UNDER-FIVE CHILD MORTALITY: AN ASSESSMENT OF MILLENNIUM DEVELOPMENT GOAL 4 IN ABUJA MUNICIPAL AREA COUNCIL

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Abstract

This research examined Under-five Mortality as a case study for assessment of Millennium Development Goal 4 in Abuja Municipal Area Council (AMAC) in the FCT, Abuja. The objective was to examine the efforts of the public sector, in Abuja Municipal Area Council in tackling child health care within the Millennium Development Goals Programmes. Two targets and 3 indicators for monitoring the Goals and aspects of the National Policy on health as it pertains to under-five child health were specifically selected. Five key issues came out prominently from the National Policy on health namely: child health Care Delivery system by the public sector,' quality care and management of child health care; child health care issues outside the control of children and of course the Millennium Development Goal 4 and the 3 indicators. Including under-five mortality rate,' Infant mortality rate and proportion of one year-old children immunized against measles. Thereafter, 2 hypotheses were formulated and tested with chi-square non-parametric test to ascertain their validity. The Research method used included desk, survey and instrument of structured questionnaire. The populations of study were three categories namely: Officials of the Special Assistant to the President on the MDGs; Primary Health care services providers in 5 selected PHC in AMAC; mother of under-five children in five AMAC Primary Health care centres. Sample size were determined using proportional stratification method and 222 samples were given questionnaires which consisted of thirty questions and data collected were processed using descriptive statistical analysis, percentages and manual computation. The research found discrepancies and unsatisfactory performance of indicators pertaining to Millennium Development Goal 4 (to reduce child mortality) by 2015. The research however found that the implementation of Midwives Service Scheme by the Federal Government has scaled up performance and acted as catalyst with a turnaround in the focus and performance of the Millennium Development Goal 4. This new system if properly sustained would have certainly ensure a high score towards reduction by 2/3rd of' under 5 Mortality Rate by the life span of MDGs in October 2015. The research accordingly recommended the stepping up of Midwives Service Scheme and at the same time, free medical services for children under 5 and for pregnant women in the Abuja "Municipal Area Council, as two sure sources for the achievement of Millennium Development Goals 4. The research also recommended that immunization programmes for children should be directed at measles eradication and vaccines for the "six killer diseases" of children, among other recommendation.

Keywords: Under-five child mortality, millennium development goal 4,Immunization,Mortality Rate, Ante-Natal Care, Public sector.

Introduction

Early childhood mortality rates based on data from the 2008 NDHS shows that the under-five mortality rate for the five years preceding the survey is 157 deaths per 1,000 live births. This translates to about one in every six children born in Nigeria dying before their fifth birthday. The child mortality rate is 88 deaths per 1,000 children surviving to 12 months of age, but not to their fifth birthday. The infant mortality rate is 75 deaths per 1,000 live births, and the neonatal mortality rate is 40 deaths per 1,000 live births. The post-neonatal mortality rate is 35 deaths per 1,000 live births.

An examinations of mortality levels across the three successive five-years periods shows that under-five mortality decreased from 199 deaths per 1,000 births during the middle to late 1990s (circa 1993-1998) to 157 deaths per 1,000 births in the middle part of this decade (2003-2008). Most of the decrease in mortality occurred outside of the neonatal period.

In September 2000, 189 member states of the United Nations came together at the Millennium Summit and adopted the Millennium Declaration, including commitments to poverty eradication, development, and protecting the environment.

Many of these commitments were drawn from the agreements and resolutions of world conferences and summits organized by the United Nations during the preceding decade. A year later, the UN Secretary General's Road Map for implementing the Millennium Declaration formally unveiled eight goals, supported by 18 quantified and time-bound targets and 48 indicators, which became known as the Millennium Development Goals (MDGs). The MDGs focus the efforts of the world community on achieving significant, measurable improvements in people's lives by the year 2015. They established targets and yardsticks for measuring results-not just for developing countries but for the rich countries that help fund development programs and for the multilateral institutions that help countries implement them.

Eight MDGs were listed to guide the efforts of virtually all organizations working in development and have been commonly accepted as a framework for measuring development progress. Goal 4 is to reduce child mortality.

Specifically the Attainment of Goal 4 which is to reduce child mortality is the focus of this research. The current situation with regard to the attainment of MDGs especially Goal 4 have seen mixed achievements with good progress in some areas and little progress in other areas.

The target is to reduce by two-thirds between 1990 and 2015 the under-five mortality rate, equivalent to an annual rate of reduction of 4.3 percent. Examples of child mortality reduction strategy includes; breastfeeding; hand washing; safe disposal of stool; latrine use; safe preparation of weaning foods; use of insecticide treated bed nets; complimentary feedings; immunizations; micronutrient supplementation (zinc

and vitamin A); prenatal care, including steroids and tetanus toxoid; anti-malarial intermittent preventive treatment in pregnancy; newborn temperature management; replacement feeding; antibiotics for premature rupture of membranes; clean delivery, case management with oral rehydration therapy for diarrhea; antibiotics for dysentery, pneumonia, and sepsis; anti¬malaria for malaria; new born resuscitation; breast feedings complementary feeding during illness; micronutrients supplementation (zinc and vitamin. In Western and Central Africa, mortality rates for under-fives are among the highest in the world. The figures stand at 184 compared to global average of 88 per 1,000 according to UNICEF; girls' mortality rates are higher than those of boys. By the time girls are teenagers, they are exposed to gender - specific reproductive health problems such as early pregnancy as a result of early marriage and premature sexuality, unwanted pregnancy, abortion, sexual exploitation and commercial sex, Sexually Transmitted Diseases (STDs) and HIV/AIDS.

Progress in reducing child mortality has been significant. With sustained effort and improvement in related and lagging sectors, such as water and sanitation, there is a strong possibility of achieving Goal 4 by 2015. Under-five mortality has fallen by over a fifth in five years, from 201 deaths per 1,000 live births in 2003, to 157 deaths per 1,000 live births in 2008. In the same period, the infant mortality rate fell even faster, from 100 to 75 deaths per 1,000 live births.

Recent interventions - including Integrated Management of Childhood Illnesses - that reflect the underlying causes of child deaths, have contributed to these successes. However, these need to be rapidly expanded and accelerated if Nigeria is to achieve Goal 4. Access to primary health care needs to be improved by more investment in infrastructure, human resources, equipment and consumables, and better management. Implementation arrangements must target local needs, which vary hugely from community to community and state to state. Routine immunization is unsatisfactory but can be rapidly improved by building on the successes of the near eradication of polio.

Government commitment is not in doubt. An innovative Midwives Service Scheme is expected to contribute substantially to ongoing shortfalls but its impact has yet to be reflected in the data. If the scheme is expanded in proportion to the national gap in the number of midwives, this will further accelerate progress. In addition, more mothers will be covered by antenatal care as access to quality primary healthcare improves and incentives attract health workers to rural areas, indicating that Nigeria will progress to date on this goal into a MDG success story.

Since the Millennium Declaration in 2000, the MDGs have become important tools of monitoring human progress across nations. The eight time-bound goals are aimed at achieving many things by 2015 among which is to reduce child mortality.

UNDP has been given the role of Global MDG Monitor for the UN System, a role that UNDP Nigeria takes very seriously. On a global level and in collaboration with other development partners, the UNDP has transformed the MDGs into an actionable instrument of development management by turning the eight goals into

18 targets and 48 indicators that can be used to monitor human progress across nations. Nigeria amongst other nations has signed up to these goals, targets and indicators.

In Nigeria, evidence from the 2006 MDG shows that there is a likelihood of achieving three of the eight goals in Nigeria namely: achieving universal basic education; ensuring environmental sustainability; and developing global partnership for development while the health MDGs remain daunting challenges for Nigeria. A critical barrier to planning for achievement of the MDGs continues to be the availability of up to date data on most of the indicators. This is compounded by the limited funding available for data generation and management.

Constitutional responsibility for implementation on almost all the goals rest with the states and local governments in Nigeria's federal structure, however in spite of remarkable strides at federal level, appreciation of the requirements for meeting these goals, as well as institutional capacity remain relatively low at these levels of government. Poor governance and integration of the MDGs into national development strategies have also been a challenge while other challenges include a weak monitoring mechanism for the MDGs and low stakeholder involvement (private sector and Civil Society Organizations).

Despite these challenges political commitment remains very high at Federal level under the leadership of the Senior Special Adviser to the President on MDGs. Under its four practice areas, UNDP has provided support to the government in a number of areas. In the AMAC, which is the case study area for this research, the Council is supposed to anchor the MDG Programmes. However, there has been no specific programmes identified by AMAC especially for Goal 4. The situation is that the AMAC seems to be contented with whatever is being developed and implemented by the national body for MDG, which is the Office of the Senior Special Assistant to the President on the Millennium Development Goal.

Statement of the Problem

Nigeria has a population of approximately 140 million, with 30 million women of reproductive age. About 5 million pregnancies occur every year with 54,000 of them resulting in death from complications of pregnancy and child birth. One Nigerian woman dies every 10 minutes from pregnancy and childbirth related causes.

The factors that contribute to high under-five child mortality include: poor Antenatal care; inadequate delivery care; poor post-partum care; HIV/AIDs; malaria; Acute Respiratory Tract Infection; diarrhea diseases; infant feeding and children's nutritional status.

The Country loses 2,300 under-five year olds and 145 women of childbearing age everyday making Nigeria the second largest contributor to the under-five (U5MR) in the world. Over one million Nigerian children will die before their fifth birthday according to Black et.al (2003) a figure that represents about 100/0 of the global total.

As the countdown of the MDG goes, Nigeria is not on-track to achieve its health-

related millennium development goals. NBS (2005). In Nigeria the U5MR has shown a marginal reduction in the last five years, of about 10% compared to about 50% in countries such as Ghana and Mozambique. It is estimated that Nigeria would need to intensify its efforts, including doubling its action on child health, to be able to achieve MDG 4 by 2015, a reduction from 201 in 2003 to 77 per 1,000 live births by 2015 (230 in 1990 to 77 in 2015).

The targets for improved access to safe drinking water and sanitation have not been met; according to UNICEF /WHO (2004), while diarrhea continues to account for 16%of U5MR. The tragedy behind this lack of progress is that 63% of the U5MR and up to 75% of newborn deaths could be avoided, since lifesaving interventions are well known and can be implemented on a large scale, even in settings where resources are constrained.

Unabated, HIV/AIDs is likely to impact negatively on the overall achievement of MDGs 4. The current HIV prevalence rate in pregnant women in Nigeria is estimated at 4.4% (about 260,000 of the 5.9 million deliveries per annum). ANC (2005). Mother-to-child transmission (MTCT) of HIV accounts for 90% of the pediatric infections. Without prevention of mother-to-child-transmission (PMTCT) interventions, 35% of the children born to HIV positive mother will become infected with HIV; at least one quarter of the children infected through their mothers will fall ill and die by their first birthday; up to 60% will die before their second birthday. Increasing access to effective interventions will significantly reduce the risk of HIV transmission from mother-to-child.

Nigeria is one of the countries that had no significant improvement in child survival over the past forty years. Compared to other African countries, Nigeria had a mere 10% reduction in U5MR whilst Ghana, Cameroon and Kenya achieved 530/0, 40% and 42% reductions, respectively. Limited impact has been made in addressing the determinants of ill health such as malnutrition, unhealthy environments and low level of access and utilization of quality health care service by children. Other determinants of child survival include low female literacy levels and poor family/household health-care practices. In addition, access to safe water and adequate sanitation are important in improving household hygienic practices. Less than half the population has access to safe water (42.8%) and about a quarter have no access to adequate sanitation.

Furthermore, other causes of morbidity and mortality include malaria, sickle cell disorder (SCD), unintentional injuries and child abuse, as well as environmental hazards (air pollution).

The implementation of child survival interventions in Nigeria has largely been vertical, focusing on immunization, malaria control and the promotion of breast - feeding with little emphasis on an integrated approach to healthcare.

In recognition of the unacceptably high under-five mortality rate, the government of Nigeria in 1997 adopted the Integrated Management of Childhood Illness strategy (IMCI) and commenced its implementation in 1999, to reduce childhood morbidity and mortality. The IMCI has been included in the yet-to-take-off ward minimum

health care package for the country. To date, the IMCI is only being implemented in twenty-five states with limited coverage. Consequently, despite the knowledge about the management of childhood diseases and injuries, coverage of essential interventions has been minimal. Many children who survive serious illnesses do not reach their full physical, intellectual and social potential due to the effects of poor health care and nutrition during their years of rapid growth and development.

This research project examined all these problems with a view to highlighting how the Millennium Development Goal No 4 has been implemented to tackle the problems and challenges experienced in AMAC in the Federal Capital Territory.

Objectives of the Study

i. To analyze the efforts, programmes and policies put in place in AMAC towards the achievement of the Millennium Development Goal Number 4;

ii. To examine the identified targets and indicators outlined to measure and monitor progress so as to ensure the attainment of the Millennium Development Goal Number 4;

Research Questions

i. What have been the efforts, guidelines, policy actions put in place towards the Millennium Development Goal 4 and the attainment of reduction under-five child mortality in the Abuja Municipal Area Council?

ii. What were the relevant targets and indicators outlined for the Millennium Development Goals to ensure effective attainment of reduction of under-five child mortality in Abuja Municipal Area Council?

Statement of Hypotheses

Ho_1: Improvement in Anti-Natal Care Programmes has not significantly reduced under-five child mortality rates.

Ho_2: Under-five Mortality Rates have not reduced tremendously due to the implementation of MDG 4 in AMAC.

2.1 Literature Review

Conceptual Review

The Millennium Development Goals:

The Millennium Development Goals (MDGs) are commonly described as a "roadmap for world development by 2015", They embody the core content of the current development agenda of "global governance". They are treated as the current framework of international development cooperation, to which there would allegedly be no alternative, All countries and development agents have so far proven to comply with this framework, reasoning and operating "inside the box", The MDG framework will remain valid until at least 2015, the "target date" established for its implementation, Although not a legally binding instrument, nor even a formal UN resolution, the MDG framework has in practice acquired a politically and morally compelling character,

In the 1990s, UN member states went through an intense, historically unprecedented UN conference process, aimed at "building consensus" on development priorities for the 21st century, A consensus was proclaimed, even if the acrimonious debates that

marked some of the conferences (1994 Cairo conference on population and 1995 Beijing conference on women in particular) were proof of the fakeness of the consensus. At the end of the 1990s, governments experienced "conference fatigue", and those actors at the rudder of global governance feared the process launched by the conferences was losing steam.

The year 2000 was an opportunity the UN did not want to miss to reengage governments. Under the influence of the UN Secretariat, at the Millennium Summit held in New-York in September 2000, 189 UN member-states adopted the Millennium Declaration - a declaration which ideologically builds on the conference process of the 1990s. The Declaration, signed by 147 heads of states, substantially draws from the UN Secretary General Millennium Report published in April 2000, We the Peoples: The Role of the United Nations in the 21st Century. The history of the intergovernmental Declaration reveals the key role played by the UN Secretariat in the drafting process, which raises the question: does the Declaration express the views of sovereign governments and the will of the people these governments represent, or those of the experts consulted by the UN Secretariat?

A year later, in August 2001, the UN Secretariat published the 8 Millennium Development Goals (MDGs). The goals were devised, not by governments through an open debate as would have been desirable, if the goals were to express the will of the people in developing countries, but by a "working committee drawn from a range of UN bodies, including the World Bank, the International Monetary Fund, UNICEF, the Population Fund and the World Health Organization, as well as the Organization for Economic Cooperation and Development" WHO (2000) The goals were not the object of a formal resolution of the UN General Assembly, but it was taken for granted that they reformulated the intergovernmental Declaration and were to frame international development cooperation until 2015. The history of the goals' origin makes it clear that they are not, strictly speaking, an intergovernmental product, but an initiative driven by the UN Secretariat and its "experts": a fuzzy, "formal-informal" situation.

The Millennium Development Goals Process

The UN Secretary General invited heads of state and government for a Summit at the opening of the General Assembly in September 2005 in New-York, in order to review progress towards the goals. 170 heads of state and government participated in the event. On September 20-22, 2010, a UN High Level Plenary Meeting of the UN General Assembly on MDGs took place.

Ever since 2005, the UN Secretariat has issued a yearly Millennium Development Goals Report. The report is based on a master set of data compiled by an Inter-Agency and Expert Group on MDG Indicators, led by the Department of Economic and Social Affairs of the UN Secretariat.

In 2002, the UN Secretary General commissioned the Millennium Project an independent advisory body, to develop a concrete action plan for the world to achieve the MDGs. In 2005, the Millennium Project, directed by economist Jeffrey

Sachs, presented its final recommendations to the Secretary General in a report entitled "Investing in Development - A Practical Plan to Achieve the Millennium Development Goals". As of January 1st, 2007, the advisory work formerly carried out by the Millennium Project is being continued by an MDG support team integrated under the UN Development Program (UNDP). The UNDP, which is present in 166 countries, now plays a central role in tracking the MDGs (global progress, country progress and UNDP's work with donors), campaigning and mobilizing, researching and sharing best strategies, and supporting governments in operational activities.

The MDGs inspires a global lobby, the End poverty 2015 millennium campaign, which describes itself as a "growing global movement of people who are demanding that their government honor their commitments to achieve the MDGs by 2015" end poverty.

The history of the MDG process since its origin reveals that sovereign governments are not in the driver's seat, but are themselves driven by a host of "partners" whose identity often remains nebulous: experts appointed or consulted by the UN Secretariat, statisticians, the UN Secretariat and other UN bodies, other international organizations, financial institutions, bilateral agencies, the "private sector", NGOs and pressure groups. This tacit acceptance of governance by experts, not by the people for the people, is a symptom of the current western crisis of democracy. The West exports its crisis to global governance. As a consequence, global governance processes such as the MDGs tend to often be opaque - a situation which facilitates power-grab by special interest groups.

Millennium Development Goals in Nigeria

The relevant Millennium Development Goal to this research project and their Targets are outlined as follows:

Goal 4. Reduce child mortality

Target 5. Reduce by two thirds, between 1990 and 2015, the under-five mortality rate. To this end the following yardsticks are to be used as measurements namely:

i. Children 1 year old immunized against measles;
ii. Children under-five mortality rate per 1,000 live births;
iii. Infant mortality rate(O-l year) per 1,000 live births.

Goals, Targets and Indicators

The internationally agreed framework of 8 goals and 18 targets was complemented by 48 technical indicators to measure progress towards the Millennium Development Goals. These indicators have since been adopted by a consensus of experts from the United Nations, IMF, OECD and the World Bank. Each indicator below is linked to millennium data series as well as to background series related to the target in question.

Goal 4: Reduce Child Mortality

Target 5. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate

Indicators

13. Under-five mortality rate (UNICEF-WHO)
14. Infant mortality rate (UNICEF-WHO)
15. Proportion of 1 year-old children immunized against measles (UNICEF-WHO)

Millennium Development Goals Supports

As of Jan 1, 2007, the advisory work formerly carried out by the Millennium Project secretariat team is being continued by an MDG Support team integrated under the United Nations Development Program.

The Millennium Development Goals Framework

On the 6th and 8th September, 2000, the world witnessed the gathering of 189 heads of state and government in New York, the Headquarters of the United Nations in the United States of America, to draw the Millennium Development Goals (MDGS). These goals are geared towards the reduction of poverty and encouragement of rapid progress in the improvement of the world. Journal of Research Development (2008). The eight Millennium Development Goals and their targets are as follows:

i. To eradicate extreme poverty and hunger;
ii. To achieve universal primary education;
iii. To promote gender equality and empower women; iv) To reduce child mortality;
iv. Improve Maternal Health;
v. To combat HIV/AIDs, malaria and other diseases;
vi. To ensure environmental sustainability;
vii. Develop a Global Partnership for Development;

These goals are expected to be attained by the countries of the world in the year 2015. To simplify the implementation exercises for greater success to be recorded, 18 targets three of these targets are specifically for Goal 4 were set alongside the goals, for countries to be well-focused and time conscious in pursuing the goals. This will also enable them to measure the degree of progress made at any point in time.

3.1 Methodology

The study employed survey research design popularly used in medical science. First, recognizance survey was carried out in the Abuja Municipal Area Council, FCT on Millennium Development Goals 4. Secondly, questionnaire was designed on issues pertaining to Millennium Development Goal 4 in the aspects of child health care. The questionnaires were designed to ascertain how the targets and the 3 indicators have been achieved in Abuja Municipal Area Council in the Federal Capital Territory. Thirdly, direct observations complemented the data collected through survey and the use of questionnaire. The observation method of data

collection was undertaken not only to fine tune the questionnaires and assess their suitability, preciseness and relevance to the research but also to observe how activities pertaining to the internationally agreed goals, targets and technical indicators to measure progress towards the Millennium Development Goal 4 have been implemented in Abuja Municipal Area Council, the case study area.

Sample size Determination and Sampling Technique

A total sample of 500 was selected from the population of residents in Abuja, FCT, phase 1, which is about 4 million. As the population is a finite one, this makes it possible to apply Yamane (1964:2) formula for determining sample size from a finite population. Onwe (1988:21) support principle.

The formula states that:

$$n = \frac{N}{1 + N(e)^2}$$

Where

n = Research population size

N = Population of the study I = Statistical constant

E = Maximum margin of error at 0.0012

Level of confidence is therefore

$$n = \frac{500}{1 + 500\ (0.00125)2}\quad n = 500$$

$$n = \frac{500}{1 + 1.25}$$

$$n = 222$$

The researcher decided to distribute the same size according to the strata of the population of the study using the principle of proportional stratification; (Asika, 1991)

Table 3.1 Proportional Stratification of Sample size

Category of Population	Number	%	Proportional Stratification
Officials of the Special Assistant to the president on MDGs	25	5	0.05 x 222 = 11
Primary Health Care Service Providers	150	30	0.03 x 222 = 67
Under-five children in AMAC Primary Health Centers	325	65	0.60 x 222 = 144
Total	**500**	**100**	**222**

Source: Orji Ikechukwu Anthony (fieldwork 2012)

Administration of Questionnaire

The researcher personally administered the questionnaires to the sample population. The strategy was adopted to enable the respondents to volunteer responses to the questionnaires. The administration of the questionnaire lasted 3 months (October to December 2012). In the end, the response rate is in table 3.3.

Table 3.2 Questionnaire Administration Response rate

Category	Total unit administered	Sampling response	Percentage	Remark
Official of Federal Ministry of Health	12	6	50	Officials/policy makers
Health care service providers	66	55	83	Service providers and FCT public health dept
Pregnant women and children under five	144	128	89	Beneficiaries
Total	222	189	74	

Source: Orji Ikechukwu Anthony (fieldwork 2012)

Table 3.2 shows that 74% of the respondents successfully completed the questionnaire, which is quite a high rate of response.

3.2 Method of Data Analysis

The questionnaires were processed using descriptive statistical analysis (percentages). Manual computation was applied in the analysis of data from both primary and secondary sources.

The hypotheses formulated were tested for validity using the chi-square (x^2) non-parametric technique which is stated as follows:

$$x^2 = ?\frac{(0 - E)^2}{E}$$

Where 0 = the observed frequencies

E = the expected frequencies

The results obtained were compared with the chi-square table at 5% level of significance to ascertain the validity of each hypothesis.

4.1 Analysis and Discussion of findings

Research Question 1:

Ante-Natal Care and Under-five Child Mortality Rates

On whether improvement in Ante Natal care programmes will significantly reduce under-five child Mortality Rates, responses received are in table 4.1.

Table 4.1

Will improvements in Antenatal care programmes significantly reduce Under-five Mortality Rates?

Research Question 1:

Response	Number	%
No	137	72
Yes	52	28
Total	**189**	**100**

Source: Orji Ikechukwu Anthony (fieldwork 2012)

Table 4.19 shows that 72% of the respondents said that improvements in Ante-Natal Care Programmes will significantly reduce under-five Mortality Rates, while 28% said it will not reduce under-five Mortality Rates.

Research Question 2:

Under-five Mortality Rates versus MDG 4

On whether under-five Mortality Rates have reduced tremendously due to the implementation of Millennium Development Goals in the AMAC, responses received are in table 4.20.

Table 4.2 Have Under-five Mortality Rates reduced tremendously due to implementation?

Response	Number	%
No	116	61
Yes	73	39
Total	**189**	**100**

Source: Orji Ikechukwu Anthony (fieldwork 2012)

Table 4.2 shows that 61 % of the respondent said that Under-five Mortality Rates have reduced tremendously due to the implementation of Millennium Development Goals 4 in AMAC, while 39% said it has not reduced tremendously.

4.2 Testing of Hypothesis

In this section, the hypotheses formulated will be tested, using the chi-square (x^2) test with the level of significance at 5% and 1 % is in Appendix II at the back of the project.

4.2.1 Hypothesis No (1)

Ho: Improvement in Anti-Natal Care Programmes has not significantly reduced under-five child mortality rates.

Hi: Improvement in Anti-Natal Care Programmes has significantly reduced under-five child mortality rates.

The hypothesis will be tested at 5%level of significance using the results obtained in table 4.1.

(a) Observed Frequencies

Table : 4.1

	Observed Frequencies					
	Gwagwa PHC	Dei-Dei Health Centre	PhcKaru	PHC Jikwoye	PHC Kagini	Total
Not Significant	11	9	12	11	9	52
Significant	28	25	26	29	29	137
	39	34	38	40	38	189

(B) Expected Frequencies

	Expected Frequencies					
	Gwagwa PHC	Dei-Dei Health Centre	PhcKaru	PHC Jikwoye	PHC Kagini	Total
Not Significant	10.9	9.51	0.6	11.2	10.6	52
Significant	28.1	24.8	27.4	28.8	27.4	137
	39	34	38	40	38	189

x^2 (chi square) calculations

$x^2 = \underline{?(0 - E)^2}$

E Where

0 = the observed frequencies

E = the expected frequencies

(0)	(E)	(O-E)	(O-E)	$\underline{(O-E)^2}$ E
11	10.9	0.1	0.01	0.00
28	28.1	-0.1	0.01	0.00
9	9.5	-0.5	0.25	0.03
25	24.48	0.52	0.27	0.01
12	10.6	0.52	1.96	0.18
26	27.4	1.4	1.96	0.07
11	11.2	-0.2	0.04	0.00
29	28.8	0.2	0.04	0.00
9	10.6	-1.6	2.56	0.24
29	27.4	1.6	2.56	0.09

$X^2 = \underline{0.62}$

d) Degrees of freedom

a) Degrees of freedom =

b) V(Rows - 1) (Columns - 1)

c) V = (2 - 1) (5 - 1)

= 4 degrees of freedom

Table cut-off point of chi-square for 4 degrees of freedom = 9.488

Decision

As the calculated value of chi-square X^2 (0.62) is less than the table value (9.48) we accept the null hypothesis which states that improvements in Ante-Natal Care Programmes have not significantly reduced Under-five Child Mortality Rates.

4.2.2 Hypothesis No (2)

Ho: Under-five Mortality Rates have not reduced tremendously due to the implementation of MDG 4 in AMAC.

Hi: Under-five Mortality Rates have reduced tremendously due to the implementation of MDG 4 in AMAC.

The hypothesis will be tested at 5% level of significance using the results obtained in table 4.2.

Observed Frequencies

	Observed Frequencies					
	Gwagwa PHC	Dei-Dei Health Centre	PhcKaru	PHC Jikwoye	PHC Kagini	Total
Not Significant	26	22	23	25	20	116
Significant	17	15	13	16	12	73
	43	37	36	41	32	189

(b) Expected Frequencies

	Expected Frequencies					
	Gwagwa PHC	Dei-Dei Health Centre	PhcKaru	PHC Jikwoye	PHC Kagini	Total
Reduced	26.23	22.57	21.96	25.01	19.52	116
Not Reduce	16.34	14.06	13.68	15.58	12.16	73
	43	37	36	41	32	280

x^2 (chi square) calculations

$x^{22} = \frac{?(0 - E)^2}{E}$ Where

0 = the observed frequencies

E = the expected frequencies

(0)	(E)	(O-E)	(O-E)	$\frac{(O-E)^2}{E}$
26	26.23	-0.23	0.05	0.00
22	16.34	0.66	0.43	0.02
17	22.57	-0.57	0.32	0.01
15	14.06	-0.94	0.88	0.06
23	21.96	1.04	1.08	0.04
13	13.68	-0.68	0.46	0.03
25	25.01	-0.01	0.00	0
16	15.58	0.42	0.17	0.0
20	19.52	0.48	0.23	0.1
12	12.16	-0.16	0.02	0.0

$X^2 = \underline{0.18}$

d) Degrees of freedom

Degrees of freedom =

V(Rows - 1) (Columns - 1)

V = (2 - 1) (5 - 1)

= 4 degrees of freedom

= 4 degrees of freedom

Table cut-off point of x^2 for 4 degrees of freedom, at 5% level - 9.488

Decision

As the calculated value of x^2 (0.18) is less than that table value (9.488) we accept the null hypothesis which states that under-five mortality rates have not reduced tremendously due to the implementation of MDG 4 in AMAC.

4.2 Discussion of Findings

Under-five Child Health Care Delivery System by the Public Sector

The study found that under-five child health care delivery system status in AMAC is not different from the state of Nigeria's health care system. For health services to make a difference in the life of the people, they must not only be accessible in terms of distance, they should be affordable, appropriate and adequate. The current situation of health care delivery system in Nigeria is that they do not meet these criteria of affordability, accessibility, appropriateness and adequacy. The study

found that the cost of accessing maternal and child health care services have become a burden overtime and is becoming exacerbated by the worsening poverty situation, especially for the low income group of people among the population. It was found during the study that the quality of health services and facilities for under-five child health care is very low, while service facilities are not only dilapidated, under-funded but poorly equipped with obsolete equipment.

The weak service delivery system is unable to deliver a minimum quality health care package for under-five child health care especially and including: routine immunization; emergency obstetric, prevention and management of communicable diseases and infections such as Malaria, Tuberculosis and HIV and AIDs,

The study found that the state of under-five child health care in the AMAC is not satisfactory and is indeed below the national standards. The health care delivery system for under-five child health care are not only weak but the provision of the services are not adequate as discovered in the course of the study. Delivery /child-birth care system in AMAC was found to be at unacceptable levels, given that Abuja Municipal Area Council is the host of the Federal Government where all the national resources are being controlled. The quality of under-five child health care services being rendered in the AMAC are poor. Also the impact of quality of Ante-Natal Care and delivery services were not good for child survival until the Millennium Development Goals were adopted in the territory.

Quality Care and Management of Under-five Child Health Care

The research found that there is poor totality of health care especially national natal services (including the post natal) which is reflected strongly in a disproportionately high infant mortality rate (IMR).In a situation where close to 70% of women deliver outside the health facility and therefore do not receive post natal care, there is low coverage of post natal care (PNC). It is important to note as found during the study, that post natal care is essential and pertinent because most maternal and neonatal death occur at this time. The matter has been made complicated because as found in the study, two-thirds of women in the Federal Capital Territory do not deliver in any health facility. Hence the provision of adequate and quality post natal care are quite low. The post natal services are only limited mostly to those who give birth within health facility in AMAC and since they are not more than one -third, the services have low coverage.

It is a well-known fact that nothing reveals the state of a nation's health care delivery as much as immunization average rates. This reveals the extent to which not only all segments of the Society are mobilized and participate in the health care but also a measure of the confidence the consumers of the services have and show to all health care services. Therefore, a poor level of immunization average shows a side lined and mistrusted health care services.

There is no doubt that as found in the study, there is significant difference in the quality and coverage of immunization services between the Federal government guideline and that found practically on the ground in AMAC. Despite the facts that

there are adequate community mobilization and awareness of the need for vaccination, the single most important factor for failure of effective immunization coverage was lack of /non-availability of vaccines even in Abuja Municipal Area Council. A lack of access to a health facility especially for those in remote /hard -to-reach areas also contributes to the situation. Thus it is a fact that there is poor coverage of immunization services in AMAC.

Even with the Supplementary Immunization Activities (SIA) for polio vaccination, which is to support and strengthen the routine immunization, more than 20°,!:) of the eligible children has been consistently missed during various rounds of the exercise. This is made worse by pockets of rejections by same parents was refuse their children to be immunized.

The impact of failure to immunize children especially against the "six killer" disease have increased the burden of mortality and morbidity. A recent data confirmed that as much as 22% of under-five child mortality is related to vaccine- preventable diseases.

However, the study found that the failure of immunization in the FCT was not purely the fault of the AMAC. The national policy of concentration on polio eradication rather than measles eradication was a mis-direction of policy. Whereas the rest of the world concentrated on measles eradication, Nigeria concentrated on polio eradication programme. However in Nigeria it is measles that accounts for mortality and morbidity than polio. During these eradication campaigns, it was only polio vaccines that were available. Other vaccines were conspicuously not available. Besides, many of the untrained caregivers wrongly assumed that receiving the multiple polio doses was tantamount to receiving all of the immunization requirements of the child. The vaccine stock outage in some health facilities prevented other caregivers from obtaining the other vaccinations needed. Thus the immunization programme was lopsided and incomplete due to lack of stock. This situation has now changed for better with the adoption of Millennium Development Goals 4 and the Midwives Service Scheme in the Federal Capital Territory.

The rate of under-five child mortality and morbidity are not satisfactory in the AMAC. It is a fact that infant and child mortality is a basic indicator of a country's socio-economic situation and quality of life as well as a good gauge of a country's future. The Under 5 Mortality Rate (USMR) was 217, twice more than 95 for Ghana. Also, it was found during the study that those who did not receive ante natal care and assisted delivery have higher infant and child mortality than those who were cared for.

It was found during the study that infant feeding and children's nutritional status in AMAC are not satisfactory. Malnutrition is a major contributor (directly or indirectly) to childhood mortality especially in those under five years old. Whichever of them survives beyond that age then adapts to survive death-dealing malnutrition by every available means.

The study found that under-five children nutritional issue stem partially from their mother's nutritional status. Although majority of mothers in AMAC generally can be

described as universal breast feeders, the intensity and efficacy of this practice can be found to raise many questions than answers. First the mother's nutritional status is quite low as even when they are breast feeding, the level of poverty means that the mothers themselves cannot afford to eat balanced diet. Yet they have to breastfeed the child from this position and condition of lack of balanced diet. Second, most of them combine herbs of all sorts which may not be nutritious together with their breast feeding. Thus breastfeeding is culturally combined with local herbs, teas and water and after a while the colostrum's is discarded because it is considered to be impure on account of its brownish or yellowish colouration. Some that do exclusive breast feeding have problem of lack of proper nutrition. The practice of exclusive breastfeeding (EBF) has not fully gained ground simply because the mothers cannot accept the idea of not using local herbs, which they consider as necessary medication. Other mothers consider fluid as an integral part of a meal and would not understand why the infant should be denied.

In AMAC, it was discovered during the study, that less than one-fifth of the children are breast fed exclusively and only 25% of children under 2 months are exclusively breastfed and this trend of exclusive breastfeeding reveals declining trends. On the other hand, there are mothers with HIV, who on delivery are instructed not to breastfeed their babies so as not to get them infected with HIV through their breast milk. These ones use Breast Milk Substitutes (BMS) in forms of baby formula food such as SMA and NAN. This group also does not agree to use only the Baby formula food, instead they mix up with local herbs as well, thinking that these could supplement whatever nutrients that are not available in infant formula food, so as to give the babies balanced diet and good nutrition.

Height-for-age, weight-for-height and weight-for-age measurements of children under-five year of age was found to be unsatisfactory in the AMAC for so many reasons. The study found that almost one-fifth of the under-five children are severely stunted, which could be regarded as a measure of long- standing under-nutrition. It was found that children from rural areas with uneducated mothers are likely to be wasted and stunted. The prevalence of malnutrition as measured by these indices of height-for-age, weight-for-height and weight-for-age were not as severe in the first six months of life (though still unacceptably high) as in the other months. Inappropriate weaning and complementary feeding was noted as a contributor to the malnutrition in this age group.

4.3 Conclusions

The issue of under-five child health is so central to the growth and future development of the population of the country that they deserve special focus and effective actions. Under-five child mortality is a basic indicator to the country's economic situation, quality of life and a good gauge of the country's future. Hence their inclusion in the Millennium Development Goals.

This research has established the fact that the current state of under-five child health care delivery system and management in AMAC are not quite satisfactory. The

comparatively high mortality indices have been related to the patterns of morbidity as well as to the general poor health care infrastructure available for the prevention and management of ill health in the AMAC.

Despite the policies and programmes that are put in the place for the prevention of childhood infection, there are still gaps in the implementation, coverage and effectiveness of such programmes. The study for examples has established the wrong focus of immunization programmes for children in the territory. The focus which is on polio eradication has neglected the more serious problem of measles in the territory. Acute shortage of vaccines and incomplete vaccination of the "six killer diseases" of children mean that under-five children in the territory are still seriously exposed and susceptible to such vaccine- preventable diseases.

Thus the achievement of the Millennium Development Goal 4 which is directed at reduction of child mortality is still far from realization. The children are still at the compete mercy of their parents and depend largely on whether their parents can afford to pay for medical treatment when they are attacked by malaria, infected by diarrhea diseases and exposed to Acute upper respiratory tract infection URTI). All those still remain till today the common and major causes of morbidity and mortality in infancy and childhood in Abuja Municipal Area Council.

In addition, malnutrition still remains a major contributor directly or indirectly to childhood mortality especially in those under five years old in AMAC; While the infant may not have the advantage of exclusive breast feeding while growing up at the same time the child should have access to alternative source of complementary food to supplement what they have lost by not being given exclusive breast feeding.

On the whole, this research has shown that there is much room and prospect in the improvement of the existing situation. A substantial improvement in the health care system, especially under-five child health care will go a long way towards resolving all the various problems highlighted in this study. Above all, improvement is the only way towards the full implementation and achievement of the Millennial Development Goal 4 for under-five Child Health care service delivery.

4.4 Recommendations

The recommendations made here are based on the conclusions of this study.

There is an urgent need for the overhauling and overall improvement in under-five child health care service delivery system in AMAC. This is even more expedient in view of the fact that the Millennium Development Goal 4 for children and upon which all child health care programmes revolve around had come to an end by 2015.

There should be political will and commitment to women's health at ministerial level, legislation should be enacted and appropriate policies devised to implement the legislation .There is need to revisit and possibly to revise laws guiding health workers. There laws should be revised to avoid incessant strikes and other industrial actions by health workers.

There should be a change in the locations of Ambulances in the FCT. Ambulances should henceforth be located at the designated and accessible locations within

communities and all the required staff for the ambulance alert and ready for action at the beck and call of the communities 24 hours/ 7 days a week.

The abysmally low immunization coverage and wrong direction of the type of immunization should be corrected. The routine immunization programmes for children should be strengthened to cover the killer diseases and there should be enough stock of vaccines.

Malaria, Acute upper respiration tract infection (URTI) as well as diarrhea diseases for children under-five years of age within the FCT should be treated free. Similarly, those that have measles should be given free medical treatment by the FCT. These will go a very long way towards the speedy realization of the Millennium development Goal 4 in the territory.

On the controversial issue of exclusive breast feeding, malnutrition and stunted growth of children, the AMAC should step in by providing Breast milk substitutes in the form of Baby Milk (SMA, NAN) to mothers who are HIV/AIDs positive freely to use in feeding their babies. Other mothers who are not HIV positive and who are breast feeding but have no proper nutrition should be similarly helped by the AMAC. Meanwhile, the benefits of exclusive breast feeding up to age two will help to improve height-for-age, weight-for-height and weight-for-age measurement and improve the proper growth and development of the children. This recommendation will also curb the continuous problem of malnutrition, which is a major contributor (directly or indirectly) to childhood mortality especially those under five years old.

The Millennium Development Goals agreed by Nigeria with other countries under the auspices of the United Nations has ended 2015. The goals, targets and indicators especially with regards to Goal 4 are now integrated into Sustainable Development Goals (SDGs) . It is hoped that a lot can still be done, there is room for improvement and proper intervention. The indicators can and must be made so that the AMAC can enhance and sustain the aspects where they have performed well. On the other hand, they can improve on areas they have not achieved much so as to remove bottlenecks that at the end, the score of the territory will be reasonable and applaud able.

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