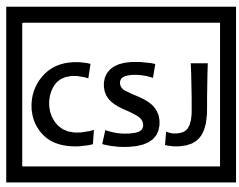
Maternal, New Born and Child Health Standards and Katsina State's MNCH Budgets 2010–2015



Centre for Social Justice (CSJ)

(Mainstreaming Social Justice In Public Life)

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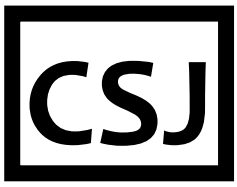

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ACRONYMS

ACHPR	African Charter on Human and Peoples Rights
AIDS	Acquired Immune Deficiency Syndrome
CSJ	Centre for Social Justice
DTP	Diphteria, Tetanus, and Pertussis
FGN	Federal Government of Nigeria
FMoH	Federal Ministry of Health
FRA	Fiscal Responsibility Act
GAVI	Global Alliance for Vaccines and Immunization
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
ICESCR	International Covenant on Economic, Social and Cultural Rights
IMNCH	Integrated Maternal, Newborn and Child Health
ITNs	Insecticide Treated Nets
KAT-SACA	Katsina State Action Committee on HIV/AIDS
KAT-SHDP	Katsina State Strategic Health Development Plan
KATS-PHCDA	Katsina State Primary Healthcare Development Agency
KPHCDA	Katsina State Primary Health Care Development Agency
KSSHDP	Katsina State Strategic Health Development Plan
MDAs	Ministries, Department and Agencies of Government
MDGs	Millennium Development Goals
MNCH	Maternal, Newborn and Child Health
MoH	Katsina State Ministry of Health
NACA	National Agency for the Control of AIDS
NBS	National Bureau of Statistics
NDHS	National Demographic and Health Surveys
NGN	Nigerian Naira
NHA	National Health Act
NHMIS	National Health Management Information System
NOFIC	National Obstetric Fistula Centre
NOFICK	National Obstetric Fistula Centre, Babba Ruga, Katsina
NPC	National Population Commission
NPHCDA	National Primary Health Care Development Agency
NSHDP	National Strategic Health Development Plan
OECD	Organisation for Economic Cooperation and Development
OF	Obstetric Fistula
PRRINN	Partnership for Reviving Routine Immunization in Northern Nigeria
SDGs	Sustainable Development Goals
UDHR	Universal Declaration of Human Rights
UK	United Kingdom
UNFPA	United Nations Population Fund
US$	United State Dollar
VVF	Vesico Vaginal Fistula
WHO	World Health Organization

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EXECUTIVE SUMMARY

Chapter One is the introductory chapter and discusses the objectives, methodology and other preliminary issues. The specific objectives of the Study are to:

- Review the alignment of Katsina State MNCH budgets with other high level sectoral policy documents in the last six years.
- Review the implementation mechanisms of Goals 4, 5 and partly 6 of the MDGs in order to identify the contribution of Katsina State to Nigeria's inability to attain the various targets of the Goals.
- Review the alignment of Katsina State MNCH budgets with global best practices in the last six years.
- Identify the extent to which Katsina State Government efficiently utilizes available resources for the progressive realisation of the right of its citizens to MNCH services.
- Identify areas that can be improved upon to make better use of available resources.
- Recommend feasible solutions that can help improve upon some areas of MNCH services that will bring about efficient utilization of available resources towards more reliable, available, affordable, accessible and acceptable MNCH facilities and services in Katsina State.

Chapter Two reviews national and international standards on MNCH. The international standards reviewed include the standard setting Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights, the African Charter on Human and Peoples Rights and the nature of the obligations arising from these standards, namely the obligations to respect, protect and fulfil MNCH rights. The national standards reviewed include the Constitution of the Federal Republic of Nigeria 1999, the Child Rights Act, National Health Act, the National Strategic Health Development Plan and the Integrated Maternal, New Born and Child Health Strategy. Also the Katsina State Strategic Health Development Plan was reviewed.

Chapter Three dwells on the current state of MNCH in Katsina State. The sub components of this chapter include the health status indicators of infants in the State; under five health care indicators and maternal health care indicators and the penetration of preventive and curative measures against infant, under five and maternal mortality in the State.

Chapter Four is on reconciling budgetary allocations with the applicable national and international standards. It records evidence of the state's budgetary allocations and its shortfall from the 15 percent Abuja Declaration. The allocations to the health sector amounted to an average of 6.48 percent over the six years of the study. The allocation to the capital component of the budget did not meet the stipulations in the State Strategic Health Development Plan. Essentially, the budgets did not meet the stipulations of standards and the full budget figures were not fully released by the Ministry of Finance, thus making it impossible for the sums to be utilised

Chapter Five dwells on matters arising from budgetary allocations and other provisions. The per capita budgetary allocation was found to be very low at a yearly average of N972. The vaccine coverage was low while VVF ravaged the State. The Chapter reviewed management of external

funds from Development Partners. Chapter Six is on the MNCH funding gap and reviewed three different perspectives on healthcare funding. They are government's health spending as a ratio of the nation's wealth; government's health spending as a ratio of government's total budget; and government's per capita health spending.

Chapter Seven contains the conclusions and recommendations. The recommendations are divided into two namely coordination and implementation issues and budgetary and related issues. They are as detailed below.

Coordination and Implementation Issues

- Empower the State's Ministry of Health or the State's Office of Statistics to keep accurate and up-to-date records and statistics so as to help the State know at what point they are on the right track towards meeting their goals.

- Further to the above, collaboration with traditional and religious institutions to collect information on MNCH issues using standard templates is imperative.

- Empower the State's Planning Commission or any other statutory body that can handle the responsibility of coordinating aid inflows into Katsina State. This should be done in order to allow for complementarity among the various activities of the development partners operating in the State.

- Set measurable targets for MNCH indicators in the State so as to help the State know when it is in line with meeting the targets.

- The State's coordinating unit for aid and intervention funds should explore other sources of funds for healthcare (with special attention to MNCH) services in the State so as to achieve universal coverage among all the communities in the State.

- The State Government should take concrete and targeted steps towards a policy and legal framework for sustainable MNCH financing.

- The State and Development Partners should increase sensitisation of male members of Katsina society on MNCH issues including the causes of maternal and neonatal deaths.

Budget-related Issues

- The State Ministry of Health should ensure that annual budgetary allocation to the sector conform to the projections in the State's Strategic Health Development Plan.

- It will be important for budgetary allocation of the State's health sector to meet the benchmark of 15 percent of total budget as stipulated in the Abuja Declaration.

- The annual budgets of the State's health sector should reflect the State's commitment towards improving the state of MNCH services and facilities across the State. Essentially, the funding should be evidence based and sufficient to meet the MNCH needs of the State based on projected demand.

- Beyond increasing the annual budgetary allocations, there is need for full and timely release and utilisation of all the amounts appropriated for the health sector in every fiscal year.

- It has become imperative to ring-fence all funds appropriated to the health sector including capital votes which have not been fully released over the years.

- There is also the need for the inclusion of all donor funds flowing into the health sector of the State in the annual budget of Katsina State Ministry of Health.

- The State in collaboration with the Federal Government and Development Partners has the capacity to mobilise financial resources needed to fund VVF intervention programmes through treatment. It should therefore prioritise treatment and dedicate adequate resources to same. The State should also launch and intensify sensitisation and awareness creation programmes on the causes of VVF in order to reduce the rate of spread of the disease to new patients. This will entail budgeting some significant amount for the sensitisation and awareness campaign programmes in the State.

- Increase the efficiency of health sector spending through greater value for money practices and open contracting standards as part of an open government strategy.

Chapter One
INTRODUCTION

1.1 BACKGROUND

On annual basis, more than 350,000 women die during pregnancy or from childbirth-related complications. In addition, about 7.6 million children died in a single year (2010) before their fifth birthday[1]. The rising trend in the number of maternal, neonatal and infant deaths across the globe has led the global leaders to promote policies and programmes targeted at reducing the rate of maternal, neonatal and infant mortality in every part of the globe.

Maternal, New Born and Child Health (MNCH), as currently emphasised, is one of the mechanisms for combating the trend of maternal, neonatal, infant and under-five mortality rates across the globe. Various tiers of government across the globe have been made to see maternal, newborn and child health (MNCH) as their responsibility and part of the citizens' right to health. This is viewed from the perspective that the citizens' right to life cannot be guaranteed without being accompanied by the citizens' right to health. Moreover, any tier of government that protects citizens' rights as enshrined in the various constitutions of countries must of necessity protect the right to life. This is based on the fact that only the living can claim and access any other form of fundamental human rights.

To show the importance of MNCH services in the world, three out of the eight Millennium Development Goals (MDGs) of the United Nations focused on these areas. On its own, Goal 4 of the MDGs was targeted at reducing child mortality globally, while Goal 5 was targeted at improving maternal health. A related goal to the two above is the sixth Goal that was targeted at combating HIV/AIDS, malaria and other diseases. Most of the indicators of the sixth goal showed how the sixth Goal was closely linked to the fourth and fifth Goals. Member states of the United Nations saw the need to improve on MNCH services in order to ensure a replacement population for the global communities.

Achieving the various goals (Goals 4, 5 and 6) of the MDGs required some level of commitment from national and subnational governments. The Federal, State and Local Governments in Nigeria were not exempted from the national and subnational governments that should be committed to actualizing Goals 4, 5 and 6 of the MDGs. To be able to show such a commitment, the various tiers of government were expected to make laws and policies that are targeted at respecting, protecting and fulfilling the MNCH rights of citizens. In some cases, what is required of these tiers of government is to domesticate globally promulgated policies in order to ensure compliance by the institutions and agencies of the government. In addition, the various tiers of governments make financial commitments to their laws and policies with the application of fiscal policy tools.

The annual budget of any government is a financial statement that indicates the government's priorities for any fiscal year. Governments use the budget to show their commitment to national

[1] World Vision (2012) *Guide to Maternal, Newborn and Child Health and Nutrition in Emergencies*.

and international standards on the subject of MNCH services. This means that a lot of financial resources are usually required to effectively provide MNCH services to the people. However, it is a known fact that developing countries (such as Nigeria) are usually faced with some resource constraints to meet their fiscal obligations. Therefore, the annual budgets of governments in developing countries are usually not enough to meet the MNCH needs of the people. This gives rise to the need for interventions of development partners in the provision of MNCH services in many developing countries.

Given that MNCH issues were focal to the MDGs, very great attention has continued to be paid to the areas of MNCH services. The attention and emphasis have even resulted in increased interventions on MNCH services, especially among the developing regions of the globe. Some of the interventions have been given in order to increase the accessibility of antenatal health care, intrapartum care, emergency obstetric and new born care, routine postnatal care, and increased reproductive health education leading to strengthened family planning and child spacing among women of reproductive age. In the same way, there have also been great interventions in the areas of infant and young child feeding, prevention of malaria, institutionalization of routine immunisation, prevention of mother to child transmission of HIV, etc among newborns and children. Also of great importance are the interventions in the areas of water, sanitation and hygiene for the safety and health of the mothers and children[2].

MNCH-targeted budgets and interventions should ideally seek to meet the criteria of availability, accessibility, acceptability and quality of MNCH services among the citizens that need the services. Each of the criteria above is a necessary condition for ensuring that the indicators of MNCH services in any given country is improved upon from time to time. For any budget to be said to have met the availability criterion of MNCH services, the budget must provide for adequate and functional public health and health care facilities for the people in need. This also implies existing hospitals and clinics are adequately equipped with essential drugs and properly staffed with trained medical personnel.

For any budget to meet the accessibility criterion of MNCH services, such a budget must consider the four components of accessibility. The first component of accessibility has to do with non-discrimination. This means that MNCH facilities and services must be made accessible to everyone (including all social groups) who needs them without discrimination on the basis of age, gender, educational background, etc. In this case, the laws and policies establishing such facilities must be clear on the non-discrimination of such facilities and services, and the application of such laws and policies must be seen to obey the non-discrimination component of accessibility to MNCH services. The second component of accessibility criterion of MNCH services has to do with physical accessibility of MNCH facilities to those who need them. In this case, accessibility is viewed from the perspective of the proximity of the facilities and services to the people in need of them. The nearer the facilities and services to the people in need, the greater their accessibility. The third component of accessibility criterion of MNCH services has to do with economic accessibility. This means that MNCH services must be affordable to all who have need of such services. To ensure economic accessibility, users of MNCH services should be made to pay for

[2] Integrated Maternal, New Born and Child Health Strategy, Federal Ministry of Health Abuja, 2007.

the services based on their economic capacities – equity. This is also a good way of ensuring that no one who has need of MNCH services is left out on the basis of inability to afford the financial cost of the services. The fourth dimension of accessibility criterion of MNCH services has to do with information accessibility. It is not all the citizens that may have need of MNCH services that are literate enough so as to know when they actually have such needs. It is not even all those that know that they actually have such needs really know where to get the services. This means that information on needs and availability of supply of such services can still hinder some citizens from obtaining MNCH services when they ought to. In a broad sense, reproductive health education should be part and parcel of any budget for the provision of MNCH services in any society.

In order to meet the acceptability criterion of MNCH services, any annual MNCH budget of the government should also be seen to meet internationally acceptable standards and the budget must as well be acceptable to the people. There are internationally acceptable standards for what should constitute the minimum proportions of health sector budget in the overall budget of any government. Apart from the meeting the internally acceptable standards for budgeting for MNCH services, the budget items should also meet the people's acceptation. This means that MNCH budget of the government should respect medical ethics and be culturally appropriate. The implication of this criterion is that financial resources of the government can be wasted if the recipient communities of such services do not understand and accept the efforts of the government.

Finally, any budget for MNCH services must provide for quality services. These quality services should be scientifically and medically appropriate. This criterion of quality services is closely linked to the availability criterion. It is true that availability of MNCH facilities and services do not necessarily guarantee the quality of such facilities and services. It is not possible to discuss the quality of MNCH services in any society where there are no available facilities and services. This implies that availability begets quality. However, it is often observed that governments may achieve proximity of health facilities to the people without necessarily achieving quality services through the health facilities. In such a situation, citizens that have access to the health facilities as a result of proximity to the facilities may still not be able to obtain necessary health services as a result of poor qualities of personnel and facilities. Such poor facilities will still mean that those in need of health services within the society will still be as worse-off as those that have none of such facilities near them. It is therefore not enough for governments to provide MNCH facilities in every corner of the society without ensuring the quality of such facilities.

In Nigeria, healthcare services fall into the concurrent legislative list. This means that is a shared responsibility among the various tiers of government. Certain aspects of healthcare services are provided for by the Federal Government of Nigeria, while State Governments provide other aspects of the services. Budgetary provisions for MNCH services as part of the healthcare services are shared among the Federal Government of Nigeria, State Governments and Local Government Councils in Nigeria. For most vaccine-preventable diseases, the Federal Government of Nigeria provides routine immunisation, with counterpart funding from the States in order to ensure that children in every corner of the country are duly and fully immunised.

Katsina State is one of the States in the North Western region of Nigeria. As an autonomous entity, the State Government prepares its annual budget for MNCH services in the State. Such estimates usually present a good picture of the overall commitment of the State Government towards the actualisation of full MNCH services in the State. However, actual expenditures of the State, derived from the implementation of the annual budgets may reveal a gloomy picture of such perceived commitments.

1.2 OBJECTIVES AND TERMS OF REFERENCE

Drawing from the overall context of this Study, the broad goal of the Study is to critically evaluate the current level of MNCH funding in Katsina State. This will provide MNCH policy makers, budget designers, and implementing MDAs with the needed evidence on existing funding gaps. This will also provide recommednations on how best to improve the quantity and quality of MNCH services available in Katsina State with the fiscal policy tool of the State's annual budgets. The overall output of this Study will also be a veritable tool for advocacy engagement with the State's executive, legislature and non state actors with the overall aim of improving on the availability, affordability, accessibility, acceptability and quality of MNCH facilities and services in Katsina State.

The specific objectives of the Study are to:

- Review the alignment of Katsina State MNCH budgets with other high level sectoral policy documents in the last six years.
- Review the implementation mechanisms of Goals 4, 5 and partly 6 of the MDGs in order to identify the contribution of Katsina State to Nigeria's inability to attain the various targets of the Goals.
- Review the alignment of Katsina State MNCH budgets with global best practices in the last six years.
- Identify the extent to which Katsina State Government efficiently utilizes available resources for theprogressive realisation of the right of its citizens to MNCH services.
- Identify areas that can be improved upon to make better use of available resources.
- Recommend feasible solutions that can help improve upon some areas of MNCH services that will bring about efficient utilization of available resources towards more reliable, available, affordable, accessible and acceptable MNCH facilities and services in Katsina State.

1.3 METHODOLOGY

This Study involves desk reviews of available information, data and documents. The entire Study is based on qualitative review of existing information on MNCH services development and improvement policies and plans in Katsina State. It also involves a critical examination of the State's budgetary provisions for MNCH services, with a view to identifying areas of policy and funding gaps. This includes a review of the budgetary provisions of the State in line with the

optimal funding needs of the State in order to achieve full MNCH services coverage. In a categorised manner, this Study entails:

- Collation of relevant policy materials from relevant MDAs in Katsina State. These MDAs include Katsina State Ministry of Health (MoH), Katsina State Primary Health Care Development Agency (KPHCDA), Katsina State Action Committee on HIV/AIDS (KAT-SACA), Katsina State Ministry of Budget and Economic Planning; and development partners. A key document collated for the sake of this Study is Katsina State Strategic Health Development Plan (KAT-SHDP). This document is very important due to the fact that it contains baseline information on health indicators such as infant and maternal mortality rates and even the targets set for measuring progress over time on those indicators. The document also tries to cost the various targets in real monetary values. Such a costing is also relevant in the overall assessment of the overall agreement of the State's annual health sector budgets and the required funding for health sector as calculated in the development plan. This Study also collates the State Government's annual budgets. These documents are important due to the fact that they show health sector allocations and MNCH allocations within the sector.

- Consultations with relevant stakeholders to clarify grey areas and provide explanations where documentation on its face value is susceptible to multiple interpretations. Among this category of stakeholders are the executive officers of relevant MDAs in Katsina State who may have more information than as contained in available documents.

- Review of all the documents collated in an in-depth manner. The review is borne by the desire to understand the current situation of MNCH facilities and services in Katsina State and also to understand the reasons for such current situations. As part of the review, this Study considers the quantity and quality of MNCH facilities in Katsina State; the content and scope of MNCH services in Katsina State; the actual performance level of MNCH indicators in Katsina State against their targets as stipulated in the State's Strategic Health Development Plan. In addition, the Study also considers the budgetary gaps in terms of what is recommended or planned for in the State's Strategic Health Development Plan and what is actually budgeted for the health sector in the annual budgets of the State. In the same way, the Study considers the fiscal policy gaps that exist between what is budgeted annually for MNCH services in the State and actual expenditures. In addition, this Study employs descriptive analysis using simple tables and charts to represent information on the relevant issues of development plans, budgets and also to illustrate its points and arguments. This is carefully done in order to reach a wide range of audience.

- Recommending policy options based on the review of documents. Such recommendations are evidenced-based and flow from the analysis of issues discussed in the Study.

1.4 LIMITATIONS OF THE STUDY

This Study is evidence-based. It is therefore limited by the quality of information and data available and collectible on MNCH facilities, MNCH services, MNCH performance indicators,

annual budgets, budget implementation reports from Katsina State. For instance, MNCH as an issue has not been carved out as a department in the State's Ministry of Health. It is therefore not possible to pick out budget information on MNCH only. However, MNCH is usually categorised under Primary Healthcare, but it cannot be said that primary healthcare is all about MNCH. This makes a large proportion of the discussions on MNCH budgets to revolve around the budget of Katstina State Primary Healthcare Development Agency.

Chapter Two
REVIEW OF INTERNATIONAL, NATIONAL AND SUB-NATIONAL STANDARDS ON MNCH

2.1 INTERNATIONAL STANDARDS

Nigeria is a member of the United Nations and is a signatory to a plethora of international standards that mandate member nations to be more responsive to the bundle of rights encapsulated in MNCH. Given that Katsina State is one of the 36 States in Nigeria, the State is by extension mandated to be more responsive to the bundle of rights that are encapsulated in MNCH standards. The following are some of the MNCH standards that bind Nigeria and Katsina State is by extension obliged to uphold.

2.1.1 Universal Declaration of Human Rights (UDHR)

In Article 25, the UDHR states:

> (1) *Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control*.
>
> (2) *Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection*.

The UDHR outlines the imperative for State Parties to make provisions for a standard of living adequate for promoting the health and well-being of families in all ramifications. Apart from other areas of concern for the Declaration, there is a specific emphasis on special care and assistance that should be given to mothers and children.

2.1.2 The International Covenant on Economic, Social and Cultural Rights (ICESCR)

Nigeria is also a signatory to the International Covenant on Economic, Social and Cultural Rights (ICESCR). This also implies that Katsina State is by extension a signatory to the Covenant.
In *Article* 2 (1) of the International Covenant on Economic, Social and Cultural Rights, it is stated that:

> *Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and cooperation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures."*

Also, in article 10 (1) and (2) of the Covenant, it is stated that:

> *The States Parties to the present Covenant recognize that:*

(1) *The widest possible protection and assistance should be accorded to the family, which is the natural and fundamental group unit of society, particularly for its establishment and while it is responsible for the care and education of dependent children. Marriage must be entered into with the free consent of the intending spouses.*

(2) Special protection should be accorded to mothers during a reasonable period before and after childbirth. During such period, working mothers should be accorded paid leave or leave with adequate social security benefits.

Also, article 12 states that:

1. *The States Parties to the present Covenant recognise the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.*

2. The steps to be taken by the States Parties to the present Covenant to achieve the full realisation of this right shall include those necessary for:

a. *The provision for the reduction of the still-birth rate and of infant mortality and for the healthy development of the child;*
   ……
b. *The prevention, treatment and control of epidemic, endemic, occupational and other diseases;*

d. *The creation of conditions which would assure to all medical service and medical attention in the event of sickness.*

From article 2 (1), one can easily decipher that the article emphasises "progressive realisation". This means that the Covenant recognises the various levels of economic capacities possessed by the member states. Member countries will therefore not be expected to attain the MNCH goals at the same time. This owes partly to the quantum of resources available and at the disposal of the member countries and the nature of partnerships that the member countries are able to form with bilateral and multilateral development partners. However, every member country is expected to set its targets within the limits of available resources within its disposal and other resources that may be made available through international partnerships. This means that no member country is exempted from meeting its obligations on the ground of insufficient resources. In addition, the article also emphasises international assistance and cooperation, especially economic and technical. The implication is that foreign aid (overseas development assistance) is encouraged by this article in order to enable developing countries to achieve the set goals in this Covenant.

2.1.3 The African Charter on Human and Peoples' Rights (ACHPR)

Nigeria is also a signatory to the African Charter on Human and Peoples Rights (ACHPR) which it has domesticated in its municipal law. This also implies that Katsina State is by extension a signatory to the Charter.

In article 1 of the African Charter, it is stated that:

The Member States of the Organization of African Unity parties to the Charter shall recognize the rights, duties and freedoms enshrined in this Charter and shall undertake to adopt legislative or other measures to give effect to them"

In article 16 of the African Charter, it is stated that:

> (1) *Every individual shall have the right to enjoy the best attainable state of physical and mental health.*
>
> *(2) State Parties to the present Charter shall take necessary measures to protect the health of their people and to ensure that they receive medical attention when they are sick.*

By being a signatory to this Charter, Nigeria (including Katsina State) agrees to respect, protect, promote and fulfil the peoples' rights outlined above. Agreeing to the above Charter implies that governments in Nigeria (including Katsina State) have the responsibility of guaranteeing the provision of MNCH services to all mothers and children.

2.1.4 Other Standards

There are other standards and charters that Nigeria (including Katsina State) has been signatory to in the last few decades. One of such charters is the African Charter on the Rights and Welfare of the Child. This Charter places an obligation on the state to guarantee the survival, protection and development of the child; reduce infant and child mortality rates; ensure appropriate health care to expectant and nursing mothers; combat disease and malnutrition within the framework of primary health care through the application of appropriate technology[3]. This Charter clearly provides obligations on MNCH issues. From all the stipulations of the Charter, it is clear that a great responsibility is placed on Katsina State Government with respect to provision of optimal MNCH facilities, personnel and services for all that may have need of such services within the State.
Other charters include the Convention on the Rights of the Child, which makes similar provisions. Also, the Convention on the Elimination of all forms of Discrimination against Women places the responsibility of providing appropriate services in connection with pregnancy, confinement and the post natal period, granting free services where necessary as well as adequate nutrition during pregnancy and lactation on the government (national and sub-national alike)[4].

By signing unto the MDGs, Nigeria (as well as Katsina State) agreed to pursue all the development targets therein. Of the eight goals contained in the MDGs, three goals were closely tied to the issues of MNCH, which are:

> *Goal 4 – Reduce child mortality;*
> *Goal 5 – Improve maternal health; and*
> *Goal 6 – Combat HIV/AIDS, Malaria and other diseases.*

Specifically, Goal 4 had the target of reducing by two-thirds between 1990 and 2015, the under-five mortality rate. Goal 5 had the target of reducing by three-quarters, between 1990 and 2015, maternal mortality ratio and achieving by 2015, universal access to reproductive health. On the other hand, Goal 6 had the target of halting by 2015 and beginning to reverse the spread of HIV/AIDS; achieve by 2010, universal access to treatment for HIV/AIDS for all those who need it; have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.

[3] See article 14 of the Charter.
[4] Article 12 (2) of CEDAW.

When the set year for the attainment of the MDGs was rounding off in 2015, member nations of the United Nations gathered again to set another set of 15-year global goals that replaced the MDGs, currently referred to as the Sustainable Development Goals (SDGs) with a terminal date of 2030. Out of the 17 goals in the current SDGs, one goal also focuses on MNCH issues. Goal 3 is to ensure healthy lives and promote well-being for all at all ages. The 2030 targets related to MNCH include:

- *By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.*
- *By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.*
- *By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.*
- *By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.*
- *Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.*
- *Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States.*

2.1.5 Implications of the International Standards above for the Provision of MNCH Services in Katsina State and the Roles of Katsina State Government in such Provision

Several scholars and groups of scholars have tried to provide interpretation to the provisions of the all the standards listed above. However, this discussion will focus on the interpretation given to the stipulations of the International Covenant on Economic, Social and Cultural Rights (ICESCR)[5]. The interpretation focuses on the three pillars of the responsibilities of the State in the actualisation and attainment of the rights and privileges set out in the Covenant. These three pillars are obligations to: (a) respect (b) protect, and (c) fulfil the rights of the people. Expatiating on the pillars, the scholars have the following to say:

(a) Obligation to Respect: In order to define the responsibility of governments with respect to the attainment of the rights outlined in this Covenant, a critical view of the obligation stated above reveals that Katsina State Government should organise its activities and agencies in such a way that they do not interfere with the citizens' ability to enjoy MNCH rights outlined in the Covenant.

[5] De Schutter, O.; A. Eide, A. Khalfan, M. Orellana, M. Salomon, and I. Seiderman (2012) "Commentary to the Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights." *Human Rights Quarterly, 34: 10 – 1169.* Also available at: http://www.icj.org/wp-content/uploads/2012/12/HRQMaastricht-Maastricht-Principles-on-ETO.pdf

Such interferences include direct and indirect interferences through actions of the Government that have the potential to impact on the citizens' capacity to enjoy these rights[6].

(b) Obligation to Protect: Just like the obligation to respect, Katsina State Government also has the obligation to protect the rights of the people in the State with respect to MNCH services. The Katsina State Government should protect (through regulations) the rights of the people in the State. This protection includes taking practicable measures to protect the rights of the people against the risk of interference by private actors. It is particularly important to emphasise here that Katsina State is required by this obligation to regulate the conduct of private groups or individuals in order to ensure that their actions or inactions do not constitute violation of other peoples' human rights. This is where the decision of parents to marry out a child to an older person without the consent of the child comes clear as one of the areas that the State Government should strictly regulate. Obstetric Fistula (OF) or Vesico Vaginal Fistula (VVF) has become a common disease in many States in Northern Nigeria including Katsina State. A major cause of the disease has been traced to child marriage, a common practice in Katsina State. Given that these actions of parents constitute violation of the girl child's rights, the principle of the obligation to protect these rights requires that Katsina State Government should quickly step in to outlaw the child marriage practice in the State so as to eradicate the disease from the State. Katsina State is responsible to regulate the actions and inactions of the people living in the State within the boundaries of Nigerian Constitution and these international standards. Such regulations must be made with the view of attaining the full protection of the citizens from any interference with their ability to enjoy all the economic, social and cultural rights outlined for them.

(c) Obligation to Fulfil: In addition to the previous two obligations, Katsina State Government also has the obligation to fulfil the rights of people in the State with respect to MNCH rights. By this principle of fulfilling the economic, social and cultural rights of the persons within their territories, Katsina State Government should take appropriate steps towards the full realisation of MNCH rights of the people by progressively setting short to medium term targets that are aimed at realising the overall goal of attaining these rights in the long run. This implies being deliberate, concrete and targeted as clearly as possible towards meeting the obligations recognised in the Covenant. As good as setting MNCH targets in the State's Strategic Health Development Plan may be, Katsina State Government must be seen to be deliberate about the actualisation of these targets. It is not enough to set targets, it is equally important to make all necessary resource commitments towards the attainment of such targets.

2.2 NATIONAL STANDARDS

Having gone through some of the international standards that pertain to MNCH issues, it is equally important to consider the national standards applicable to MNCH issues that have been operational within the period of this Study (2010 – 2015).

[6] The Maastricht Guidelines on Violations of Economic, Social and Cultural Rights 1997 and the Limburg Principles on the implementation of the International Covenant on Economic, Social and Cultural rights 1987.

2.2.1 Constitution of the Federal Republic of Nigeria 1999

The 1999 Constitution of the Federal Republic of Nigeria (as amended) is the fundamental law operational within the Nigerian territory. Every other Acts or Laws must be in tandem with the stipulations of the Constitution. In Chapter 2 – Section 17, Sub-section 3 (c) and (d), the Constitution states that:

> *The State shall direct its policy towards ensuring that-*
>
> > *(c) The health, safety and welfare of all persons in employment are safeguarded and not endangered or abused;*
> >
> > *(d) There are adequate medical and health facilities for all persons;*

Just like the international treaties and charters, the 1999 Constitution puts on the Government (Federal or State) the responsibility of ensuring that the health, safety and welfare of all person are safeguarded and not endangered or abused. This responsibility supports the "obligation to protect" principle of the International Covenant on Economic, Social and Cultural Rights discussed above.

2.2.2 Child Rights Act

Drawing from the 1999 Constitution of the Federal Republic of Nigeria (as amended), the Child Rights Act provides for the rights and welfare of the Nigerian child including his/her health. As long as the issue of MNCH is concerned, section 13 of the Child Rights Act is very relevant. The section states thus:

> ***13*** *– (1) Every child is entitled to enjoy the best attainable state of physical, mental and spiritual health.*
>
> *(2) Every Government, parent, guardian, institution, service, agency, organisation or body responsible for the care of a child shall endeavour to provide for the child the best attainable state of health.*
>
> *(3) Every Government in Nigeria shall—*
>
> > *(a) endeavour to reduce infant and child mortality rate;*
> >
> > *(b) ensure the provision of necessary medical assistance and health care services to all children with emphasis on the development of primary health care;*
> >
> > *(c) ensure the provision of adequate nutrition and safe drinking water;*
> >
> > *(d) ensure the provision of good hygiene and environmental sanitation;*
> >
> > *(e) combat disease and malnutrition within the framework of primary health care through the application of appropriate technology;*
> >
> > *(f) ensure appropriate health care for expectant and nursing mothers; and*
> >
> > *(g) support, through technical and financial means, the mobilisation of national and local community resources in the development of primary health care for children.*
>
> *(4) Every parent, guardian or person having the care and custody of a child under the age of two years shall ensure that the child is provided with full immunization.*

It is important to take a second look at subsection (2) above, where the Act puts on all actors (state and non-state) the responsibility of taking care of the health of a child. It is equally important to take a second look at subsection (3) above, where the Act puts on the State actors (all tiers of government) the responsibility of reducing infant and child mortality rates in Nigeria. It is imperative to emphasise here that reduction in infant and child mortality rates can only be attained

through improved MNCH services, which must be accompanied with accessible and affordable MNCH facilities and personnel in Katsina State.

2.2.3 The National Health Act, 2014

The Child Rights Acts discussed above focuses on the overall well-being of the Nigerian child. It limits itself to the health and well-being of the child. MNCH on its own is not only about the child, it is equally about the mother. Therefore, the National Health Act incorporates all other aspects of MNCH issues into one law. The National Health Act provides a framework for the regulation, development and management of a national health system and set standards for rendering health services in the Federation and for related matters. A lot of provisions in the Act are targeted at improving the state of MNCH services and indicators in Nigeria. One of such provisions mandates the Federal Ministry of Health to prepare strategic medium term plans that are focused on the health status of the Nigerian people and forecast the human and financial resources needed to attain such goals[7]. These medium term plans are expected to be updated annually based on improvements made within the fiscal years. The Act also mandates the National Health Council to ensure full and nationwide coverage of immunisation and vaccination programmes for all under-five children and pregnant women in order to combat any vaccine-preventable infectious disease[8].

Given that providing free and universal coverage of immunisation implies a huge cost on the part of the government, the Act establishes a Basic Health Care Provision Fund. In order to finance the Fund, the Act requires the Federal Government to provide annual grant of not less than one percent of the Consolidated Revenue Fund and deposit same into the Basic Health Care Provision Fund[9]. Of any amount provided in the Fund, 20 percent goes for essential drugs, vaccines, and consumables for eligible primary health care facilities; 15 percent goes for the provision and maintenance of facilities, equipment and transport for eligible primary health care facilities; while 10 percent goes for the development of human resources for primary health care. 50 percent of the Fund shall be used for the provision of basic minimum package of health services to citizens in eligible primary and secondary healthcare facilities through the National Health Insurance Scheme. Based on the fact that health service is one of the items in the concurrent legislative list in Nigeria, the Act also makes provisions for States and Local Governments to provide counterpart funding of 25 percent of the total cost of whatever health project that will be implemented within their territory drawing from the Basic Healthcare Provision Fund[10].

2.2.4 The National Strategic Health Development Plan (NSHDP or Strategic Plan)

The National Strategic Health Development Plan provides detailed strategies that should be adopted for the overall development of Nigeria's health sector. The Strategic Plan entails setting periodic targets for the improvement of MNCH and general health sector indicators. The following targets are outlined in the NSHDP:

[7] Section 2 (2) of the NHA.
[8] Section 5 (1) (i) of the NHA.
[9] Section 11 of the NHA.
[10] Section 11, supra.

- *Implement good governance at all levels of health system through the application of a National Heath Law, thereby creating a system where regulatory responsibilities are shared between the three tiers of government;*
- *Foster integrated service delivery by clarifying technical responsibilities of federal institutions;*
- *Improve the efficiency of the federal health workforce by implementing a comprehensive human resources for health agenda;*
- *Ensure increase in availability of and access to financial resources for health including appropriate risk pooling and exemption mechanisms;*
- *Strengthen the National Health Management Information System (NHMIS) to improve the use of routine health information for programmes/service performance monitoring and evaluation;*
- *Improve community ownership and participation during implementation of the National Health Agenda through a purposeful engagement of Community Service Organizations; and*
- *Embed appropriate solutions to health equity issue, including service provision, access to finance, financial risk protection for vulnerable, low and middle income groups*

Apart from the targets outlined above, the Strategic Plan also projected the financial and human resources that will be needed to attain the targets. The Strategic Plan also outlined the roles of the various tiers of government in the attainment of the set targets in the plan. In addition, the Strategic Plan outlined the roles of various actors and stakeholders in the attainment of the targets.

2.2.5 The Integrated Maternal, Newborn and Child Health (IMNCH) Strategy

Whenever the issue of maternal, newborn and child healthcare is mentioned, every consideration goes to neonatal, infant, under-five, and maternal mortality. However, in reality the issue of MNCH goes beyond the four aspects mentioned above. MNCH matters include many seemingly unrelated issues of general health like life expectancy at birth, neonatal mortality rate, infant and under five mortality rates, maternal mortality ratio, immunisation of children and pregnant women against some diseases, feeding and nutrition, underweight and stunted children, use of insecticide-treated nets (ITNs) and malaria prevention, child/teenage pregnancy, prevalence of HIV among 15-24 year olds, etc. All the above form the concept of Integrated Maternal, Newborn and Child Health (IMNCH) programmes.

It is not surprising that each of the various issues and aspects of MNCH can be viewed as stand-alone, and therefore approached independent of the others. Such approach can bring about poorly coordinated and ineffective services. It is in a bid to avoid such poor outcomes that brought about IMNCH. The strategy for achieving IMNCH entails weaving together all interventions to ultimately improve MNCH implementation. This is in line with the policy coordination idea of the National Strategic Health Development Plan.

2.3 SUB-NATIONAL STANDARDS IN KATSINA STATE

Apart from the international and national standards in the area of healthcare improvement, there is also a sub-national standard for healthcare improvement in Katsina State. However, unlike the international and national standards, this sub-national standard is a set of goals of the State Government for the improvement of the health and well-being of the people. To be able to achieve this, the State hopes to improve on the indicators of healthcare both in terms of facilities, human

resources and quality of services. The Sub-national Standard is otherwise referred to as Katsina State Strategic Health Development Plan (2010 – 2015).

2.3.1 Katsina State Strategic Health Development Plan (2010 – 2015) (KSSHDP or Plan)

Strategic plans that will be achievable and measurable must be based on baseline information of the society wherein it is to be set. There is no reliable and measurable projection that should not show the status quo before the projection. In the KSSHDP, Katsina State Government looked into its demographic composition before setting out the goals in the Plan.

Information provided in the Plan reveals that as at the time of its rolling out, the total population of Katsina State was about 6 million, of which 4 percent were infants, 20 percent were under-five, while 22 percent were women of reproductive age (i.e. 15 – 49 years). Other important health indices of the State were Neonatal Mortality Rate of 55 deaths per 1,000 live births; Infant Mortality Rate of 114 deaths per 1,000 live births; Under-five Mortality Rate of 269 deaths per 1,000 live births; Maternal Mortality Rate of 1,000 deaths per 100,000 live births; Total Fertility Rate of 7 deliveries per mother. In addition, the proportion of fully immunized child was below 5% as at 2006, and vaccine-preventable diseases remained major causes of childhood morbidity and mortality.

The KSSHDP therefore sought to provide strategic guide in the selection of evidenced-based priority interventions which would contribute to achieving the desired health outcomes in Katsina State. In order to provide the needed guide, the Plan focused on eight priority areas as listed below:

- *Leadership and governance;*
- *Service delivery;*
- *Human resources for health;*
- *Health financing;*
- *Health information system;*
- *Community participation and ownership;*
- *Partnerships for health; and,*
- *Research for health.*

The overall goal of the Plan was to significantly improve the health status of the people of Katsina State through the development of a strengthened and sustainable healthcare delivery system. To be able to achieve the set goal, the plan estimated the total cost at the sum of ₦43,400,127,313.48, out of which the total amount of ₦18 billion was projected to be made available by the State Government within the fiscal period of 2010 – 2015. This implies that the Plan envisaged a total funding gap of ₦25.4 billion in the implementation of all the plans.

As part of the operational plan in closing the gap, the State planned to engage institutional partners such as the traditional and religious institutions, with the hope of successfully engaging the emirs of the two emirates (Daura and Katsina) in order to increase the cost effectiveness of healthcare interventions like immunization. The State also planned to effectively leverage on the intervention programmes of non-governmental developmental partners. This second set of

partners play strategic roles in the provision of technical and logistic support, as well as funding for the State's health sector. In addition to the previous two partnerships, the State also planned engaging private sector actors in the areas of capacity building, monitoring and evaluation, supportive supervision and community mobilisation. However, the State's engagement with private sector actors has the limitation of limited reach, as a result of the operations of most of the actors being limited to the urban areas.

Chapter Three
CURRENT STATE OF MATERNAL, NEW BORN AND CHILD HEALTH INDICATORS IN KATSINA STATE

3.1 HEALTH STATUS INDICATOR OF INFANTS IN KATSINA STATE

The future of any society depends largely on the status of the society's replacement population. The persons that will eventually become adults in the future must have been born today. It therefore follows that the future of any society depends largely on the safety and health status of the children born today. By extension, the future of Katsina State depends on the status of MNCH services in the State at the present time.

MNCH issues are so important to the global leaders that the issues are conspicuously presented in the MDGs. It is important to point out that three (Goals 4, 5 and 6) out of the eight Goals in the MDGs of 2000 – 2015 are health-related goals. It is equally important to note that two (Goals 4 and 5) out of the three health-related goals in the MDGs concentrate on maternal and child health. The third health-related goal (Goal 6) also has some indicators that are related to MNCH issues. All these go a long way to emphasise the importance of MNCH in the general healthcare of any society[11].

Just as the MDGs were coming to an end in 2015, the global leaders gathered again to conceptualise another long term development goals for every society in the world. These long term development goals are currently referred to as Sustainable Development Goals (SDGs) of 2015 – 2030. Again, the importance of MNCH issues in the globe become glaring in the midst of the goals. Targets 1 and 2 of Goal 3 of Sustainable Development Goals (SDGs) of 2015 – 2030 focus on the same MNCH issues. It therefore implies that MNCH cannot be disassociated from the overall health status of any given society.

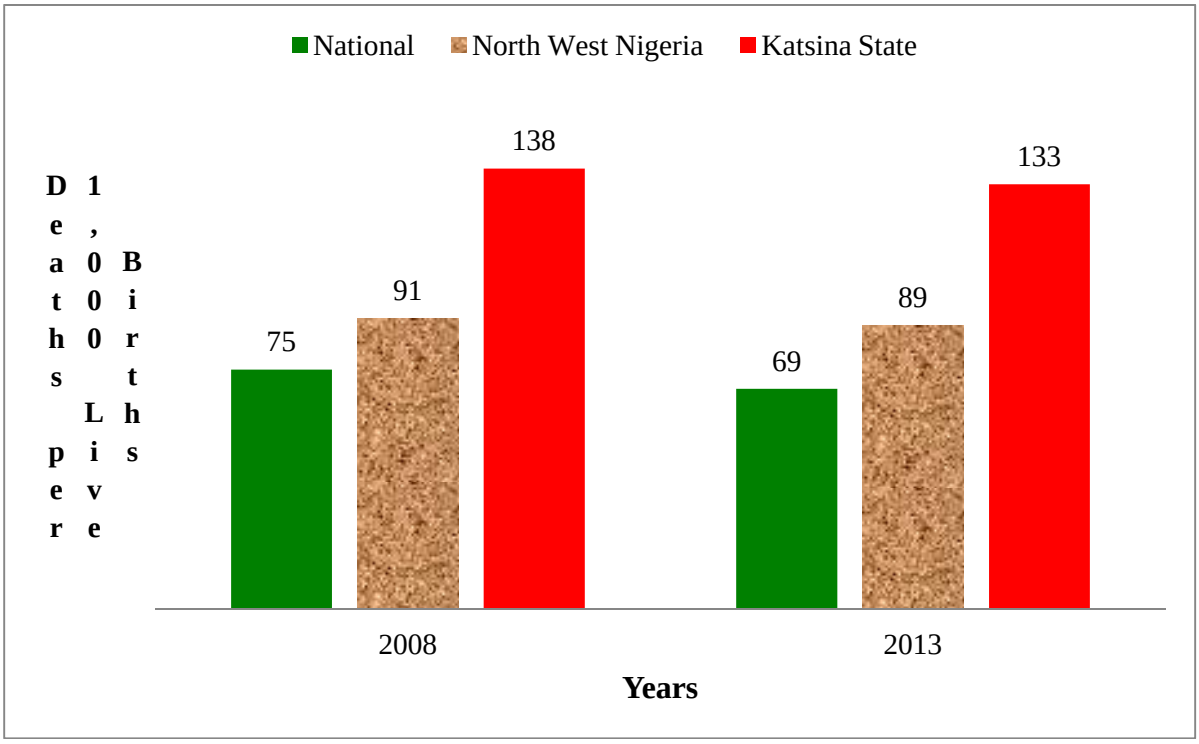
To be able to understand and evaluate the extent to which the above goals and targets are actualised, certain indicators have been developed. These indicators are measurable, and can therefore show when a society (national or subnational state) is on the right track towards achieving any of the goals and targets. This sub-section of the Study focuses on some of the indicators of MNCH services in Katsina State.

For an effective discussion of the subject matter, efforts are made to compare what has happened in Katsina State with other parts of Nigeria including national statistics on the same issues being discussed. This is based on the fact that a supposed progress in Katsina may be seen as being minimal if such a progress does not match what is happening elsewhere in the country. In the same way, a supposed decline in the statistical figures of Katsina State may not necessarily be seen as much a problem if such is still way above what is happening in other parts of the country. The Study therefore begins with the presentation of facts and figures as they relate to neonatal and

[11] Office of the Senior Special Assistant to the President on Millennium Development Goals – OSSAP-MDGs (2010) "Countdown Strategy 2010 to 2015: Achieving the MDGs". Abuja: OSSAP-MDGs Publications. Also available at: http://mdgs.gov.ng/index.php/downloads/category/1-mdgs-general?download=10:mdgs-countdown-strategy.

infant health status in Katsina State. To be able to do this, the Study presents national, regional and Katsina State infant mortality rates as shown in Figure 1 below:

Figure 1: National, Regional and State-Level Infant Mortality Rates in Katsina State



Source: *National and Regional Data computed from 2008 and 2013 National Demographic and Health Surveys (NDHS) of the National Population Commission; 2008 figure for Katsina State computed from Baseline Survey of Partnership for Revival of Routine Immunisation in Northern Nigeria (2009); while 2013 figure for Katsina State was computed from Primary Health Care Under One Roof Implementation Scorecard III Report of the National Primary Health Care Development Agency (NPHCDA)*

Neonatal and Infant mortality rates are usually estimated from the average of total number of neonatal and infant deaths in every 1,000 live births. It was observed that Katsina State does not keep nor update its health sector statistics. This Study based most of its analysis on available data, mostly generated through the 2008 and 2013 National Demographic and Health Surveys (NDHS) of the National Population Commission and PRRINN- MNCH Baseline Survey and final report.

From Figure 1 above, we can easily compare the level of infant mortality rate in Katsina State with those of North West geopolitical region on one hand, and the national average on the other hand. In like manner, we can easily compare the level of reduction or increase in infant mortality rates in Katsina State between 2008 and 2013 with the levels of reduction or increase in the same rates in the North West geopolitical region and the national figures.

As at 2008, infant mortality rate in Katsina State stood at 138 infant deaths in every 1,000 live births. This means that about 138 infants in every 1,000 infants born in Katsina State in 2008 died. This number can also represent 13.8 percent of infant deaths in relation to the total number of infants born in Katsina State.

Katsina State is one of the seven States in the North West geopolitical region of Nigeria. As at 2008, the North West geopolitical region of Nigeria recorded an average infant mortality rate of 91 infant deaths in every 1,000 live births. This number also implies that 9.1 percent of infants born within the North West geopolitical region of Nigeria died as infants. The 2008 average infant mortality rate of 91 infant deaths in every 1,000 live births in the North West geopolitical region of Nigeria was much lower than the 2008 average infant mortality rate of 138 infant deaths in every 1,000 live births in Katsina State.

Furthermore, as at 2008, Nigeria recorded an average infant mortality rate of 75 infant deaths in every 1,000 live births. This number also implies that 7.5 percent of infants born in Nigeria died as infants. The 2008 average infant mortality rate of 75 infant deaths in every 1,000 live births in Nigeria was much lower than the 2008 average infant mortality rate of 91 infant deaths in every 1,000 live births in the North West geopolitical region of Nigeria.

However, as at 2013, Nigeria recorded an average infant mortality rate of 69 infant deaths in every 1,000 live births. This represents a decline of about 8 percent from the infant mortality rate of 75 infant deaths in every 1,000 live births recorded in the country in 2008. On the other hand, as at 2013, the North West geopolitical region of Nigeria recorded an average infant mortality rate of 89 infant deaths in every 1,000 live births. This represents a decline of about 2.2 percent from the infant mortality rate of 91 infant deaths in every 1,000 live births recorded in the geopolitical region as at 2008. In the same way, Katsina State recorded an average infant mortality rate of 133 infant deaths in every 1,000 live births as at 2013. This represents a decline of about 3.6 percent from the infant mortality rate of 138 infant deaths in every 1,000 live births recorded in the State as at 2008.

From all the above, it is clear that as at 2008, the North West geopolitical region's average infant mortality rate of 91 infant deaths in every 1,000 live births was higher by about 21.33 percent than the national average infant mortality rate of 75 infant deaths in every 1,000 live births. In the same way, Katsina State's average infant mortality rate of 138 infant deaths in every 1,000 live births in 2008 was higher by about 51.65 percent than the North West geopolitical region's average infant mortality rate of 91 infant deaths in every 1,000 live births. In addition, Katsina State's average infant mortality rate of 138 infant deaths in every 1,000 live births as at 2008 was higher by about 84 percent than the National average infant mortality rate of 75 infant deaths in every 1,000 live births.

Usually, when infant mortality is discussed only in terms of its rate in every 1,000 live births, it is not properly contextualised, especially when the volume of crude births is unknown to the reader. There is no accurate annual figure of the total number of crude births in Katsina State that can facilitate a discourse on infant mortality in its nominal value. However, at the national level, the 2008 infant mortality rate of 75 infant deaths in every 1,000 live births represents 528,031 infant deaths in nominal figures[12]. This implies that Nigeria recorded about 7,040,413 crude births in 2008 alone. Using the calculated ratio of 4.1 percent[13] of Katsina State's population in the total national population as at 2006, the above implies that Katsina State must have recorded at least

[12] World Development Indicators (2015) of the World Bank.
[13] Annual Abstract of Statistics (2012) of the Nigerian National Bureau of Statistics (NBS)

288,657 crude births in 2008 alone. Recall that Figure 1 above shows that available information reveals that Katsina State recorded average infant mortality rate of about 138 infant deaths in every 1,000 live births. This implies that Katsina State must have lost about 39,835 infants in 2008 alone. Therefore, saying that Katsina State recorded infant mortality rate of about 138 infant deaths in every 1,000 live births in 2008 translates to the death of about 39,835 infants in 2008 alone.

In the same way, the World Development Indicators estimated that Nigeria lost about 496,561 infants in 2013 alone. Recall that Figure 1 above shows that the National Demographic and Health Survey estimated this figure to imply infant mortality rate of 69 infant deaths in every 1,000 live births as at 2013. This implies that Nigeria recorded about 7,196,536 crude births in 2013 alone. Using the calculated ratio of 4.1 percent of Katsina State's population in the total national population as at 2006, the above also implies that Katsina State must have recorded at least 295,058 crude births in 2013 alone. Using the average infant mortality rate of about 133 infant deaths in every 1,000 live births as at 2013 shown in Figure 1 above, we can also estimate that Katsina State must have lost about 35,253 infants in 2013 alone. Therefore, saying that Katsina State recorded infant mortality rate of about 133 infant deaths in every 1,000 live births in 2008 translates to the death of about 35,253 infants in 2013 alone.

The above estimations show that though there was a marginal increase in the volume of crude births in Katsina State between 2008 and 2013, yet there was also an impressive decline in the nominal value of infant deaths in Katsina State between 2008 and 2013. This could be attributed to some interventions in MNCH initiatives in Katsina State. Available information from the 2013 Final Report of the activities of Partnership for Revival of Routine Immunisation in Northern Nigeria – Maternal, Newborn and Child Health Initiative (PRRINN-MNCH) funded by the UK Department for International Development reveals that in 2013 alone, 16,037 infant lives were saved in only three states of Katsina, Yobe and Zamfara. Even if this figure is divided equally among the three States, it means that the programme saved at least 5,345 infant lives in Katsina State as at 2013 alone. Also, the report reveals that between 2008 and 2013, the programme saved about 53,995 infant lives in the three States. As stated earlier, even if this value of saved infant lives is divided equally among the three States, it means that the PRRINN-MNCH programme alone saved at least 17,998 infant lives in Katsina State between 2008 and 2013.

It should be recalled that there was only about 3.6 percent reduction in the infant mortality rate of Katsina State between 2008 and 2013. For the sake of emphasis on nominal values, we may safely assume that PRRINN-MNCH was the only intervention programme in Katsina State within the period under discussion. We may as well assume that all the 3.6 percent reduction in the infant mortality of the State can be attributed to the programme. Based on the assumptions above, we can conclude that the 3.6 percent reduction in the State's infant mortality rate between 2008 and 2013 represents 17,998 infant lives saved in Katsina State between 2008 and 2013.

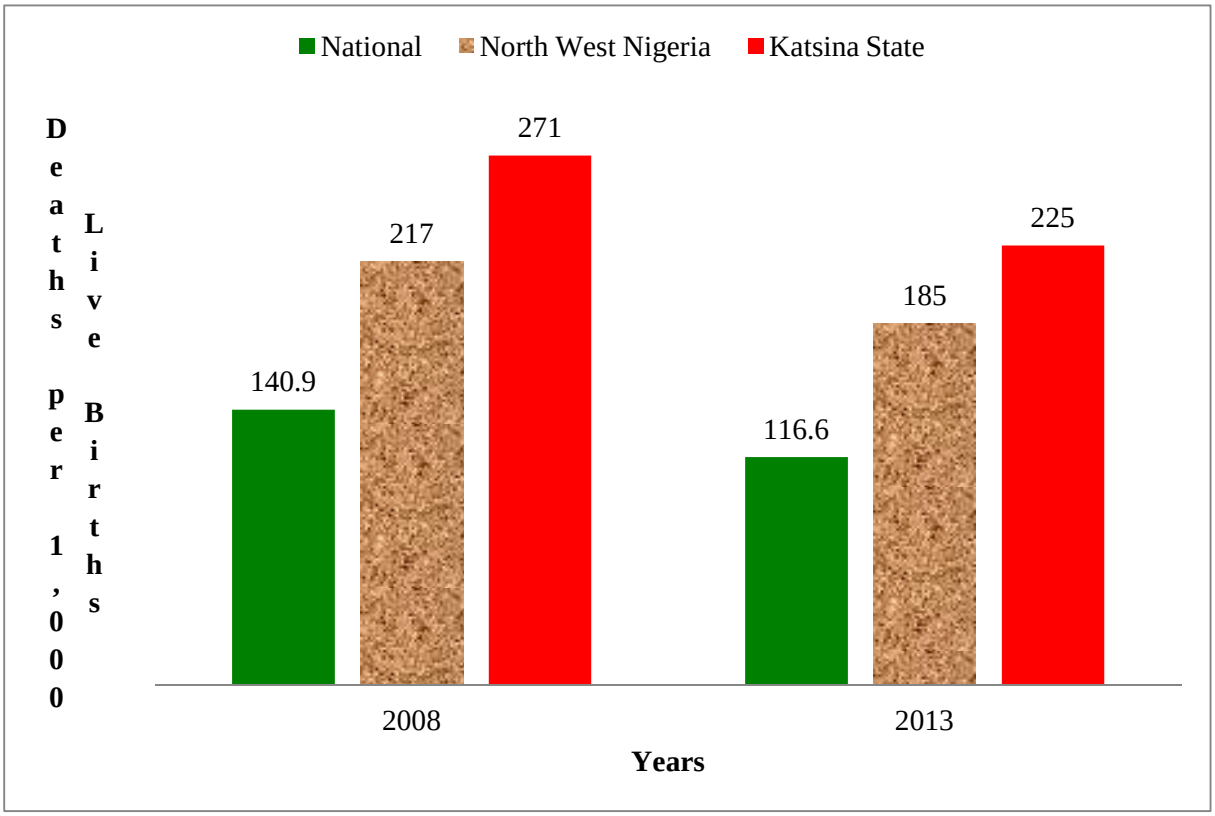
3.2 UNDER-FIVE CHILD HEALTHCARE INDICATORS IN KATSINA STATE

Just like newborn and infant healthcare indicators, the indicators of child healthcare go a long way in showing what the future holds for any people. This means that the future of Katsina State

depends on the status of those indicators of child healthcare services in the State at the present time.

Given that State-level annual time series data on child healthcare indicators are not available in Nigeria, the discussions in this sub-section depends greatly on available data for the two years of 2008 and 2013. In addition, to enrich the discussions that are based on the two years data, this sub-section comparatively analyses the status of child healthcare indicators in Katsina State with the regional and national status of child healthcare indicators. Figure 2 below presents national, regional and Katsina State under-five mortality rates.

Figure 2: National, Regional and State-Level Under-Five Mortality Rates in Katsina State



Source: *National and Regional Data computed from 2008 and 2013 National Demographic and Health Surveys (NDHS) of the National Population Commission; 2008 figure for Katsina State computed from Baseline Survey of Partnership for Revival of Routine Immunisation in Northern Nigeria (2009); while 2013 figure for Katsina State was computed from Primary Health Care Under One Roof Implementation Scorecard III Report of the National Primary Health Care Development Agency (NPHCDA)*

Under-five mortality rate is usually estimated from the average number of children who died before their fifth birthday. It is usually calculated as number of children who could not reach their fifth birthday in 1,000 children born alive. This category of mortality includes those that died as newborns, infants and others before age five. Figure 2 above is based on available data mostly generated through the 2008 and 2013 National Demographic and Health Surveys (NDHS) of the National Population Commission and other documents that report other household surveys.

From Figure 2 above, we observe as at 2008, Nigeria as a country recorded under-five mortality rate of about 141 under-five child deaths in every 1,000 live births. This means that about 141 children in every set of 1,000 children born in Nigeria died before getting to their fifth birthday in 2008. The number also represents 14.1 percent of under-five child deaths when expressed in terms of percentage of the total number of under-five children born in Nigeria.

There are six geopolitical regions in Nigeria, out of which is North West geopolitical region. Figure 2 above also shows that as at 2008, North West geopolitical region of Nigeria recorded an average under-five mortality rate of 217 under-five deaths in every 1,000 live births. This number represents 21.7 percent of under-five population in Nigeria that died before their fifth birthday. The 2008 under-five mortality rate of 217 under-five deaths in every 1,000 live births in North West geopolitical region of Nigeria was higher by about 54 percent than the national average under-five mortality rate of 141 under-five deaths in every 1,000 live births in the same 2008.

Katsina State is one of the seven States in the North West geopolitical region of Nigeria. As at 2008, Katsina State recorded an average under-five mortality rate of 271 under-five deaths in every 1,000 live births. This number implies that 27.1 percent of all the children born in Katsina State died before their fifth birthday in 2008. Comparatively, the 2008 average under-five mortality rate of 271 under-five deaths in every 1,000 live births in Katsina State was higher by about 24.9 percent than the 2008 average under-five mortality rate of 217 deaths in every 1,000 live births recorded in North West region of Nigeria. Worse still, when the situation in Katsina State is compared with the national average rate, a lot is revealed. The 2008 average under-five mortality rate of 271 deaths in every 1,000 live births in Katsina State was higher by about 92.3 percent than the 2008 national average under-five mortality rate of 141 deaths in every 1,000 live births recorded in Nigeria.

At the national level, Nigeria recorded an average under-five mortality rate of 117 deaths in every 1,000 live births in 2013. The 2013 mortality rate represents a decline of about 17.25 percent from the under-five mortality rate of 141 deaths in every 1,000 live births recorded in the country in 2008. In the same way, the North West geopolitical region of Nigeria also recorded a decline in under-five mortality rate in 2013. The region recorded an average under-five mortality rate of 185 deaths in every 1,000 live births in 2013. The 2013 regional mortality rate represents a decline of about 14.7 percent from the under-five mortality rate of 217 deaths in every 1,000 live births recorded in the geopolitical region as at 2008. As impressive as the decline in the regional under-five mortality rate between 2008 and 2013, it is equally important to compare the 2013 under-five mortality rate of the geopolitical region with the 2013 national under-five mortality rate. The 2013 under-five mortality rate of 185 deaths in every 1,000 live births recorded in the North West geopolitical region of Nigeria was higher by about 58.7 percent than the national under-five mortality rate of 117 under-five deaths in every 1,000 live births in the same 2008.

Similarly, Katsina State also recorded a decline in under-five mortality rate in 2013. The State recorded an average under-five mortality rate of 225 deaths in every 1,000 live births in 2013. The under-five mortality rate recorded by Katsina State in 2013 represents a decline of about 17 percent from the under-five mortality rate of 271 deaths in every 1,000 live births recorded in the State as at 2008. This level of decline within a 5-year period can be considered impressive.

However, it is important to compare the 2013 under-five mortality rate of Katsina State with the regional and national 2013 under-five mortality rates. The 2013 under-five mortality rate of 225 deaths in every 1,000 live births recorded in Katsina State was higher by about 21.6 percent than the 2013 under-five mortality rate of 185 deaths recorded by the North West geopolitical region of Nigeria. The 2013 under-five mortality rate of 225 deaths in every 1,000 live births recorded in Katsina State was equally higher by about 93 percent than the 2013 national under-five mortality rate of 117 under-five deaths in every 1,000 live births.

It is imperative to emphasise that globally, Nigeria was ranked as the sixth worst country on the basis of very poor level of under-five mortality rate in 2015[14]. It is important to observe that the ranking was based on the 2015 national under-five mortality rate of 108.8 deaths in every 1,000 live births. Recall that as at 2013 when the national under-five mortality rate stood at 116.6 deaths in every 1,000 live births that the regional under-five mortality rate of North West geopolitical region in Nigeria was higher than the national average by about 58.66 percent to stand at 185 deaths in every 1,000 live births. Recall also that in the same 2013 when the national under-five mortality rate stood at 116.6 deaths in every 1,000 live births that under-five mortality rate in Katsina State was higher than the national average by about 92.97 percent to stand at 225 deaths in every 1,000 live births. It is equally important to emphasise that as at 2012, Sierra Leone was ranked the worst globally in terms of poor under-five mortality rate of 182 deaths in every 1,000 live births[15]. Based on the above, it is clear that the worst global record of under-five mortality rate in 2012 was still better than the 2013 record of under-five mortality rate in North West geopolitical zone of Nigeria. There is no point comparing the under-five mortality rate of Katsina State in 2013, which stood at 225 with the global worst record of under-five mortality rate in 2012 as recorded in Sierra Leone at 182 deaths per 1,000 live births.

Discussing under-five mortality in terms of its rate in every 1,000 live births only can make the issue less weighty as it should have been. This is especially the case when the volume of crude births in the society under discussion is not known by the reader. There is therefore need to relate the discussion on under-five mortality in Katsina State to the nominal figures that represent the real number of children born in Katsina State alone who did not cross their fifth birthday before their deaths.

To be able to do this, it is important to look at statistical figures on under-five mortality. As usually the case in many developing societies of the world, generating accurate data is usually a difficult task. This can weaken any effort in carrying out evidence-based research that depends on such statistical figures. It is true that there are no accurate annual records of the total number of crude births in Katsina State that can help us discuss under-five mortality in its nominal value, yet we can glean some information from available sources in order to discuss the subject matter.

We can estimate the total population of Katsina State based on the ratio of Katsina State's population in the 2006 national population census figure and the annual population growth rate of Katsina State as presented by the National Population Commission[16]. First of all, the World Bank

[14] World Health Organisation (WHO)'s World Health Statistics 2016: Monitoring Health for the SDGs.
[15] World Health Organisation (WHO)'s World Health Statistics 2014.
[16] Annual Abstract of Statistics 2012 of the National Bureau of Statistics, Abuja, Nigeria.

estimates the total population of Nigeria to stand at 151,115,683 as at 2008. Using the calculated ratio of 4.1 percent of Katsina State's population in the total national population as at 2006, it can as well be estimated that Katsina State's total population stood at about 6,195,743 as at 2008. Again, the World Bank estimates the total population of Nigeria to stand at 172,816,517 as at 2013. Using the calculated ratio of 4.1 percent of Katsina State's population in the total national population as at 2006, it can as well be estimated that Katsina State's total population stood at about 7,085,477 as at 2013.

In the same way, we can estimate the under-five population of Katsina State based on the national ratio of under-five children given in the 2006 national population census figure as presented by the National Population Commission. The record calculated the national ratio of under-five children as 16.09 percent of the total population as at 2006. Using the same ratio for Katsina State, we can as well estimate that Katsina State's under-five children's population stood at about 996,895 children (i.e. 16.09% of 6,195,743 Katsina State's total population) as at 2008. In the same way, we can estimate that Katsina State's under-five children's population stood at about 1,140,053 children (i.e. 16.09% of 7,085,477 Katsina State's total population) as at 2013.

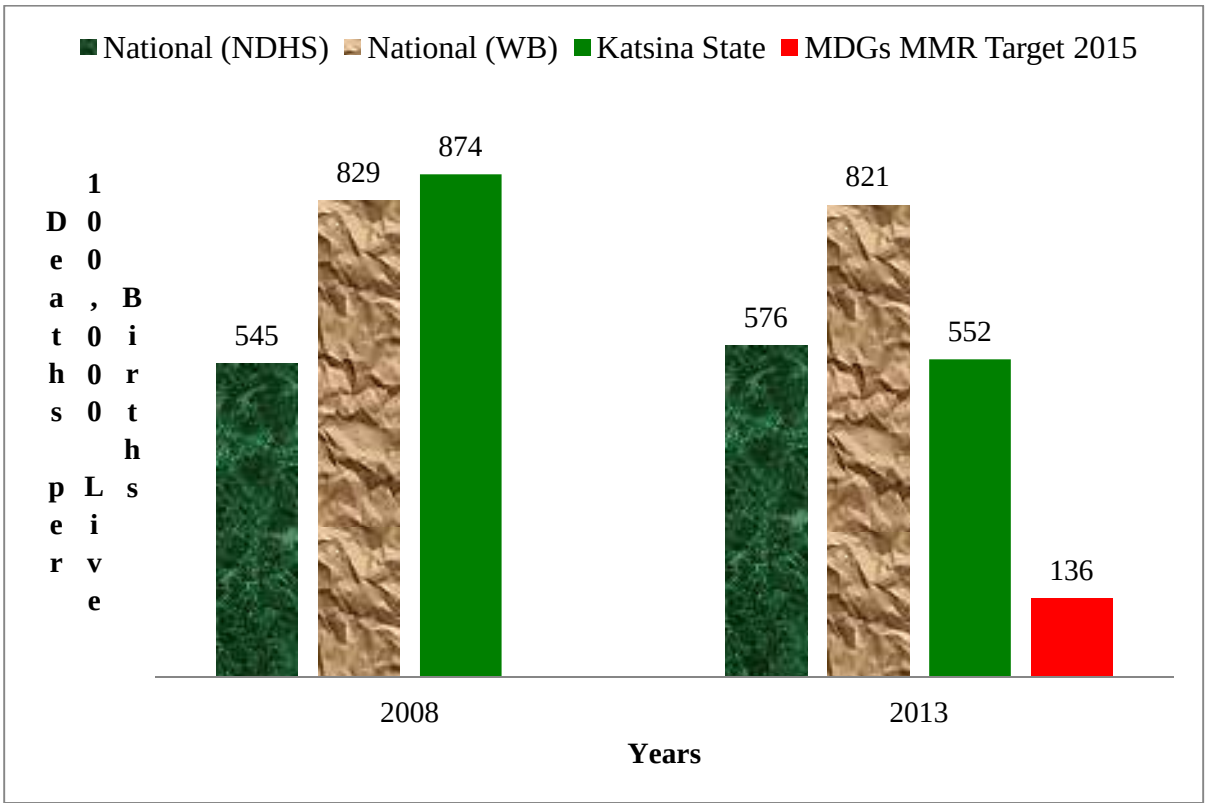
Figure 2 above reveals that as at 2008, under-five mortality rate in Katsina State stood at 271 deaths in every 1,000 live births. This represents about 27.1 percent of all the children below the age of five that died only in 2008. The nominal value of this level of under-five mortality rate is that 270,158 under five children were lost in Katsina State as at 2008 alone. Similarly, the same Figure 2 above reveals that as at 2013, under-five mortality rate in Katsina State stood at 225 deaths in every 1,000 live births. This represents about 22.5 percent of all the children below the age of five that died only in 2013. The nominal value of this level of under-five mortality rate sums up to about 256,511 under five children that were lost in Katsina State as at 2013 alone.

3.3 MATERNAL HEALTHCARE INDICATORS IN KATSINA STATE

Maternal mortality rate is an indicator for assessing the extent to which a society has deepened maternal healthcare. Unlike infant and under-five mortality rates that are calculated per 1,000 live births, maternal mortality rate is calculated per 100,000 live births. As was observed in the cases of infant mortality and under-five mortality discussions, there are no time series data on these indicators for Katsina State. This made our discussion to be based on 2008 and 2013 figures that are available. In the same way, the discussion on maternal mortality rate is also based on the available data for only 2008 and 2013. Observations from available sources of data are graphically presented in Figure 3 below:

We cannot effectively discuss infant and child healthcare issues in any society without proper attention given to the issues around maternal healthcare in the same society. It is true that the future of any people in any society depends largely on the status of the society's replacement population (i.e. infants and children), however, these children must be borne by some mothers. It therefore follows that the future of any society depends largely on the safety and health status of the mothers or women within the reproductive age, who must give birth to the children that will replace that adult populations in the future. By implication, the future of Katsina State depends on the status of maternal healthcare services in the State at the present time.

Figure 3: National and State-level Maternal Mortality Ratio in Katsina State



Source: *National (NDHS) Data computed from 2008 and 2013 National Demographic and Health Surveys (NDHS) of the National Population Commission; National (WB) Data computed from World Development Indicator Databank of the World Bank 2015; 2008 figure for Katsina State computed from Katsina State Strategic Health Development Plan 2010-2015; and 2013 figure for Katsina State computed from Maternal Death Review in the Northern States under the Midwives Service Scheme (2014) of the National Primary Health Care Development Agency (NPHCDA)*

To show that maternal healthcare is so important to the global community, the issue form the fifth Goal of the eight (8) MDGs. Just as the MDGs were coming to their deadlines in 2015, the global leaders gathered again to conceptualise another long term development goals for every society in the world. These long term development goals, otherwise known as the Sustainable Development Goals (SDGs) have their deadlines set at 2030. This means that the goals are expected to be achieved between of 2015 and 2030. Just like Goal 5 of the MDGs, Target 1 of Goal 3 of the SDGs of 2015 – 2030 focuses on the subject of maternal healthcare and maternal mortality issues. This goes a long way in buttressing the fact that maternal healthcare issues have continued to be prominent in every discussion on the health of any given society.

From Figure 3 above, we can easily compare the maternal mortality rate in Katsina State with the maternal mortality rate in Nigeria. Given that different sources of information report different levels of maternal mortality rate in Nigeria, we report two levels and their sources. This explains why the national maternal mortality rates are shown in two different bars in Figure 3 above.

Drawing from available information gathered from the National Demographic and Health Survey of the National Population Commission of Nigeria (NDHS-NPC), Figure 3 above reveals that as

at 2008, Nigeria as a country recorded maternal mortality rate of about 545 maternal deaths in every 100,000 live births. This means that about 545 mothers in every set of 100,000 mothers that delivered live babies died in the process of child bearing or as a result of complications emanating from child-bearing. This number also represents 0.545 percent of all pregnant women that delivered their live babies died as a result of complications emanating from the delivery process when expressed in terms of percentage of the total number of pregnant mothers who delivered their live babies in Nigeria in 2008.

Drawing also from available information gathered from the World Development Indicators of the World Bank (WDI-WB), Figure 3 above also reveals that as at 2008, Nigeria as a country recorded maternal mortality rate of about 829 maternal deaths in every 100,000 live births. This means that about 829 mothers in every set of 100,000 mothers that delivered live babies died in the process of child bearing or as a result of complications emanating from child-bearing. This number also represents 0.829 percent of all pregnant women that delivered their live babies died as a result of complications emanating from the delivery process when expressed in terms of percentage of the total number of pregnant mothers who delivered their live babies in Nigeria in 2008.

There are no records of regional maternal mortality data that can be used in comparing the national level of maternal mortality rate with the maternal mortality rate in North West geopolitical region. This is why Figure 3 above shows only the national level of maternal mortality rate and that of Katsina State. As at 2008, Katsina State recorded an average maternal mortality rate of 874 maternal deaths in every 100,000 live births. This means that about 874 mothers in every set of 100,000 pregnant mothers that delivered live babies died in the process of child bearing or as a result of complications emanating from child-bearing. This number also implies that about 0.874 percent of all pregnant women that delivered their live babies died as a result of complications emanating from the delivery process in Katsina State of Nigeria in 2008 alone.

Similarly, available information gathered from the 2013 NDHS-NPC and presented in Figure 3 above reveals that as at 2013, Nigeria as a country recorded maternal mortality rate of about 576 maternal deaths in every 100,000 live births. This means that about 545 mothers in every set of 100,000 mothers that delivered live babies died in the process of child bearing or as a result of complications emanating from child-bearing. This number represents an increase of 5.69 percent from the 2008 record of 545 maternal deaths in every 100,000 live births in Nigeria as gathered from the 2008 NDHS-NPC.

On the other hand, available information gathered from the 2015 WDI-WB and presented in Figure 3 above reveals that as at 2013, Nigeria as a country recorded maternal mortality rate of about 821 maternal deaths in every 100,000 live births. This means that about 821 mothers in every set of 100,000 mothers that delivered live babies died in the process of child bearing or as a result of complications emanating from child-bearing in 2013. The 2013 maternal mortality rate represents a decline of 5.69 percent from the 2008 record of 829 maternal deaths in every 100,000 live births in Nigeria as gathered from the same 2015 WDI-WB.

Similarly, Katsina State also recorded a sharp decline in maternal mortality rate in 2013. The State recorded an average maternal mortality rate of 552 deaths in every 100,000 live births in 2013. The 2013 maternal mortality rate recorded by Katsina State represents a decline of about 36.84 percent from the maternal mortality rate of 874 deaths in every 100,000 live births recorded in the State as at 2008. This rate of decline represents more than 7 percent annualised rate of decline in maternal mortality ratio in Katsina State between 2008 and 2013. It is therefore an impressive level of decline in maternal mortality in any society within a 5-year period.

It is interesting to observe that as at 2008, maternal mortality rate in Katsina State was higher than the national average maternal mortality ratio both as estimated through the NDHS-NPC and as estimated in the WDI-WB. Comparing maternal mortality ratio in Katsina State with the national average mortality ratio published in the NDHS-NPC, we observe that the 874 maternal deaths in every 100,000 live births recorded in Katsina State as at 2008 was higher by about 60.37 percent than the average of 545 maternal deaths in every 100,000 live births recorded in Nigeria as at 2008 alone. Furthermore, comparing maternal mortality ratio in Katsina State with the national average mortality ratio published in the WDI-WB, we observe that the 874 maternal deaths in every 100,000 live births recorded in Katsina State as at 2008 was higher by about 5.43 percent than the average of 829 maternal deaths in every 100,000 live births recorded in Nigeria as at 2008 alone.

It is even more interesting to observe that as at 2013, maternal mortality rate in Katsina State was much lower than the national average maternal mortality ratio both as estimated through the NDHS-NPC and as estimated in the WDI-WB. Comparing maternal mortality ratio in Katsina State with the national average mortality ratio published in the NDHS-NPC, we observe that the 552 maternal deaths in every 100,000 live births recorded in Katsina State as at 2013 was lower by about 4.17 percent than the average of 576 maternal deaths in every 100,000 live births recorded in Nigeria as at 2013 alone. Furthermore, comparing maternal mortality ratio in Katsina State with the national average mortality ratio published in the WDI-WB, we observe that the 552 maternal deaths in every 100,000 live births recorded in Katsina State as at 2013 was lower by about 32.76 percent than the average of 821 maternal deaths in every 100,000 live births recorded in Nigeria as at 2013 alone.

It is true that the average maternal mortality ratio in Katsina State was still higher than the MDGs target of reducing maternal mortality ratio down to 136 in Nigeria as at 2015, yet the rate of decline in maternal mortality within the period of 2008 to 2013 was quite impressive. Should that rate of decline be sustained over a period of ten (10) additional years, maternal mortality ratio in Katsina State will become very insignificant to be an object of concern and discussion. However, discussing maternal mortality only in terms of its ratio in every 100,000 live births can make the issue less burdensome than should have been. This is especially the case when the impressive rate of decline in maternal mortality ratio in Katsina State is considered in the discussion. Therefore, there is the need to shift the discussion on maternal mortality in Katsina State from its ratio in every 100,000 live births to the nominal figure of the number of maternal deaths recorded in the State as a result of child delivery-related complications.

In order to achieve this goal, it is important to look at statistical data on maternal mortality. As usually the case in many developing societies of the world, generating and keeping accurate data are very difficult tasks. Therefore, there are no accurate annual records of the total number of maternal deaths in Katsina State that can help us discuss this issue in its nominal value. However, we rely on estimates that we generate from available population data.

First of all, we estimate the total population of Katsina State based on the ratio of Katsina State's population in the 2006 national population census figure and the annual population growth rate of Katsina State as presented by the National Population Commission. Doing this, we rely on the World Bank estimate of the total population of Nigeria quoted to be 151,115,683 as at 2008. Using the calculated ratio of 4.1 percent of Katsina State's population in the total national population as at 2006, it can as well be estimated that Katsina State's total population stood at about 6,195,743 as at 2008. Again, the World Bank estimates the total population of Nigeria to stand at 172,816,517 as at 2013. Using the calculated ratio of 4.1 percent of Katsina State's population in the total national population as at 2006, it can as well be estimated that Katsina State's total population stood at about 7,085,477 as at 2013.

Secondly, we estimate the total population of Women within the reproductive age in Katsina State based on the national ratio of this group of the population given in the 2006 national population census figure as presented by the National Population Commission. The record calculated the national ratio of women within the reproductive age was 24.9 percent of the total population as at 2006. Using the same ratio for Katsina State, we can as well estimate that Katsina State's population of women within the reproductive age stood at about 1,542,740 female persons (i.e. 24.9% of 6,195,743 Katsina State's total population) as at 2008. In the same way, we can estimate that Katsina State's population ratio of women within the reproductive age stood at about 1,764,283 female persons (i.e. 24.9% of 7,085,477 Katsina State's total population) as at 2013. However, we can argue that it was not all the 1,542,740 female persons within the reproductive age that were pregnant in 2008. We may also argue that it was not all the 1,764,283 female persons within the reproductive age that were pregnant in 2013. It may therefore be difficult to estimate accurately the number of women that delivered their babies in either 2008 or 2013. To help us resolve this, we use available information from the databank of Maternal, Newborn and Child Health Programme (MNCH2) of the Northern Nigeria. The databank shows that there were 377,904 live births in Katsina State in one year – 2013. Using the number of deliveries in Katsina State in 2013, we can safely estimate that 3,303 mothers (0.874 percent of 377,904 mothers) lost their lives in 2013 during child birth or as a result of complications emanating from child delivery processes.

It can be argued that the sharp reduction in maternal mortality ratio in Katsina State between 2008 and 2013 was as a result of improved maternal healthcare services. This is especially the case when Figure 3 above shows that maternal mortality ratio in Katsina State declined even to be lower than the national level of maternal mortality ratio as at 2013. However, only an enquiry into other indicators of maternal healthcare services in Katsina State can confirm this argument.

3.4 PENETRATION OF PREVENTIVE AND CURATIVE MEASURES AGAINST INFANT, UNDER-FIVE AND MATERNAL MORTALITY IN KATSINA STATE

To be able to discuss the issue of penetration of preventive and curative measures against infant, under-five and maternal mortality in Katsina State over the period of 2010 – 2015, it is important to look at the availability of human resources and facilities for healthcare services in the State. The first aspect of the discussion is on the availability of human resources. This is very important as proper healthcare services can only be rendered by the trained personnel for healthcare services. Table 2 below shows the ratio of healthcare personnel to the population that needs their services in Katsina State. This is based on the record retrieved from the Katsina State Strategic Health Development Plan (2010 – 2015).

Table 2: Distribution of Katsina State Healthcare Personnel to Population Ratio

Type of Healthcare Personnel	Number of Persons per Healthcare Personnel
Doctors	43,234
Pharmacists	157,009
Nurses/Midwives	6,978
Laboratory Technologists	170,467
Pharmacy Technicians	75,523
Dental Technologists	5,966,355

Source: *Katsina State Strategic Health Development Plan 2010-2015;*

Except for complicated cases, Nurses and Midwives are the most important and most available healthcare personnel in many rural communities. This is usually because of their level of training and availability in many rural communities. However, Table 2 above shows that Nurses and Midwives are still in short supply in Katsina State. Due to their short supply in Katsina State, a Nurse or Midwive is expected to take care of about 6,978 persons who may have need of maternal, newborn or child healthcare services. This is not to mention the likes of Pharmacists and Laboratory Technologists, who have to take care of 157,009 and 170,467 persons in the population respectively. The simple summary is that the high level of infant, child and maternal mortality may not be unconnected with the number of trained healthcare service providers that are available in Katsina State.

Apart from looking at the human resources availability in Katsina State, it is equally important to look at the availability of healthcare facilities where the people can visit in times of needs. Table 3 below is a tabular presentation of the distribution of healthcare facilities according to the 34 Local Government Areas in Katsina State:

Table 3: Katsina State 34 LGAs Health Facilities by Category and Ownership

S/N	LGAs	GH	CHC	MCHC	PHC	H/C	DISP	H/POST	PRIV	ALL	Beds
1	Daura	1	1	7	0	5	0	0	3	17	317
2	Baure	1	0	6	0	34	0	0	0	41	134
3	Maiadua	0	1	4	0	24	1	0	0	30	93
4	Sandamu	0	1	4	1	19	0	0	1	26	115

5	Zango	0	1	6	1	1	22	0	0	31	154
6	Dutsamma	1	1	0	7	1	29	2	3	44	206
7	Batsari	1	0	10	5	6	53	0	1	76	148
8	Danmusa	1	1	0	3	0	28	0	0	33	168
9	Kurfi	1	0	1	2	23	0	1	0	28	351
10	Safana	0	1	6	4	2	12	1		26	234
11	Funtua	1	1	1	6	8	5	13	10	45	424
12	Dandume	0	1	5	0	9	16	0	2	33	
13	Faskari	0	1	2	3	5	39	0	1	51	582
14	Sabuwa	0	1	1	5	24	0	1	0	32	412
15	Katrina	4	0	12	1	19	3	1	17	57	656
16	Batarawa	1	1	0	2	12	31	0	1	48	407
17	Jibia	1	0	3	4	1	31	2	1	43	
18	Kaita	0	1	3	2	24	2	0	0	32	168
19	Rimi	1	0	3	5	3	18	0	0	30	107
20	Kankia	1	0	6	4	8	10	5	1	35	236
21	Ingawa	1	0	6	1	32	0	19	0	59	236
22	Kusada	0	1	6	6	21	0	0	0	34	920
23	Musawa	1	0	4	1	52	0	0	0	58	244
24	Matazu	0	1	4	3	23	0	0	0	31	88
25	Mani	1	0	9	4	11	0	14	0	39	187
26	Bindawa	0	1	5	4	3	37	0	0	50	288
27	Charanchi	0	1	8	3	0	37	0	0	49	89
28	Dutsi	0	1	15	2	7	5	0	0	30	700
29	Mashi	0	1	6	2	33	0	0	0	42	152
30	Malumfashi	2	0	1	7	33	0	14	6	63	427
31	Bakori	0	1	4	5	46	0	16	2	74	186
32	Danja	0	1	0	2	3	35	0	0	41	189
33	Kafur	0	1	1	2	7	35	4	0	50	385
34	Kankara	1	0	1	2	7	35	4	0	50	177
	TOTAL	**21**	**22**	**154**	**101**	**518**	**460**	**102**	**50**	**1,428**	**9180**

Source: *Katsina State Strategic Health Development Plan 2010-2015;*

Key to the Abbreviations in the Table:

GH = General Hospital;
CHC = Community Health Centres;
MCHC = Maternal and Child Healthcare Centres;
PHC = Primary Healthcare Centre;
H/C = Health Clinics;
DISP = Dispensary;

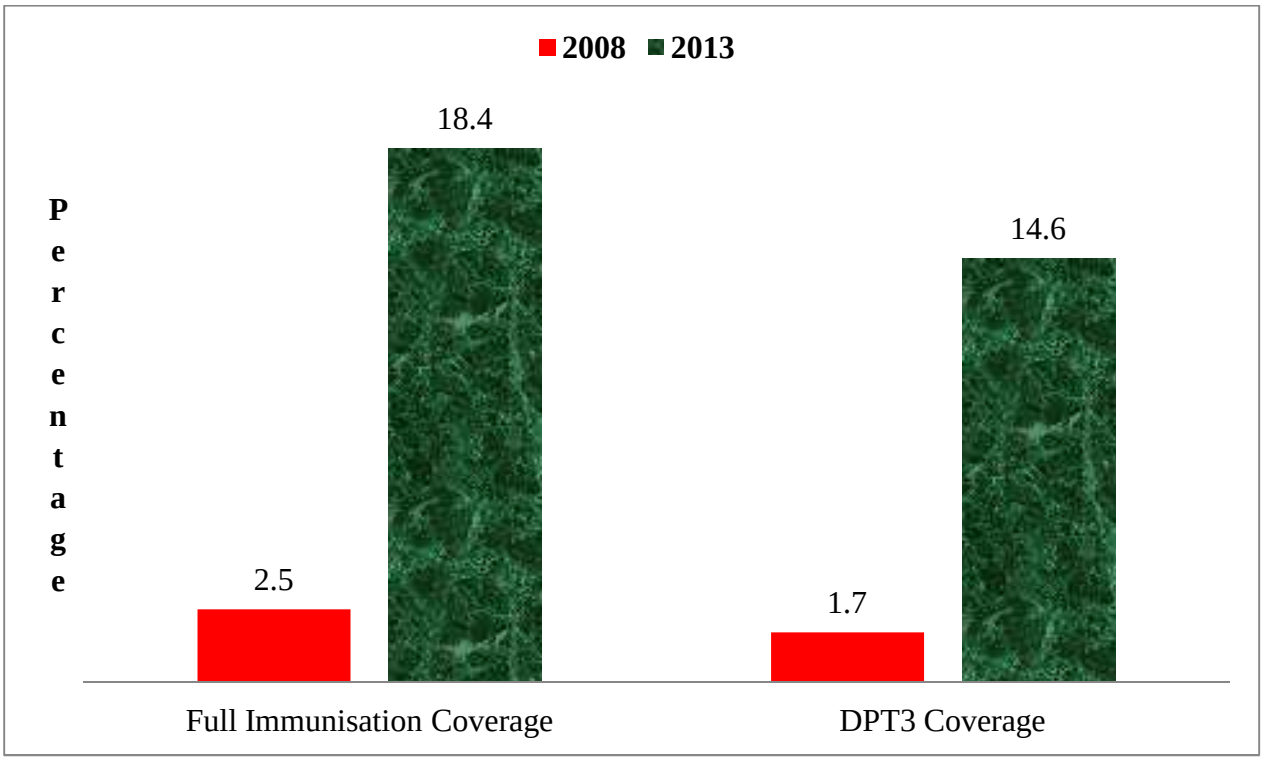
H/POST = Health Post;
PRIV = Private Hospitals/Clinics.

The total population of Katsina State as shown in the discussion on maternal deaths stood at more than 7 million persons as at 2013. In Katsina State, there are a total of about 21 General Hospitals; 22 Community Health Centres; 154 Maternal and Child Health Centres; 101 Primary Health Centres; 518 Health Clinics; 460 Dispensaries; 102 Health Posts; and 50 Private Hospitals/Clinics. All these sum up to a total of 1,428 health facilities. Looking at the nature of health issues under discussion, we can say that there were only about 255 health facilities that are dedicated to maternal, newborn and child healthcare matters. The same source of information estimated that 4 percent of Katsina State total population are infants, 20 percent under-five children, and 22 percent are women between the ages of 15-49 years (reproductive age). This means that about 42 percent of Katsina State total population amounting to 2,975,900 mothers and children should utilise the available 255 healthcare facilities in the State.

Having seen the depth of need for improved human and material resources for maternal and child health services in Katsina State, it is equally important to also look at the indicators of improvement in the penetration and reach of health services to the people in need. As we noted earlier in this section, there is dearth of data on MNCH indicators. As a result of the dearth of data and information on annual basis concerning the level of improvement that has been recorded on MNCH issues in Katsina State, this sub-section relies greatly on data collected for only 2008 and 2013 periods. These two data points are believed to be strong enough to allow for conclusions on improvements or otherwise of the indicators of choice in this Study. In many cases, this sub-section tries to do a comparative analysis of the level of improvement recorded in Katsina State with what has happened in other Northern States of Nigeria. In order to justify the choice of States that compare with Katsina in the course of this Study, we have carefully chosen Yobe and Zamfara States. Just like Katsina State, these two States have received interventions in the area of MNCH care systems through the Partnership for Reviving Routine Immunisation in Northern Nigeria; (PRRINN-MNCH) with financial support from the UK Department for International Development and the Royal Norwegian Ministry of Foreign Affairs. It therefore makes sense to compare Katsina State with other States that have similar background before intervention in order to understand how the interventions and other programmes of the State Governments and donor agencies have impacted on the indicators of improved maternal, newborn and child healthcare.

Figure 4 below presents the level of coverage of immunisation programmes in Katsina State:

Figure 4: Immunisation Coverage in Katsina State



Source: *Final Report 2013 – Better Maternal, Newborn & Child Health in Northern Nigeria, of Partnership for Reviving Routine Immunisation in Northern Nigeria; Maternal, Newborn and Child Health Initiative (PRRINN-MNCH)*

From Figure 4 above, it is clear that even the presence of heavy interventions in the area of MNCH in Katsina, the penetration and reach of immunisation programme in the State still remains very low. As at 2008, only about 2.5 percent of all the under-five children that should receive their full immunisation doses had received them. This is even worsened by the fact that only about 1.7 percent of the children had been reached with the vaccine for third phase of Diphteria, Tetanus, and Pertussis (DPT 3).

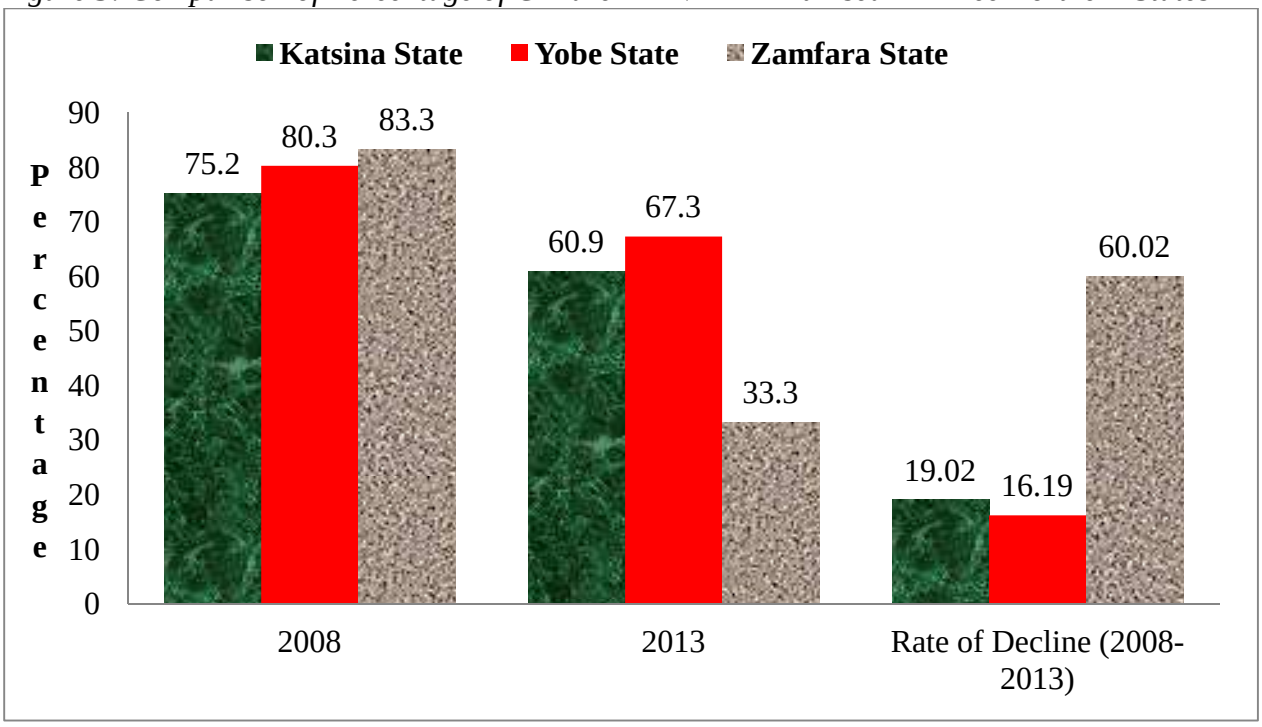
There were improvements in the coverage of the immunisation programme based on Diphteria, Tetanus, and Pertussis (DPT 3) vaccines in 2013. From the 1.7 percent coverage, the programme reached to more children, thereby increasing the coverage to about 14.6 percent of the children that should be immunised. On the other hand, full immunisation coverage also received some improvements. From the 2.5 percent coverage recorded in 2008 in Katsina State, full immunisation programme improved its coverage to about 18.4 percent in 2013.

Comparing Katsina State experience with the national level of coverage, we observe that as at the 2008 when Katsina State recorded 1.7 percent coverage and penetration of DPT 3 coverage, the national record shows that Nigeria experienced DPT 3 coverage of 35 percent. Also, DPT 3 coverage in Katsina State was 14.6 percent in the same 2013 when the level of coverage of DPT 3 immunisation nationwide stood at 38 percent of all the children that should duly be immunised. The case of full immunisation is not much different from the case of DPT 3 vaccination. At the national level, up to 23 percent of all the children under five years old had been fully immunised with the basic vaccines in 2008, whereas in Katsina State, only about 2.5 percent of the children

within the appropriate age range had been covered with the basic vaccines in the same year. Similarly, there were improvements in both the national coverage and Katsina State coverage in 2013. Full immunisation coverage in Katsina State improved from 2.5 percent in 2008 to 18.4 percent in 2013, whereas at the national level, full immunisation coverage improved from 23 percent in 2008 to 25 percent in 2013.

It is important at this point to stress the fact that 18.4 percent coverage of full immunisation programmes in Katsina State as at 2013 implies that less than one-fifth of the under-five children are fully immunised against all the vaccine-preventable diseases. This level of immunisation coverage goes a long way in explaining the high under-five mortality rate recorded in Katsina State as shown in Figure 2 above. There is therefore the need to improve on the coverage of routine immunisation programmes and to ensure that all the children within the requisite age group fully get immunised.

Figure 5: Comparison of Percentage of Children NEVER Immunised in Three Northern States



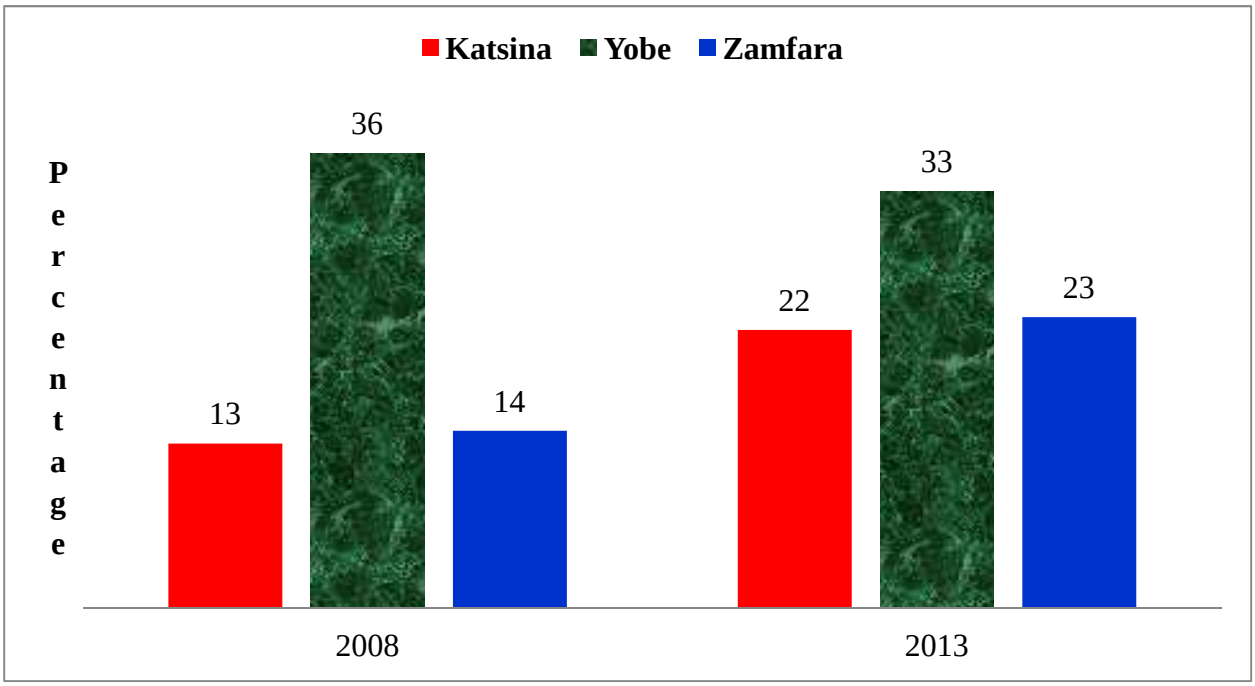
Source: *Final Report 2013 – Better Maternal, Newborn & Child Health in Northern Nigeria, of Partnership for Reviving Routine Immunisation in Northern Nigeria; Maternal, Newborn and Child Health Initiative (PRRINN-MNCH)*

Having seen how low full immunisation coverage in Katsina State has been over the years, it is equally important to discuss the case of omitted population of children. Figure 5 above shows the proportion of children that are never immunised against any vaccine-preventable disease. The Figure reveals that as at 2008, up to 75.2 percent of all the under-five children in Katsina State never got a single dose of immunisation/vaccination. Furthermore, the Figure equally reveals that as at 2008, up to 80.3 percent of all the under-five children in Yobe State never got a single dose of immunisation/vaccination, just as 83.3 percent of all the under-five children in Zamfara State never got a single dose of immunisation or vaccination. However, with the interventions through

PRRINN-MNCH and others, there was a sharp decline in the proportion of children that were never immunised against any form of vaccine-preventable disease in Zamfara State in 2013. From the 83.3 percent in 2008, the percentage of under-five children that were never immunised declined by 60.02 percent in 2013 to stand at 33.3 percent of the under-five children population in Zamfara State. With the same forms of interventions in Zamfara State, the record in Katsina State marginally declined by 19.02 percent from the 75.2 percent in 2008 to 60.9 percent in 2013, just as the record in Yobe State marginally declined by 16.19 percent from 80.3 percent in 2008 to 67.3 percent in 2013,

To attain the fifth goal of the MDGs, there was increased awareness campaign in favour of maternal health, with much emphasis on increased maternal health literacy. It is therefore rational to expect that the proportion of pregnant women who received antenatal care from skilled birth attendants would increase. Figure 6 below graphically presents the experiences of Katinsa, Yobe and Zamfara States in this regard:

Fig 6: Pregnant Women receiving Antenatal Care from Skilled Birth Attendant (%)



Source: *Final Report 2013 – Better Maternal, Newborn & Child Health in Northern Nigeria, of Partnership for Reviving Routine Immunisation in Northern Nigeria; Maternal, Newborn and Child Health Initiative (PRRINN-MNCH)*

Antenatal care is to pregnant women what immunisation is to under-five children. Just as immunisation protects the child from some known diseases, antenatal care from skilled birth attendants helps to forestall any complication that would have otherwise happened during child delivery. Figure 6 above shows that as at 2008, only about 13 percent of all the pregnant women in Katsina State received antenatal care from skilled birth attendants. The record was not much better in Zamfara State in the same 2008, as only about 14 percent of all the pregnant women in the State received antenatal care from skilled birth attendants. As at 2008, Yobe State was

exemplary to the other two States in terms of the proportion of pregnant women that received antenatal care from skilled birth attendants. About 36 percent of all the pregnant women in the State received antenatal care from skilled birth attendants in Yobe State as at 2008. However, the situation upturned in 2013. Instead of recording an improvement in the proportion of pregnant women who received antenatal care from skilled birth attendant, Yobe State recorded a decline of 8.33 percent from the 36 percent of all the pregnant women in the State that received antenatal care from skilled birth attendants as at 2008 to only 33 percent of all the pregnant women in the State that received antenatal care from skilled birth attendants as at 2013. On the other hand, Katsina State recorded an improvement in the proportion of pregnant women who received antenatal care from skilled birth attendants in 2013 from what was recorded in 2008. From 13 percent of all the pregnant women in 2008, about 22 percent of all pregnant women in Katsina State received antenatal care from skilled birth attendant in 2013. The improvement in Zamfara State was not much different from the improvement in Katsina State. From 14 percent of all the pregnant women in 2008, about 23 percent of all pregnant women in Zamfara State received antenatal care from skilled birth attendant in 2013.

All the above discussions drawn from Figure 6 above reveal that as at 2013, less than one quarter of all pregnant women received antenatal care from skilled birth attendants in Katsina State. This means that more than 75 percent of pregnant women still patronised the unskilled birth attendants with its attendant risks. This may explain the reason behind the high maternal mortality rate in Katsina State.

Chapter Four
RECONCILING THE BUDGET WITH THE STANDARDS

4.1 ALLOCATIONS TO THE HEALTH SECTOR

The health sector has continued to receive attention from African leaders. As a result, there is a general consensus agreed in the *Abuja Declaration* that to be able to meet up the health needs of the people, every government should set aside up to 15 percent of its annual budget for the health sector. This Chapter therefore investigates how the annual budget provisions of Katsina State for the years 2010 to 2015 have complied with the consensus. This is done with the intention of finding out how the MNCH budgets of the government have reflected the maternal, newborn and child healthcare needs of Katsina citizens. Table 4 below shows the budgetary allocations to the health sector between the years 2010 to 2016 in Katsina State and their variances from international and national standard expectations.

Table 4: Proportion of Katsina State's Health Sector Allocation and Shortfalls in the 15% Benchmark to Health Sector

Year	Total Budget (₦)	Health Allocation (₦)	As % of Total Budget	As 15% of Total (₦)	Variance from 15% Benchmark (₦)
2010	82,227,683,870	6,087,868,305	7.40	12,334,152,581	6,246,284,276
2011	99,959,815,066	6,349,663,410	6.35	14,993,972,260	8,644,308,850
2012	113,956,769,180	8,480,510,275	7.44	17,093,515,377	8,613,005,102
2013	114,171,627,790	6,271,368,580	5.49	17,125,744,169	10,854,375,589
2014	113,344,392,180	6,541,084,520	5.77	17,001,658,827	10,460,574,307
2015	110,069,841,170	7,052,816,175	6.41	16,510,476,176	9,457,660,001
Totals		40,783,311,265		95,059,519,388	54,276,208,123

Source: *Approved Budgets of Katsina State 2010 – 2015.*

From Table 4 above, the budgetary allocations to the health sector hovered between 5 and 7 percent of the total budget of Katsina State. It was an average of 6.48 percent over the six years. The proportion of Katsina State's budgetary allocation to the health sector fell much below the 15 percent benchmark, in all the cases, the allocations were less than half of what should have been allocated to the sector should the 15 percent benchmark be complied with. With a total health allocation of ₦6,087,868,305 in 2010, Katsina State recorded a variance of ₦6,246,284,276 from the ₦12,334,152,581 that the State should have allocated to the health sector supposing it complied with the 15% allocation benchmark. The total budgetary allocations of Katsina State to the health sector for the period 2010 – 2015 sum up to ₦40,783,311,265, whereas the State should have allocated the total sum of ₦95,059,519,388 to the sector within the period under review. This created a total variance of ₦54,276,208,123 in the budgetary allocation of the State to the health sector.

It is a known fact that it is one thing to make budgetary allocations to a sector and another thing to actually spend the money as budgeted. This is especially the case in societies where budgets are not accorded the kind of respect they should be accorded as appropriation laws of the states and

nations. We therefore turn to discuss the rate of implementation of the budgetary allocations to the health sector of Katsina State in the light of the effect of such implementation on MNCH programmes in the State.

Table 5: Katsina State's *Health Capital Budget Allocation and Health Capital Releases 2010 – 2015*

Year	Approved Capital Health Budget (₦)	Health Actual Capital Releases (₦)	Health Actual Capital Releases as % of Health Capital Budgets
2010	3,456,332,970	2,186,578,912	63.27%
2011	2,501,332,970	616,424,071	24.65%
2012	2,706,057,970	1,771,195,766	65.46%
2013	1,715,164,555	497,557,743	29.01%
2014	1,994,880,495	1,459,834,027	73.18%
2015	1,856,890,190		
Total	**14,230,659,150**	**6,531,590,519**	**Average for 5 years: 51.11%**

Source: *Approved Budgets of Katsina State 2010 – 2015.*

Table 5 above reveals that actual health sector capital budget releases were usually much lower than the budgeted amounts. The highest rate of implementation of the capital budget of the health sector in Katsina State was recorded in 2014 when out of the ₦1,994,880,495 budgeted for the sector, up to ₦1,459,834,027 was released. The released amount accounts for up to 73.18 percent of the amount budgeted for the sector within that particular year. On the other hand, the State had the lowest rate of implementation of health sector capital budget in 2011 when out of the ₦2,501,332,970 budgeted for the sector, only about ₦616,424,071 was released. The released amount accounts for only 24.65 percent of the amount budgeted for the sector within that particular year.

In a nutshell, the period of 2010 – 2015 received a total health sector capital allocation that sums up to ₦14,230,659,150 only, with the total capital allocation to the sector for the period of 2010 – 2014 accounting for about ₦12,373,768,960 out of the said amount. Available information on capital budget implementation of Katsina State health sector also reveals that total health sector actual capital releases sum up to ₦6,531,590,519 only. Within the five year period of 2010 – 2014, the health sector actual capital releases as percentage of health sector capital budget yielded an annual average of 51.11 percent.

From all the discussions arising from Tables 4 and 5 above, Katsina State Government has not been allocating optimal resources to the health sector that can help the State meet up the Abuja Declaration and other standards for the realisation of the right to health of Katsina State citizens and residents. Furthermore, since maternal, newborn and child healthcare rights of the people are derived from the overall rights to health of the people, whatever deficiencies that are recorded in the overall allocation to the health sector would definitely affect the realisation of MNCH rights. As though the paltry allocations to health sector are not problematic enough, the greatest budget of the sector is that even the little allocated resources to the health sector were not fully released

for implementation of the health sector budgets. It therefore implies that the budget may not be a good gauge of public expenditure in Katsina State, especially with respect to the health sector.

Apart from the differences that exist between the budgeted amount and the amount actually spent on the health sector of Katsina State, it is also important to compare the budgeted amount with what the State has in its medium term health sector development plan. Katsina State's Strategic Health Development Plan 2010 – 2015 is a well drafted development plan for the health sector, aimed at improving the health status of Katsina State citizens. Table 6 below compares the amounts estimated in the strategic development plan and the amounts in the annual budgets of the State for the period of 2010 – 2015.

Table 6: Katsina State's *Financing Plan for Strategic Health Development Plan and Katsina State's Health Sector Budgeted/Actual Allocations 2010 – 2015*

Estimated Cost of Financing Katsina State Strategic Health Development Plan			**Health Sector Budget Performance in Katsina State 2010 – 2015**		
Priority Areas	**Cost 2010 – 2015**		**Year**	**Approved Health Capital Budget (₦)**	**Health Actual Capital Releases (₦)**
Leadership and Governance for Health	434,001,273.13				
Health Service Delivery	28,132,587,027.09				
Human Resources for Health	12,038,933,355.65		2010	3,456,332,970	2,186,578,912
Financing for Health	407,598,655.36		2011	2,501,332,970	616,424,071
National Health Information System	651,001,909.70		2012	2,706,057,970	1,771,195,766
Community Participation and Ownership	434,001,273.13		2013	1,715,164,555	497,557,743
Partnerships for Health	434,001,273.13		2014	1,994,880,495	1,459,834,027
Research for Health	868,002,546.27		2015	1,856,890,190	
Total	**43,400,127,313.48**		**Total**	**14,230,659,150**	**6,531,590,519**

Source: *Katsina State Strategic Health Development Plan 2010 – 2015; and Approved Budgets of Katsina State 2010 – 2015.*

From Table 6 above, Katsina State estimated that to move the health status of the State from the point where it was before 2010 to where it should be by 2015, a total sum of ₦43,400,127,313.48 would be spent in health sector capital expenditures. Of the projected amount, only the paltry sum of ₦14,230,659,150 was allocated to health sector capital expenditures within the period of 2010 – 2015. The total sum of budgeted amount for health sector capital expenditures within the period represents only 32.79 percent of the amount projected to be optimal for improving Katsina State's health sector between 2010 and 2015. Worse still, the amount budgeted was not spent on the health sector. Out of the sum of ₦14,230,659,150 allocated to health sector capital expenditures in

Katsina State within the period of 2010 – 2015, only the sum of ₦6,531,590,519 was actually spent for health sector capital expenditures within the period of 2010 – 2015. This leaves a lot to desire in health sector financing in Katsina State for improved health systems.

4.2 ALLOCATIONS TO PRIMARY HEALTHCARE: MNCH IN VIEW

The MNCH programme in the State is yet to assume the status of a health department. This implies that the annual budget allocations to MNCH are usually embedded in the department where MNCH is currently classified. Currently, MNCH care system is classified under the Primary Health Care Department of the Ministry of Health. It therefore implies that MNCH budgetary allocation is embedded in the budgetary allocation to Katsina State Primary Health Care Development Agency. Therefore, this section reviews the extent to which Katsina State has funded MNCH programmes in the State through the States Primary Health Care Development Agency[17].

Table 7: Katsina State Budgetary Allocation to Primary Healthcare (Value and Proportion)

Year	Total Health Sector Allocation	PHCDA Recurrent Allocation	PHCDA Capital Allocation	PHCDA Total Allocation	PHCDA Total Allocation as % of Total Health Sector Allocation	PHCDA Total Allocation as % of Total Budget Allocation
2010	6,087,868,305	313,802,930	600,000,000	913,802,930	15.01%	1.11%
2011	6,349,663,410	313,431,530	600,000,000	913,431,530	14.39%	0.91%
2012	8,480,510,275	503,522,780	600,000,000	1,103,522,780	13.01%	0.97%
2013	6,271,368,580	494,238,580	50,000,000	544,238,580	8.68%	0.48%
2014	6,541,084,520	524,912,450	50,000,000	574,912,450	8.79%	0.51%
2015	7,052,816,175	525,192,285	233,936,365	759,128,650	10.76%	0.69%
Total	***40,783,311,265***	***2,675,100,555***	***2,133,936,365***	***4,809,036,920***	***Average = 11.77%***	***Average = 0.78%***

Source: *Approved Budgets of Katsina State 2010 – 2015.*

Table 7 above reveals that the total allocations to primary healthcare in Katsina State were only a small fraction of the total allocation to the State's health sector. As at 2010, Katsina State allocated only the sum of ₦913,802,930 to primary healthcare. This amount merely accounts for 15.01 percent of all the allocations to the health sector in 2010 alone, and at the same time accounts for merely 1.11 percent of the total budgetary allocation of the State in 2010. Classifying the total allocation to primary healthcare programmes in Katsina State in 2010 into recurrent and capital, we observe that greater proportion of the 2010 allocation goes to capital expenditure component of the allocation. This was a commendable move towards improved maternal, newborn and child healthcare programmes in the State. However, after maintaining a constant

[17] The allocations to KATS-PHCDA are treated as a proxy to PHC allocations of which MNCH is an integral part.

value for three years, capital expenditure allocation to primary healthcare in Katsina State took to a sharp downward movement in 2013 when it moved from ₦600,000,000 in 2012 to merely ₦50,000,000 in 2013 – a decline of over 90 percent in one year. Oscillating further, capital expenditure allocation to primary healthcare in Katsina State rose sharply in 2015 when it moved up from mere ₦50,000,000 in 2014 to a whopping amount of ₦233,936,365 in 2015 – an increase of over 360 percent in one year.

Interestingly, total allocation to primary healthcare in Katsina State continued rising annually between 2010 and 2012 before it crashed in 2013 to almost 50 percent of the 2012 value. In the same way, the proportion of total allocation to primary healthcare in total health sector allocation in Katsina State gradually declined from 15.01 percent in 2010 to 14.39 percent in 2011 and further to 13.01 percent in 2012. However, the proportion recorded a very sharp rate of decline between 2012 and 2013 when it moved from 13.01 percent of total health sector allocation to merely 8.68 percent of total health sector allocation, though it slight moved up again to 10.76 percent of total health sector allocation in 2015. On the average, the proportion of primary healthcare allocation stood at 11.77 percent of total allocation to the health sector of Katsina State between 2010 and 2015.

The proportion of primary healthcare allocation in total budget allocation of Katsina State performed woefully. From 1.11 percent of total budget allocation in 2010, the proportion of primary healthcare allocation in total budget allocation of Katsina State declined to 0.97 percent in 2012. The proportion declined further to 0.48 percent of total budget allocation in 2013 before moving up gradually to 0.69 percent in 2015. On the average, the proportion of primary healthcare allocation stood at 0.78 percent of total budget allocation of Katsina State between 2010 and 2015.

As we observed earlier, it is possible to rank a State in Nigeria favourably on the basis of budgetary allocations to the health sector without looking into the issue of implementation. Looking into the issue of implementation of the budget may deflate the rank that has earlier been awarded. It is therefore one thing to make budgetary allocations to a sector and another thing to actually release and spend the money as budgeted to the sector. Therefore, it is equally important to discuss the implementation of the budgetary allocations to primary healthcare in Katsina State. This will shed more light on the essence of low performances of all the indicators of MNCH in Katsina State.

Table 8 below reveals that actual capital expenditure releases to primary healthcare in Kaduna State were persistently lower than the budgeted amounts, except for 2014 that the actual release stood as an outlier. As at 2010, the total amount of ₦600,000,000 was budgeted for primary healthcare in Katsina State, and only the sum of ₦239,822,018 was released to the sub-sector. The released amount accounts for only about 39.97 percent of the amount budgeted for primary healthcare in the State within that particular year. The rate of implementation worsened further in 2011, when the total amount of ₦600,000,000 was still budgeted for primary healthcare in Katsina State, and only the sum of ₦90,980,647 was released to the sub-sector. The released amount represents only about 15.16 percent of the amount budgeted for primary healthcare in the State as at 2011.

Table 8: ***Capital Budget Implementation in the Health Sector including MNCH***

Years	Total Health Sector Actual Capital Releases (₦)	PHCDA Actual Capital Releases (₦)	PHCDA Actual Capital Releases as % of Total Health Sector Actual Capital Releases	PHCDA Capital Allocation (₦)	PHCDA Actual Capital Releases as % of PHCDA Capital Allocation
2010	2,186,578,912	239,822,018	10.97%	600,000,000	39.97%
2011	616,424,071	90,980,647	14.76%	600,000,000	15.16%
2012	1,771,195,766	-		600,000,000	
2013	497,557,743	12,311,900	2.47%	50,000,000	24.62%
2014	1,459,834,027	234,947,867	16.09%	50,000,000	469.90%
2015				233,936,365	
Total	***6,531,590,519***	***578,062,432***	***Average = 11.07%***	***2,133,936,365***	***Average = 137.41%***

Source: *Approved Budgets of Katsina State 2010 – 2015.*

There was a sharp decline in actual capital releases to primary healthcare in Katsina State from the sum of ₦90,980,647 in 2011 to the sum of ₦12,311,900 as at 2013. The sharp decline in actual capital releases coincided with a sharp decline in the capital budget of Katsina State Primary Health Care Development Agency, which crashed from ₦600,000,000 in 2011 to ₦50,000,000 as at 2013. Due to the sharp decline in both budgeted and actual capital expenditure of the agency, actual capital releases of the agency as a percentage of capital allocation of the agency seemed to have improved from 15.16 percent in 2011 to 24.62 percent as at 2013. However, it should be noted that this improvement in the proportion does not translate to improvement in the overall releases. The only improvement in the capital releases to the agency was recorded in 2014 when the capital allocation to primary healthcare remained at mere ₦50,000,000, while actual capital release increased from ₦12,311,900 as at 2013 to ₦234,947,867 in 2014. First, this amount was much more than the actual releases of all other years except 2010. Secondly, the amount represents 469.9 percent of capital allocation to primary healthcare in 2014. As good as it may be to have increased capital releases to primary healthcare in Katsina State, it is important to understand the legal implication of such acts. As long as there were no supplementary budgets to back up the increased need for actual expenditure in the sector, any extra-budgetary expenditure above what was contained in the budget amounts to contempt of the appropriation laws by the executive arm of the government, and therefore should not be celebrated nor encouraged.

Summarily, within the period of 2010 – 2015, primary healthcare in Katsina State received a total sum of ₦578,062,432 only in actual capital releases, whereas a total sum of ₦2,133,936,365 was allocated for capital expenditures in the sub-sector within the same period. The implication is that only about 27.09 percent of all the amounts allocated for capital expenditures on primary healthcare in Katsina State within the period of 2010 – 2015 were actually released for same purpose.

It is clear from all the discussions arising from Tables 6, 7 and 8 above that Katsina State Government has not been allocating optimal financial resources to primary healthcare in the State. This goes a long way to establish the fact that maternal, newborn and child healthcare rights of the

people had not been properly guaranteed in Katsina State. This is especially the case when the population of those that need MNCH services is placed side by side with the amount allocated to primary healthcare in Katsina State.

Chapter Five
MATTERS ARISING FROM BUDGETARY ALLOCATIONS AND OTHER PROVISIONS

5.1 PER CAPITA BUDGETARY ALLOCATION FOR HEALTH

One of the best measures of the commitment of any government to the health and wellbeing of its citizens is the amount the government spends on its health sector. The previous chapter has taken time to discuss issues that relate to Katsina State's health sector budgets for the period of 2010 – 2015. The discussion considered both the general health sector budget and budget for primary health (maternal, newborn and child healthcare) sub-sector. The chapter even delved into the discussion of actual health sector capital expenditures (releases) and those of primary health (MNCH) sub-sector. From all the discussions so far, the question of per capita health expenditures of Katsina State has arisen. This question is motivated by the fact that Katsina State is known to be one of the States with the highest level of fertility in Nigeria and therefore should have need for increased MNCH spending.

Table 9 below shows the per capita health expenditures of Katsina State. The Table considers both budgeted health expenditures and actual expenditures on health. After considering total budget to the health sector, the Table equally considers health sector capital budget in the discussion of per capita health expenditures.

Table 9: Per Capita Health Expenditure of the Government of Katsina State

Year	Total Health Budget (N)	Health Capital Budget (N)	Health Actual Capital Releases (₦)	Population [18]	Per Capita Health Allocation (N)	Per Capita Health Capital Allocation (N)	Per Capita Actual Health Capital Expenditures (N)
2010	6,087,868,305	3,456,332,970	2,186,578,912	6,536,414	931.4	528.8	334.5
2011	6,349,663,410	2,501,332,970	616,424,071	6,714,597	945.7	372.5	91.8
2012	8,480,510,275	2,706,057,970	1,771,195,766	6,897,857	1229.	392.3	256.8
2013	6,271,368,580	1,715,164,555	497,557,743	7,085,477	885.1	242.1	70.2
2014	6,541,084,520	1,994,880,495	1,459,834,027	7,276,515	898.9	274.2	200.6
2015	7,052,816,175	1,856,890,190		7,470,280	944.1	248.6	0

Source: *Approved Budgets of Katsina State 2010 – 2015.*

The commitment of Katsina State Government to the overall wellbeing of its citizens through health sector funding seems questionable as shown in Table 9 above. From Table 9, the highest per capita health sector budget of the State occurred in 2012 with a maximum limit of ₦1,229 per

[18] Baseline is NPC 2006 National Population Census that puts Katsina State's population at 5,801,584 (4.1% of Nigeria's total population then). Nigeria's estimated population for the years of 2010 – 2015 was generated from the World Bank's World Development Indicator Databank. Using the 4.1% proportion of Katsina State's population in total population, we generated the estimated population of Katsina State for the study period as shown here.

citizen. The least per capita health sector budget allocation in Katsina State occurred in 2013 with an average allocation of ₦885.1 per citizen. Cumulatively, per capita health sector budgetary allocations of Katsina State Government between 2010 and 2015 fiscal years sum up to ₦5,834.62 only. The sum equally translates to an average of ₦972.44 per annum for the six year period.

Basing the discussion of the commitment of Katsina State Government to the overall wellbeing of the citizens on the State Government's allocation to capital projects in the health sector, the situation becomes worse. Table 9 above equally shows that the highest per capita health sector capital expenditure budget of the State was recorded in 2010 when it reached a maximum limit of ₦528.78 per citizen. On the other hand, the least per capita health sector capital expenditures budget allocation in Katsina State was recorded in 2013 when it reached the lowest point of ₦242.07 per citizen. Cumulatively, per capita health sector capital expenditures budgetary allocations of Katsina State Government for the period of 2010 – 2015 fiscal years sum up to mere ₦2,058.40 only. The sum equally translates to an average of ₦343.07 per annum for the six year period.

The commitment of Katsina State Government to the overall wellbeing of the citizens through health sector funding is questionable when the discussion is based on per capita actual health sector capital expenditures. Table 9 above reveals that the highest per capita health sector actual capital expenditure of the State was recorded in 2010 when it reached a maximum limit of ₦334.52 per citizen. On the other hand, the least per capita health sector actual capital expenditures of Katsina State Government was recorded in 2011 when it reached the lowest point of ₦91.80 per citizen. Cumulatively, per capita health sector actual capital expenditures of Katsina State Government for the period of 2010 – 2015 fiscal years sum up to mere ₦953.95 only per citizen. The sum equally translates to an average of ₦190.79 per citizen per annum for the six year period.

It is important to look at the overall average per capita health sector actual capital expenditures of Katsina State in the light of current realities. Our discussion on funding gap in the subsequent chapter reveals that in order to maintain full MNCH services, the government should spend an average of $38 per citizen that has need of the services. If overall health sector records per capita actual capital expenditures of ₦190.79 per citizen, it will be too optimistic to expect that MNCH actual capital expenditures of the Government will reach a per capita level of ₦190.79 per mother, newborn or child. The implication is that the $38 per citizen mark of achieving full MNCH services may not easily be met in Katsina State. In addition, the World Bank also recommended as at 1993 that per capita government expenditure should reach a minimum level of US$12.00 per citizen in order to fund basic health packages[19]. It is true that this stipulation is a very old one, yet it is still much more than what Katsina State Government sets aside for actual capital projects in the health Sector of the State. Current realities show that the stipulated minimum per capita government expenditures of US$12.00 per citizen may not be enough to fund basic health packages for the citizens of any society. Again, going by the current exchange rate, this amount exceeds N2,500, which is far more than two times the maximum per capita health sector budget allocation in Table 9 above. The amount is equally more than the cumulative sum of the per capita

[19] World Bank (1993) *Investing in Health*. World Development Report; Washington DC: The World Bank.

health sector capital expenditures budget allocation of Katsina State for the period of 2010 – 2015 (i.e. ₦2,058.40) as derived from Table 9 above.

5.2 SEEMING INFORMATION ASYMMETRY WITH RESPECT TO HEALTH STATISTICS OF THE STATE

Ideally, whenever Katsina State Government presents its annual budget proposal for the subsequent fiscal year at the floor of the State House of Assembly, the Governor reads out all the achievements of the Government in the current year. A critical look at some of the achievements of the State Government in the area of health as contained in the annual budget presentations shows some form of contradiction between the claims of the State Government and the other sources of health statistics of the State. A good example of this is contained in the 2014 State Budget Speech of Governor Shema of Katsina State:

> *"One of the remarkable achievements recorded was in the immunization coverage which for the first time reached the epic level of 90% and KTS has been Polio free for over one year. Despite the huge salary bill it attracts, 400 health personnel were employed in the year for the purpose of improving the healthcare delivery"*[20].

The quote above refers to Katsina State health sector achievement in 2013. It talks about the level of reach of immunisation programme in the State as at 2013. As commendable as the quote above may seem, it does seem to align with other sources of health statistics of Katsina State. Available information from the final report of PRRINN-MNCH reveals that as at 2013, immunisation coverage in Katsina State has only managed to reach about 18.4 percent of the children who need the immunisation. For a State to claim to have recorded 90 percent immunisation coverage, it means that the State has recorded 90 percent coverage in full immunisation of children for the basic vaccinations in Nigeria. A list of basic vaccination is contained in Table 10 below:

Table 10: Complete Required Vaccination for Children in Nigeria based on Required Age[21]

S/N	AGE	ANTIGEN
1	At BIRTH	BCG, OPV1, HEPBO
2	6 weeks	OPV1, Pentavalent 1, PCV (optional), Rotavirus 1(optional)
3	10 weeks	OPV2, Pentavalent 2, PCV (optional)
4	14 weeks	OPV3, Pentavalent 3, PCV, Rotavirus 2 (optional)
5	9 months	Measles, Yellow Fever
6	15-18 months	MMR, OPV, chicken pox (optional)
7	24 months	Meningitis, Thyphoid fever (optional)

Below is a brief description of the various antigens and why they are very important vaccinations to be administered to Nigerian children[22]:

[20] 2014 State Budget Speech of Governor Ibrahim Shehu Shema of Katsina State to the State House of Assembly.
[21] http://www.mamalette.com/baby/new-parent-see-revised-nigerian-immunization-schedule/
[22] http://www.mamalette.com/baby/new-parent-see-revised-nigerian-immunization-schedule/

1) *BCG is the tuberculosis vaccine. Tuberculosis causes pulmonary infection, but can spread to many other organs, causing serious illness, death and disability. OPV1 is also called oral polio vaccine. Polio mainly affects children under five years of age. One in 200 infections leads to irreversible paralysis. Among those paralyzed, 5% to 10% die when their breathing muscles become immobilized. HEPBO is the Hepatitis B vaccine. Hepatitis B can cause chronic liver disease and put people at high risk of death from cirrhosis of the liver and liver cancer.*

2) *Pentavalent vaccine is a combination of five vaccines-in-one that prevents diphtheria, tetanus, whooping cough, hepatitis B and haemophilus influenza type B, all through a single dose. Diphtheria is a fatal disease. It is a bacterium that causes a severe throat and upper lung infection. Tetanus is also a fatal disease. It is a bacteria that causes weakness and paralysis when allowed to fester in a deep, dirty wound. Whooping cough (also known as pertussis) is a bacterium that causes severe coughing fits. It can lead to fatalities and this occurs especially in young infants. Hepatitis B is a virus that causes severe liver damage. It can be fatal. Haemophilus Influenza type B is a bacteria that causes meningitis and bloodstream infections. Most cases are in infants or the elderly. It can be fatal. PCV is also called pneumococcal conjugate vaccine. Pneumococcal disease, an infection caused by the bacteria Streptococcus pneumoniae or pneumococcus can lead to bacterial meningitis, pneumonia and bacteremia. Rotavirus vaccine is an oral vaccine against rotavirus infection, a common cause of diarrhoea and sickness. Rotavirus typically strikes babies and young children, causing an unpleasant bout of diarrhoea, sometimes with vomiting, tummy ache and fever.*

3) *Pentavalent 2, OPV2 and PCV have similar features as Pentavalent 1 and PCV described in point 2 above.*

4) *Pentavalent 3, OPV3, PCV, and Rotavirus 2 have similar features as Pentavalent 1, PCV, and Rotavirus described in point 2 above.*

5) *Measles vaccine is a highly effective vaccine used against measles. Yellow fever is a potentially fatal viral infection, transmitted by mosquitoes in tropical regions. There is no specific treatment for yellow fever.*

6) *MMR is the measles, mumps and rubella vaccine. Measles, mumps and rubella are very common, highly infectious, conditions that can have serious, potentially fatal, complications, including meningitis, swelling of the brain (encephalitis) and deafness. The chickenpox (varicella) vaccine provides protection against the varicella zoster virus that causes chickenpox.*

7) *Meningococcal vaccine is a vaccine used against Neisseria meningitidis, a bacterium that causes meningitis, meningococcemia, septicemia, and rarely carditis. Typhoid vaccine helps prevent typhoid fever. Typhoid is a serious disease caused by bacteria called Salmonella Typhi. Typhoid causes a high fever, weakness, stomach pains, headache, loss of appetite, and sometimes a rash.*

It therefore follows that any information that relates to immunisation coverage in any Nigerian State should be referring to the coverage of these 7 basic stages of vaccinations among children in the State. The only exception to such a general coverage of immunisation and vaccination programmes should be referring to a specific national or sub-national immunisation programme (e.g. immunisation against polio days). It was not clear from the budget speech that the Governor

was referring to immunisation against polio. However, even if the Governor was referring to polio immunisation, it becomes worrisome to imagine that "an epic level of 90 percent coverage" in polio immunisation in 2013 could translate to total eradication of polio menace in Katsina State. The 10 percent children population that are not covered in the polio immunisation could still be a threat to the 90 percent that are covered in the immunisation programme.

5.3 VICTORY OVER POLIO BUT NOT VVF

Katsina State is one of the Nigerian States which the World Health Organization (WHO) declared polio-free in 2015. As at 2013, Katsina State has started celebrating its victory over polio, though this was yet to be confirmed by health regulatory agencies like the WHO. At the time of ravaging spread of polio disease in Nigeria, Katsina State was one of the worst hit States in the country. The victory over polio is therefore worth celebrating in the State.

Although Katsina State, being one of the States in Nigeria, that has been declared free from polio by the WHO, yet it takes two additional years of no record of the disease or death caused by the disease before a country can truly be certified free from polio. This means that the State should continue to allocate financial resources to the continued eradication of the disease through immunization and sensitization till 2017 when it will complete two years of the initial celebration. However, available records show that the State has not continued to allocate financial resources to the eradication resilience programme, especially after the initial period of the declaration. To Anuforo (2015)[23], it is not yet uhuru for any State in Nigeria to celebrate. This is based on the fact that sustaining the eradication status for the next two years will demand continued immunization and surveillance activities in order to rapidly detect any potential reintroduction or reemergence of the virus in any part of the country. This will definitely demand collaboration between the Federal and State Governments. This will also entail huge financial commitment of the two tiers of government to achieve.

On the other hand, Vesico Vaginal Fistula (VVF) otherwise known as obstetric fistula has continued to threaten the existence and survival of several mothers. Just like polio, obstetric fistula has continued to be more widespread in the north (Katsina State inclusive) than in the southern part of Nigeria. Globally, about 2 million women and girls are estimated to be living with VVF. Out of these 2 million women and girls, about 800,000 of them (i.e. up to 40 percent of the global record) are Nigerians. Taking this a step further, about 680,000 women and girls (about 85 percent of the Nigerian infected population) are living in northern Nigeria. This is even more worrisome when we consider the fact that about 20,000 – 50,000 new cases of VVF are recorded in Nigeria at the estimated rate of about 2–5 new cases per 1,000 deliveries. Unfortunately, there are only 12 VVF Centres in Nigeria (with one at Babbar-Ruga, Katsina) that currently offer surgical care to less than 5,000 VVF infected women in Nigeria annually. This means that the rate at which infected women are treated and rehabilitated is much less than one quarter (25 percent) of the new cases recorded annually in the country. In another way, even if new cases are to be

[23] Polio de-listing: Not Yet Uhuru for Nigeria. A Newspaper article by Emeka Anuforo published in Guardian Nigeria on 7th October, 2015. Also available at http://guardian.ng/features/polio-de-listing-not-yet-uhuru-for-nigeria/

ignored, it will take much more than 100 years to treat and rehabilitate the backlog of VVF infected women in Nigeria going by the current rate of treatment of the disease[24].

Katsina State, just as Sokoto, Kebbi, Borno, Kano and Plateau States, is one of the States with the highest prevalence rate of the scourge of VVF in Nigeria. Given that VVF is arguably one of northern Nigeria's most devastating yet less spoken about "epidemic", it is expected that States like Katsina State begin to focus on ending the cultural practices responsible for the primary cause of VVF. This is especially the case as it has been found by various studies that the primary cause of VVF is child marriage and consequently child/teenage pregnancy when the girl child's reproductive system is not yet fully developed and matured. It therefore follows that providing treatment services can only help a fraction of those that are already infected, while a lasting solution to the increasing number of new cases would be to intensify public awareness on the dangers of child marriage among the communities in Katsina State[25].

Therefore, given that the 12 dedicated VVF Centres exist at the instance of the Federal Government with financial support from development partners (e.g. UNFPA), it is important that Katsina State Government takes up the responsibility of intensifying public awareness on the dangers of child marriage in order to mitigate any further spread of the disease. Public awareness also needs to be raised on pregnant women using antenatal and postnatal services in institutions with qualified medical personnel and appropriate equipment. The State Government, if it gets its priorities right, can mobilise the financial resources to replicate the National Obstetric Fistula Centre, Babba Ruga, Katsina (NOFICK) in other parts of the State in order to increase the number of infected women and girls that can be treated in Katsina State annually. It can also facilitate the reduction or elimination of the spread of VVF in the State thereby stopping the possibility of any new cases through awareness campaigns. There seems not to be any such commitment in the annual budgets of the State for the period of 2010 – 2015 as reviewed.

5.4 ALIGNMENT OF FINANCIAL REQUIREMENTS IN THE STATE'S STRATEGIC HEALTH PLAN WITH ANNUAL BUDGETARY ALLOCATIONS IN KATSINA STATE

In the previous chapter, we made efforts to discuss the estimated costs of financing Katsina State Strategic Health Development Plan as calculated in the Plan itself. The discussion following Table 6 in the previous chapter reveals that Katsina State estimated that it would take the State the sum of ₦43,400,127,313.48 within the period of 2010 – 2015 in order to finance the strategic plan. However, in actual practice, the State merely allocated the cumulative sum of ₦14,230,659,150 in capital budget to the health sector within the fiscal years of 2010 – 2015. This cumulative sum of the allocations for the period implies that the State merely allocated 32.79 percent of what should have been enough to finance the strategic health development plan to the health sector within the period that the development plan should be implemented. The cumulative sum of the allocations within the period equally implies that the State already created room for financing gap of up to ₦29,169,468,163.48 in the implementation of the strategic health development plan alone.

[24] http://www.nofick.gov.ng/index.php/responsive/md-s-goodwill-message
[25] http://nigerianhealthjournal.com/?p=693

The discussion emanating from Table 6 in the previous chapter equally reveals that contrary to the projected cost of ₦43,400,127,313.48 needed to finance the strategic plan for the period of 2010 – 2015, Katsina State merely released the cumulative sum of ₦6,531,590,519 in actual capital expenditures to the health sector within the fiscal years of 2010 – 2015. Given that the cumulative sum of ₦14,230,659,150 the State allocated to the health sector in capital budget within the fiscal years of 2010 – 2015, fell short of the required amount to finance the strategic health development plan by about 67.21 percent, it becomes more worrisome what the actual amount spent by the State could have achieved. By actually spending that cumulative sum in health sector capital projects, the State could have only been able to finance 15.05 percent of the amount needed to finance the strategic health development plan within the period of 2010 – 2015. The cumulative sum of actual spending of the State on health sector capital projects within the period equally implies that the State already created room for financing gap of up to ₦36,868,536,794.48 in the implementation of the strategic health development plan alone.

From the discussions above, it becomes pertinent to wonder if the State's Strategic Health Development Plan was developed with the intention of being implemented. It is equally important to wonder if the budget officers in the State (especially those in the State Ministry of Health) make reference to the Strategic Health Development Plan in order to draw out activities that will form their annual budget. It is possible that though there exists a commendable health sector development plan, yet there is no log frame that translates the goals into implementation actions that can easily be allocated financial costs.

5.5 MANAGEMENT OF EXTERNAL FUNDS FROM DEVELOPMENT PARTNERS AND KATSINA STATE BUDGETS

A lot of development partners operate in Katsina State. These development partners have been funding some aspects of MNCH programmes in the State. Their efforts are meant to support the meagre funds coming from the purse of Katsina State government in favour of MNCH programmes. Some of such agencies and programmes are: UNFPA, UNICEF, GAVI, USAID, Bill & Melinda Gates Foundation, Dangote Foundation, PRRINN-MNCH (with support from UK-DFID & Royal Norwegian Ministry of Foreign Affairs), etc. However, it has been observed from available budget documents of the State that the financial resources coming into the State through these agencies and external programmes are not usually captured in the annual budgets. The situation poses the question of whether the problem has to do with aid coordination in the State or the position of the officials of the agencies themselves.

Ideally, the State's Planning Commission should be the coordinating unit for all forms of aid that come into the State. This implies ensuring that all the donor agencies do not concentrate their efforts in one area of the State, leaving the rest of the places unreached. The coordination duty also entails that the agencies are made to focus on different but complementing areas of maternal, newborn and child healthcare issues in the State without duplicating efforts in only one area. For instance, the efforts of UNFPA in controlling or eradicating VVF in Katsina State should have ideally been complemented by the efforts of PRRINN-MNCH or any other succeeding

programme using their existing community-based service delivery platforms. It has been maintained in the previous sub-section that any effort in treating already infected VVF patients without commensurate effort in intensifying awareness campaign to eradicate the main cause of the disease will amount to little or no effect on the total number of infected women. This is mainly because of the rate of spread of new cases of the disease in Katsina State compared to the rate of treatment.

Katsina State is yet to reach that ideal state of operation where all the aid money is declared before the State Planning Commission and therefore incorporated into the annual budget of the State. The implication is that most donor agencies (including their programmes) decide the areas of MNCH issues they would want to focus on and their target recipients, even when the target recipients are also reached out to by other donor agencies. The result is the concentration of the activities of donor agencies in some areas, while some other areas remain unreached. This could also explain why the heavy presence of all these agencies that have operated in Katsina State could only move full immunization coverage from 2.5 percent in 2008 to 18.4 percent in 2013 as shown in Figure 4 above, and at the same time reduce the proportion of children who were never immunized with any vaccine at all from 75.2 percent in 2008 to 60.9 percent in 2013 as shown in Figure 5 above. Buttressing the need for coordination, Inter-Agency Working Group on Reproductive Health in Crisis has this to say[26]:

> *"A well-coordinated response 'can improve efficiency, effectiveness and speed of response, enable strategic decision making and problem solving and help avoid gaps and duplication in services. It can generate a multiplier effect that results in expanded coverage and efficient use of resources and can compensate for any single agency's limited expertise, staff, resources or range of activities"*

In summary, there is need for Katsina State to effectively empower its aid coordinating unit in order to ensure that the aid inflows into the State are effectively utilized to achieve the developmental goals of the State. Incorporating such expected inflows into the annual budgets of the State is a step in the right direction. Consequently, the State Government has to own every intervention programme in the State by coordinating and linking it up with existing or complementing programmes so as ensure efficiency and effectiveness of expenditure.

[26] Inter-Agency Working Group on Reproductive Health in Crisis (2010). *Inter-Agency Field Manual on Reproductive Health in Humanitarian Settings.*

Chapter Six
THE MNCH FUNDING GAP IN KATSINA STATE

6.1 BENCHMARKS FOR OPTIMAL FUNDING OF MNCH (HEALTH) PROGRAMMES IN KATSINA STATE

National and subnational governments in the world have continued to do their best in order to improve on the healthcare services obtainable within their territory. This is usually done with the application of their fiscal policy instruments either in long term, medium term or short term agendas, or even a combination of all the above. The global fight against poverty and vulnerability is currently viewed as being incomplete without a fight against ill-health. Recent scholars have maintained that:[27]

> *"Everybody should have the best possible chance of enjoying good health for its own sake, but ill-health is also a major source of poverty and vulnerability. Millions of the world's poorest households are effectively priced out of health provision, unable to afford the cost of treatment and basic medicines. Universal health coverage should be seen as a vital element of any strategy for achieving the Sustainable Development Goals (SDGs). On the basis of updated costings from the High Level Task Force on Innovative International Financing for Health Financing, it has been calculated that universal health coverage in low-income countries would require around $74 billion per annum for a basic health package, from all public sources. Health systems are the responsibility of domestic governments, but there is a strong case for strengthening the international public finance architecture to better support their endeavours"*

In order to meet up with the responsibility of domestic governments with respect to healthcare financing, national and sub-national governments have continued to seek for optimal level of healthcare financing. This is not an easy puzzle to solve, partly because of the various angles to view optimal financing from, and also partly because of the unavailability of funds. Several suggestions have been put forward by various schools of thought. Based on their views, they rank countries' performances with respect to healthcare financing.

Government Spending Watch[28] views optimal healthcare financing of any government from three main perspectives. These perspectives are (a) Government's Health Spending as a Ratio of the Nation's Wealth; (b) Government's Health Spending as a Ratio of the Government's Total Budget; and (c) Government's Per Capita Health Spending. Expatiating on the three main perspectives, we have the following to say about each of the three main perspectives to view government health expenditures. These views can hold, whether it is for national governments or for sub-national governments.

[27] Greenhill, R.; P. Carter; C. Hoy; and M. Manuel (2015). *Financing the Future: How International Public Finance should Fund a Global Social Compact to Eradicate Poverty.* London: Overseas Development Institute. Also available at: https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9594.pdf

[28] www.governmentspendingwatch.org/spending-data

(a) Government's Health Spending as a Ratio of the Nation's Wealth

This perspective of measuring the optimality of government health spending focuses on the output of the society (national or sub-national state) where the government operates. In measuring the output of the society, the gross domestic product of the society is usually considered as the best yardstick. This means that this perspective of considering the optimality of government spending looks at such government's health spending as a ratio of the gross domestic product (GDP) of such a society. This perspective is similar to the model of understanding government health spending termed "Total Health Spending and National Income Approach" by Savedoff (2003)[29]. By this perspective of measuring how optimal any government's health expenditures are, economists can easily compare countries that are within the same output threshold in order to know how optimal their government's expenditures have been over a certain period of time. Using this perspective, we can compare Katsina State Government's total health expenditures with those of other States that have similar level of economic output or wealth. It is possible to look at the overall GDP of the State as a yardstick for the State's wealth or the per capita GDP of the State. It may be better to base the measurement of Katsina State Government's health spending as a ratio of the State's wealth on its per capita GDP. This will help in doing a comparison between Katsina State and other surrounding State that may not have similar GDP and population structures with Katsina State. Basing the measurement on the State's nominal GDP may make it very difficult to make a good comparison between Katsina State and other States that may have similar socio-economic characteristics and similar health challenges due to variation in the GDP and population. For instance, Katsina, Jigawa, Yobe and Zamfara seem to have similar demographic structure – more of children and women of reproductive age, yet their population endowments are not similar. The total population of Katsina State is more than double the total population of Yobe State. This should naturally imply variations in their total nominal GDP, whereas their GDP per capita may not be much different due to the similar demographic structure of their populations.

(b) Government's Health Spending as a Ratio of the Government's Total Budget

This perspective of measuring the optimality of government health spending focuses on the total value of the budget of any society (national or sub-national state). This perspective considers the priority given to the health sector in the budget. Savedoff (2003) also refers to this perspective of measuring the optimality of government health spending as the budget approach. This is the same approach we adopt in discussions emanating from Tables 4 and 7 above. From Table 4 above, we discuss total health budgetary allocation of Katsina State Government as a ratio of total budgets of Katsina State within the years under study. On the other hand, discussions from Table 7 focused on how optimal Katsina State Government primary health (MNCH) expenditures have been by looking at its ratio to the overall health sector expenditures and at the same time as a ratio of the State Government's total expenditures. This is one of the mostly used perspectives for measuring the optimality of government's health spending especially in a comparative study. Using this method, Katsina State can easily be compared with other States in the North that have similar socio-economic and demographic characteristics, and even similar but peculiar health challenges like polio and VVF that have been discussed in the previous chapter. Given that many donor

[29] Savedoff, W. 2003. *How Much Should Countries Spend on Health?* Geneva, World Health Organization (WHO)

agencies have continued to release intervention funds into the North, it is also possible to carry out a comparative study of the extent to which those States have complemented the activities of the development partners through their internal government health spending. One common way to do such a comparative analysis is the adoption of this perspective of measuring the optimality of government health spending through the ratio of such health spending to the overall government's total budget or total actual expenditures.

(c) Government's Per Capita Health Spending

The extent to which any State Government optimally spends on its health sector can easily be viewed from the perspective of measuring such government health spending viz-a-viz the total population of the State. This is usually referred to as government per capita health spending. This perspective to the discussion on health expenditure (whether as budgeted or as actual expenditures) considers the population of the State as an important determinant of the volume of total expenditures on its health sector. Just as GDP per capita, government's per capita health spending divides the total amount the government spends on the health sector by the number of persons living within the territory of that government. Our discussion of matters arising from the budget as contained in Table 9 in the previous chapter is a clear attempt at applying this perspective of discussing government's health sector expenditure. The discussion usually reveals how little the amount budgeted for the health sector is supposing every individual in the State is asked to access his/her portion for healthcare services within the fiscal year. Also, in the calculation of financing gap (as shown below), consideration of optimal per capita health expenditure is the best way to arrive at optimal total health expenditure in order to generate the financing gap that exists.

6.4 CALCULATION OF MNCH FUNDING GAP IN KATSINA STATE

Several attempts have been made to estimate how much more governments across the globe need to invest into their health sector in order to meet up with the required health facilities and services. This attempt is usually referred to as calculating health funding gaps. To be able to effectively calculate the health funding gap, the unit cost of providing efficient and optimal health services to an individual in that society must be known. The unit cost is therefore multiplied by the total population of those in need of such health services.

One of the core components of MNCH services in any society is immunisation. Therefore, estimating the cost of full immunisation of a child is a step towards arriving at full cost of MNCH services. In Nigeria, the former Executive Director of National Primary Health Care Development Agency, Dr Ado Mohammed estimated the cost of full immunisation of a child at ₦4000. This estimate came before the introduction of four new vaccines that later pushed the total cost of full immunisation up to ₦14,000 per head[30].

Globally, the Organisation for Economic Cooperation and Development (OECD) also estimated the unit cost of full immunisation of a child in Africa. According to the estimate, it should cost

[30] http://healthreporters.info/2016/04/24/immunization-trust-fund-as-panacea-for-sustainable-immunization-financing-in-nigerian

about US$30.45 to fully immunise a child in Africa. However, the introduction of additional vaccines into a full course of vaccinating a child according WHO's recommendation increased the cost of full immunisation to US$38.80 per child. This means that Katsina State can easily calculate how much it needs to fully immunise every child in the State, especially when every State Government campaigns for free MNCH services. The essence of the estimation is to arrive at how much more financial resources the State needs to commit to MNCH services assuming all the development partners leave the State. This is especially important at a time like this when many donors have planned to exit Nigeria as a result of its transition to the lower middle income country group as at 2014. Should these donors exit, States will be left to cater for their citizens' health service needs. Tables 11 (A) and 11 (B) below present the funding gaps that exist in Katsina State over the period of 2010 – 2015.

Table 11 (A): Estimated Total Funding Gap for MNCH in Katsina State, 2010 – 2013 Fiscal Years

		2010	2011	2012	2013
A	Unit Cost of MNCH Services Per Person (US$)	30.45	38.8	38.8	38.8
B	Total Population of Nigeria	159,424,742	163,770,669	168,240,403	172,816,517
C	Proportion of Population of Katsina State in Total Population of Nigeria (%)	4.1	4.1	4.1	4.1
D	Total Population of Katsina State	6,536,414	6,714,597	6,897,857	7,085,477
E	Proportion of Under-5 Children in Katsina State Pop (%)	16.09	16.09	16.09	16.09
F	Population of Under-5 Children in Katsina State	1,051,709	1,080,379	1,109,865	1,140,053
G	Proportion of Women within Reproductive Age in Katsina State (15-49 Years)	24.9	24.9	24.9	24.9
H	Population of Women within Reproductive Age in Katsina State (15-49 Years)	1,627,567	1,671,935	1,717,566	1,764,284
I	Population of those in need of MNCH Services in Katsina State	2,679,276	2,752,313	2,827,431	2,904,337
J	Cost of Full MNCH Service Coverage in Katsina State (US$)	81,583,962	106,789,763	109,704,338	112,688,280
K	Prevailing Exchange Rate	150.3	153.86	157.5	157.31
L	Cost of Full MNCH Service Coverage in Katsina State (NGN)	12,262,069,559	16,430,672,976	17,278,433,217	17,726,993,264
M	Amount Provided by Donor Agencies for MNCH Services in Nigeria (US$)	290,700,000	213,300,000	251,100,000	307,500,000
N	Amount Provided by Donor Agencies for MNCH Services in Nigeria (NGN)	43,692,210,000	32,818,338,000	39,548,250,000	48,372,825,000
O	Amount Provided by Donor Agencies for MNCH Services in Katsina State (NGN)	1,213,672,500	911,620,500	1,098,562,500	1,343,689,583
P	Amount Provided by Katsina State Government for Full MNCH Services in Katsina State (NGN)	16,991,984,471	7,629,947,921	19,676,863,054	14,069,422,712
Q	Total Amount Provided by KTSG and Donor Agencies for Full MNCH Services in Katsina State (NGN)	18,205,656,971	8,541,568,421	20,775,425,554	15,413,112,295
R	Funding Gaps (NGN)	5,943,587,412	-7,889,104,555	3,496,992,337	-2,313,880,968
S	Funding Gaps (US$)	39,544,826	-51,274,565	22,203,126	-14,709,052

Table 11 (B): Estimated Total Funding Gap for MNCH in Katsina State, 2014 – 2015 Fiscal Years

		2014	2015	TOTAL
A	Unit Cost of MNCH Services Per Person (US$)	38.8	38.8	
B	Total Population of Nigeria	177,475,986	182,201,962	
C	Proportion of Population of Katsina State in Total Population of Nigeria (%)	4.1	4.1	
D	Total Population of Katsina State	7,276,515	7,470,280	
E	Proportion of Under-5 Children in Katsina State Population (%)	16.09	16.09	
F	Population of Under-5 Children in Katsina State	1,170,791	1,201,968	
G	Proportion of Women within Reproductive Age in Katsina State (15-49 Years)	24.9	24.9	
H	Population of Women within Reproductive Age in Katsina State (15-49 Years)	1,811,852	1,860,100	
I	Population of those in need of MNCH Services in Katsina State	2,982,644	3,062,068	
J	Cost of Full MNCH Service Coverage in Katsina State (US$)	115,726,575	118,808,237	
K	Prevailing Exchange Rate	158.55	197	197
L	Cost of Full MNCH Service Coverage in Katsina State (NGN)	18,348,448,390	23,405,222,607	105,451,840,012
M	Amount Provided by Donor Agencies for MNCH Services in Nigeria (US$)	420,300,000	467,400,000	
N	Amount Provided by Donor Agencies for MNCH Services in Nigeria (NGN)	66,638,565,000	92,077,800,000	323,147,988,000
O	Amount Provided by Donor Agencies for MNCH Services in Katsina State (NGN)	1,851,071,250	2,557,716,667	8,976,333,000
P	Amount Provided by Katsina State Government for Full MNCH Services in Katsina State (NGN)	11,776,619,072	12,145,147,334	82,289,984,564
Q	Total Amount Provided by KTSG and Donor Agencies for Full MNCH Services in Katsina State (NGN)	13,627,690,322	14,702,864,001	91,266,317,564
R	Funding Gaps (NGN)	-4,720,758,068	-8,702,358,606	-14,185,522,448
S	Funding Gaps (US$)	-29,774,570	-44,174,409	-72,007,728

a) **Unit Cost of MNCH Services Per Person (US$):** A reliable source of the unit cost of MNCH services in Africa is the one by the Organisation for Economic Cooperation and Development (OECD). According to the source, the unit cost of full course of vaccines rose from US$1.37 in 2001 to US$2.23 in 2004 due to the addition of Hepatitis B Vaccines in Africa. In 2006, the cost rose again to US$11.23 due to the addition of Hib vaccines. It remained at US$11.23 for the period of 2006 – 2009. As at 2010, the cost has moved up sharply to US$30.45 due to the addition of PVC, and a further increase to US$38.80 as at 2011 due to the addition of Rotavirus and Rubella vaccines as recommended by the WHO. The calculation of unit cost of MNCH services per person here is based on the cost presented by OECD.

b) **Total Population of Nigeria:** The latest population figure of Nigeria as published in the Annual Abstract of Statistics of the National Bureau of Statistics is for 2011. This means that any reliable estimate of Nigeria's total population beyond this point must rely on other sources of information. Therefore, we generate this information from the World Development Indicator Database of the World Bank, from where we are able to have population figure that covers the period of 2010 – 2015.

c) **Proportion of Population of Katsina State in Total Population of Nigeria (%):** The latest version of the Annual Abstract of Statistics of the National Bureau of Statistics (NBS) shows the proportion of Katsina State population in the 2006 Natonal Population Census conducted by the National Population Commission.

d) **Total Population of Katsina State:** Using the national population figure as generated from the World Development Indicator of the World Bank and the proportion of Katsina State population in (c) above, we estimate Katsina State total population for the study period.

e) **Proportion of under-5 Children in Katsina State Population (%):** Also the latest version of the Annual Abstract of Statistics calculates the proportion of under-5 children in the national population. We therefore assume that this same proportion holds for Katsina State.

f) **Population of under-5 Children in Katsina State:** Using the calculated proportion in (e) above, we estimate the nominal value of the population of under-5 children from the total population figures of Katsina State. That means multiplying (e) by (d) above.

g) **Proportion of Women within Reproductive Age (15-49 Years) in Katsina State Population (%):** Just like (e) above, we calculate the proportion of women within reproductive age in Nigeria from the latest version of the Annual Abstract of Statistics, and thereafter assume that the same proportion holds for Katsina State.

h) **Population of Women within Reproductive Age (15-49 Years):** Just like the population of under-5 children, we use the calculated proportion in (g) above to estimate the nominal value of the population of women within reproductive age (15-49 years) from the total population figures of Katsina State. That means multiplying (g) by (d) above.

i) **Population of those in Need of MNCH Services in Katsina State:** This is the sum of the values of the total population of under-5 children and those of women within reproductive age (15-49 years) in Katsina State that we generated in (f) and (h) above.

j) **Cost of Full MNCH Services Coverage in Katsina State (US$):** This is a product of the multiplication of the unit cost of full MNCH service in (a) above by the population of those in need of MNCH services in (j) above.

k) **Prevailing Exchange Rate (US$:NGN):** We generate this from the latest publication of Statistical Bulletin by the Central Bank of Nigeria. We use the annual average exchange rates of Naira to a US Dollar in this case.

l) **Cost of Full MNCH Services Coverage in Katsina State (NGN):** Using the prevailing exchange rate in (k) above, we multiply the cost of full MNCH services in US$ as shown in (j) above by the prevailing exchange rate to arrive at the cost of full MNCH services in Naira.

m) **Amount Provided by Donor Agencies for MNCH Services in Nigeria (US$):** Available health statistics shows this amount. Also, the latest publication on MNCH standards and federal budgets 2010 – 2015 by CSJ shows the volume of financial inflow into Nigeria for MNCH service interventions.

n) **Amount Provided by Donor Agencies for MNCH Services in Nigeria (NGN):** Same source as (m) above

o) **Amount Provided by Donor Agencies for MNCH Services in Katsina State (NGN):** With the understanding that there are 36 States in Nigeria, the safest assumption is that all the inflows are divided equally among the 36 States. This means dividing (n) above by 36 States.

p) **Amount Provided by Katsina State Government for Full MNCH Services in Katsina State (NGN):** We generate this from the annual budget document of Katsina State. Here the assumption is that all the budgetary allocations to Katsina State Primary Healthcare Development Agency (KATS-PHCDA) are meant for MNCH. It is true that it would have been better to use actual expenditures on MNCH rather than budgetary allocation due to the disparity between the two, yet because of several missing data points, we stick to the budgetary allocations for this..

q) **Total Amount Provided by KTSG and Donor Agencies for Full MNCH Services in Katsina State (NGN):** This is the summation of the amount budgeted by Katsina State Government for MNCH and the amount provided by donor agencies for MNCH over the study period.

r) **Funding Gaps (NGN):** This is the difference between the total amount provided for full MNCH services in (q) above and the cost of full MNCH services coverage in Katsina State as shown in (l) above. Positive values of the funding gap represent surplus, while negative values of the funding gap represent deficit.

s) **Funding Gaps (US$):** This is the product of the funding gap in Naira and the prevailing exchange rate.

Chapter Seven
CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

It is surprising to observe that at some points within the study period of 2010 – 2015, Katsina State recorded surplus gaps in MNCH funding. The surprise is based on the fact that all the indicators of MNCH services in Katsina State are still very low. As at 2013, full immunisation coverage in Katsina State is still as low as 18.4 percent. Again, the proportion of children that are never immunised against any disease is still as high as 60.9 percent as at 2013.

It is equally surprising that the presence of many development partners with their various programmes focused on the improvement of MNCH services in Katsina State has not brought about optimal improvement. From infant mortality rate of 138 infant deaths in every 1,000 live births as at 2008, Katsina State only recorded an insignificant decline of 3.6 percent within the five year period to declare infant mortality rate of 133 infant deaths in every 1,000 live births as at 2013. It is interesting to observe that in both years, infant mortality rate in Katsina State was higher than the average infant mortality rate in the North West region. The North West geopolitical region recorded infant mortality rates of 91 infant deaths and 89 infant deaths in every 1,000 live births as at 2008 and 2013 respectively. It is even worse to compare infant mortality rate in Katsina State with national average infant mortality rate in Nigeria. The national average infant mortality rates were 75 infant deaths and 69 infant deaths in every 1,000 live births as at 2008 and 2013 respectively.

In the same way, MNCH interventions by development partners have not reflected significantly in under-five mortality rate in Katsina State. From under-five mortality rate of 271 deaths in every 1,000 live births as at 2008, Katsina State only recorded a decline of 16.97 percent within the five year period to declare under-five mortality rate of 225 deaths in every 1,000 live births as at 2013. Comparatively, the under-five mortality rates recorded in Katsina State for the two years were higher than the average under-five mortality rate in the North West region. The North West geopolitical region recorded under-five mortality rates of 217 deaths and 185 deaths in every 1,000 live births as at 2008 and 2013 respectively. Worse still, comparing under-five mortality rates in Katsina State with national average under-five mortality rates in Nigeria shows a much higher record for Katsina State. The national average under-five mortality rates were 141 deaths and 117 deaths in every 1,000 live births as at 2008 and 2013 respectively.

It is only in the area of maternal mortality that Katsina State recorded impressive improvement through MNCH intervention programmes. From maternal mortality rate of 874 deaths in every 100,000 live births as at 2008, Katsina State recorded a significant decline of 36 percent within the five year period to declare maternal mortality rate of 552 deaths in every 100,000 live births as at 2013. Interestingly, maternal mortality rate in Katsina State was higher than national average rates as at 2008 (both as estimated by the World Bank and as estimated in the NDHS report 2008). However, due to the very significant rate of reduction in the maternal mortality rate in Katsina

State, maternal mortality rate in Katsina State was lower than the national average maternal mortality rate as at 2013 (both as estimated by the World Bank and as estimated in the NDHS report 2013). The national average maternal mortality rate stood at 576 deaths and 821 deaths in every 100,000 live births as estimated by the World Bank and in the NDHS report respectively.

Given that the indicators of MNCH services in Katsina State still show very low improvement over time, it became imperative to review the level of budgetary allocation to general health sector (with particular focus on MNCH issues) in line with the estimated cost of financing Katsina State Strategic Health Development Plan. Observations from the review reveal that within the study period of 2010 – 2015 alone, Katsina State has accumulated health sector financing gap of ₦36,868,536,794.48 as a result of actually spending only the cumulative sum of ₦6,531,590,519 in health sector capital projects. Even if the State had fully implemented its health sector budgets for the period of 2010 – 2015, it would still have accumulated health sector financing gap of ₦29,169,468,163.48 as a result of allocating only the cumulative sum of ₦14,230,659,150 to health sector capital budgets. This means that the health sector budgets of Katsina State for the period of 2010 – 2015 were not drawn from the medium term plan for developing the sector in the State.

7.2 RECOMMENDATIONS

Coordination and Implementation Issues

- Empower the State's Ministry of Health or the State's Office of Statistics to keep accurate and up-to-date records and statistics so as to help the State know at what point they are on the right track towards meeting their goals.

- Further to the above, collaboration with traditional and religious institutions to collect information on MNCH issues using standard templates is imperative.

- Empower the State's Planning Commission or any other statutory body that can handle the responsibility of coordinating aid inflows into Katsina State. This should be done in order to allow for complementarity among the various activities of the development partners operating in the State.

- Set measurable targets for MNCH indicators in the State so as to help the State know when it is in line with meeting the targets.

- The State's coordinating unit for aid and intervention funds should explore other sources of funds for healthcare (with special attention to MNCH) services in the State so as to achieve universal coverage among all the communities in the State.

- The State Government should take concrete and targeted steps towards a policy and legal framework for sustainable MNCH financing.

- The State and Development Partners should increase sensitisation of male members of Katsina society on MNCH issues including the causes of maternal and neonatal deaths.

Budget-related Issues

- The State Ministry of Health should ensure that annual budgetary allocation to the sector conform to the projections in the State's Strategic Health Development Plan.

- It will be important for budgetary allocation of the State's health sector to meet the benchmark of 15 percent of total budget as stipulated in the Abuja Declaration.

- The annual budgets of the State's health sector should reflect the State's commitment towards improving the state of MNCH services and facilities across the State. Essentially, the funding should be evidence based and sufficient to meet the MNCH needs of the State based on projected demand.

- Beyond increasing the annual budgetary allocations, there is need for full and timely release and utilisation of all the amounts appropriated for the health sector in every fiscal year.

- It has become imperative to ring-fence all funds appropriated to the health sector including capital votes which have not been fully released over the years.

- There is also the need for the inclusion of all donor funds flowing into the health sector of the State in the annual budget of Katsina State Ministry of Health.

- The State in collaboration with the Federal Government and Development Partners has the capacity to mobilise financial resources needed to fund VVF intervention programmes through treatment. It should therefore prioritise treatment and dedicate adequate resources to same. The State should also launch and intensify sensitisation and awareness creation programmes on the causes of VVF in order to reduce the rate of spread of the disease to new patients. This will entail budgeting some significant amount for the sensitisation and awareness campaign programmes in the State.

- Increase the efficiency of health sector spending through greater value for money practices and open contracting standards as part of an open government strategy.