ward. Concurrently, there should be the development of protocols and guidelines for the referral mechanism. This should be followed by ensuring awareness of the referral system and its mode of operation among health staff and communities. The awareness campaign should be for a period of time before commencement of the referral. Strict measures must be put in place to ensure compliance by patients and health workers.

### **Challenges**

The following have been identified as the factors militating against bridge-building between the levels of health services in Nigeria:

- ◆ A fragmented health system with multiple players
- ◆ Absence of guidelines and protocols on the functioning of the referral system
- ◆ Lack of trust in lower levels of care by the populace especially urban dwellers
- ◆ Low awareness among the health staff and the communities on the referral mechanism
- ◆ Lack of orientation and training of all health care providers, at all levels of the health care system, on the functioning of the referral system
- ◆ Poor communication and transport facilities

### **Conclusion**

Primary health care provides the first contact with the health system where the majority of cases of morbidity are treated. The poor national health indices may be attributable in part to the inability of the health system to sieve life-threatening cases from others and refer to the level that will provide appropriate care. Instituting a mechanism for prompt referral of cases will ensure that people enjoy an optimal level of care.

# **SERVICES AT THE PRIMARY CARE LEVEL**

*Dr P.C. Campbell - Lecturer/Consultant Public Health Physician,  
Institute of Child Health and Primary Care, LUTH, Lagos*

## **Introduction**

The health services of Nigeria have evolved through a series of historical developments including a succession of policies and plans which had been introduced by previous administrations. The National Primary Health Care Development Agency (NPHCDA) was created at the federal level to ensure sustainability of the primary health care (PHC) movement, but hardly recorded reasonable or actual success in the country, indicative of static or deteriorating community health indices. This can be attributed to the absence of a true community health service by which some of the indices are calculated or easily obtained.

## **PHC Component Services**

The ideal health services based on PHC, in line with the PHC components, include:

- ◆ Education concerning prevailing health problems and the methods of preventing and controlling them.
- ◆ Promotion of food supply and proper nutrition.
- ◆ An adequate supply of safe water and basic sanitation.
- ◆ Maternal and child healthcare, including family planning. In this context, family planning refers to services offered to couples to educate them about family life and to encourage them to achieve their wishes regarding:
  - Preventing unwanted pregnancies
  - Securing desired pregnancies
  - Spacing of pregnancies and
  - Limiting family size in the interest of the family, health and socio-economic status.
- ◆ Immunization against the major infectious diseases
- ◆ Prevention and control of locally endemic and epidemic diseases
- ◆ Appropriate treatment of common diseases and injuries
- ◆ Provision of essential drugs and supplies.

- ◆ Mental health
- ◆ Dental health

### **The Realities**

The States and LGAs are not performing their respective responsibilities in managing and allocating resources. General health services of preventive, curative, promotive and rehabilitative nature are meant to be provided to the populace at the PHC level, the point of entry to the health care system, by the local government with the support of the State Ministries of Health. The services are judged to be unsatisfactory. The health facilities are inadequate and poorly maintained particularly at the PHC level. A poor state of infrastructure such as buildings, equipment, materials, supplies and inequitable distribution of available facilities is the norm in many places. In some communities people have to travel over 5km to access health care because coverage is inadequate. During a situation analysis of health facilities that offer emergency obstetric care in Ibeju Lekki Local Government (Lagos State), it was found that virtually all the facilities visited were devoid of basic instruments; some health workers were not at the facilities and the rural communities and the urban poor are not well served.

The distribution of health personnel is inequitable and inadequate in the rural areas especially in the hard-to-reach areas. The provider-client relationship is also poor, with poor incentives and poor compensation for health workers. The management often shows major weaknesses resulting in waste and inefficiency, as shown by failure to meet targets and goals.

The quality of service is poor and largely unaffordable by majority of people. Squabbles between nurses, community health workers, and environmental officers are a contributory factor to low quality of care. Sensitive health issues are now being relegated to low cadre of staff with very little experience. Protocols for standard management of common childhood illnesses at the primary care level are inadequate. Poor client satisfaction has over the years led to loss of confidence in the public health care delivery system.

Traditional health practitioners are devoid of standardized practice and may constitute danger in their mode of practice sometimes. In Ibeju

Local Government and Lekki Development Areas, focus group discussions held with the TBAs revealed the deplorable condition under which they deliver services to their clients.

Most of the laboratories in the primary health care facilities visited were judged to require some infrastructural upgrading to provide a safe, secure and appropriate working environment. Some basic health center laboratories were found to be better equipped than those in the comprehensive health centres. PHC laboratories were found to have very low workload, and the accuracy of their results and the quality of the small range of tests performed is questionable. There was no quality control of laboratory tests in primary facilities because they lack appropriate professional supervision. While some PHC laboratories are equipped to perform TB microscopy, most of these also have a low workload and seldom offer other laboratory tests.

Voluntary organizations and other agencies providing health care with various inputs are poorly coordinated. The involvement of the community is minimal at critical points in the decision-making process and because communities are not well informed on matters affecting their health, they are often unable to make rational choices.

Other defects include lack of basic health statistics, poor financial resource allocation to the services, especially in priority areas, and defective basic infrastructure and logistic support.

## **Conclusion**

There is still a need to encourage active community involvement as participation, ownership and empowerment are largely lacking although isolated examples of successful initiatives have been witnessed.

## **ENSURING PATIENTS' SAFETY AND SATISFACTION**

*Dr J.B. Adetunji - Director, Hospital Services, FMOH, Abuja*

### **Concept of Patient Safety and Satisfaction**

Ensuring patient safety and preventing errors means designing a health care system with safety as a priority at all levels. The focus must

shift from blaming individuals for past errors to a focus on preventing future errors by designing safety precautions into the system. The interaction between factors in the external environment and factors inside the health care system can also prompt the changes needed to improve patient safety. Factors in the external environment include availability of knowledge and tools to improve safety, strong and visible professional leadership, legislative and regulatory initiatives, and actions of purchasers and consumers to demand safety improvements. Internal factors include strong leadership for safety, an organizational culture that encourages recognition and learning from errors, and an effective patient safety program.

## **External Factors for Improved Patient Safety**

### ***Establishing a centre for patient safety***

To make significant improvements in patient safety, a highly visible safety assurance centre, with secure and adequate funding, is needed. The centre should establish goals for safety; develop a research agenda; define prototype safety systems; develop and disseminate tools for identifying and analyzing errors and evaluate approaches taken; develop tools and methods for educating consumers about patient safety; issue an annual report on the state of patient safety, and recommend additional improvements as needed.

It is also imperative that the centre for patient safety focuses adequate attention on the communication of information and on knowledge of patient safety. The support and production of better information on medical errors and patient safety will be of little use without explicit mechanisms identified for the dissemination of information and recommended actions.

### ***Establishing error reporting systems***

Reporting systems have the potential to serve two important functions. They can hold providers accountable for performance or they can provide information that leads to improved safety. Reporting systems whose primary purpose is to hold providers accountable are “mandatory reporting systems”. Reporting focuses on errors associated with serious injuries or death. Most mandatory reporting systems are operated by state

regulatory programs that have the authority to investigate specific cases and issue penalties or fines for wrong-doing. These systems serve three purposes. First, they provide the public with a minimum level of protection by assuring that the most serious errors are reported and investigated and appropriate follow-up action is taken. Second, they provide an incentive to the health care system to improve patient safety in order to avoid the potential penalties and public exposure. Third, they require the health care system to make some level of investment in patient safety, thus creating a more level playing field.

### ***Setting performance standards and expectations for patient safety***

The development and availability of standards for patient safety serves several purposes:

1. It establishes minimum levels of performance, consistency or uniformity across multiple individuals and organizations.
2. The publication and dissemination of standards additionally helps to set expectations for consumers and purchasers.

Although there are many kinds of standards in health care, especially those promulgated by licensing agencies and accrediting organizations, few standards focus explicitly on issues of patient safety. Furthermore, the current lack of safety standards does not allow consumers and purchasers to reinforce the need for safe systems from the providers and organizations with which they have contact.

The National Primary Health Care Development Agency should develop standard operating procedures (SOPs) based on best practices which would guide the processes of health care at the local government level and thereby ensure patient safety. These SOPs should cover steps that should be taken in the diagnosis and treatment of common ailments, the type of equipment that should be used in the centres (appropriate technology), and the calibre of professionals that should be employed.

### **Conclusion**

In ensuring patient safety and satisfaction, the actions of professional groups and group purchasers in setting standards and expectations are critical. Professional groups shape professional behaviour by developing practice guidelines and identifying best practices

through educational, convening, and advocacy activities. All could be enhanced by a sharper focus on patient safety issues. Group purchasers have the ability to consider safety issues in their contracting decisions, and to reinforce the importance of safety by providing relevant information to employees and beneficiaries.

## **TRADITIONAL MEDICINE AS AN ASPECT OF PRIMARY HEALTH CARE IN NIGERIA**

*Dr Kolawole Komolafe - Medical Director,  
Tewetegbo Trado-Medical Centre, Lagos*

### **Introduction**

In Nigeria, the healthcare delivery to our people was taken care of almost exclusively by traditional medicine until 1873 when the first government health facility that was to be the fore-runner of the Lagos General Hospital was established. Between 1873 and 1960, traditional medicine in Nigeria suffered various forms of discrimination and neglect. However, since Nigeria's independence in 1960, there has been an increasing drive towards official recognition and respect for traditional medicine.

### **Quality and Safety**

For about a century or so, there have been various controversies raised over the quality and safety of traditional medicine not only in Nigeria but also in other developing countries of the world. These controversies have been largely responsible for the official neglect and non-recognition of traditional medicine in Nigeria and many other African countries. However, the 1978 Alma-Ata WHO declaration stimulated many nations towards meaningful development of traditional medicine. 1978 was the year that the federal government and some state governments in Nigeria started the re-training of our traditional midwives who were then called Traditional Birth Attendants (TBA). The re-training program soon became popular and successful to the extent that practically every state in Nigeria adopted the program according to a syllabus that was prepared by WHO. It is pleasing to note that the TBA re-training

program in Nigeria remains a program that many state governments have not only adopted but sustained because it has been seen as an effective means of reducing maternal and neonatal mortality/morbidity in primary health care plans.

Another notable area of positive development of safety and quality of traditional medicine in Nigeria is the current role of the National Agency for Food and Drug Administration and Control. This body has not given full recognition to any herbal or traditional medicine but has put in place a protocol that now allows temporary official recognition of traditional herbal preparations. Although this protocol does not address the issue of efficacy, it ensures that finished herbal medicine preparations abide by prescribed quality and safety regulations before they can be advertised or sold in public. Through such initiatives, some herbal medicines that are hygienically packaged can now be found in some conventional pharmacies. However, the efficacies of many of these preparations are still in doubt.

### **Efficacy**

In 1979, some authors of botanical and other scientific publications stated that the plant products of Africa could only pass as placebos since they possessed no significant efficacy to make them pass as medicines for effective therapy. In recent times, several medical and biological research workers who have worked on tropical plants have refuted this assertion.

### **Cost and Convenience**

Even with the advent of organized modern healthcare traditional medicine has remained the most dependable source of healthcare for the rural-poor in Nigeria. With the current economic situation in Nigeria, more people are patronizing the readily affordable and available traditional medicine facilities. This observed trend in Nigeria is similar to that reported in a survey sponsored by African Development Bank and UNICEF in Ivory Coast. The result of the survey showed that 13.5% of households examined had switched from the more expensive modern medicare to the cheaper traditional variety for economic reasons. In Nigeria, this type of switch is currently taking place not only in the rural communities but also in the urban areas.

## **Conclusion**

Since Nigeria's political independence in 1960, many stakeholders have come out openly and strongly, to put forward logical advocacy for the development of traditional medicine. The federal government, through some of its agencies (particularly the Ministry of Health and that of science & technology), has taken a good number of documented initiatives that are aimed at the positive development of traditional medicine in Nigeria.

## CHAPTER 2

# The Socio-Political Environment

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The social situation has continued to deteriorate in sub-Saharan Africa. This has been attributed to the inequity in access to basic social services and increasing food cost leading to high malnutrition levels. More than 50% of the African population lack access to services such as health facilities, housing, safe water and sanitation. Data from many countries indicate that rural populations are seriously disadvantaged in terms of access to health and health related services. Also access to safe water and basic sanitation is limited.

Local Government Authorities (LGAs) were established and recognized as the third tier of government, responsible for participating in the delivery of most local public services along with state governments and entitled to statutory revenue allocations from both the federal and state governments for the discharge of their responsibilities. In the late 1980s, there was a national initiative to overhaul the primary health care system through the adoption of a new national health policy in the context of which the federal and state governments issued directives giving LGAs full jurisdiction over the delivery of primary health care services.

The national health policy document, revised in 1996, indicates that local governments are expected to be the main implementers of primary health care policies and programs, with the federal government being responsible for formulating overall policy and for monitoring and evaluation, and state governments for providing logistical support to the LGAs such as personnel training, financial assistance, planning and operations. Yet, the current Constitution (1999) of Nigeria is unclear with regards to the autonomy of local governments in providing basic services, such as primary health care for which they have been given responsibility through segmental directives. This contributes to the

inefficiency of the local government functionaries to deliver quality primary health care services.

Intersectoral collaboration and community participation recognize that health and well-being are linked to both economic and social policy. These are needed to establish national health goals and also necessary for the development of healthy public policy and planning and evaluation of health services. This chapter provides an overview of the political situation in strengthening the delivery of primary care services, the importance of intersectoral collaboration for effective and optimum delivery of services and the importance of using community participation as a vehicle of giving end users of services a sense of belonging and importance. The chapter concludes by relaying the success achieved by Lagos state in its ongoing waste management project in the state.

## **STRENGTHENING LOCAL GOVERNMENT DELIVERY OF HEALTH**

*Dr Wale Okediran - Former Member, Federal House of Representatives, Abuja*

To strengthen local government health delivery in Nigeria, several long-standing issues need to be addressed:

1. **Disparity in conditions of service across geo-political zones:** It has been established that some geographical zones in the country suffer from a disproportionate deficit of poor health indices and a lower quality of health resources. For example, while the South-West has about 7,300 doctors, the North-East has only 639. This lopsidedness in distribution, from Northern to Southern Nigeria, can also be seen in the numbers of nurses and community health officers. Strategic efforts should be made to attract and employ qualified health professionals from parts of the country that have better resources.

2. **Conflict between the Three Tiers of Government:** The absence of collaboration between the three tiers of government in carrying out the health expectations of the people is a big deterrent to the health care delivery system at the local government level. The development has raised constitutional issues relating to the power structure within the federal government. Every effort must be made by the three tiers of government to work together for successful health care delivery to the people.
3. **Increased Budgetary Allocation to Local Governments:** The current revenue allocation formula which gives 16% of national revenues to local governments, 26% to States and 55% to federal governments and 3% to ecological funds has been criticized as being grossly inadequate. If the local governments are expected to perform creditably it may be necessary to allocate more funds to them. For this to be possible, a Constitutional amendment will have to be undertaken. While this may take some time, an increased appropriation to the health sector with an emphasis on primary health care will achieve the expected trickle-down effect to local government areas in the interim.
4. **Community Health Insurance Scheme:** Due to the dire economic situation in Nigeria, health care access remains a big challenge to many, especially those living in the rural areas. Fortunately, the establishment of the National Health Insurance Scheme has created an opportunity for many Nigerians to access some form of healthcare. It is hoped that a community based aspect of this scheme can take root in our local government areas, which will further increase access to health care among rural dwellers.

## **WORKING TOGETHER FOR PROGRESS: EXAMINING INTER-SECTORAL COLLABORATION**

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The health sector has not benefited significantly from the contribution of other sectors of the Nigerian economy, largely because health services continue to be politicized as an “essential commodity which must be provided free of cost by the government.” This belief by Nigerians has contributed largely to the poor state of the health system in the country. The World Bank policy study in 1987 observed that decentralization of the government health system should be considered as one way to improve health services in developing countries (including Nigeria).

The following inter-sectoral organizational structures are essential for the sustenance of Primary Health Care in Nigeria:

1. The establishment of State primary health management committees in which all the relevant ministries, parastatals, NGOs and private sector organisations are represented.
2. The establishment of a functional local government area PHC management committee in which all the relevant public sector institutions, private sector stakeholders, NGOs, religious bodies, social institutions (such as representatives of paramount rulers and important chiefs, school teachers, etc) are well represented and the committee meets regularly and implements strategies.
3. The establishment of district PHC committees for the mobilization and integration of grassroots support for PHC implementation strategies.
4. Bilateral sectoral approach between the National Agency for the Control of AIDS (NACA) and the other communication agencies with respect to the prevention and control of HIV/AIDS.

5. Bilateral sectoral collaboration between the Ministry of Water Resources and the Ministry of Health in the eradication of guinea worm.
6. Bilateral sectoral collaboration between the Ministry of Environment and the Ministry of Health in the control of malaria.
7. Multisectoral collaboration between the National Agency for Poverty Eradication Programme (NAPEP) and the other ministries for the alleviation of poverty in Nigeria with added value to the health of the people, especially children under 5 years.
8. The university-community-government partnership in the establishment, implementation, and sustained growth of PHC in the local government areas in Nigeria.

### **Building Health Systems: Collaboration between Medical Schools and Local Government Health Departments in Nigeria (1986)**

Fifty-two local government areas (LGA's) were selected in 1986 as a pilot project to begin the process of implementation of the adopted National Health Policy in Nigeria. Each LGA selected a medical school nearest to it for the implementation of a primary health care system. The medical school and schools of health technology were requested to provide technical assistance to the local government area in setting up the PHC services. The programme was also intended to enable universities participate in developing and implementing policies at the first-tier of government (Olikoye Ransome Kuti 1991).

Each participating local government area carried out a survey of its health problems and the resources available to it and they used the data to produce health plans which were implemented step-by-step. In the process, each LGA set up the management system of the PHC services beginning at the village level through wards and ending at the central LGA level. Village development committees were formed and taught their functions and village health workers were trained using selected preventive and curative skills relevant to the solution of local health

problems at an expertise level compatible with village resources and facilities. The village health services are supervised and supplied from the district level by ward development committees. The ward development committee also receive referrals from the village services. The general hospital established by the state government in each local government area serves as the referral centre for the ward development committees.

## **COMMUNITY INVOLVEMENT AND PARTICIPATION IN PRIMARY HEALTH CARE**

*Dr David Osrin, Research Fellow, Institute of Child Health, London*

### **Community Participation**

The renewed interest in community participation in health care is due partly to the lack of resources committed to primary care, and partly to the perceived failure of conventional health education and primary health care to deliver substantial health benefits. Although the desire for community participation features in many project and programme briefs, it is something of an abstract concept.

Community participation is desirable to connect primary health care services and their users, and to drive improvements in service quality, but evidence of effective models is limited. The community component of the Integrated Management of Childhood Illnesses (IMCI), for example, did not develop as rapidly as the more procedural clinical components, and the IMCI strategy was left with a substantial gap where its demand side activities were supposed to be: the multi-country evaluation of success was not compelling. Nevertheless, participatory approaches are increasingly being adopted. Community-based health promoters have increased exclusive breastfeeding rates in Mexico and India, where diarrhoeal morbidity was also decreased. In Ethiopia, a randomized controlled trial of mother coordinators trained to teach other local mothers to recognise symptoms of malaria in their children and to promptly give chloroquine, achieved a 40% reduction in under-five mortality.

## **Community Participation for Newborn Health: the Nepal Experience**

We took advantage of developments in cluster randomized trial methodology to test a model of community mobilization based on women's groups. The cluster design was appropriate because the intervention was delivered at the level of groups rather than individuals. We wanted to use a quantitative outcome that would be meaningful for child survival, and hypothesised that the intervention would reduce the neonatal mortality rate from 60 to 40 per thousand live births. Detailed considerations of the trial - which tested the intervention in a population of 170,000 in Makwanpur district, Nepal - are available elsewhere. At the time of initiation, the estimated maternal mortality ratio was 539 per 100,000 live births, the infant mortality rate 64, and the neonatal mortality rate 39 per thousand live births. 94% of rural infants were born at home, and only 13% of births were attended by trained health workers. The district primary health care system included a general hospital in the single municipality (at which caesarean section was not available), and a health facility in each of 42 village development committees. This health facility was a primary health centre, a health post or a sub-health post, which provided services in descending order of sophistication. Most people in rural areas of Makwanpur made use of traditional healers during illness.

The trial was implemented by Mother and Infant Research Activities (MIRA), Nepal. We matched 24 village development committee areas into 12 pairs and allocated one cluster in each pair to receive the intervention. We recruited a female facilitator for each intervention cluster. A literate, locally resident woman; she convened one women's group meeting per month in each of nine wards that made up her working area. Her role was to activate and strengthen groups and support them through an action research cycle. Although facilitators were not health workers, we trained them in basic perinatal health issues so that they could share information with women's groups. The first step was to explore issues around childbirth and child care in the community. This allowed the facilitators to develop participatory learning skills, and generated a body of information on pregnancy and childbirth covering beliefs and practices in both uncomplicated and complicated maternities.

The facilitators then supported the women's groups through monthly meetings. The groups identified important local maternal and neonatal problems, discussed them and formulated strategies to address them. They then shared their work at meetings with the wider community. In the next steps, the women's groups implemented and evaluated their strategies. One result of the process was that women sought more information about perinatal health. This was provided through a picture card game that addressed prevention, treatment and consultation for common problems in mothers and babies. Common strategies included community-generated funds for maternal or infant care, stretcher schemes, production and distribution of clean delivery kits, home visits by group members to newly pregnant mothers, and awareness-raising using a locally made film to create a forum for discussion.

The intervention appeared to reduce neonatal (and maternal) mortality substantially, and to improve home care practices and care seeking for both neonatal and maternal illness. The activities of a single facilitator in a population of 7000 appeared to rapidly reach a high proportion of pregnant women, even in poor and remote communities. It also appeared acceptable: 95% of groups remained active at the end of the trial, despite no financial incentives. A cost-effectiveness analysis conducted alongside the study suggested that the intervention was affordable according to usual standards. Two key elements distinguished our approach from conventional health education. First, women's groups explored demand-side as well as supply-side issues. Second, the approach emphasized participatory learning rather than instruction.

### ***Other models for community intervention:***

#### **Non-government Community Health Workers**

In the SEARCH group study from rural India, almost half of the newborn infants encountered high risk morbidity, commonly due to sepsis. The intervention was complex and involved training of traditional birth attendants, health education, and a new cadre of supervised village health workers who visited newborn infants at home, identified warning signs and managed sepsis with injectable and oral antibiotics. The group were able to reduce neonatal mortality rates by over 60%. The programme raised a number of questions since it was implemented by a non-

government organization with a history of work in the area; could it be replicated in a less intensive context such as government primary health care? How could the village health worker be absorbed into the existing health system? And would chains of support and supervision be strong enough to scale the initiative?

### **Government Community Health Workers and Traditional Birth Attendants**

A trial from rural Pakistan has reopened the debate about the potential contribution of traditional birth attendants to newborn survival. With some caveats about design and the inputs to the intervention, perinatal mortality was reduced after training and integration of traditional birth attendants within the public sector health system. There is little doubt that community-based workers – be they traditional birth attendants, community health volunteers or salaried health workers – have a major role in rural maternal and newborn care.

### **Government Community Health Volunteers**

It has become clear that the management of childhood infections – particularly acute respiratory infections – by community health volunteers is feasible and effective. WHO recommends a combination of three strategies: improving quality of care and accessibility at first-level public health facilities, improving quality of care in the private sector, and increasing access to care through the work of community health workers. These latter can be trained to assess, counsel, treat, refer and follow up children with pneumonia in the community. Meta-analysis suggests that such approaches can lead to a reduction of 24% in total mortality and 36% in pneumonia mortality in children under 5 years old.

Much of the work on community management of pneumonia was done in Nepal. The model is already being taken to scale through the medium of female community health volunteers. At present, the programme covers infants and children over the age of two months, but there is concern that it should be expanded to cover younger infants. The Morang Innovative Neonatal Intervention (MINI), implemented by the Ministry of Health and Population, with technical support from John Snow International and funding from The Bill and Melinda Gates Foundation, Save the Children and Saving Newborn Lives, trains existing

female community health volunteers and peripheral government health workers to identify and manage neonatal infections.

The female community health volunteer (FCHV) role was conceived as that of a grassroots worker. She is nominated by a ward mother's group, becomes its member secretary and is responsible for facilitating the group itself and for building linkages with the health system at village level. There are 54,000 FCHVs in Nepal: 48,550 in rural areas and 5450 in municipalities. Initial training lasts 18 days and centres on primary health care. Mother and child health and family planning are particular focuses. FCHVs receive 5 days of refresher training per year, usually on emerging issues such as HIV/AIDS, sexually transmitted infections, nutrition and IMCI. Supervisory responsibility rests with the district public health office, and FCHVs meet with the District Public Health Officer every six months.

The FCHV has a number of specific responsibilities: facilitation of the ward mother's group, counseling on family planning and distribution of contraceptives, contribution to the community component of IMCI, health education, safer motherhood referral services, immunization with an emphasis on oral polio vaccine and tetanus toxoid, distribution of vitamin A, antihelminthics and iron supplements, management of minor illnesses and injuries, and nutrition education. FCHVs are not salaried, but receive support for training and may receive incentives for particular activities.

### *Next Steps*

The MIRA Makwanpur study showed that demand-side intervention through women's groups is associated with changes in perinatal care behaviour by mothers and their families and can substantially reduce neonatal mortality. From a conservative viewpoint, the study at least demands replication and assessment of modifications that would make it scalable and institutionally sustainable within a national public health matrix. The results of the trial beg many questions, some of which we are attempting to address in current work. The most important of these are policy-related. Can such projects be scaled up within existing systems? Will they work for issues other than newborn survival? How can community facilitators be sustained?

## **Nepal: MIRA Dhanusha**

The project involves a cluster randomized controlled trial in a rural population of 417,000, with a total of 60 clusters. The trial is testing two models of intervention to improve child survival and nutrition. There is no doubt that improvements to women's diets are needed, particularly from a life-cycle perspective, and little doubt that behaviour change could improve the health of both women and their infants. However, the programmatic wherewithal to achieve behaviour change remains unclear. Nutrition is intimately linked with social development, and we propose that a community mobilisation intervention that has led to improvements in maternal and neonatal survival could also be a route into dietary behaviour change. The demand-side approach is a model that may sustain a range of issues. The MIRA Makwanpur study addressed the issues of pregnancy, delivery and newborn care. It did not, however, include any discussions about diet and nutrition. There is ample scope for such discussions to be included in the action research cycle, and for local strategies to improve the nutritional status of women to be formulated. We are examining the potential for including nutritional issues in the community group work. A second dimension is to work with government to institutionalize the intervention. The MIRA Dhanusha study is not using a cadre of community facilitators, but is attempting to work with FCHVs who already have a role in the primary health care system.

The research from rural India has shown that treatment of newborn infections in the community using paid workers to visit homes and provide injectable antibiotics can significantly reduce neonatal mortality. The intervention was complex and scaling up presents difficulties for policymakers. Nepal's Acute Respiratory Infection programme, however, has been successful in achieving broad coverage by FCHVs to provide oral antibiotics and referral advice for children with signs of acute respiratory infection. At present, the programme covers infants and children over the age of two months. We are, therefore, attempting two things: first, to build on and simplify the Indian model on a framework that targets scalability; second, to scientifically test the effectiveness of expanding the programme activities to cover the newborn period, a move supported by the Nepal Family Health Programme. We are collaborating with the MINI project, which has developed extensive training and

monitoring packages for community-based management of newborn infections.

### **Bangladesh: Perinatal Care Project**

The project involves a cluster randomized controlled trial in a rural population of 480,000, with a total of 18 clusters. Implemented by the Diabetic Association of Bangladesh and Women and Children First (a UK-based charity), it is testing a modification of the facilitator-led women's group intervention. An added sub-study is examining the effects of newborn resuscitation training for traditional birth attendants.

### **India: Ekjut**

The project involves a cluster randomized controlled trial in a rural population of 228,000, with a total of 36 clusters. Implemented by Ekjut in the states of Jharkhand and Orissa, it is testing a modification of the women's group intervention. Of particular interest is its location in particularly poorly served communities with high maternal and neonatal mortality. In addition, specific problems in these communities include malarial endemicity and high rates of alcohol use.

### **India: Mumbai**

The City Initiative for Newborn Health brings together community intervention and health service quality improvement. Implemented by the Society for Nutrition, Education and Health Action (SNEHA), one component looks at government health facilities and tries to improve maternal and newborn care through the institution of clinical and administrative protocols, referral systems and training. The community project involves a cluster randomized controlled trial in a population of 300,000, with a total of 48 clusters. Of particular interest for the community intervention is its urban location, with women's groups working in some of the world's largest urban slums.

### **Malawi: Maimwana**

The project involves a cluster randomized controlled trial in a rural population of 170,000, with a total of 48 clusters. Of particular interest is the problem of HIV/AIDS, specifically mother-to-child transmission. A novel aspect is the inclusion of an intervention involving community-

based infant feeding counselors who visit new mothers to discuss and support infant feeding practices in the face of the epidemic.

## **Conclusion**

Progress towards the Millennium Development Goals for maternal and child mortality reduction has faltered. Our work suggests that demand-side intervention can achieve dramatic reductions in neonatal and maternal mortality in poor and remote communities. The approach - a local woman facilitating women's groups - is potentially acceptable, scalable, sustainable and cost-effective as a public health intervention. Studies to assess the replicability of the approach in different settings are ongoing, as are wider efforts to examine effects on maternal morbidity and mortality.

## **WASTE MANAGEMENT AND HEALTH LESSONS FROM LAGOS STATE: THE PAST, PRESENT AND FUTURE**

*Mr. Ola Oresanya - Managing Director, Lagos Waste Management Agency & Mr. Jide Onayiga - Consultant, Hazardous Waste, Lagos Waste Management Agency*

## **Introduction**

The Lagos Waste Management Authority (LAWMA) is responsible for the collection and disposal of municipal, industrial, and medical waste. The medical waste management programme which started about 2<sup>1</sup>/<sub>2</sub> years ago has enlisted more than 300 hospitals, including private clinics within the metropolis of Lagos. Changing people's behaviour and perceptions has been the most challenging part of this programme. While some successes were recorded in the area of needles and sharps collection and disposal, there is still more work to be done in the area of waste segregation at the point of generation.

## **Management of healthcare waste**

A survey done in Lagos State revealed that the management of healthcare wastes was not satisfactory in many of the facilities visited, (with few exceptions – private) and the current waste management

practices especially in all the public and government hospitals are unsuitable and not comparable with acceptable standards. The general awareness of the health and environmental risks resulting from poor healthcare waste management practices is limited at all levels of management. A lack of knowledge of handling of hazardous healthcare waste by the administrators, doctors, nurses, cleaners, waste handlers, and waste pickers gives rise to serious concern. Figure 2.1 shows the characterization of healthcare waste into non-risk waste and risk waste while figure 2.2 further gives the various components that characterize risk waste.

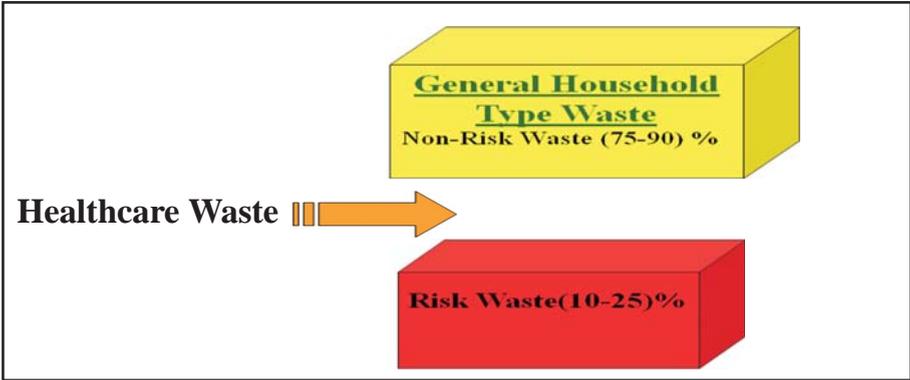


Figure 2. 1 - Characterization of medical waste



Figure 2.2 - Risk waste characterization

## **The Status of Medical Waste Management in Lagos**

Progress has been made in the past 2 years, particularly in appointing healthcare waste management officers and monitoring units both at Lagos State Ministry of Health – Hospital Facility Accreditation and Monitoring Agencies (HEFAMA) - and Lagos Waste Management Authority (LAWMA). However, there are areas that still need some improvements:

- ♦ There are still no specific regulations or written policies at State level on medical waste management.
- ♦ Disposed medical waste volumes appear to be very low in some facilities in comparison to the number of safety boxes collected. This suggests that medical waste is being disposed along with domestic waste.
- ♦ No reliable data is available on waste generation at any of the healthcare facilities.
- ♦ There is need for a better medical waste handling practice to be instituted in the health care facilities.
- ♦ Healthcare facilities lack budgeting on waste management and disposal.

## **Statistical Data of Healthcare Facilities**

According to Lagos State Healthcare Facility and Monitoring Accreditation Agency (HEFAMA) and LAWMA's survey, there are:

- ❖ 126 public health centers
- ❖ 26 general hospitals
- ❖ An estimated 3000 private hospitals/clinics
- ❖ An estimated 160 trade-medical health centres
- ❖ An estimated 2000 laboratories
- ❖ An estimated 0.8–1.75 kg/bed/day of medical waste generated. (LAWMA 2005)

**Table 2.1 - Category of hospitals with waste generation**

CATEGORIES OF HOSPITALS	AVG. NO OF BEDS/UNIT	NO. OF UNITS	TOTAL NO. OF BEDS	DAILY WASTE GENERATION (1.5 kg/ bed) Source : WHO
Public health centres	5	80	400	600
General hospitals	200	20	4,000	6000
Private hospitals				
Small	12	640	7680	11520
Medium	35	144	5040	7560
Large	100	16	1600	2400
Trado-medical health centre	2	160	320	480
Laboratories	1	300	300	450
Unclassified sources	-	-	-	14,040kg/day
<b>TOTAL</b>	355	1360	19340	42,120kg/day

Source: LAWMA

## **Method of Medical Waste Separation/Collection/Storage**

### *Assessment*

The current medical waste management practices in most of the hospitals visited proved that the waste segregation awareness program has not been effective. Records indicated that most of the wastes generated, especially at the medical wards (point of generation) are comingled with other general waste and as a result accounted for the relatively small quantities of medical waste reported at most of the public hospitals, e.g. Lagos State University Teaching Hospital [LASUTH]), Lagos University Teaching Hospital/College of Medicine (LUTH) and the Lagos General Hospital-Marina. None of the administrators interviewed during the assessment could provide definitive information on waste types or quantities generated on a daily basis. However, data collected by LAWMA between January 2007 and March 2008, revealed most hospitals are either not forthcoming with information on waste generation or do not fully understand the waste segregation programme. Table 2.1 gives an overview of waste generated daily at different categories of hospitals.

## Recommendations

- ◆ The key to the success of a medical waste management programme is not only education but also the use of dedicated containers for waste segregation.
- ◆ All on-site storage of medical waste should be in a designated area, away from general traffic flow patterns (including domestic waste site), and must be accessible only to authorized personnel.
- ◆ All areas primarily used for storage of medical waste other than the points of origin, shall be constructed of smooth, easily cleanable materials that are impervious to liquids and capable of being readily maintained in a sanitary condition.
- ◆ All outdoor storage areas shall be conspicuously marked with the international biological hazard symbol.
- ◆ The mechanism for transporting waste from the hospital wards must be reviewed, to ensure waste is not transferred from the generation point by hand to the dump site, but transported by a trolley or wheeled bin. This serves to protect the employee and minimizes the contamination of the environment.
- ◆ Imposing segregation practices within hospitals to separate biological and chemical hazardous waste will result in a clean solid waste stream, which can be recycled easily.
- ◆ If proper segregation is achieved through training, clear standards, and tough enforcement, resources can be turned into useful materials with only a small portion of the waste stream needing special treatment.
- ◆ New emphasis should be put on the reduction of waste, and workers' safety should be ensured through education, training and proper personal protective equipment (PPE).

## **Preferred Processes of Healthcare Waste Management: The Way Forward.**

- 1. Waste segregation:-** Should be done at the source of generation of medical waste (e.g. all patient- care activity areas, diagnostic services) areas, operations theatres, labour rooms, treatment rooms etc., The responsibility of segregation should be with the generator of medical waste i.e. doctors, nurses, technicians etc., (medical & paramedical personnel).
- 2. Collection:-** Segregated wastes of different categories need to be collected in identifiable containers, bins, bags of different coded colours etc. Segregation and identification instructions should be conspicuously displayed at each waste collection point to ensure proper procedure.
- 3. Transportation:-** Within hospitals, waste routes must be designated. Separate time should be earmarked for transportation of medical waste to reduce possibility of mixing with general waste. Wheeled containers such as trolleys or carts should be used to transport the waste / plastic bags to the site of storage /collection point.

### **Conclusion**

Proper training of healthcare administrators, matrons, nurses and ward staff is highly recommended and should be an integral part of healthcare waste management. The healthcare waste management awareness programme at all levels must continue and should be funded for it to succeed. The findings of this audit will help in the development of the Lagos State healthcare waste management plan for all the healthcare facilities “as the way forward”.

## CHAPTER 3

# Quality Assurance Management of Services

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The quality of care is one of the determinants of how successful a health reform is or not. Quality delivery of services at the primary health care level is known to be low. Many factors are attributed to this; obsolete or inadequate equipment and infrastructure, inadequate capacity of healthcare staff, lack of a logistics system, lack of quality assurance for quality control, weak health information management systems, poor integration of health service delivery and an almost non-existent referral system.

Quality assurance is an approach that can be used to improve the quality of services in primary health care facilities. Quality assurance could be seen as a tool for monitoring, assessing and improving the quality of health services on a continuous basis using existing resources. Primary health care systems should be centred on people and try to meet their needs in the most comprehensive way possible; this considers the physical, mental, emotional and social dimensions of a person, giving a feeling of “belonging” to the system.

Equity in health addresses unfair differences in health status, access to healthcare and health-enhancing environment. Unfortunately in Nigeria, there are huge disparities in allocation of resources between the rural and urban areas, and between local, state and federal governments. Access to service is skewed and the health outcomes are shown by the various health statistics which confirm the disparities. Thus, ensuring equity within the PHC system should guide health policies and programmes.

Imposition of user fees which are perceived to be too high results in low utilization of services. User fees are the most regressive form of

healthcare financing available. They contribute to the unaffordable cost burdens imposed on poor households, taking into cognisance that these poor households make the majority of patients at the primary health care facilities. The user fees capture a higher proportion of income among poor households than wealthier ones.

In theory, there should be some accountability of public facilities to the community through village development committees. The PHC should also be viewed as the primary means for investing in population health. Such investments through political commitment are essential in order to guarantee financial stability. The provision of essential drugs and equipment for primary health care is discussed in this chapter bearing in mind that this cannot be achieved without equity in health and financing as detailed in this chapter. Also in this chapter, data management using a bottom-top approach and monitoring and evaluation of primary health care were extensively discussed.

## **ESSENTIAL DRUGS AND EQUIPMENT IN PRIMARY HEALTH CARE**

*Prof Lateef Salako, FAS - Emeritus Professor of Pharmacology,  
University of Ibadan*

### **Introduction**

Essential drugs are those drugs that meet the health care needs of a vast majority of the people. The essential drugs concept is universal, applicable to all countries and within each country to all social classes, all age groups and all levels and systems of health care. It is particularly important for low-income countries and at the primary health care level because these are where inequitable availability of drugs bites hardest. Drugs are a very important element of health care.

### **Steps in Setting up an Essential Drugs Programme**

A decision to set up an essential drugs programme in a country should be taken at the highest level of government and should apply to the whole country. It should be backed by law which will prescribe sanctions for non-compliance with the requirements of the law. The

agency of government responsible for operating the programme should be the Ministry of Health and an expert committee should be set up to implement it. In enacting a law for the establishment and operation of an essential drugs programme in a country, there should be wide consultation with all the stakeholders so that no group feels left out. This is particularly true with medical doctors, pharmacists and other drug distributors. If any of these groups feels disadvantaged in relation to the others, the cooperation needed for the success of the programme will not be received and its success would remain elusive.

Once the law has been enacted, the next step is to set up a national essential drugs committee. This is an expert committee made up of persons knowledgeable in the field of drug use and control. They should include doctors, pharmacists, health sociologists and health educators. The main task of the national essential drugs committee is to draw up a national essential drugs list, to publish and distribute it to its end users, prepare a drug information manual and, if possible, produce a national formulary covering all the drugs in the list.

It is not possible for all medical specialties to be represented on the essential drugs committee. It would therefore be necessary for the committee to have power to co-opt specialists when medicines used in their various fields of interest are being discussed. It will also be the responsibility of the committee to promote understanding of the essential drugs concept and the rational use of drugs through workshops and other information, education and communication channels for the main stakeholders, that is, prescribers, dispensers and patients. Policy matters on essential drugs should be the responsibility of the Ministry of Health but the Committee can play an advisory role in this. For the smooth running of the programme, a separate section or unit should be set up in the Ministry for its management. This unit would have its own complement of staff under the headship of an essential drugs programme manager.

### **Selection of Essential Drugs**

The World Health Organization has prepared guidelines on which selection of drugs for inclusion in a national essential drugs list could be based. The discussion that follows is based on those guidelines. For a

drug to qualify for inclusion in the essential drugs list, it must be accepted by all that it, indeed, satisfies the health care needs of the great majority of the people. The drugs should be ones for which there is good evidence of efficacy and safety from controlled clinical trials and from experience in general use. In an age when drugs are coming into the market in large numbers all the time, many of the drugs have only the minimum evidence for efficacy and safety and their place in general use is still not firmly established. When there is a need to make a choice between this kind of drug and another for which there is no longer any doubt about safety, efficacy and acceptability, then the latter should be preferred.

Drugs included in the essential drugs list should be those for which quality certification can be easily obtained. Such certification might be from the national drug control authority or, where that is not available, through the auspices of the World Health Organization Certification Scheme for Medicines Circulating in International Commerce. As much as possible, an essential drugs programme should be supported with an efficient and virile national drug registration system. In its most basic form, all drugs for widespread use in the country should be notified to the registration authority. This body would then issue a letter of authorization or permit to distribute the drug.

At a higher level of capability, the drug registration authority would review the preclinical and clinical studies on the drug and, if satisfied, with the evidence for its safety and efficacy, issue a certificate of registration and authority for its distribution. If not satisfied with the evidence presented, the drug registration authority should have power to demand for further studies to be done before the drug could be registered. The Certification Scheme on the Quality of Medicines moving in international commerce is a World Health Organization convention to which countries subscribe by signing. Nigeria is a signatory to this convention. It can therefore turn to the WHO for information on the international registration status of a drug which is not available to it otherwise.

As much as possible, essential drugs should be capable of being manufactured locally in the country or through regional cooperation, using locally produced raw materials or from imported bulk. Where capacity for national or regional manufacture does not exist in a country,

effort should be made to develop it using the essential drugs concept as its anchor. This local manufacturing capacity is important because many of the drugs that would have the chance of being selected might no longer be favoured products by international manufacturers. This is the kind of situation one would expect if the drug has been displaced in the richer countries by newer and more expensive products which are not necessarily safer or more effective. This scenario commonly arises with diseases for which there are many drugs to choose from like bacterial infections, diabetes, hypertension and arthropathies.

Essential drugs should be selected, as much as possible, in their generic names. Prescribing and selling drugs by their brand names often leads to misuse of drugs. At one time in Nigeria, there were more than twenty brands of the antimalarial drug, chloroquine, in the market. A patient who has taken a therapeutic dose of one brand without response could go back to the market to buy another brand thinking he was buying a different type of antimalarial when he was actually repeating the previous drug. In this way, a patient might take two or more treatment courses of the same drug with the attendant risk of over-dosage. For a drug that is no longer under patent, generic products are usually available and are usually a lot cheaper than the brand products. Advocates of the use of brand name products argue that whereas the quality of the brand product is guaranteed by its manufacturer, there may be no such guarantee with a generic product. This overlooks the fact that generic as well as brand manufacturers are bound by the same regulations on the quality assurance of their products. In some cases the same companies that have established their reputation as brand manufacturers also manufacture generics.

Where there is a large number of drugs in a particular therapeutic group (e.g. antihypertensives), preference is given to the drug for which there is local experience with regard to efficacy and safety.

When one drug has been named in a particular chemical group containing a variety of structural analogues (e.g. calcium channel blockers or angiotensin II receptor blockers), other members of the group can be substituted for the named drug provided the substitutes meet the requirements for safety. In this, as in every other circumstance, the following factors have to be taken into consideration in making a choice. They are; comparative cost (total cost of treatment and not per tablet),

frequency of administration, ease of procurement and availability of the desired dosage form and strength.

Single component drug formulations are, as a rule, preferred to fixed ratio drug combinations since individualization of dosage in therapy is often difficult or impossible with the latter. However in some instances, fixed ratio drug combinations meet the requirements of particular clinical situations and have clear advantages in efficacy, safety and compliance over separately administered single drugs. This explains the wide support for the use of fixed dosage combinations of artemisinin with another suitable anti-malarial and the fixed-dosage combination of a thiazide diuretic with other antihypertensive drug in the treatment of hypertension.

Drugs known to have serious side effects may be selected if their benefits outweigh their risks. This is true of anticancer drugs and also for anti-sera used for treatment or prophylactic purposes. Thus, the risk of anaphylaxis should not be a contraindication to the use of anti-tetanus serum in a patient with a deep dirty wound or of anti-snake venom in a patient bleeding from carpet viper bite. The important precaution is that, at whatever level of health care they are used, appropriate care should be taken to ensure that measures to counteract the adverse reactions are available. Facilities for their proper storage should also be available at the point of use.

### **Advantages of an Essential Drugs Programme**

Several advantages have been shown for the essential drugs programme in all countries that have adopted and operated it over the past few decades. Some of the more striking advantages are:

1. A reduction in the number of drugs used in the health care system. In the absence of the stringent requirements of the essential drugs programme with regard to the selection of drugs for use in the country, there is no limit to the number of drugs so deployed. However, experience has shown that countries operating the programme can get by with only a small number of drugs - as little as 25% of what the number is - without the programme. Apart from substantial reduction in drug costs to the health service and the individual, the administrative processes involved

- in the procurement, storage and distribution of drugs will become simpler and more efficient.
2. With the limited number of drugs and the use of generic rather than proprietary names, it would be easier to provide concise, accurate and comprehensive information in the form of a national formulary on all the drugs in the essential drugs list.
  3. It should be a lot easier for prescribers to familiarize themselves with the pharmacological properties of the prescribed drugs, thus improving the quality of drug treatment.
  4. Monitoring of drug utilization at the various levels of the health care service should become easier. It would then be possible to determine quantitative requirements reasonably accurately thereby avoiding waste and the erstwhile common stock-out syndrome. Availability of correct utilization figures should also enable local drug manufacturing companies determine the true needs of the country and set up facilities for producing the drugs in the needed amounts.
  5. It should be easier for the drug regulatory agency to formulate strategies for the evaluation and monitoring of drugs circulating in the country and for the inspection of premises for compliance with the guidelines for good manufacturing practices.
  6. Reimbursement of costs in the National Health Insurance Scheme. When only generic prescription is approved, it becomes easy to cost prescriptions since there would be a standard price for every drug. Controversy about the cost of a prescription would thus be eliminated and reimbursement simplified.

### **Special Considerations for Primary Health Care**

In addition to the national level, expert committees on the selection of essential drugs can also be set up at the state and local government levels and at institutional levels like in the teaching hospitals. The

foregoing discussion constitutes the basic principles on which a national essential drugs programme should be based. The guidelines provided have universal application for all countries as well as for all systems and levels of health care. In drawing up an essential drug list for primary health care, certain considerations should be borne in mind given the characteristics peculiar to PHC. The list would only be a subset of the national list and the PHC list might vary from place to place within a country since some of the factors determining drug selection might be focally distributed in the country. For example, in Nigeria, trypanosomiasis and leishmaniasis which are endemic in some parts of the country are not seen at all in other parts.

The number of drugs selected and their variety would also vary from place to place depending on the quality of staff and the working materials available. Other factors that would need to be borne in mind include making allowance for parallel systems of health care commonly used by rural dwellers. This might include the use of herbal remedies in the traditional system of health care and special provisions for situations that could be predictable from the work of traditional birth attendants. The infrastructure at a rural PHC facility might only be able to support the use of some types of medications and not others. This should also be borne in mind. The types of disease commonly encountered in the area and the possibility and ease of referral in cases of increasing severity would also influence drug selection. Finally, all these would depend on the funds allocated for the operations of the PHC facility and on the ability of the people to pay, in places where cost recovery system of financing health care is being operated.

### **Essential Equipment for Primary Health Care**

The more important materials that should be available in operating an essential drugs programme at the PHC level are appropriate storage facilities for drugs of all dosage forms. Hence, refrigerators and thermos flasks for vaccines and other prophylactic and therapeutic substances that have to be maintained in a cold chain have to be available. There should also be syringes of various sizes for injection. Ideally, disposable syringes and needles should be preferred, but, if this is not possible, materials for sterilizing syringes should be provided. There should be

no compromise to the provision of disposable needles in this age of HIV/AIDS epidemic.

Drugs would need to be dispensed in containers and quantities that are appropriate to the location of the health care facility. In particular, the containers should be made of materials that are reasonably moisture resistant. Materials and equipment needed for minor operations should be available. These include scalpels, forceps and different types of bandages. Vehicle for the rapid transfer of patients to a higher level of health care would help greatly in getting patients to centres where more complex treatment like intravenous infusion can be undertaken.

### **Conclusion**

The essential drugs concept was introduced to ensure that people have access to quality health care in which needed drugs are always available in adequate amounts and affordable costs. Experience has shown that, wherever it is strictly operated, drug treatment is improved and the health care services become more efficient and more credible.

## **EQUITY IN HEALTH AND FINANCING**

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### **Introduction**

The availability of adequate financial resources is a critical objective of the health system. Therefore, the identification of the most efficient way of allocating health resources to accomplish a specific policy goal, such as improvement of population health, or individual health protection is a principal concern of both health economics and health policy analysis. However, evaluating the distribution of health resources should not only be limited to efficiency consideration. It should, in addition, take into account the issue of equity, another distinct but significant subject of concern that health policy analysts and policy makers must attend to. Even though, many countries have formal policy statements requiring fair or equitable distribution of health care, views as to what constitute “fairness”, both in principle and in practice, are

varied and divergent. This is because issues relating to equity are value-laden. Accordingly, there are many not-easily-resolved moral, ethical, and technical policy issues and questions relating to equity. This paper reviews the concept of equity in health and health financing, including the social and philosophical underpinnings; and examines the experiences of equity in health and health financing in comparison to the Nigerian situation.

### **Equity Objectives**

The objectives of possible health policy analysis of equity at ensuring fair allocation of resources can be identified in terms of either the principles of fair processes for distributing goods, or fair end-states in the ultimate distribution of goods, or the combination of the two. Fair process-principles of equity require that fair procedures be followed in distributing resources. Application of fair procedure suggests that the resulting distribution will, *de facto*, be fair. The fair process-principle, which health professionals place great emphasis on, demands a certain level of moral duty, or the imperative to “do the right thing” in any given situation. Part of the professional role expectations in the health care sector are moral duties. Though as a guide to resource allocation, it often conflicts with other criteria for equity and efficiency.

The end-state principle of distributive equity is concerned with where the resources eventually end up. Here, policy makers place less emphasis on the process of distribution. For example, the devolvement of federal budget for health care into state level spending best illustrates the end-state principle. In Nigeria, attempt is often made to follow equal per capita grants, but there is the need to incorporate adjustment for per capita grants to reflect response to variations in the relative health care needs across all states as well as variations in the cost of providing services. Equality is a key concept for analyzing end-state distributions. The importance of equalizing the distribution of some good among certain recipients is usually emphasized by nearly all end-state distribution principles.

## **Equity in Health Care**

Equity in health care can be examined from two perspectives: equity in health care finance and equity in the delivery of health care. Note that while the former is concerned with the impact which health care financing and delivery arrangements have on the distribution of income, the latter deals with the impact which health care and financing arrangements have on the distribution of health care utilization. In other words equity in health care addresses issues of access. If health financing and delivery arrangements ensure equal access to all individuals irrespective of differential factors like location, ethnicity, religion, and age, then the system promotes horizontal equity. On the other hand, vertical equity ensures that people in similar circumstances, except for incomes, should be treated on the basis of ability to pay. This is the traditional justification for progressive income tax. In practice, in the health context, resources are allocated with the intent of guaranteeing that those with greater health care needs receive a greater share of the budget. On individual basis, vertical equity ensures that people with similar needs, are accorded equal access irrespective of differences in income or financial wealth.

Access in relation to health care is often perceived in terms of receipt of treatment. Receipt of health care or treatment affects the health status of individuals. The extent to which this happens may improve health status or result in its mal-distribution. Similarly, health financing and delivery arrangements may lead to re-distribution of income. This is the case in the situation of vertical equity when ability to pay principle is invoked with the rich paying more than the poor for the same service.

## **Some Empirical Evidence**

In this section, we report some empirical evidence of equity in health and health financing. We first review briefly two experiences from China and India; reporting a number of experiences from Nigeria.

### **Evidence from Other Countries**

Liu, Hsiao and Eggleston examined the changes in inequality in health and health care in China during its transition from command economy to market economy, using data from three national surveys conducted in 1985, 1986 and 1993 and other complementary data. The

empirical evidence suggests a widening gap in health status between urban and rural residents during the transition period correlated with increasing gaps in income and health utilization. The changes were found to be associated with changes in health care financing and organization, including dramatic reduction of insurance cover for the rural population and relaxed public health.

Garg analyzed the financing and delivery of health care in India from the equity viewpoint. It examined typical financing mixes of public and private sectors. The paper analyzed inequity in health care on the basis of utilization of health services by people of different income quintiles, and in different geographical location on the basis of reported ill-health. It found that, though government sources of financing are mildly progressive, the large proportions spent by households on health care makes it regressive overall. Both government and private expenditures are higher for higher income quintiles and for people living in urban areas and working in the formal sector. On the other hand, people, in lower income quintiles and living in rural areas bear a higher burden of health expenditure as a proportion of their income. Similarly, delivery of health care is biased in favour of urban centres.

## **Evidence from Health Accounts Studies**

### *A. Equity in sources of health funds*

In Nigeria, there is a lot of inequity in sourcing health funds even within government sources. The capacity to generate health funds from public sources depend on a number of factors such as existing economic structures, tax collection capacity, overhang of internal and external debt with budgetary outlays for debt servicing, among others. Government derives its funds from taxes. In Nigeria, the constitution assigns tax jurisdictions to the different tiers of government, with the federal government, having jurisdiction over the majority of taxes. The federal government of Nigeria has four major tax revenue components: tax and royalties, company tax, custom and excise duties and value added tax. The ability of government to generate general taxes in Nigeria is limited as the ratio of general tax revenue to GDP is generally less than 15%. In fact in 1998, tax revenue was 7% of GDP. However, it progressively increased from 10% in 1999 through 15% in 2000 to 17% in 2001(Soyibo,

Olaniyan and Lawanson ). This limitation is exacerbated by the fact that the federal government sits on choice and juicy taxes (courtesy of skewed federal constitution) making the other tiers of government to always go cap in hand to beg for funds for service delivery from it.

Between 1998 and 2002, total health expenditure from all public sources (federal, state and local) averaged ₦44.9 billion or 20.65% of total health expenditure (THE). Of this, federal government expenditure averaged ₦27.1 billion or 12.44% of THE; state governments averaged ₦13.5 billion or 6.19% of THE while local governments averaged ₦4.4 billion or 2.02% of THE. In contrast, over the same period, the average health expenditure from households totaled ₦139.7 billion or 64.3% of THE. Health expenditure of firms averaged ₦10.6 billion or 4.89% of THE while the corresponding expenditure of donors ₦22.3 billion or 10.28% of THE. Over the period, THE as proportion of GDP averaged 4.89% (Soyibo, Olaniyan and Lawanson ). This shows a very high burden on households, about 2 in 3 of whom live below the poverty line; exacerbating the problem of inequity of access.

### *B. Equality in health resource-pooling*

Resource-pooling concerns the raising of funds from different types of taxes and/or health insurance schemes with a view to sharing the financial risk and funds among the contributing stakeholders. Usually, it involves channelling funds belonging to, or owned by, a source through an entity that pays directly for health service consumed or to a third party who then pays for service. In national health accounts terminology, the corresponding entity through which the funds are channelled is called a financing agent. Financing agents include government ministries and agencies through which health funds, belonging to government, are channelled; insurance companies, household out-of-pocket (HOOP) health expenditure and non-government organizations (NGOs).

Between 1998 and 2002, resource-pooling of health funds through government financing agents (GFAs) averaged ₦63.421 billion or 29.1% of THE. Funds channelled through federal GFAs averaged ₦41.1 billion or 19.3% of THE; those that went through state GFAs averaged ₦15.5 billion or 6.7% of THE while those pooled through local government GFAs averaged ₦ 6.8 billion or 3.1% of THE. In contrast, private

financing agents (PFAs), consisting of health insurance companies, HOOP, NGOs pooled on average over the period ₦154.0 billion or 70.9% of THE. Of this, the amount pooled as HOOP averaged ₦142.4 billion or 65.8% of THE. Health Insurance companies pooled on average ₦7.9 billion or 3.1% of THE while the amount channelled through NGOs averaged ₦3.7 billion or 1.7% of THE. This shows a lot of burden for PFAs and in particular, HOOP; restricting access of poor households to health care delivery.

### *C. Equality in purchasing health services*

Purchasing involves obtaining and paying for services from providers of health services. In Nigeria, health services can be obtained in government facilities, private facilities, mission facilities, pharmacies/chemists and traditional health providers.

Over the period 1998-2002 the purchasing of health services in government facilities in Nigeria averaged ₦30.95 billion or 14.23% of THE; while purchasing done in private health facilities averaged ₦59.19 billion or 27.22% of THE. In mission facilities health services purchased averaged ₦19.94 billion or 9.17% of THE. Other health service purchases averaged ₦23.48 billion or 13.10% in Chemists/pharmacies; ₦8.55 billion (3.93%) for traditional health care and ₦70.33 billion for other health services like education and training of health personnel, health research and management/administration of health services. Purchasing is skewed in favour of private facilities. The fact that this is usually provided on the basis of fee-for-service tells a lot of stories on the burden borne by the poor.

## **Conclusion and Recommendations**

This reviews the concept of equity in health and health financing and examines the experiences of selected countries in equity in health and health financing vis-à-vis that of Nigeria. It is found from these examples that there is inequality in health status between urban and rural areas as well as political and administrative regions/zones. There is also inequality in health care utilization with the poor and hard-to-reach areas having worse physical and financial access measures as it is the case in China. From the Indian experience, it shows that while government

sources of finance are mildly progressive, the large proportion spent by households, makes it overall regressive. Besides, both government and private health expenditures are higher for higher income quintiles and for people living in urban areas and working in the formal sector.

Using data from the national health accounts (NHA) of Nigeria and survey results, the paper demonstrates that there is inequality in health and health financing in Nigeria, with households bearing the highest burden of health expenditures averaging 64.3% of total health expenditure between 1998 and 2002 in contrast to the expenditure from public sources (20.65%), firms (4.89%) or donors (10.28%). The federal government has greater access to more taxes than other levels of government which have a lot more responsibilities in terms of health care, being closer to the populace. The paper also shows that GFAs channel less health than funds PFAs and that health insurance funds, though small, compared to other financing agents, are very promising for resource-pooling to lessen the burden of health expenditure on the poor. Besides, the fact that households carry a high burden as a source, suggests that households demonstrate willingness to pay for health care, in spite of low ability to pay. This willingness can be capitalized on by health insurance through resource-pooling as is done in other informal sector schemes like informal finance, even though health insurance is presently limited to the formal sector.

To lighten the burden on households, several approaches can be adopted. In public facilities, the use of exemptions and referrals which has been successful in some states can be replicated and the observed weaknesses in the current success stories corrected. The health insurance scheme as currently designed is inclusive as it is planned to extend to the informal sector. The implementation of the informal health insurance scheme should, therefore, be expedited to ensure the poor people in urban and rural areas are covered. Finally, there is need to widen the revenue base of state and local governments. The review of the tax base of government with the federal government having less number of exclusive taxes is long overdue. In particular, the need for having a balanced federation is long overdue. However, these are constitutional issues and the time to address these issues is now.

# **STRENGTHENING DATA MANAGEMENT: BOTTOM-TOP APPROACH**

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A number of specific health programmes have been designed to enable Nigeria achieve the MDG goals; they have typically followed the bottom-top approach. For example, in order to achieve the reduction of under-5 mortality, one of the strategies adopted has been to immunize all children against vaccine-preventable diseases and this is done basically at the primary health care level. Unfortunately, like any other programmes in Nigeria, there has been a lack of monitoring and evaluation mechanisms, and so there has been no reliable information on the actual coverage of immunization and this is so with other indicators of health such as mortality and morbidity levels.

The health information system in Nigeria has been designed to accommodate this bottom to top approach in the transfer of health data from the PHC to the state and to the national level, a system that synchronizes well with the three tiers of government (LGA, State and Federal). The PHC level is the centre or focus for the generation and collection of accurate and reliable health data.

## **Type of Data Needed**

It is important to note that in the health sector different types of information are required, ranging from data on the management and administration of health services to health system outputs such as coverage and quality of care and data required to monitor and evaluate specific health programmes. The baseline data relevant to health include the following:

- ♦ The demographic characteristics of the population served by the primary health care in each local government area (the census, vital events monitoring-civil registration of births, deaths and causes of death).
- ♦ Health determinants – socioeconomic, environmental, behavioural, and genetic factors and the contextual environments within which the health system operates.

- ◆ Health system inputs – the structures and processes of the health system (policy and organization, health infrastructure including facilities, human and financial resources, and health information systems).
- ◆ Health system outputs – the quality, use and availability of health information and services.
- ◆ Health outcomes and impact – mortality, morbidity, disease outbreaks, and health status.

From the point of view of policy-makers and planners, certain types of information are more important than others. In terms of MDG monitoring, most of the demand is at the level of output, outcome, and impact indicators. However, programme managers and planners are also interested in inputs and process indicators. One of the critical basic steps in the development of health information systems is to bring stakeholders together to identify which data are critical for management, strategic decision-making and policy development, and which therefore must be available in a timely and reliable manner.

The NPHCDA has made several attempts to do this and arrived at a consensus on 29 core indicators, all of which are action-oriented. In addition, a monitoring and evaluation system was developed to provide relevant information to influence strategic decisions and management functions that would improve the PHC programmes.

### **Inter-Sectoral**

The boundaries of health statistics are by no means confined to the health sector – there is a strong interdependence between health statistics and statistical systems in other sectors. For example, higher levels of female literacy are associated with higher compliance with home treatment for diarrhoea/dehydration in infants; improved sanitation is associated with increased child survival; food and nutrition policies affect the health of children and adults alike. Making links such as these and identifying broad areas of data common to health and other sectors is properly within the responsibility of a health information system. This underscores the role of the Directorate of Planning, Research and Statistics at the Health Ministries in Nigeria. The PHC should be empowered to play strict roles in the collection of these data.

## **The Health Information System**

The health information system has been aptly described as “an integrated effort to *collect, process, report and use health information and knowledge to influence policy-making, program action and research*”. These principles also apply to all countries, whatever the level of income and degree of sophistication of the health system. Data are essential for health decision-making at all levels of the health pyramid. From the level of individual patient care, to the management of specific health programmes through to the policy level where strategic decisions are made, sound information is essential. A key task of the health information system is to determine which data should be collected, at which levels of the system, and by whom. Decisions should be made about which data are to be reported upwards and for what purpose, bearing in mind the need for a limited set of indicators, in order to avoid overburdening the system. The health management information system in Nigeria derives its primary data from the PHC for monitoring the health of the nation. Thus the quality of data from such a system is of crucial importance to the health information system because poor data often leads to poor information which cumulates in poor decision- making.

Feedback from the national to the more peripheral levels is equally important, and encourages the creation of a culture of data generation and use. In decentralized systems, innovative approaches should be found to make representative and disaggregated data available at local level and below.

## **The Weaknesses in the Data Collection Systems at the PHC Levels**

It is sad to note that the PHC system is weak in data generation partially because there are no strict penalties for poor implementation of our health data management system. It is generally known that the data generated are seldom used for planning purposes and allocation of resources. The location of some of the PHC like most social facilities in Nigeria could have been dictated by political consideration rather than evidence-based information of need and potential use. The country is yet to disengage itself from the politics interwoven with empirical data. Hence, rather than plan health services, on available facts and figures, the planning and policy formulation have largely been influenced by the strength of our political powers.

One serious problem affecting data collection in Nigeria is lack of focal persons for data generation and collection at the PHC centres. Many a times, the health workers were not trained, thereby having poor skills in data collection. Sometime there are no materials to work with, no funds to transfer the data from the health facilities to the LGA where it can be collected. There is poor feedback mechanism and the worst problem is poor monitoring and evaluation of the system. The problem of lack of feedback to the health facilities affects the attitude of the data collectors as they are not aware that the data they collect is being used by anyone and so do not know its importance to justify its continuous collection.

In summary therefore, the strategies for strengthening data collection and utilization in PHC can be effectively appreciated if, we have a proper digest of the diagnosis of the weaknesses in the system. Some of these problems can now be summarized as follows:

1. weak implementation of the health information systems;
2. poor quality data and poor user interfacedonors and disease-specific programmes obtain their own data e.g. WHO, EU-PRIME;
3. little donor investment in information systems;
4. weak demand by in-country users;
5. systemic problems like corruption, power failure and political ideology.

### **Strengthening the Data Collection System**

Strengthening the data collection system at the PHC can be actualized through the following:

1. conducting advocacy workshop for chairmen and members of local government to sensitize them on the importance and use of health data
2. training of workers at PHC centres to acquire skills in data collection;
3. provision of materials used for data collection;
4. provision of feedback to the PHC centres; and
5. attitudinal change at all levels to change mindset.

## Conclusion

Health data and information lack value unless they are used to inform decisions. As such, interventions that increase local demand for information and promote/facilitate its use are critical to improving the effectiveness and sustainability of the health system.

The ultimate goal of a national health information system is to “collect, process, report *and use* health information and knowledge to influence policymaking, program action and research” As noted above, evidence-based decisions rely upon data and information from a variety of sources. Each source aspires to produce data that are transparent, consistent, verifiable, and understandable.

Correct and complete data are needed to:

- ◆ Establish administrative control over functional activities;
- ◆ Provide a basis for preparing operational budgets;
- ◆ Render reports to governing and donor agencies.

It is important to strengthen the PHC to perform its duties as the cornerstone for the generation of data needed for monitoring and evaluation of our health system. The collection or generation of data at the primary health care facility level should be manned by well trained, honest, and committed health workers. There is also the need to harmonize the several collection forms currently available and provide relevant training of the staff on how to complete the forms. The management of health data should not be left in the hands of development partners who have a special interest in monitoring and evaluating their programmes. To this effect, all tiers of government should allocate 2% of their budget to data management.

It is well known that reliable, complete and timely data will improve our health system. Access to and capacity to use information more frequently and effectively will lead to decisions that improve health by improving the health system’s ability to respond to health needs at all levels. Strengthening data management at Primary Health Care level amounts to strengthening the health care delivery system in the country.

# **STAYING ON TRACK: MONITORING AND EVALUATION OF PRIMARY HEALTH CARE**

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## **Monitoring and Evaluation Perspectives**

### **I. Process**

- a. *Organization*: The hub of service provision and other activities in the PHC system is the health centre, which relates horizontally with the catchment community (ward) and vertically with the other tiers of care and with the state and federal ministries of health. The first structured level of monitoring is the M & E Unit of the LG PHC department which aggregates statistics and observations from the PHC centres and then shares these with the state, zonal and federal authorities (and with other stakeholders). In scope, the monitoring effort may be directed at selective/vertical interventions or the entire PHC purview.
- b. *Monitoring parameters*: Notionally, the PHC monitoring matrix encompasses the defined PHC components (deliverables) and aspirations, including disease prevention, patient care, environmental protection, essential drugs supply and health promotion/education. The monitoring framework is also designed to track system functions, in terms of stewardship, resource generation and financing, alongside occurrences like disease incidence.

Of critical importance is the potential of the PHC M & E framework to enable meso-analysis to support the tracking and evaluation of determinants such as ability to pay, leadership, behavioural change, service demand and perception of quality, and values like workers motivation, sustainability and gender sensitivity.

To complement institutional effort, community participation is promoted to enable track participatory/interactive meetings and other modes of interface, staff attitude at health centres, operation of community-based health workers (TBA, and VHWs),

community initiatives and collaborative actions in disease surveillance. PHC house numbering was meant to provide a direct interaction between services and community.

- c. *Monitoring tools*: The master-tool is manifest in the cluster of forms featured in the National Health Management Information System developed by the Department of Planning, Research and Statistics of the Federal Ministry of Health. Below are the NHMIS Forms that constitute the monitoring matrix:

<b>Form</b>	<b>Parameter</b>
001	- Monthly summary of Ante-Natal Care and Pregnancy outcome
002	- NPI
003	- Family Planning Services
004	- Family Planning Commodity Utilization
005	- Growth Monitoring/Promotion
006	- In-Patient Cases/Admission
007	- In-Patient Deaths
008	- Out-Patient Attendance
009	- Immediate Notifiable Occurrences
010	- Routine Notifiable Diseases
011	- Pharmaceutical Services
012	- Drug Inventory/Utilization
013	- Laboratory Services.

In addition to the above mainstream routine monitoring tools, there are other forms for keeping track of occurrences, including the Integrated Disease Surveillance and Response forms (IDSR forms 001, 002, 003)

Other measures adopted for monitoring from the demand side include suggestion boxes and price lists to enhance transparency and accountability. There are also home based cards, clinic master cards and tools designed for specific intervention or interest.

PHC centres commonly display service and some demographic statistics (including catchment area population, age/sex mix of the population, immunization and other targets) in simple graphic presentation on the walls of the facility.

d. *Evaluation framework*: The WHO schema below depicts the major levels of PHC evaluation.

- ◆ Input: Basic resources necessary, policies, people, money, equipment.
- ◆ Process: Programmes, Activities, Training, Management, Logistics, Information, Education/Behavioural change communication.
- ◆ Output: Results of programme services, service use knowledge.
- ◆ Outcome: Results at level of target population, behaviour, safer practices.
- ◆ Impact: Ultimate effect of services, e.g. incidence/ prevalence reduction, Morbidity/Mortality reduction.

The Federal Ministry of Health has outlined a template of minimum categories of indicators to ensure the comprehensive monitoring and evaluation of health care within the following domains:

- ◆ Health policy
- ◆ Health status
- ◆ Socio-economic indicators related to health and living standards
- ◆ Provision and utilization of health care

## **II. Participation**

- a. On a routine and regular basis:
  - M&E and Disease Surveillance/Notification Officers
  - Community Health Officers
  - Community Health Extension Workers
  - National Primary Health Care Development Agency Zonal Officers
- b. Episodic:
  - Project officers-Consultants
  - Intervention stakeholders (including NGOs, CBOs, etc)
  - Community-based health workers
  - Community committees and key informants

### III. Performance

#### a. Strength & weakness

Considering PHC M&E as a framework by itself and as a sub-system within a service-wide context gives a wider view of its organizational capacity; this representing the “carrying power” for a set of tasks faced by the organization. The key tasks are to generate and present evidence of progress or change or depict status, and also to provide impetus for progress or change in the context of two broad values – access/coverage and quality of services. Insight into the M&E framework performance may be gained from the following two panels (see text boxes below).

#### Panel 1

Between March and April 2008, 5 PHC centres in 3 LGAs in one of the states were visited in the course of a rapid appraisal. Scrutiny of treatment as recorded in the patients’ card showed the following:

**Table 3.1:** Prescription for 43 children of age between 5 months and 3 years who visited over a period of time for complaints of cough and fever:

<i>(N = 43)</i>
<ul style="list-style-type: none"><li>◆ Number of items prescribed for patients ranged between 5 - 9 (drugs, micro-nutrients)</li><li>◆ Number of patients for whom injection was prescribed = 36 (N = 43)</li><li>◆ Most commonly prescribed injections (in all 36 prescriptions for injection)<ul style="list-style-type: none"><li>▪ Chloroquine = 36</li><li>▪ Analgin = 31</li><li>▪ Crystalline Penicillin = 11</li></ul></li><li>◆ Number of prescriptions in which all three injections featured = 9</li><li>◆ Of 5 cases that presented with complaint of diarrhoea (without vomiting), oral rehydration therapy was prescribed in only 2 instances.</li></ul>

## System support issues

**Table 3.2:** Monitoring/Supervision visit in the last 6 months to 5 health centres and 3 LG PHC departments.

Level visited	Visit by whom	Purpose	
		Specific intervention General	PHC
PHC Centre	WHO/UNICEF/NGO Official/Consultant/ MOH Official	NPI/IMCI/PMTCT Life saving Skills Training	NIL
LG PHC Dept	”	”	”

### Panel 2

The National Planning Commission (NPC) in its annual reports attempts to give insight into the capacity to track progress towards attainment of the Millennium Development Goals in Nigeria. The indicators used are pertinent to PHC e.g.

### Monitoring and evaluation capacity

**Table 3.3:** Tracking progress in reducing child mortality

Elements of Monitoring Environment	Assessment		
	Strong	Fair	Weak
Data gathering capacity			√
Quality recent information		√	
Statistical tracking capacities			√
Capacity to incorporate statistical analysis into policy, planning and resource allocation mechanisms			√
Monitoring and evaluation mechanisms			√

**Table 3.4:** Tracking maternal mortality and reproductive health

Elements of Monitoring Environment	Assessment		
	Strong	Fair	Weak
Data gathering capacity			√
Quality recent survey information		√	
Statistical tracking capacities			√

Source: *National Planning Commission: Nigeria Millennium Development Goals 2006 Report*

Performance as portrayed both in the PHC centres setting and the NPC profiling is affected by the same underlying factors. There is inadequate funding support for M&E; technical capacity is limited; resources and attention are skewed in favour of selective interventions which are funded by donor agencies; local governments do not budget for monitoring (and supervision); compartmentalization, whereby M&E is undertaken largely under the auspices of donor agencies purposively to their own perspectives and needs; the institution–community cycle in M&E is weak; local initiatives is weak and staff attitude to M&E is rather perfunctory; sentinel surveillance is commonly facility-based with no application of the sentinel community surveillance concept that could enhance meso-analysis.

### **Prospects of Monitoring and Evaluation**

Fully exploited within the Primary Health Care (PHC) context, M&E should not only be applied as a management tool, but also be valued as a strategy for improving and sustaining health services, and, through its dynamics, provide an opportunity for deepening community involvement in health actions and overall development.

The intrinsic processes of M&E could stimulate interaction among the stakeholders, and the products of such interaction should be held up to wide public gaze in synergy with communication strategies to promote the demand side of health services.

M&E is potentially interactive, entailing repeatable cycles that permit learning in practice and capacity building for both community

and health workers. The interactions provide opportunities for informed dialogue about causes, options and cost that may also be used as the evidence basis for priority setting and for tracking implementation of the *minimum care package*.

## **Conclusion**

The primary health care system provides Nigeria with a strategic framework for mass movement towards achievement of the health-related millennium development goals. M&E is the burning platform of that movement-enabling us stay on track.

## CHAPTER 4

# Vanguards of Primary Health Care

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**T**he health workforce is the ‘heart’ of a health system. Worldwide, there are an estimated 59 million health workers of which about 35,000 doctors and 210,000 nurses are registered in Nigeria. This translates into about 28 doctors and 170 nurses per 100,000 population. These Nigerian health worker ratios are above the sub-Saharan average but still far from ideal in terms of distribution or deployment.

Health personnel constitute 50-75% of recurrent health budgets in most African countries in terms of salaries alone. While estimates of health personnel have been difficult to obtain, human resource development has remained a critical challenge in improving health care systems.

Many countries in Africa, including Nigeria, however, have trained and utilised community health workers (CHEWs) and village health workers to promote the delivery of basic, cost-effective services to the majority of the people. In spite of government’s efforts in developing human resources, it seems to be inadequate at all levels, and particularly in PHC.

The PHC progressive viewpoint has implications on health personnel training and health care practices. The PHC approach requires that health workers both adapt and change a range of traditional attitudes, expectations and opinions.

Indeed, many health systems are still based on a disease-curing model of service, relying mainly on hospitals and technical health staff that try to resolve specific disease and illness events. As a consequence, training and education of health workers are selective and hospital-focused. Therefore, they are not appropriately equipped to deal with promotive and preventive care in line with PHC. There is clearly a need

for a shift from the “medical paradigm” to a “health paradigm” which is more geared towards promotion of health and wellbeing.

The situation of migration within the African region and beyond has reached crisis levels. The main identified factors for migration were poor salaries, poor working conditions, lack of opportunities for professional development, unclear career paths, conflicts and wars. Migration of skilled health workers has contributed significantly to deteriorating access and quality of care in Africa, particularly in Nigeria. This chapter gives in detail the roles of different health cadres in the delivery of services in primary health care system and the importance of achieving an effective health workforce.

## **THE ROLE OF THE MEDICAL OFFICERS OF HEALTH**

*Prof Michael Asuzu - Department of Community Medicine,  
College of Medicine, University of Ibadan, Ibadan*

### **The Job of the Medical Officer of Health (MOH)**

As the name clearly states, the MOH is a medical officer who performs clinical duties as expected of all medical officers but his duty is to ensure that all of his efforts are not disease-oriented but rather health-oriented, health protective, and health promoting.

The other duties of the MOH, beyond the essential (largely preventive and rehabilitative) clinical services include the following:

1. To advise the LG authorities on all issues related to health, its legislation, enforcement and services provision.
2. To be the chief epidemiologist of the LGA with regard to the control of all the epidemic or otherwise troublesome diseases and ailments.
3. To liaise with the higher levels in the national health system to ensure proper two-way referral of disease and patients that need such care.
4. To visit with every other health service unit within the LGA for their individualized supportive, supervisory and service delivery activity so as to ensure good and perhaps better and

ever improving health care within the LGA. The remote health centres and clinics run by the community nurse/midwives, especially as district nurse/midwives, are the primary centres of these visits.

5. To attend and provide/spread CME to all within the LGA, especially those within the PHC system.
6. To carry the health services to other remote and yet un-reached communities or to see that others do so in mobile health service activities.
7. To identify, develop, staff and train various local categories of auxiliary community health workers as the needs may be.
8. To ensure that all sorts of vertical (including foray-type) public health services do not derail the comprehensive community health services as they always do, especially when left in the hands of non-professional health workers at that level.
9. To provide any other services or advice as may be found necessary or asked of him by the LG authorities.
10. To produce an annual report of the activities and results of the health service under his jurisdiction with the highest level of professional expertise as possible, including the economic assessment of the services with which the efficient continuity of the health services will be most likel.

A few states have embraced the MOH concept, at least on paper, especially in the south-west and a few of the south-south states. Some of the reasons for the inability to establish professional community health practice in Nigeria have been summarized in Table 4.1 below:

**Table 4.1:** Reasons for lack of professional community health practice in Nigeria

<ol style="list-style-type: none"><li>1. No established culture of professional/specialist community health work existed in Nigeria before political independence.</li><li>2. The earliest Nigerians who trained in disciplinary public health did so in only vertical public health abroad and not in community medicine/health and so were still unable to establish it on return here after Nigeria's political independence.</li></ol>
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3. The lack of community and rural development ideals by Nigerian politicians and the associated poverty in other social amenities there has resulted in the unattractiveness of the places to educated people and so also of community health development there.
4. Nigerian teachers of preventive medicine did not develop it to community health practices till lately, mostly because many of them were not trained in community medicine and so remained content with teaching hospital vertical public health and its consultancies rather than LGA ones where community health usually gets developed.
5. The people who first tried to promote PHC in Nigeria were also vertical public health trained and so did not understand professional community health work and so, in deed, undermined it very much in real terms.
6. As a result of all the above, community nursing and midwifery remained hardly known, understood or attempted in practice in Nigeria; and in its place we have vertical public health nursing which does not render any real community health care in the country “in the places where the people live and work”.
7. The auxiliary community health workers developed in Nigeria in response to the PHC needs remain unsupervised by any professional community health workers and largely antagonistic to the professional health workers themselves, and so, undermining PHC as maximally as possible everywhere.
8. Continuous lip service only continue to be paid to authentic community health work in Nigeria from every angle; with vertical public health coming in, spreading as rapidly and undermining the health services as freely as possible.

## The work/results of the MOH where it has been developed and duly supported

The result of these types of health services, even in much resource-poorer countries than Nigeria, as the Fiji Island surely is, are as reflected in the health indices of that country as shown in Table 4.2.

**Table 4.2:** Health status indices in Fiji from factual data community survey, 1997

<b>Index sought</b>	<b>Value</b>
Crude birth rate	16 per 1000
Crude death rate	4 per 1000
Infant mortality rate	11 per 1000
Maternal mortality rate	<1 per 1000
Contraceptive prevalence rate	37% WCBA
Immunization rate- BCG/Polio 0	99%
	-DPT 3 99%
	-HIB 3 85%
	-Measles 88%
Under-5s weight below 3 <sup>rd</sup> percentile of normal weight	5%
Trained volunteer health workers for settlements in 1998	2 (11%)
Built self-owned village dispensaries in 1998	7 (37%)
Built self-owned settlement dispensaries in 1998	3 (16%)
Proportion of villages with volunteer health workers in 1998	79% (72/994)
Proportion of settlements with volunteer health workers in 1998	7% (72/994)
Proportion of villages with health/development committees	59%

Proportion of settlements with health/development committees	3%
Proportion of villages with dispensaries in 1998	36%
Proportion of settlements with dispensaries in 1998	3%

**NB.** Villages are native communities while settlements are mixed race ones

**Where Do We Go from Here?**

With the Nigerian doctor/population ratio already at about 1/5,000 (twice better than the 1/10,000 suggested by the WHO), it is obvious that if we develop the necessary political will, we can surely have one MOH for every LGA in this country. We can also have at least one NYSC doctor to assist the MOH in each LGA and we will still have more than enough of such doctors each year. If we can modify our national health system so that we have a unified one, with clear but non-antagonistic contributions from any of the three tiers of government, where each can contribute to whatever is missing at any point, it should be possible for state or federal government-employed workers to work primarily at the LA level – if the LGAs for any reason are unwilling or incapable of employing and paying them. Same can happen with their drug supply and service vehicle provision for the efficiency of the services.

In the far northern states, if for any reason they are unable or unwilling to deploy and supply their own doctors with the resources to do so for each LGA, they can at least do so on the basis of one for groups of contiguous LGAs for now. The NYSC doctors should be restored to community/PHC work, with the relevant provisions for the required job.

Above all, we must divide all the LGAs into community nursing zones of 3 to 7,000 people, depending on how densely populated the constituent communities are, and begin to appoint nurse-midwives to look after them. Our nursing and midwifery training must be expanded to incorporate the community nursing and community midwifery services and not merely the current public health nurse. The so-called community physicians in the medical schools should be made to serve, each as

honorary MOH or community medical consultant to nearby LGAs so as to actually practise community medicine as ought. In that way, everybody would have the understanding and appreciation of community medicine, it would then be seen and appreciated for the great things that it does in the modern world. Moreover, every tertiary-educated Nigerian should be educated enough to know that they truly have no other place that they will have life and have it to the full except here in this country.

## **WHAT CAN COMMUNITY HEALTH WORKERS DO?**

*Dr David Osrin\* - Research Fellow, Institute of Child Health, London*

### **Defining a Community Health Worker**

There are many complex issues surrounding the critical group referred to as community health workers (CHW). There are probably more questions than there are answers and these begin with defining who they are.

What is the status of the CHW, within the community, health system and country? Are they paid, or unpaid? If paid, are they salaried or incentivised? The questions continue to such issues as training and what scope their training should cover and the need for updates. What will be their responsibilities, and the consequences of fulfilling these or otherwise? To who are they accountable and have to report and do they feel like part of the support chain? Finally, are they classified as government, private sector or NGO workers?

It is known that while most pregnant women are managed at home, in the community or at first level facilities, the requisite equipment and skills are less at this level. It has also been shown that maternal mortality diminishes as skilled birth attendance increases. However, who is a skilled birth attendant (SBA)?

The intent of this paper is to examine examples of SBAs (as a type of CHWs) activities. Evidence will be provided by examples from around the world of innovative ways in which CHWs (SBAs) have been used to mitigate health problems, especially in maternal and child health.

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This piece was adapted from Dr Osrin's presentation, delivered on the topic, at the workshop

## **Search Gadchiroli (Bang et al, Laureat 1999) India**

The Gadchiroli Project, in a most deprived part of a most deprived state in India, was the first to show that community-based health workers could reduce NNMR substantially. Village women were trained to identify high risk pregnancies and treat babies at risk. In addition, TBAs were trained and health education given. Also, VHWs visited newborn infants at home, identified warning signs and managed sepsis with injectable and oral antibiotics. By the third year of the project, NNMR crashed to 26 per 1000 in the intervention areas, as against 60 per 1000 in control villages.

What really caused the reduction in neonatal mortality is debatable. It was probably not due to a single intervention, but a combination of all the interventions as above. Is this replicable and suitable? That would depend on many factors such as the existence of a parallel cadre of health workers, the charisma and commitment of the selected workers due to conditions of service ability to scale through government programmes, incentives and human resources retention. Ultimately, would this be sustainable?

## **Pneumonia Case Management**

Another example is the CHW identification and management of pneumonia. The pneumonia case management programme is being rolled out by the WHO. The underlying assumptions of the programme are:

- ◆ Most of the pneumonia cases are caused by bacteria
- ◆ Giving antibiotics early can reduce mortality
- ◆ RR algorithms are sensitive
- ◆ CHWs can use the algorithms
- ◆ CHWs will act

A meta-analysis of community studies showed a mortality reduction of 27% among the newborn, 20% among infants and 34% among pre-school children. Specifically, pneumonia reduction was found to be 42% among newborn, 36% among infants and 36% among pre-school children (Sazawal and Black, Lancet Infectious Disease 2003).

### **Morang Innovative Neonatal Intervention (MINI), Nepal**

In this collaborative programme by the Nepal MOH and multilateral agencies, CHWS are trained in order to reduce NNM. CHWs identify all local births and classify these based on their infection status. They are then followed up on days 3, 7, 14, and 28. The “possible infection” category is further classified as local or severe infection. The CHW is mandated to refer the infected babies, but allowed to treat with oral antibiotic in the event that they do not go to the referral centre. The programme is reported as being successful but again there are confounding factors. The CHWs are highly motivated and supported (the CHW is supervised in the treatment of infections).

### **MIRA, Dhanusha**

This is similar to the MINI project above, but probably more realistic. It is located in the part of Nepal, called Dhanusha. The project uses Female Community Health Volunteers (FCHVs), who are incentivised but are not government workers. The FCHVs are also treated to act as in MINI but are less supervised.

### **TBAs in Pakistan**

In Pakistan, a project was carried out in 7 rural subdistricts (3 interventions and 4 controls). TBAs were trained and these were supported by female health workers, who in turn were supported by obstetricians. This resulted in reductions in both maternal and perinatal deaths. Though this has often been referred to as slowing the impact of training TBAs, it probably shows the result of integrating TBAs into an effective health system.

### ***Other Initiatives:***

#### **Community-Based Newborn Care Package**

Based on evidence as above, this is a new CHW initiative being implemented in Nepal. It includes BCC, promotion of institutional delivery (clean delivery practices for home deliveries), postnatal care, and community case management of pneumonia or infection, care of low birth weight infants, prevention and management of hypothermic and newborn resuscitation.

## **Conclusion**

There is an important role for community health workers in ensuring an improvement in the health indices of communities, as suggested by the results of several projects around the world. However, their role and impact will be better felt if they are well integrated into the health system as a whole.

## **ACHIEVING AN EFFECTIVE WORKFORCE**

*Dr Aderonke Olumide - Department of Community Medicine,  
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### **Introduction**

A primary health care (PHC) workforce can be characterized as effective only if it responds to the health needs of the community which it serves and achieves the expected health outcomes efficiently without wastage of the available resources. Attainment of an effective workforce for PHC will require the recruitment of appropriate (potentially effective) personnel, optimizing the performance of the existing personnel and retaining them in the system.

This presentation limits itself to measures which should be taken to optimize the performance of existing personnel. It begins with a brief description of the major human resource management challenges in Nigeria, an explanation of the major dimensions of workforce performance and a description of indicators for measuring each dimension. This is followed by an outline of the factors which determine performance and strategies which are known to stimulate better performance using various instruments or “levers” related to the job, the support system and the work environment. The paper describes the changes which will have to be made in order to achieve PHC workforce effectiveness and concludes by emphasizing that successful recruitment and retention of personnel largely depend on the attainment of job satisfaction among the existing workforce, a major by-product of effective performance. Also emphasized is the importance of stakeholder and community participation for the sustainability of the required changes in human resource management practices.

## **Major Human Resource Management Challenges in the Nigerian Health System**

As background, it is necessary to outline the many challenges confronting the management of human resources in the Nigerian health system. These include the paucity of accurate and comprehensive data on the human resources for health (HRH) situation. One finds that data is either non-existent or incomplete or inaccurate. The actual number of health personnel working at the PHC level is unknown much less talk of having accurate information on the various cadres. The data that exist indicate that the personnel are unevenly distributed with more shortages in the northern zones and rural areas of all zones.

Furthermore, the PHC workforce is inadequate in relation to health needs throughout the entire country. The disparity in the remuneration packages and schemes of service between health workers on federal, state and local government payrolls gives cause for concern as do the low morale, inter-cadre conflicts and poor job-satisfaction among health workers.

The continuing migration of health personnel to other countries is a major challenge. It is gratifying that the Federal Ministry of Health (FMOH) has recognized that these problems exist. FMOH deserves to be commended for formulating a National Human Resources for Health Policy (NHRHP), but it is very worrying that the policy has remained a “draft” since 2006 and is not being implemented. With all these challenges it is not surprising that the PHC workforce performs so poorly.

### **The Dimensions of Workforce Performance**

Optimizing the performance of existing personnel is crucial to the ultimate well-being of Nigerians because it has an immediate impact on service delivery. Moving away from the traditional focus on inputs (the right number of personnel, in the right place, at the right time with the right skills and support), modern health personnel management focuses on outputs and outcomes. Thus the modern approach is to consider the dimensions of health workforce performance which contribute to better service delivery. These include:

- ◆ Availability – distribution and attendance
- ◆ Competence – technical knowledge, skills and behaviour

- ◆ Responsiveness – courteous treatment of clients
- ◆ Productivity – ability to provide maximally effective services and outcomes and to reduce waste of times, skills, etc.

Health service performance is not easy to measure and monitor. However, it could be done through the use of appropriate yardsticks or indicators. Hornby and Forte have described human resource indicators which may be used to monitor health workforce performance. These are summarized in Table 4.3.

**Table 4.3:** Human resource indicators to assess health workforce performance

<b>Performance dimension</b>	<b>Indicators</b>
Availability	Staff ratios Absence rates Waiting time
Competence	Individual: prescribing practices Institutional: re-admission rates, cross infections, Live births, etc
Responsiveness	Patient satisfaction
Productivity	Interventions delivered per worker or facility Occupied beds Outpatient or home visits

Source: *Hornby P. and Forte P., 2002.*

### **The Determinants of Health Personnel Performance**

An understanding of the factors which determine how health personnel perform is key to formulating strategies for improving their performance. These factors include the characteristics of:

- ◆ **the external environment of the health system** e.g. the socio-cultural characteristics of the community being served such as the level of education, their knowledge, attitude and beliefs about health and diseases; economic characteristics such as income levels, the availability of resources, etc.,

- ◆ **the health system** e.g. the allocation of health resources; the internal environment and culture of the system – its organization, how personnel are paid, managed, supervised; leadership of the system and its programmes, etc.,
- ◆ **the health workers** themselves such as their own socio-cultural background, knowledge, skills, experience, motivation, work ethics, etc.

### **Strategies which Stimulate Better Performance**

Knowledge of the determinants of performance informs the formulation of instruments or “levers” to be used in strategies for stimulating better performance of health personnel. Some of these strategies are related to the job, others to the support system and others to the work environment. Collectively, these strategies may be used to address various human resource management (HRM) challenges. The strategies may be directed at individual personnel, at the health team, the organization or the entire system.

#### **1. Job-related strategies include:**

- ◆ **The use of written job-descriptions** which clearly state the responsibilities of the worker, his authority, reporting relationships, prospects for further training and development, methods for his appraisal, etc. Job descriptions have been effectively used in public sector health systems in many developing countries including Indonesia.
- ◆ **The creation and support of professional codes of conduct** to nurture professional values. Written codes of conduct and regulations are often used. Professional values can also be nurtured through the creation of professional associations. Experience has shown that this strategy can work even in resource-constrained countries where the challenges of maintaining professional values are so huge.
- ◆ **Matching tasks with skills** to prevent situations in which health personnel carry out tasks for which they are not

skilled or which other cadres should be doing e.g. CHEWS taking deliveries when midwives are present.

- ◆ **Applying supportive supervision** which solves specific problems and is seen to be helpful and educational rather than fault-finding and punitive. This should be extended to include private sector PHC providers as is done in Ghana.

## 2. **The support system-related strategies** include:

- ◆ **Appropriate and regular remuneration:** All health personnel must receive a living wage which is commensurate with their responsibilities and fair when compared to what others in equivalent jobs receive. The wages must also be paid regularly and on time. If not, all sorts of coping mechanisms will be used - absenteeism, ghost workers, referring patients to private sector, migration, etc. The remuneration of health personnel has been successfully increased in recent years in Tanzania and Uganda following a job-evaluation exercise. One hopes that the current exercise being done here will also lead to an increase in remuneration. Efforts to remove health personnel from the civil service pay structure have unfortunately failed in Zambia and Ghana. Method of payment for services has also been found to affect productivity. Service-based methods (fee-for service) have been found to be more effective in increasing productivity and performance than time-based methods (salaries or fixed budgets). Performance-related methods are now increasingly being used in developed countries. These methods require higher administrative capacity and incur high administrative costs.
- ◆ **The use of incentives:** The use of various types of allowances and bonuses has been shown to be effective incentives to enhance performance. These have included all manner of allowances, including allowances for working in remote and rural areas and for specific services such as immunization. This strategy was very

effective in increasing the availability of health personnel in rural Thailand and other parts of the developing world.

- ◆ **Provide adequate information, communication, monitoring, evaluation & feedback:** One of the unfortunate characteristics of our health services is that there is little feedback of information to health personnel about the impact of the services which they give. Relevant information does help to increase performance. Our national health information system must be improved so as to make the required information available. In addition we must develop a culture of monitoring, evaluation and feedback of information to enhance performance of the workforce. Attention must be drawn to the use of modern communication technology to improve data, services and productivity in the developed countries. In the meantime, we can make better use of appropriate technology such as newsletters, verbal communication, etc.
- ◆ **Improve infrastructure and supplies:** No matter how skilled a health worker is, very little can be achieved without basic infrastructure and supplies such as clean water, vehicles, working equipment and essential drugs. A safe and pleasant environment is equally important. More attention should be given to stores and supplies management and to the availability of more support workers in the PHC system – store and supplies managers, accounts clerks, etc.

### 3. Work environment-related strategies

An enabling work environment may be promoted through the application of the following strategies:

- **The promotion of life-long learning:** The knowledge of health personnel needs to be updated constantly to keep up with the rapid increases in knowledge and practice which characterize Public Health. Continuous professional development is necessary for health

personnel at all levels of care and particularly for those at the lowest levels who go through the shortest periods of training. Experience has taught that interactive hands-on experiential training with continuing supervision and support is much more effective than didactic training without practice. Such methods have improved prescribing and dispensing behaviour and clinical skills. Distance education is being increasingly used and has been shown to be effective. Care needs to be taken in the process of choosing the training approaches which are likely to be effective for specific needs.

- **The establishment of effective team management:** In order to stimulate better performance, the whole range of basic human resource management strategies must be routinely used and institutionalized. These include strategies for effective health manpower planning, procurement, preparation and maintenance with emphasis on leadership and team-building. Human resource managers need to establish a work environment where individual needs are harmonized with organizational demands, leading to the creation of a purposeful, willing, harmonious and well-motivated work team. This is no mean task at the PHC level where so many cadres from different backgrounds have to work together, but it is a task that must be done. The manager must give priority to ensuring that the workers understand the vision, mission and objectives, feel recognized and valued, participate in decision-making, work as a team, develop through mentoring, coaching, training etc, advance in their careers, are supervised supportively and are constantly monitored and evaluated, are given feedback and rewarded or sanctioned as appropriate.
- **Combining responsibility with authority and accountability:** Although decentralization of PHC has taken place and local ward managers have been given responsibility for service delivery, they are not always

given enough authority over money and staff. This sometimes affects local performance. High level managers should ensure that a culture of accountability is developed at all levels. This is an uphill task, given the current culture of corruption in Nigeria. We can start by educating the community to know what they should expect from their health providers (patients bill of rights) and that the community have a right to hold their health providers accountable for their actions. We can borrow a leaf from Uganda, where health district performance is ranked and published.

## **Conclusion**

This paper has presented and discussed various evidence-based strategies which can influence workforce performance. The strategies vary in cases of implementation, relative cost and potential effect on performance. Thankfully, most of them have an immediate impact on workforce performance. We cannot improve on the effectiveness of our health workforce without using these strategies.

However, it is necessary to sound a note of warning. Moving from rhetoric to action will require drastic changes in our human resource management practices. If we hope to come anywhere near the millennium development goals, we need to make these drastic changes in our PHC system right now. It must be pointed out that without an improvement in health workforce performance and in job satisfaction, strategies to recruit and retain health personnel will remain ineffective. Funding will be needed to make the changes. Specific allocation of funds to be used for this purpose must be made. Furthermore, the changes will not be sustainable without stakeholder and community participation. These are absolutely vital to the sustainability of workforce performance.

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## **Appendix A: Forum Membership**

**Prof Adetokunbo Lucas (Chair)**

Adjunct Professor, Harvard School of Public Health,  
Cambridge, Massachusetts, USA

**Dr Reuben Abati**

Chairman, Editorial Board,  
The Guardian Newspaper,  
Lagos

**Dr Sam Adenekan**

Corporate Affairs Manager,  
Nestle Nigeria Plc, Lagos

**Prof Martin Aghaji**

Professor of Cardiothoracic Surgery,  
University of Nigeria, Nsukka

**Dr Vincent Ahonkhai**

Vice President, US Regulatory Affairs,  
GlaxoSmithKline, USA

**Prof J.P. Ambe**

Professor of Paediatrics,  
University of Maiduguri  
Maiduguri, Nigeria

**Dr Abimbola Asagba**

Former Director of Public Health,  
Federal Ministry of Health, Abuja

**Dr Lola Dare**

Executive Director,  
Centre for Health Sciences Training, Research and Development  
Ibadan, Nigeria

**Prof G. J. F. Esan**

Director,  
Institute of Genetic Chemistry and Laboratory Medicine  
Ibadan, Nigeria

**Prof A.O. Esogbue**

Georgia Institute of Technology  
USA

**Prof E.M. Essien**

University of Uyo  
Uyo, Nigeria

**Prof James Hughes**

Director, Programme in Infectious Diseases  
Emory University  
Atlanta, USA

**Dr Oni Idigbe**

Director General  
Nigerian Institute of Medical Research  
Lagos, Nigeria

**Dr S.F. Kuku**

Co-Chairman,  
Eko Hospital, Lagos

**Prof Daniel Lantum**

Professor of Medicine,  
Yaounde, Cameroun

**Dr Celestino Obua**

Senior Lecturer,  
Faculty of Medicine  
Makerere University, Kampala, Uganda

**Prof Akin Osibogun**

Chief Medical Director,  
Lagos University Teaching Hospital, Lagos

**Dr Temitayo Odusote**

Epidemiologist,  
USAID, Abuja

**Ms Funmi Esan-Olayiwola**

Programme Officer (Health),  
DFID-UK, Abuja

**Mr Kunle Olumide**

Consultant, American Business Council  
Lagos

**Dr Obinna Onwujekwe**

Dept. of Health Administration and Management,  
University of Nigeria, Enugu

**Dr Leke Pitan**

Former Commissioner for Health, Lagos State  
Lagos

**Dr Femi Pitan**

Community Health Physician, Chevron Nigeria Plc  
Lagos

**Prof Umaru Shehu**

Professor of Public Health,  
University of Maiduguri  
Maiduguri

**Prof Oyewale Tomori**

Vice Chancellor,  
Redeemer's University  
Lagos

# **Appendix B: Programme Staff**

## **Workshop Adviser**

Prof Temitayo Shokunbi, FAS  
Department of Neurological Surgery, College of Medicine,  
University of Ibadan

## **Project Staff**

Dr M. Oladoyin Odubanjo - Project Director  
Miss Adedamola Badejo – Research Assistant

## **Staff of The Nigerian Academy of Science**

Dr M. Oladoyin Odubanjo – Acting Executive Secretary  
Dr Joanna Nwosu – Programme Officer  
Miss Adedamola Badejo – Research Assistant  
Mr Samuel Shofuyi – Assistant Administrative Manager/  
Finance Associate  
Mr Nicholas Ibeh – Office Assistant  
Miss Bolaji Dasaolu – Administrative Officer (Communications)

## Appendix C: Workshop Agenda

<b>Day 1</b>	
<b>Session 1: Opening Ceremony</b>	
9.00am	<b>Prof D.U.U. Okali, FAS (President, Nigerian Academy of Science)</b> Welcome Remarks
9.10am	<b>His Excellency, Dr Olusegun Agagu (Executive Governor of Ondo State)</b> Chairman's Opening Remarks
9.20am	<b>Dr Patrick Kelley (Director, Boards on Global Health and ASADI)</b> Goodwill Message from the US National Academies
9.30am	<b>Prof. Adetokunbo Lucas</b> Forum Chairman's Opening Remarks
9.40am	<b>Prof Fola Esan, FAS</b> Overview of Blood Safety Report
9.50am	<b>His Excellency, Governor Olusegun Agagu</b> Launching of the Blood Safety Report
10.00am-10.20am    Tea Break	
<b>Session 2: Primary Health Care Systems</b>	
10.20am	<b>Workshop Adviser</b> <i>"Overview of the Workshop"</i>
10.30am	<b>Mrs Titilayo Koleosho-Adelekan</b> <i>"Primary Health Care in Nigeria; from then till now"</i>
10.50am	<b>Dr P.C. Campbell</b> <i>"Services at Primary Care Level"</i>
11.10am	<b>Dr Ibrahim Labaran</b> <i>"Building the Bridges between Levels of Health Services"</i>
11.30am	<b>Dr J.B. Adetunji</b> <i>"Ensuring Patients' Safety and Satisfaction"</i>
11.50am	<b>Dr Kolawole Komolafe</b> <i>"Traditional Medicine as an aspect of primary health care"</i>
12.10pm	Plenary Group Discussion* <i>What are the benefits of a PHC based health System? *How can a PHC based health System be sustained? *What are the challenges in developing a framework for organizing and understanding components of a PHC based health system? *Is there a structure/procedure for reviewing the PHC policy?</i>
<b>Session 3: Socio-Political Environment</b>	

12.50pm	<b>Dr Wale Okediran</b> <i>“Strengthening Local Government Delivery of Health”</i> 1.10pm-2.00pm: Lunch
2.00pm	<b>Prof O.K. Alausa</b> <i>“Working together for Progress: Examining Intersectoral Collaboration”</i>
2.20pm	<b>Dr David Osrin</b> <i>“Community Involvement and Participation”</i>
2.40pm	Discussions: <i>*Social and Cultural factors influencing PHC delivery</i> <i>*How accountable are Local Governments for the delivery of primary health care</i> <i>*Can community participation be achieved through the Ward Health System?</i>
3.20pm	<b>Dr Dogara Bashir</b> <i>“The Place of Basic Infrastructure: Supply of Safe Water”</i>
3.40pm	<b>Mr Oladimeji Oresanya</b> <i>“Waste Management and Health; Lessons from Lagos State”</i>
4.00pm	<b>Hon. Minister of Environment, Housing and Urban Development, Hajia Halimat Alao</b> <i>“The Challenges of Housing”</i>
4.20pm	Plenary Group Discussion* <i>What strategies can strengthen policy implementation of the primary health care system within the 3 tiers of government?</i>
5.00pm	Closing of Day 1
<b>Day 2</b>	
9.00am	Overview of Day 2
<b>Session 4: Quality Assurance Management of Service Delivery</b>	
9.10am	<b>Prof Lateef Salako, FAS</b> <i>“Essential Drugs and Equipment”</i>
9.30am	<b>Prof Adedoyin Soyibo</b> <i>“Equity in Health and Financing”</i>
9.50am	Discussions
10.30am	<b>Prof Afolabi Bamgboye</b> <i>“Strengthening Data Management: Bottom-top Approach”</i>
	10.50am- 11.10am Tea Break
11.10am	<b>Dr I.J. Inyang</b> <i>“Staying on Track: Monitoring and Evaluation of PHC”</i>
11.30am	Discussions: <i>*How can Quality Assurance best be implemented and what are the effects on quality improvement?*</i> <i>What is the relationship between the process of care and health outcomes?*</i> <i>What is the</i>

	<i>relationship between quality of care and health system variables such as demand, equity, willingness-to-pay, costs and revenue? *What is the relationship between quality and equity?</i>
<b>Session 5: Vanguard of PHC</b>	
12.10am	<b>Prof Michael Asuzu</b> <i>“Role of Medical Officers of Health”</i>
12.30pm	<b>Dr David Osrin</b> <i>“What can Community Health Workers do?”</i>
12.50pm	<b>Dr Aderonke Manuwa-Olumide</b> <i>“Achieving an Effective Workforce”</i>
	1.00pm-2.00pm: Lunch
<b>Session 6 : PHC in Nigeria</b>	
2.00pm	<b>Prof. Adetokunbo Lucas</b> Address by the Forum Chairman
2.20pm	Matters Arising <ul style="list-style-type: none"> <li>• <i>Policy of Primary Health Care</i></li> <li>• <i>Are Primary Health Care facilities sustainable?</i></li> <li>• <i>Strategies of achieving an efficient PHC system</i></li> </ul>
4.00pm	End of Workshop

## **Appendix D:**

# **The Nigerian Academy of Science**

The Nigerian Academy of Science was inaugurated on 8<sup>th</sup> January 1977 at a solemn and impressive ceremony in the Conference Centre, University of Ibadan. Its inauguration marked the climax of five years of renewed effort by concerned Nigerian scientists under the auspices of the Science Association of Nigeria (SAN) to overcome the obstacles that had plagued previous efforts of about twenty years to found an Academy of Science. The main antecedent to the founding of the Academy was the formation of a committee of Fellows of SAN, to prepare a paper on the formation of the Nigerian Academy of Science. On 22 March 1975, the Committee adopted the draft statutes and also approved the list of forty-five Foundation Fellows for the Academy. The Committee also appointed a Steering Committee to prepare for the inauguration of the Academy which took place on 8 January 1977. Today, the initial group of forty-five Foundation Fellows has grown to one hundred and sixteen, covering all areas of Science, Biological and Physical.

### **Aims and Objectives**

The aims and objectives of the Academy are to promote the growth, acquisition and dissemination of scientific knowledge and to facilitate its use in the solution of major problems of national interest. The Academy strives to do this by:

- Providing advice on specific problems of a scientific or technological nature presented to it by the government and its agencies, as well as by private organizations;
- Bringing to the attention of the government and its agencies problems of national interest that science and technology can help to solve; and
- Establishing and maintaining the highest standards of scientific endeavour and achievement in Nigeria, through:
  - publication of journals and reports

- organization of conferences, seminars, workshops and symposia
- recognition of outstanding contributions to science in Nigeria
- development of a working relationship with other national and international scientific bodies and academies.

### **Activities of the Academy**

The Academy has established a tradition of organising or sponsoring conferences, symposia, workshops and public lectures periodically. Specifically, the Academy has, since 1989, embarked on lecture tours of the various states by Fellows as part of its campaign to popularize Science and Technology in Nigeria. So far, lectures have been held in Ogun, Oyo, Plateau, Rivers, Cross Rivers and Imo States, and several in the past including at Lagos, Yola, Bornu, Bauchi, Abia, Enugu, Adamawa and the Federal Capital Territory, Abuja.

Apart from the conference and other fora, the Academy holds quarterly lectures on topics of scientific nature but with applications for the larger public.

### **Publication of Scientific Literature**

Arising from its public enlightenment activities, the Academy regularly published scientific materials. These included The Proceedings - a highly reputable and prestigious journal in which Fellows as well as scholars sponsored by Fellows may publish the results of recent research; The Discourse, which contained texts of lectures delivered at the quarterly ordinary meetings of the Academy; and national journals on behalf of the Federal Ministry of Science and Technology (these were merged to become the Nigerian Journal of Science and Technology).

As part of its contribution to the Fifth General Assembly of the Third World Academy of Science, which took place at Abuja in 1995 with a focus on Science, Technology and African Development, the Academy published the book, Science Today in Nigeria. The book is a compilation of review articles on the state of science in Nigeria. The proceedings of the conference were also published by the Academy.

### **Award of Prizes**

The Academy is committed to recognising and rewarding outstanding contributions in the various branches of science. It does this through the award of the following prizes:

- ◆ Nigerian Academy of Science/Third World Academy of Sciences Prize for Young Scientists in Nigeria.
- ◆ Nigerian Academy of Science/Manufacturers Association of Nigeria National Science Prize.
- ◆ Academy Postgraduate Awards.
- ◆ Professor Chike Obi Prize in Mathematics
- ◆ Nigerian Academy of Science/Nigerian Liquefied Natural Gas Annual Prize for Science

### **The ASADI Program**

The Nigerian Academy of Science is participating in the African Science Academies Development Initiative (ASADI). This is a capacity building program involving collaboration with the US National Academies and supported by a ten-year grant from the Bill and Melinda Gates Foundation. The Nigerian Academy as well as the Academies of Uganda and South Africa were competitively chosen to participate in the program at the most intensive level.

## **Appendix E: Acronyms**

BHSS:	Basic Health Services Scheme
CHW:	Community Health Worker
CME:	Continuing Medical Education
EU-PRIME:	European Union Partnership to Reinforce Immunisation Efficiency
FCHV:	Female Community Health Volunteer
GDP:	Gross Domestic Product
GFA:	Government Financing Agents
HEFAMA:	Hospital Facility Accreditation and Monitoring Agencies
HOOP:	Household out-of-pocket
HRH:	Human Resource for Health
HRM:	Human Resource Management
IDRS:	International Disease Surveillance Report
IMCI:	Integrated Management of Childhood Illness
LAWMA:	Lagos Waste Management Authority
LGAs:	Local Government Area
MINI:	Morang Innovative Neonatal Intervention
MINI:	Morang Innovative Neonatal Intervention
MIRA:	Mother and Infant Research Activities
MOH:	Medical Officers of Health
NAPEP:	National Agency for Poverty Eradication Programme
NAS:	Nigerian Academy of Science

NGO:	Non-Governmental Organisation
NHA:	National Health Accounts
NHMIS:	National Health Management Information System
NHRHP:	National Human Resources for Health Policy
NNMR:	Neonatal Mortality Rate
NPHCDA:	National Primary Health Care Development Agency
NPHS:	Nigerian Primary Health Care System
NYSC:	National Youth Service Corps
PFA:	Private Financing Agents
PHC:	Primary Health Care
PPE:	Personal Protective Equipment
SBA:	Skilled Birth Attendants
SNEHA:	Society for Nutrition, Education and Health Action
SOPs:	Standard Operating Procedures
TBAs:	Traditional Birth Attendance
THE:	Total Health Expenditure
UNICEF:	United Nations Children’s Fund
WHO:	World Health Organisation