Data Informed Platform for Health

Feasibility Study Report

Gombe State, Nigeria 2012

IDEAS
Evidence to improve maternal & newborn health

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Multi-country feasibility study for the 'Data Informed Platform for Health' (DIPH): India, Ethiopia and Nigeria.

This report is one of three country-specific reports and is based on research findings from North East Nigeria (Gombe state).

The concept note describing the overall premise of the DIPH is on page 4.

Acknowledgements
Dr Joanna Schellenberg, Principal Investigator, IDEAS project, London School of Hygiene & Tropical Medicine
Funded by the Bill & Melinda Gates foundation

Research supervised by Dr Bilal Iqbal Avan
Report prepared by Health Hub Limited (Dr Ritgak Dimka Tilley-Gyado, Dr Obinna Onyekwena, Dr Chioma Ejeagba and Dr Iboro Nta) and Dr Nasir Umar
Proof read by Agnes Becker, Tania Ghosh and Shirine Voller
Coordination of publication by Agnes Becker

w: ideas.lshtm.ac.uk

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ISBN – 978 0 902657 87 9

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Table of Contents

Data-Informed Platform for Health: Concept note

Plans based on local data

In low-resource settings, the use of local health data for planning is usually limited. In the context of maternal and newborn health (MNH) it is difficult to ascertain the causes of changes in MNH outcomes. Sharing information across governmental and other service providers would reduce duplication of effort and ensure resources are not wasted. In India, Nigeria and Ethiopia, multiple sources of data exist at the level of the district, LGA or woreda. The Health Management Information System reflects health facility utilisation and performance; local programme staff report on human and physical resources; and non-governmental organisations report on community-based activities. Programme managers could work together to share this information, with technical support acting as a catalyst. The shared data could empower local decision making and reposition health service delivery in line with the available resources and community maternal and newborn health needs.

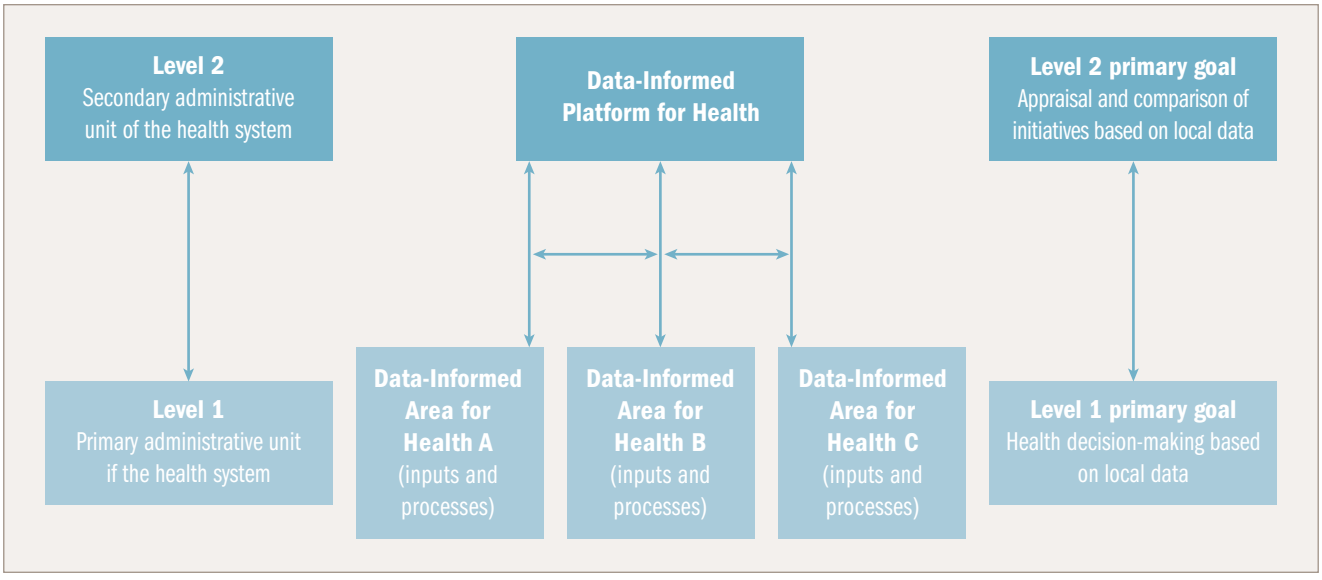
Data-Informed Platform for Health

We propose the "Data-Informed Platform for Health" (DIPH), a framework to guide coordination, bringing together key data from public and private health sectors on inputs and processes that could influence maternal and newborn health. The aims of the DIPH are:

1. to promote the use of local data for decision-making and priority-setting at local health administration level;

> The key data will be synthesised to create a measure of programme implementation strength for each local area, which in turn can be used in the evaluation of the effects of large-scale programmes on health outcomes."

Figure 1 – Data-Informed Platform for Health Framework



2. to promote the use of local data on inputs and processes for programme appraisal and comparison at the regional or zonal level.

The DIPH concept has its roots in the "District Evaluation Platform" approach (Victora, Lancet 2010)[1]. The framework should be embedded, owned and sustained by local health departments. The DIPH operates at local area and regional level, and includes both the "data-informed area for health" and the "data-informed region for health". Networks for coordination and feedback are shown in *Figure 1*. Area health administration will periodically assess the available resources and activities (inputs and processes) by all key health providers and will share this information for mutual decision making on health service provision and research.

A local health area is considered as the operating unit for the DIPH, assuming that this is the lowest effective level of decision making in a health system – in Ethiopia, this would be the woreda; in Nigeria, the Local Government Area; and in India, it would be the district.

Features of the DIPH

At the local area level, the DIPH approach provides a mechanism to bring governmental and non-governmental service providers to a common forum on a regular basis, to share data in a systematic manner, and to use the resulting information as a tool in priority setting for resource allocation and needs assessment for further acquisition of funds.

At regional, zonal or national level, the DIPH provides information for the appraisal of effectiveness of programmes or initiatives across local areas and regions. Data from local areas will reflect inputs and processes for initiatives and programmes affecting maternal and newborn health. These can be synthesised to create a measure of programme implementation strength for each local area, which in turn can be used in the evaluation of the effects of large-scale programmes on health outcomes.

Data sources: links to the Health Management Information System

The DIPH is complementary to the Health Management Information System. It differs as follows:

1. The DIPH focus is on inputs and processes in health service provision – as compared to service uptake and health outcome recorded through routine HMIS.
2. The DIPH will bring together key data from both governmental and non-governmental service providers. The focus is on effective use of existing data sources for local level planning and decision making.
3. The DIPH will focus on a few key indicators rather than the comprehensive range of data encompassed within the HMIS.

The DIPH will use some HMIS data, but also include data on commodities, training, monitoring, and supervision, from government and non-governmental sources. A limited amount of primary data collection may be carried out.

Photo above: A mother and child recieving treatment. © Teun Bousema

Next steps

The IDEAS project team (ideas.lshtm.ac.uk) is interested to explore interest and potential of the DIPH to assess the scale up of maternal and newborn health initiatives in India, Ethiopia and Nigeria. The feasibility phase for DIPH has been successfully completed and, based on the findings, detailed pilot work will be carried out in 2013. ■

[1] Victora CG, Black RE, Boerma JT, Bryce J. Measuring impact in the Millennium Development Goal era and beyond: a new approach to large-scale effectiveness evaluations. Lancet. 2011 Jan 1;377(9759):85-95.

"The DIPH is an innovative approach could be equally meaningful for Governments, funding agencies and other health stakeholders in terms assessment of their implementation efforts and necessary course correction."

Executive summary

Gombe is one of 36 states in the federal republic of Nigeria, and has an estimated population of 2,755387. Located in the northeastern part of the country, it is one of the six states in a region with some of the highest maternal and newborn death rates in the world.

Photos above:
Above left: A group of Nigerian children playing in their village. © ThinkStock
Above: A happy mother holding her twin boys outside her surgery in Nigeria.

Gombe is one of the states IDEAS – a Bill & Melinda Gates foundation funded project – is working in to improve the health and survival of mothers and newborns through the generation and synthesis of evidence to inform policy and practice.

This feasibility study was aimed at collecting, assessing and compiling information relevant to the implementation of the Data Informed Platform for Health (DIPH) in northeast Nigeria. Adapted from the District Evaluation Platform approach, the DIPH aims to measure healthcare intervention coverage and whether innovations implemented at scale lead to improved maternal and newborn outcomes. The feasibility study was conducted in 2012 and involved information-gathering from stakeholders at the state Ministry of Health, as well as personnel at local government area (LGA) headquarters and two primary healthcare facilities.

Important enablers to successful implementation of the DIPH include a well established data collection and sharing system from the districts to the federal level. For example, the administrative structure in the country is divided into three tiers of governance: federal, state and LGA. The delivery of healthcare services in the public sector reflects these three distinct tier structures: tertiary, secondary and primary care. Data is collected at the district or LGA level by the LGA's Department of Primary Health Care. The data is then forwarded to the Monitoring and Evaluation Officer at the state Ministry of Health Department of Primary Health Care, who then collates the data from all the LGAs and makes the data available for review and onward forwarding to the state Monitoring and Evaluation Officer at the Department of Planning Research and Statistics (DPRS). The state Monitoring and

> This feasibility study aimed to collect, assess and compile information relevant to the implementation of the Data Informed Platform for Health in northeast Nigeria."

Evaluation Officer at the DPRS office is responsible for collating health data from secondary facilities (through the hospital services department) and for sharing the data at the state Ministry of Health level during monthly meetings. Collated data at all levels of care are sent to the DPRS at the Federal Ministry of Health in the form of a quarterly report.

The concept of the DIPH was well received by all State stakeholders. Both governmental and non-governmental organisations expressed their willingness to share data for informed decisions at the district or LGA level. The general enthusiasm for the DIPH approach and the willingness of all relevant local stakeholders to participate in its implementation is an important precursor to the usefulness and sustainability of the DIPH.

Potential sources of data relevant to the successful implementation f the DIPH have also been identified including aggregated LGA level data, facility level registers, work force data, service delivery data, medical supplies data and financial cost data.

Barriers to implementation of the DIPH in Gombe include the deteriorating security situation in the region. Northeast Nigeria is the epicentre of political and religious conflicts currently affecting Nigeria. Potential for loss of life or injury may affect the willingness of competent personnel to work in the affected areas. Moreover, the conflict has the potential to disrupt timely data collection. Limited funds, and inconsistent or delayed release of funds to LGA Health Departments has been associated with disruption of routine activities such as supervisory visits and monitoring and data collection activities. These disruptions directly, affect the processes that implementation of the DIPH depends on, and the long-term sustainability of the approach.

Nonetheless, the DIPH has the potential to support Gombe State efforts to strengthen data collection and reporting through the public health management information system and eliminating parallel reporting of health data. Further, the approach may facilitate the optimal use of collected data to inform health policy decisions. Engagement of all relevant stakeholders at both the design and implementation stages has been recommended as a way to foster participation and ownership of the DIPH at the local level. ■

Photo above: Woman with newborn, Nigeria. © Pep Bonet/Save the Children

> The concept of the Data Informed Platform for Health was well received by all state stakeholders. Both governmental and non-governmental organisations expressed their willingness to share data for informed decisions at the district or local government area level."

Context

Photo above: A pregnant woman sitting with her family, Nigeria.
© iStockphoto

Brief background: Focus geographical areas and relationship with the Data Informed Platform for Health

The feasibility study for the Data Informed Platform for Health (DIPH) pilot was conducted in Gombe State. The state is one of Nigeria's 36 states, with Gombe town as its capital *(Figure 2)*. It has an area of 20,265km and an estimated population of 2,755,387 (2011 projection from 2006 census). Created in 1996 from the then Bauchi

State, it is made up of 11 local government areas (LGAs) or districts, 114 wards, 14 emirates or chiefdoms and currently has about 526 public health facilities.

Gombe State is located in northeast Nigeria, a region with one of the highest maternal and infant mortality rates in the world. It also has one of the highest fertility rates in the country at 7.4 live births per 1000 females aged 15-49 (National Population Commission (NPC) [Nigeria] and ICF Macro., 2009).

In addition to gathering information from stakeholders at the State Ministry of Health, this study included information from personnel at the LGA headquarters and two facilities at Shongom LGA, located at the southernmost part of the State *(Figure 3)*.

Although the majority of the LGAs in Gombe are inhabited by a heterogeneous ethnic population with a mix of Muslims and Christians, a contiguous central belt of 4 LGAs (Kwami, Gombe, Yelmatu Deba and Akko) contains about half the population of the State; the northern part of the State is inhabited mainly by people of the Muslim faith while the southern part by people of the Christian faith.

Shongom LGA, being at the southern most part of the State, has a predominantly Christian population. However, as guiding policies for primary healthcare in the state are developed at the national level with legislation augmentation and supervisory oversight at the state level, it is unlikely that there will be variations in public sector organisational structure, supervisory mechanisms, resource allocation and policy implementation across the LGAs as a result of ethnic or religious differences.

In terms of developmental indices, such as infrastructure and economy Shongom LGA could be considered to be in between the more developed LGAs, such as Gombe, Biliri and Kaltungo, and less developed LGAs, such as Funakaye, Dukku and Nafada. Shongom LGA was therefore considered representative and expected findings generalisable to the rest of the State.

> “Guiding policies for primary healthcare in Gombe State are developed at the national level with legislation augmentation and supervisory oversight at the state level.”

Rationale for selection of Shongom LGA for feasibility study

The LGA was selected using the following criteria:

- Provides a spectrum of the variability expected in terms of development;
- Easily accessible by the team;
- Feasible to be visited within the 8 hours timeframe allocated for the field visit component of the study.

Within the LGA two primary healthcare facilities representing the spectrum of facilities in the State were selected: One to represent an inadequately equipped facility, the second to represent an adequately equipped facility in the State.

The team relied on a contact point within the State Ministry of Health, the Family Planning Coordinator at the Department of Primary Health Care of the Gombe Ministry of Health to provide the selection of LGA based on the criteria given by the study team. ■

Photos left:
Far left: Woman working through files in her office. © Chalie Hopkinson
Middle: Abuja National Mosque, Abuja, Nigeria.
Left: Woman and child washing clothes outside their house.

Figure 2 – Map of Nigeria featuring Gombe State

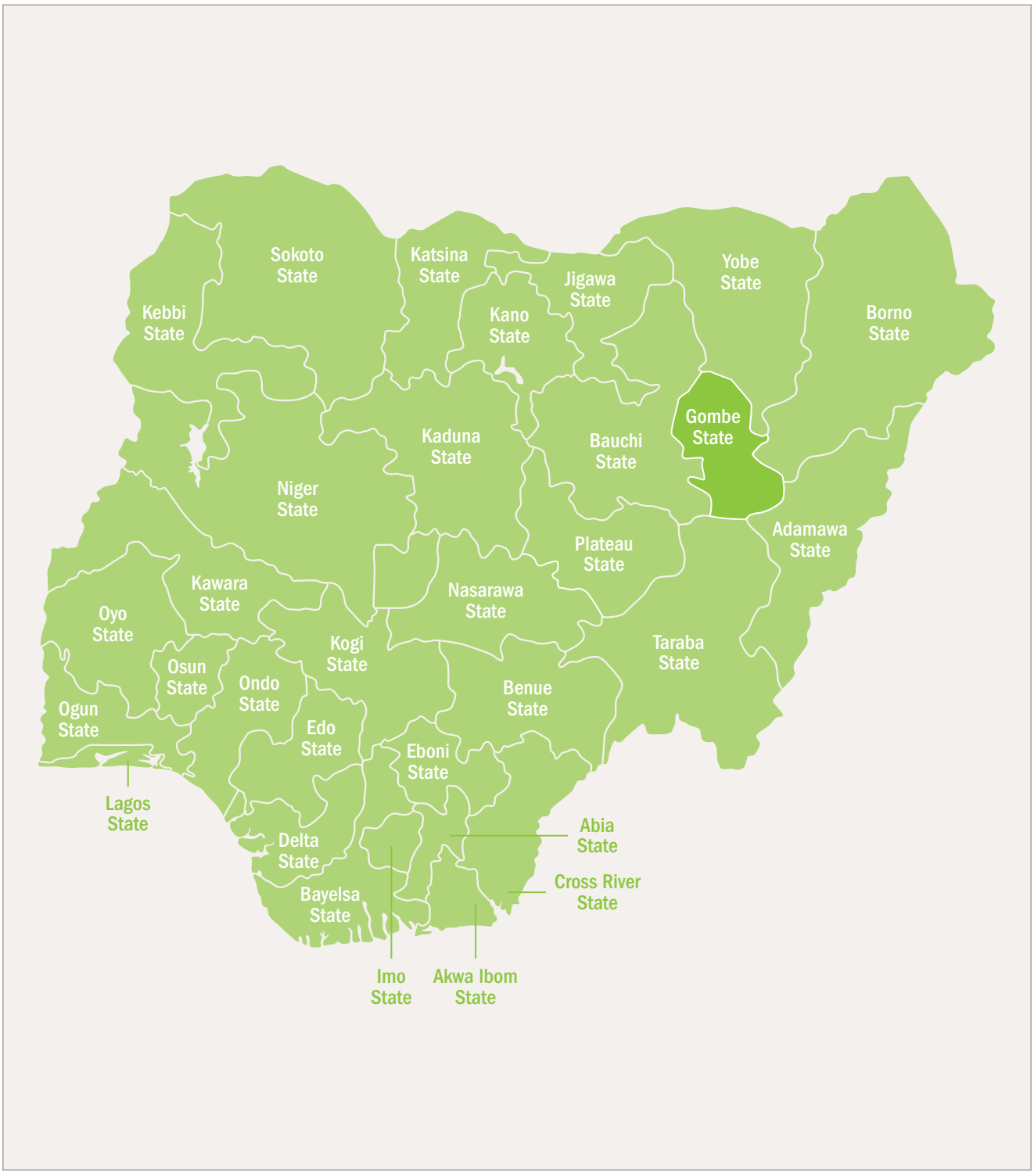


Figure 3 – Map of Gombe state featuring local government areas with Shongom highlighted

Structures and Governance

Public Health System

Brief structure of the Ministry of Health and departments relevant to the DIPH

The Nigerian Government is made up of three tiers: federal, state and local. While the federal government is responsible for developing policies that are relevant across all three levels, responsibility for healthcare service provision in the public sector reflects the three tier structure. The levels of care in the public sector are:

Tertiary care: This forms the highest level of healthcare in the country and falls under the mandate of the federal government. Facilities include teaching hospitals and Federal Medical Centres with specialised expertise and fully fledged technological capacity to act as referral centres for patients from primary and secondary levels of care and repositories of knowledge for training. Each state should have at least one tertiary facility.

Secondary Care: Falling under the mandate of the state governments, secondary care facilities serve as immediate referral centres for patients from primary healthcare facilities. They include general hospitals and medical centres that provide specialised health services such as surgery, paediatrics, obstetrics, gynaecology and laboratory services. Each local government area (LGA) is expected to have at least one secondary level facility.

Primary care: This level of care represents the entry point of communities into the healthcare system and forms the major thrust of healthcare in the country. The largest proportion of maternal and child health services provided in the country fall under this level of care. They include health centres and maternity clinics, health posts and dispensaries. Facilities are typically staffed with nurses, Community Health Officers, Community Health Extension Workers and Junior Community Health Extension Workers and also typically provide preventive, curative, promotive and pre-referral healthcare. The LGAs are expected to manage and finance these facilities under supportive supervision of the state government.

a) National/Federal

The national level has two key departments in the Federal Ministry of Health and one agency that interface with the LGA level structures for maternal and child health activities. These are:

a. The Department of Family Health
b. The Department of Planning, Research and Statistics (DPRS)
c. The National Primary Health Care Development Agency (NPHCDA)

The main role of the national level structures is to develop and implement national policies on maternal and child health, develop national strategies, monitoring and evaluation plans including frameworks for measurement/ indicators and harmonise data collection tools for reporting.

NPHCDA is one of the 77 agencies of the Federal Ministry of Health. Its specific mandate is to develop the national primary healthcare policy and support states and LGAs to implement them. In 2007, the agency merged with the National Programme on Immunisation. The immunisation programme for the country now operates within the Department of Disease Control and Immunization in the agency.

b) State

The state Ministry of Health is headed by a politically appointed Commissioner A Permanent Secretary reports to the Commissioner. The Permanent Secretary oversees seven departments, namely Finance, Hospital Services, Nursing Services, Primary Health Care, Disease Control, Pharmaceutical Services and Planning Research and Statistics; with each department headed by a Director.

The state is the custodian of public sector secondary level healthcare facilities and is expected to provide logistical support to LGAs in primary healthcare implementation such as training, financial assistance, planning and operations. Secondary health facilities are primarily overseen by the Department of Hospital Services while, coordination and oversight of activities and reporting from the Directors of Primary Health Care (PHC), also known as PHC Coordinators, at the LGA council and service commission level is handled by the state Department of Primary Health Care through the Ministry of LGA.

While the Nigerian constitution guarantees the existence of local government councils and defines their core functions, it requires all states to enact legislation augmenting their responsibilities. The functions of the state in regulating how local government councils operate is handled by the Ministry of LGA. Within this Ministry, a Director of PHC/PHC Coordinator serves as a focal point for oversight, supervision and monitoring of activities by the Department of Health at each LGA.

Policies and programmes implemented at LGA level by the state Ministry of Health involve the Ministry of LGA.

Each technical area focal person at the LGA level has a corresponding coordinating person at the state level Department of Primary Health Care who collates corresponding reports and shares with the DPRS, which is in charge of state level health information.

For data collected at primary healthcare level, the Monitoring and Evaluation Officer at the Department of Primary Health Care of the state Ministry of Health collates and makes this data available for review by the department and onward forwarding to the State Monitoring and Evaluation Officer at the DPRS. The State Monitoring and Evaluation Officer, collates, analyses and shares this data at the monthly meeting with the Permanent Secretary. The state Monitoring and Evaluation Officer's responsibilities include collating heath data collected from secondary care facilities through the Department of Hospital Services. Collated data from all levels of care are sent in the form of a quarterly report to the DPRS at the Federal Ministry of Health.

Ideally, all reporting of primary level and secondary level health data is supposed to be through this channel and meant to be reposited in this department at state and national level. However, parallel systems exist and efforts are being made from different quarters to strengthen reporting through the public Health Management Information System (HMIS) and eliminate parallel reporting. The responsibility of ensuring the proper functioning of the HMIS at the state level is given to the HMIS Officer in the same DPRS.

> "At the national level there are three key bodies that interface with local government area structures for maternal and child health."

Another area of service delivery related to maternal and child health, delivery of health and nutrition services to orphans and vulnerable children, is handled by the state Ministry of Women Affairs and Social Development (MWASD). While specific health policies come from the Ministry of Health, the state MWASD defines the context of implementation of health policies and programmes within this vulnerable population.

c) Local government area

The LGA is the third tier of administrative structure in Nigeria. All primary healthcare policies and programmes are expected to be implemented by the LGA Councils. At Shongom LGA, the focus LGA of this report, the LGA governing council chaired by the LGA Chairman oversees the Department of Health. The LGA Department of Health is housed within the LGA headquarters office which also accommodates the whole LGA structure. This department is set up with the Director of PHC/PHC Coordinator as the head, assisted by a Deputy PHC

Photos below:
Below: A lady carrying water back to her family home, Nigeria. © iStockphoto
Below left: Nigerian children playing. © Bill & Melinda Gates Foundation

Photos right:
Right: Mother and child, Nigeria. © Dr Bilal Avan
Middle: A mother with her newborn baby sitting outside her house, Nigeria. © Bill & Melinda Gates Foundation
Far right: A woman sees her grand-daughter for the first time after cataract surgery, Nigeria. © Jenny Matthews



Coordinator and six Assistant Coordinators for Maternal & Child Health, Disease Control, Monitoring and Evaluation, Essential Drugs & Supply, Environment, Sanitation & Water Supply and Leprosy Control & TB. The department is also staffed with the following officers: Local Immunisation Officer, Malaria Focal Person, Onchocerciasis Programme Officer, Social Mobilisation Officer/Health Educator, Nutrition Officer, Disease Surveillance Officer and LGA Agency for the Control of AIDS (LACA) Officer.

The Local Government Service Commission is an agency of the Ministry of LGA that is responsible for appointment, recruitment, promotion, training, posting and discipline of the Local Government staff on Grade Level 07 and above. The Commission monitors the human resource activities of the local governments and ensures that manpower planning for local government staff is maintained. All data on staff training conducted by the local governments are also forwarded to this body.

Community participation in the provision of primary healthcare services is enhanced by the involvement of development committees at the LGA level – district development committees (DDC) and the village – village development committees (VDC). The establishment of these committees was guided by the Bamako initiative to encourage and sustain community participation and from the grassroots organisations that are expected to work closely with the local government in monitoring and supporting primary healthcare services. Key members of the committees include the district heads and traditional leaders. There are variations in different communities on the roles of these committees in decision making at the primary healthcare facility level. In communities where they are active, their roles are usually limited to maintenance of facility structures and acquiring drugs, equipment and supplies for the facilities. In some facilities, they are also the principal decision makers.

At the community level members of the development committees are key players in advocacy and implementation of healthcare programmes. Decisions reached at the meetings are forwarded in reports to LGA Social Mobilisation Officers who then forward the LGA reports to the State Health Educator.

Existing contact opportunities between state and LGA

The main contact opportunity between the state and the LGA is a quarterly meeting where LGA Directors of PHC/ PHC Coordinators, Local Immunisation Officers and other Programme Officers meet with the Permanent Secretary and the State Director of PHC at the Ministry of Health to review reports on state level health indicators collected from all the LGAs quarterly.

Other contact opportunities between the LGA and state level structures are events like the state-organised Health Week, debriefing after National Immunisation Days and trainings organised by the Federal Ministry of Health, and through development partners like UNICEF and UNFPA and non-governmental organisations.

Supervisory structure and activities

a) Local government area level

At the LGA level, supervisory activities are usually scheduled to coincide with data collection from the primary healthcare facilities. Focal Programme Officers visit PHC facilities and provide supervision, monitoring and reporting of activities. In particular, the Programme Officers in charge of the various units *(see figure 5, page 17)* go out monthly to various facilities to collect summary data on LGA level health indicators. At Shongom LGA, supervisory visits were pre-scheduled but were sometimes not strictly adhered to due to constraints in transportation funding. Supervisory activities also take the form of facility audits in order to assess the adequacy and availability of medical supplies, equipment and other issues that the facilities may have. These other supervisory visits are not routine but arranged on an adhoc basis (usually as a result of information about issues obtained in prior visits).

Each Programme Officer forwards monthly summary reports containing key data elements that feed into indicators for each programme area to the Monitoring and Evaluation Officer for analysis/collation and onward transmission to the state Ministry of Health (see Appendix I for nationally agreed indicators to be collected and reported at LGA level). However, it was noted from interactions with state officers that Programme Officers for the various disease areas often forward reports directly to their state counterparts for collation. Reports were also forwarded to the LGA Service Commission (staff lists, officer cadres and training data) and WHO (immunisation data).

Activities of Programme Officers are supervised by corresponding Assistant Coordinators who, in turn, report to the LGA Director of PHC/ PHC Coordinator. Programme Officers (focal points for various disease areas) meet monthly with the LGA health team to review lapses and constraints emanating from supervisory and monitoring visits to the facilities. Issues and recommendations arising are forwarded to the LGA governing council for necessary action/approvals. There were no data quality assessment checklists for assessing the quality of data at the facilities.

b) State level

At the state level, summary data elements used in the construction of key indicators in the national monitoring and evaluation framework (see Appendix I) are collated from reports from the different LGAs. The Maternal and Child Health Coordinator is responsible for collating and analysing all the reports on maternal and child health data from the LGA Maternal and Child Health Coordinators. These reports are collected quarterly using standard reporting summary forms. Immunisation reports are also collated by the State Immunisation Officer from LGA Local Immunisation Officers and reports on HIV/AIDS indicators, including preventing mother-to-child transmission of HIV (PMTCT), from the LACA Officers by the Gombe state Agency for the control of AIDS (GomSACA) Officer. After analysis of the reports, missing data and inconsistencies are related back to the LGA Officers for clarifications, corrections or updates. However, it was noted that there were sometimes hitches associated with this process as some LGAs may fail to provide reports or there may be a paucity of funds to follow up with LGA reports.

Every quarter, the state HMIS Officer goes round to collate hard copy reports from the different state coordinators, including MCH and combines them into one state report. This report is housed at the Department of Planning, Research and Statistics.

These reports and issues emanating from them are then discussed at the state level quarterly meeting with the state LGA Director of PHC/PHC Coordinator, State Coordinators and Permanent Secretary as mentioned earlier in this report.

Supply system and record keeping on commodities from national to facility level

Commodities from the national level (Federal Ministry of Health) are sent directly from the central medical store, located in the southwest of Nigeria at Oshodi LGA, Lagos State, to the desk officer at the State Ministry of Health. These commodities are kept in the state store. LGAs make requisitions and the commodities are issued to them from the store. The state Ministry of Health keeps logistics records for commodities received from the Federal Ministry of Health and those issued to the LGAs.

On some occasions, the states are supported with commodities from development partners like WHO, UNICEF and non-governmental organisation/NGO, such as the Society for Family Health (SFH). ■

Portfolio of Local Stakeholders

Figure 4 – Organogram of the State Ministry of Health

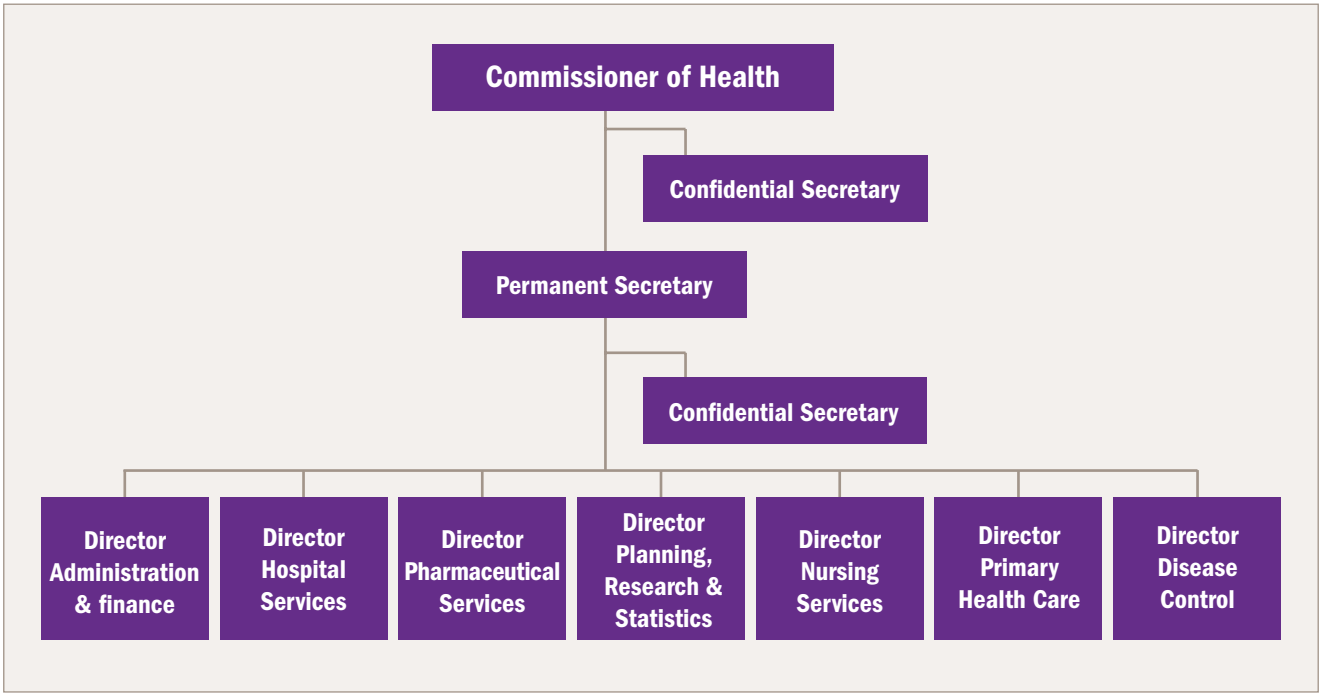
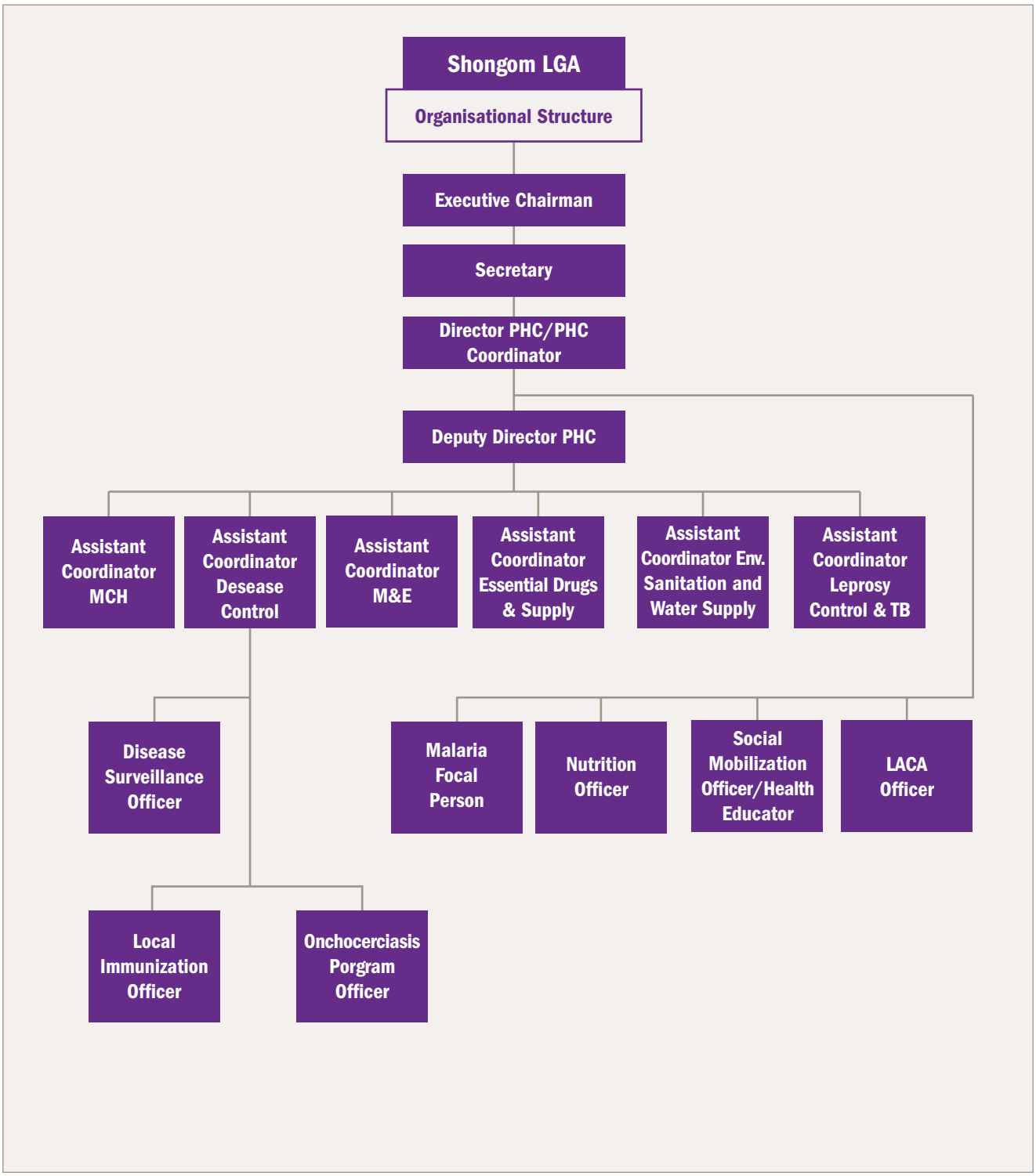


Figure 5 – Organogram of the LGA Department of Health within the Ministry of Shongom LGA



Non-governmental organisations

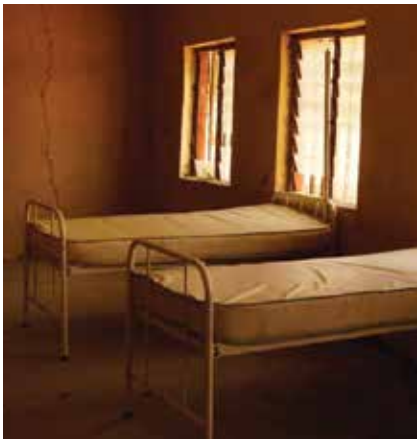


Photo left: Hosptial beds, Nigeria.
© Dr Bilal Avan

Brief structure of non-governmental organisations relevant to the DIPH and their programmes in Gombe State

Non-governmental organisations (NGOs) working in the state are primarily funded to provide technical assistance and support in terms of financial and logistics resources and technology to public sector health programmes in the states where they are funded to operate. Due to time constraints, the study selected and focused on two NGOs working on maternal and child health in Gombe State during discussions with stakeholders at the state Ministry of Health.

Society for Family Health
Society for Family Health is funded by the Bill & Melinda Gates foundation to demonstrate innovative approaches to improving maternal and newborn health practices in homes. This project employs three models in the delivery of services: traditional birth attendants (TBAs), volunteers from the Federation of Muslim Women's Associations in Nigeria (FOMWAN – a faith based organisation) and a combined model which uses TBA and FOMWAN volunteers. The main activities carried out under this project by the organisation include training of traditional birth attendants (TBA) and the National Union of Road Transport Workers drivers, advocacy to communities and primary healthcare facilities, review meetings and TBA selection exercises.

Society for Family Health has an elaborate national level structure with directors in charge of various aspects of service delivery, research and advocacy aspects of the various donor funded projects they are implementing. For this project, a state office has been established in Gombe State and is overseen directly by a State Programme Manager. Reporting to the State Programme Manager, are the following personnel:

Quality Assurance Officer, Traditional Birth Attendant Programme Officer, FOMWAN Officer, Human Resource and Administration Officer, IT Officer, Front Desk Officer, Emergency Transport Scheme Officer, Medical Detailer, call centre staff and call centre agents. The call centre staff and agents see to the call centre which was set up in Gombe town to house toll free lines that provide information, referrals and transportation to facility based care when needed for pregnant women.

There are two personnel on the project who form part of the state team but report to the Research Manager in the Abuja head office: the Monitoring and Evaluation Officer and the Management Information System Officer.

Society for Family Health has no structure at the local government area (LGA) level. However, there are contact opportunities that exist between the organisation and personnel at the LGA level (detailed in the subsequent section).

Management Sciences for Health
Management Sciences for Health has two main projects in Gombe –
1. The Plan Health project which aims to strengthen institutional capacity of public and civil society organisations for HIV services and other services for vulnerable populations e.g. orphans and vulnerable children.

One of the current activities running under this project in Gombe state is the training of State level Monitoring and Evaluation Officers and Health Management Information System (HMIS) Officers in using the District Heath Information System database to manage state level HMIS data aggregated from primary healthcare facilities in the state.

For this project, a national level structure is maintained with staff that travel from Abuja to conduct capacity and leadership building activities in the state.
2. The community-based support for orphans and vulnerable children project on the other hand is focused primarily on providing comprehensive services in Gombe state and training providers in orphans and vulnerable children (OVC) services delivery.

Since Management Sciences for Health project activities are generally focused on engagement at the state level, the organisation has maintained

a state level structure that provides technical assistance to corresponding state Ministries and civil society organisations in delivery of OVC and HIV care and treatment services.

For this project, a state level team comprises a state Team Leader, Monitoring and Evaluation Officers, Prevention, Community Care and a Clinical Services Officer. The Community Care Officer is responsible for overseeing technical assistance to the OVC project. The state office for the project in Gombe state is embedded within the state Ministry of Women Affairs and Social Development. OVC support services are sub-contracted out to Community Based and Faith-based organisations (CBOs and FBOs) at the community level.

Data collected from the project is disaggregated by the LGA. Ideally this data is reported to the LGA social welfare unit who will then report to the monitoring and evaluation focal person at the State Ministry of Women Affairs and Social Development. Further investigations will be needed to assess the extent to which this policy is adhered to.

Existing contact opportunities between the NGOs and the LGA System

Society for Family Health
During training workshops for TBA and FOMWAN volunteers, state and LGA Officers are invited to either facilitate or participate. These officers include the following: LGA Primary Health Care Coordinators, LGA Maternal and Child Health Coordinators *(Assistant Coordinators – see organisational structure in figure 5, page 17)* and the corresponding staff and Director of Primary Health Care at the state Ministry of Health.

At the community level, Society for Family Health volunteers carry out advocacy to inform communities and healthcare facilities on services offered. Social Mobilisation Officers at the LGA level are invited whenever there is an advocacy visit to the communities and the state counterparts.

Management Sciences for Health
Technical assistance activities include training of civil society organisations (CBOs and FBOs) on provision of OVC services in communities across most of the local government areas in Gombe State. The LGA Director of Primary Health Care is invited for some of these trainings.

Another part of this project where there is engagement with LGA personnel is the advocacy component. Social Mobilisation Officers from the LGA health office are involved in advocacy meetings with community leaders and district heads.

Supervisory structures and activities

a) Local Government Area Level
Although the public health NGOs assessed had no organisational structure at the LGA level and mainly engaged with stakeholders at the state level, the activities that they implemented were done in communities overseen by LGA structures. At this level, LGA government personnel are co-opted in activities like training and advocacy visits to communities.

b) State Level
Society for Family Health has a state team headed by a State Programme Manager and supported by a TBA Officer, Emergency Transport Officer, Monitoring and Evaluation Officer, Management Information System Officers, IT Officer and administrative staff. Most activities are built around training of volunteers (TBAs and FOMWAN) and drivers from the National Union of Road Transport Workers that provide emergency transportation for women in labour, provision of clean delivery kits, advocacy in communities and support of a call centre built in the state-owned specialist hospital in Gombe.

At Management Sciences for Health, a Senior Programme Officer provides technical direction and oversight to the state team comprising a technical adviser for OVC and a monitoring and evaluation specialist. These personnel support the training of CBOs and FBOs in the provision of OVC services and data collection.

Supply system and record keeping of commodities from national to facility level

At Management Sciences for Health, commodities are mostly aquired through pooled procurement (USAID's Supply Chain Management System & the Global Fund Voluntary Pooled Procurement mechanisms. Procured commodities are stored in the central medical store located in southwest Nigeria in Oshodi LGA, Lagos State, and then distributed to the state office store from where they are issued to the CBOs/FBOs. This commodities supply chain is documented using standard Logistics Management Information System data collection tools.

Society for Family Health distributes its clean delivery kits through the Manufacturers Delivery Service (a subsidiary of the United Africa Company of Nigeria, a large private company) network, with documentation at the state office within an management information system form designed by Society for Family Health. Also documented in this form are commodities collected by patent medicine vendors. ■

Data Review

Data sources relevant to the implementation of the DIPH in Gombe State

a) Potential sources
Potential sources of data for the Data Informed Platform for Health (DIPH) pilot from the Public Health System include:

1. Aggregated local government area (LGA) level data
- Form 002 – Local Government Health Information Quarterly summary form
- Report for Community Reproductive Health Technical Advisory Committee Meetings
- LGA summary forms at the state Ministry of Health e.g. maternal and child health, immunisation
- LGA service commission training registers and staff registers
- State supervision reports for Service Delivery Points
- Routine immunisation reports
- Maternal and child health reports
- Disease surveillance reports
- List of primary health care facilities in the LGA
- Non-governmental organisation (NGO) electronic health information systems. NGOs focussed on in this study both use versions 1.4 of the District Health Information System database for managing their programme data.

2. Facility level registers
- Ante natal care (ANC)
- Family planning registers
- Immunisation registers
- Delivery registers
- Post natal registers
- Child welfare registers
- Laboratory registers
- General laboratory registers for preventing mother-to-child transmission of HIV (PMTCT)
- Staff registers
- Daily diagnosis, preventive and treatment services provision register
- Referral registers.

b) Quality of data
At the facility level, most of the facility registers were consistently completed. There were however a few registers that were not standardised, with data recorded by creating columns and writing in notebooks e.g. in-patient, out-patient, ANC, delivery, post-natal and family planning registers.

At the LGA level, data collection and summary for most of the key maternal and child health indicators was done using standard forms and collated at the LGA office. Due to limitation in funds for data collection and facility supervision, there are cases of incomplete data for some facilities.

c) Willingness to share
LGA officials were willing to share data if requested as they believed it would achieve the objective of improving maternal and child health indices in Gombe State, a goal shared by every State stakeholder.

NGOs interacted with were also willing to share their data. However, data sharing must be made through appropriate government channels and the organisation must be allowed to take part as a full stakeholder in any information sharing.

Categories of data available (in congruence with WHO's Framework of Health System Blocks: Workforce, Service Delivery, Information, Medical Supplies, Finance and Governance)

1. Workforce
a. List of health workers categorised by LGA, grade level, occupational category, rank, qualification, sex and location – State Ministry of Health/ LGA Department of Health
b. List of LGA and facility trained

Photo left: A health centre filing system. © Dr Bilal Avan

health workers by occupational category and name of training – LGA Service Commission
c. Summaries of trained health workers by LGA and occupational category
d. Staff salaries with staff names, designations and salaries – LGA payroll register.

2. Service delivery
a. ANC Booking/Visit summaries – LGA monthly summary reports
b. Delivery summaries – LGA monthly summary reports
c. Maternal morbidity summaries – LGA monthly summary reports
d. Infant morbidity summaries – LGA monthly summary reports
e. ANC/Delivery referral summaries – LGA monthly summary reports
f. Family planning summaries – LGA monthly summary reports
g. Disease incident cases and mortality by in-cases and out-cases – Disease surveillance summary reports
h. PMTCT summaries – LGA monthly summary reports
i. Immunisation summaries – LGA monthly summary report.

3. Medical supplies
a. Stock status summaries – LGA monthly summary reports
b. Essential medicines supply summaries (quarterly) report – LGA summary report.

4. Information
a. Facilities that report on LGA level indicators for each reporting period.

5. Finance
a. Government (state and LGA) expenditure on health commodities per LGA
b. Government expenditure on wages and salaries per LGA.

6. Governance
a. Existence of policies guiding primary healthcare delivery at LGA level
b. Existence of policies guiding the implementation of maternal and child health at primary health care level
c. Existence of an orphans and vunerable children plan of action.

Use of Information by LGAs

a) Health Management Information System
There was little evidence that LGAs optimally and consistently used the data collected from the primary healthcare facilities to make decisions in allocating resources, improving deficiencies in healthcare delivery and planning for future healthcare investments. Meetings at the LGA level that involved review of reports focused more on report of issues encountered during supervisory visits than the analysis of key maternal and child health indicators.

On the other hand, NGOs use their data to make decisions on service delivery, but this was, more or less, focused on meeting project specific targets. Data collected monthly from the programmes are reviewed in monthly meetings with the State Managers and action points taken and documented.

b) Supervisory/Monitoring
Supervisory visits were scheduled pre-visits but did not involve prior review of data before visits. However, data collected from the facilities were analysed at the state levels as a basis for quarterly state level meetings. Supervision in NGOs was were frequent. Supervisory visits to Society for Family Health's health call centre were frequent (at least once every two days), while Measurement Sciences for Health had at least one member of staff visiting one community-based organisation once a month. These visits were mostly visits for mentoring and ensuring that services were implemented as designed. Sometimes supervisory visits raised challenges faced at implementation sites. These challenges were immediately cascaded to the next level of management via field visit reports.

c) Commodities/Supply management
There was no evidence that consumption data collected at the LGA level was used to forecast data or determine required minimum and maximum stock levels to prevent stock outs or overstocking. ■

Forward Planning

Photo above: A mother holding her baby. © Dr Bilal Avan

General receptiveness of local stakeholders to the DIPH approach

Public Health System

Stakeholders (Permanent Secretary Directors of the Departments of primary healthcare and Planning, Research and Statistics and other relevant officers in both departments) in the Ministry of Health were generally very receptive to the concept of the Data Informed Platform for Health (DIPH) at the State Ministry of Health and the local government area (LGA) Department of Health. This receptivity was enhanced by:

- The work of the identified contact point in ensuring that all the relevant stakeholders were sensitised and prepared to receive the study team prior to the visit;
- The technical assistance offered by the IDEAS team to the state in helping LGAs use information collected at the facilities to make informed decisions and improve maternal and newborn health service delivery;
- The fact that the feasibility study team clearly emphasised the importance of ownership and stakeholder involvement in the decision making process of the project.

To maintain receptivity through the implementation of the project, it is important to ensure that:

- Relevant stakeholders are involved in decision making as the project is developed and implemented;
- Ministry of Health staff are involved in the implementation of the project;
- The project is designed and implemented, as much as possible, within the confines of existing policies and mechanisms for service delivery and supervision;
- The project includes components that ensures that the capacity of public health system personnel are built in the process.

Non-governmental organisations

- Society for Family Health intimated on the DIPH were very receptive to the concept and were interested in sharing data for informed decision making at the LGA level. There were no reservations expressed about this approach;
- Interactions with the Management Sciences for Health Deputy Programme Director also indicated a willingness to be involved in the DIPH should it take off in Gombe State. However he expressed that he would like the NGOs involved to actively participate and be availed of the opportunity to present their programme data in any information sharing forums at LGA level.

Engagement Strategy

a) National/Federal

Engagement of stakeholders at the national level should, at this stage, be restricted to information gathering about key national programmes and policies influencing maternal, newborn, and child health care at the LGA level of governance.

In order to do this, correspondence and engagement withthe Director of Family Health at the Federal Ministry of Health by the IDEAS project for information purposes only and to request for maternal and child health and immunisation policies documents.

b) State

For the DIPH to be successful, it will be important to gain and maintain the commitment of state level stakeholders in the public health system and NGOs through a continuous process of engaging the right stakeholders at the right time and understanding and managing their expectations.

Based on discussions with key stakeholders at the state level of

governance during the feasibility study, the following steps are suggested for engagement with stakeholders for the DIPH:

- A formal letter of introduction of the IDEAS project (all components) to the Gombe Commissioner of Health should be written and submitted (addressed to the Commissioner of Health). This introduction and request for collaboration should explain the expected objectives of the project clearly and the cooperation expected from the state Ministry of Health. Ideally this letter should be from the IDEAS Measurement, Learning and Evaluation partner (Health Hub Limited) introducing London School of Hygene and Tropical Medicine and the Bill & Melinda Gates Foundation;
- After the letter is submitted, Health Hub Limited should follow up with the Ministry to meet with the key state holders and work together to get inputs in defining more clearly the next steps of the DIPH pilot. It is important that stakeholders be involved early on in the planning/ formative phases of the pilot and through the development and monitoring phases of the project. This should be preceded by a stakeholders' meeting at the state level which should serve to bring all the stakeholders together on one table, introduce the project to them and obtain their commitment;
- The collaboration should be formalised by signing a Memorandum of Understanding (MOU) between the IDEAS project and the Gombe State Ministry of Health. This MOU is a specific request from the state Ministry of Health as a prerequisite for engagement. It should outline the purpose of IDEAS, all project components and the expected role of the different players in the project development and implementation. Although there are other key stakeholders in other Ministries/agencies important to the development of the DIPH, e.g. Ministry of Local Government and Ministry of Women Affairs and Social Development and Local Government Service Commission, it will be best to engage primarily with the Ministry of Health as the key Ministry and then with others through the Ministry of Health. The rules of engagement should be stated clearly in the MOU signed with the State Ministry of Health;
- At all stages of the development of the DIPH pilot, it is important to emphasise government ownership of the project and to ensure involvement of the key stakeholders in the decision making process (for example in selection of the pilot LGAs for the DIPH);
- The state Ministry of Health should be requested to appoint a focal person in the ministry for the project. This focal person should preferably be someone from the Department of Primary Health Care which is the main department that oversees and engages with the

> "Public health system personnel capacity will be strengthened through the Data Informed Platform for Health."

> "For the Data Informed Platform for Health to be successful, it is important to gain and maintain the commitment of state level stakeholders in the public health system and NGOs."

LGA level on maternal and child health services;
- An information sharing medium will need to be established to enable dissemination of information and sharing of documents etc with necessary stakeholders. Meetings should be held at the state Ministry of Health office in Gombe State or a mutually agreed location in Gombe city;
- It is important for the IDEAS team to ensure that the pilot continues to use as much as possible and support technically and financially, existing information sharing structures such as LGA departmental meetings, state debriefing meetings, quarterly review meetings, village and ward level development meetings etc.

c) Local Government Area

The selected LGA Department of Health will be engaged initially through the state Ministry of Health. The following steps are suggested for engagement of stakeholders at the LGA level.
- The IDEAS project should request that the state Ministry of Health introduce the project formally to the selected LGAs administration/ governing councils;
- It will be important to ensure the involvement of the selected LGAs Director of Primary Health Care and LGAs Maternal and Child Health coordinators right from the formative phase of the DIPH pilot;
- Activities after the formative phase of the DIPH should as much as possible take place in the LGAs selected;
- The project should use human resources at the LGA system as much as possible to enhance sustainability and ensure project ownership.

Recommendation: Outline of plan for the pilot study of the DIPH

Since the actual plan of the DIPH pilot study will be produced as a result of formative phase activities, the following is aimed at serving as a preliminary draft outline plan to be expanded on during the DIPH pilot formative phase.

Potential challenges in the implementation of the DIPH

The finding of this study is that the DIPH is feasible in Gombe state. In order to ensure success, however, it is imperative to note the following potential challenges/risks to the project and include measures to address them in the DIPH pilot plan.

1. **Security:** security is a major challenge to the implementation of the pilot. The security situation in the State needs to be monitored closely and measures and resources to protect project staff and consultants clearly defined and provided for. Some of the measures suggested are as follows:
   a. Ensure transportation is available and on standby for staff/consultants working on the project for easy get-away in case of sudden crisis or violence;
   b. Project staff/consultants must stay in hotels considered safe. Two identified already are Maidugu hotel and Emerald Hotel in Gombe town. Project staff must return to their accommodation in Gombe at the end of the work day even if they travel to other LGAs in the course of implementation;
   c. Government owned buildings, military and police formations or areas near them should be avoided as much as possible.
2. **Technical capacity:** although, at all levels, there is a surplus of human resources required for the implementation of the DIPH, there is a general lack of technical capacity in the system. Capacity Building (training and mentoring) will need to be adequately accommodated in project budgets in order for the pilot to be successful.
3. **Terrain:** It can be very difficult to navigate to some LGAs and facilities during the rainy season. This issue needs to be considered as early as

Photos left:
Far left: A woman lies on a bed receiving treatment. © Dr Bilal Avan
Left: A nurse working at a hospital in Nigeria. © Dr Bilal Avan

Photo above: A premature baby lies in hospital. © Bill & Melinda Gates Foundation

possible during the selection of LGAs. Four wheel drive vehicles are the most appropriate for this terrain.

4. **Willingness of NGOs to share data:** In order to streamline the process of obtaining and including data from NGOs, it is important that the relevant organisations be involved from the formative phases of the pilot, at the behest of the state Ministry of Health.

The following are potential risks to the DIPH pilot that needs to be addressed in the planning and implementation stages:

- **Inadequate stakeholder inclusion:** Engagement should be as inclusive as possible for all relevant stakeholders for the DIPH. Due to the fact that the initial node of entry for entry for stakeholder engagement is the Ministry of Health; it is likely that Ministry of Health Officers will be reluctant to involve other stakeholders in other Ministries.
- **Inconsistent stakeholder engagement:** Some stakeholders may be required to be engaged through the formative, planning, implementation and monitoring phases of the pilot. It is important for the IDEAS team to ensure that platforms and for a created during the formative phases are maintained and active during the other phases.
- **Reluctance of external technical consultants to work in the region/area:** Due to the security situation, there is a likelihood of disruption of technical expertise due to the reluctance of technically competent consultants to travel to and work in the area. This implies that the project should attempt, as much as possible, to devolve implementation responsibilities to well trained locally based human resources in the state. Also, a well articulated security plan and exigency arrangements put in place will be necessary to minimise disruption in technical expertise due to reluctance to work in the area. The implementation plan needs to flexible enough, allowing buffer time periods needed during periods of disruptions in implementation.
- **Transfer of trained public sector personnel:** Transfers of public sector personnel are quite common in Nigerian public service. Personnel who have been already oriented and trained on the project could suddenly be replaced by new personnel due to circumstances beyond the influence of the project team. This could result hitches and challenges in implementation. It is important to ensure that personnel key to implementation who have been trained have alternates who have also been well oriented and trained on the project.
- **Paucity of funds to carry out already planned health activities:** Due to paucity or inconsistency in timely release of funds to the LGA Department of Health to carry out routine activities geared towards successful implementation of regular maternal and newborn health services, such as supervisory, monitoring activities and meetings, there may be disruptions in these processes that implementation of the DIPH pilot depends on. It will be helpful for there to be project resources allocated to support some of these routine activities to ensure that the pilot is successful. ■

Appendices

Appendix I – Nationally agreed HMIS framework and indicators (Department of Health Planning and Research, Federal Ministry of Health, Nigeria, 2007)

S/N	Indicators	Measure/Determination	Sources
Community/Village Level			
1	No. of trained, kitted and functional VHWs in the community	No. of trained, kitted and functional VHWs in the community	Routine NHMIS
2a	No. of TBAs in the community	No. of TBAs in the community	Routine NHMIS
2b	No. of trained, kitted & functional TBAs in the community	No. of trained, kitted and functional TBAs in the community in the community	
3	No. of live births	No. of live births	Routine NHMIS
4	No. of still births	No. of still births	Routine NHMIS
5	No. of maternal deaths	No. of maternal deaths	Routine NHMIS
6	No. of referrals	No. of referrals	Routine NHMIS
7	No. of patients attended by VHWs	No. of patients attended by VHWs	Routine NHMIS
8	No. of women attended by TBAs	No. of women attended by TBAs	Routine NHMIS
9	No. of clients that received family planning services	No. of clients that received family planning services	Routine NHMIS
10	No. of cases of diseases seen e.g. malaria (specify)	No. of cases of diseases seen e.g. malaria (specify)	Routine NHMIS
11	No. of deaths (specify age and sex)	No. of deaths (specify age and sex)	Routine NHMIS
Facility/Ward Level			
1	Maternal mortality rate	No. of deaths of WRA (15-49yrs) resulting from pregnancy related causes, child birth and post-natal in a year x 100,000 / Total No. of live births in the same period	Survey
2	Infant Mortality Rate	No. of U-1 year deaths in a year x 1000 / Total No. of live births during the same period	Survey
3	Under-5 Mortality Rate	No. of U-5 years deaths in a year x 1000 / Total No. of U-5 children in the population in the same period	Survey
4	Crude Birth Rate	No. of births in a year x 1000 / Midyear population	Survey
5	Crude Death Rate	No. of deaths in a year x 1000 / Midyear population	Survey
6	No. of WRA (15-49 yrs) using modern Contraceptives	No. of WRA (15-49 yrs) using modern contraceptives in the health facility	Routine NHMIS
7	No. of deliveries by trained TBAs	No. of deliveries by trained TBAs	Routine NHMIS
8	No. of ANC clients that received 3 doses of IPT	No. of ANC clients that received 3 doses of IPT	Routine NHMIS

S/N	Indicators	Measure/Determination	Sources
9	% of newborn with low birth weight	No. of new born with weight lower than 2.5kg x 100 Total No. of newborn	Routine NHMIS
10	DPT3 coverage	No. of infants that received DPT3 vaccinations No of infants that received DPT 1 vaccination	Routine NHMIS
11	Immunisation coverage	No. of children less than 12 months fully immunised x 100 Total No. of children less than 12 months	Survey
12	% of women that received ante-natal care in a year	No. of women that received at least 4 ante-natal care contacts in a year x 100 Total No. of deliveries in the in the same period.	Survey
13	No. of children 0-6 months – exclusively breast-fed	No. of children 0-6 months exclusively breast fed	Routine NHMIS
14	No. of deliveries in the health facility	No. of deliveries in the health facility	Routine NHMIS
15	% of children aged 0-59 months weighing below the lower line (3rd percentile) on the child's health card	No. of children aged 0-59 months weighing below the lower line x 100 Total No. of children 0-59 months weighed	Routine NHMIS
16	No. of children (6-59 months) given Vitamin A	No. of children (6-59 months) that received Vitamin A in the health facility	Routine NHMIS
17	Incidence of each of the notifiable communicable diseases (specify)	No. of new cases of notifiable communicable diseases (specify) in a target group in a year x 1000 Total population of target group in the same period	Survey
18	Incidence of each of the notifiable non-communicable diseases (specify)	No. of new cases of notifiable non-communicable diseases (specify) in a target group in a year x 1000 Total population of target group in the same period	Survey
19	Prevalence of notifiable communicable diseases (specify)	No. of new & old cases of notifiable communicable diseases in a target group in a year x 1000 Total population of target group in the same year	Survey
20	Prevalence of notifiable Non Communicable diseases (specify)	No. of new & old cases of notifiable non-communicable diseases in a target group in a year x 1000 Total population of target group in the same year	Survey
21	% of HF in the ward providing condoms to clients	No. of HF in the ward providing condoms to clients x 100 Total No. of HF in the ward	Routine NHMIS
22	% of health facilities in the ward providing minimum health services package as defined in HSR document	No. of health facilities in the ward providing minimum health services package as defined in the HSR document x 100 Total No. of health Total No. of HF in the ward	Routine NHMIS
23	Incidence of malaria in the U-5 children	No. of new cases of malaria in children 0-59 months in a year x 1000 Total population of children 0-59 months in the same period	Survey
24	Incidence of malaria in pregnant women	No. of new cases of malaria in pregnant women in a year x 1000 Total population of pregnant women in the same period	Survey
25	% of deaths due to notifiable non-communicable diseases (specify)	No. of deaths due to notifiable non-communicable diseases (specify) in a year x 100 Total No. of deaths in the health facility in the same year	Routine NHMIS

S/N	Indicators	Measure/Determination	Sources
26	% of deaths due to notifiable communicable diseases (specify)	No. of deaths due to notifiable communicable diseases (specify) in a year x 100 Total No. of deaths in the health facility in the same year	Routine NHMIS
27	No. of deaths due to vaccine preventable diseases (VPD) (specify)	No. of deaths due to vaccine preventable diseases at the facility (specify)	Routine NHMIS
28	No. of health facilities not experiencing stock-out of essential drugs in the ward in the last 3 months	No. of health facilities that did not experience stock-out of essential drugs in the last 3 months	Routine NHMIS
LGA Level			
1	Maternal mortality rate	No. of deaths of WRA resulting from pregnancy related causes, child birth and post-natal in a year x 100,000 Total No. of live births in the same period	Survey
2	Infant Mortality Rate	No. of U-1 year death in a year x 1000 Total No. of live births during the same period	Survey
3	Under-5 Mortality Rate	No. of U-5 year deaths in a year x 1000 Total No. of U-5 children in the population in the same year	Survey
4	Crude Birth Rate	No. of births in a year x 1000 Midyear population	Survey
5	Crude Death Rate	No. of deaths in a year x 1000 Midyear population	Survey
6	Contraceptive Prevalence Rate	No. of WRA (15-49 yrs) using modern contraceptives in a year x 100 Total No. of WRA (15-49yrs) in the same year	Survey
7	% of new born with low birth weight	No. of new born with birth weight below 2.5kg x 100 Total No. of newborns at the LGA	Survey
8	DPT3 Coverage	No. of infants that received DPT3 No. of infants that received DPT 1	Survey
9	Immunisation Coverage	No. of children less than 12 months fully Immunised x 100 Total No. of children less than 12 months	Survey
10	% of health facilities that provide minimum health package	No. of health facilities providing minimum health package x 100 Total No. of health facilities	Routine NHMIS
11	No. of deliveries in the LGA	No. of deliveries in the LGA	Survey
12	% of deliveries by trained TBAs in the LGA	No. of deliveries attended to by trained TBAs in the LGA x 100 No. of deliveries attended to by trained TBAs in the LGA x 100	Routine NHMIS
13	% of health facilities providing clients with condoms in the LGA	No. of health facilities providing clients with condoms in the LGA x 100 Total No. of health facilities in the LGA.	Routine NHMIS
14	% of health facilities providing services on STIs, HIV/AIDS	No. of health facilities providing services on STIs, HIV/AIDS x 100 Total No. of health facilities	Routine NHMIS
15	% of health facilities providing family planning services	No. of health facilities providing family planning services x 100 Total No. of health facilities	Routine NHMIS

S/N	Indicators	Measure/Determination	Sources
16	% of health facilities with referral protocol	No. of health facilities with referral protocol x 100 / Total No. of health facilities	Routine NHMIS
17	% of pregnant women that received antenatal care (ANC) in a year	No. of women that received ante-natal care (ANC) in a year x 100 / Total No. of pregnant women in the same period	Survey
18	% of infants 0-6 months exclusively breastfed	No. of infants 0-6 months exclusively breast-fed x 100 / Total No. of infants 0-6 months	Routine NHMIS
19	Incidence of each of the notifiable non-communicable diseases (specify)	No. of new cases of notifiable non-communicable diseases (specify) in a target group in a year x 1000 / Total population of target group in the same year	Routine NHMIS & Survey
20	Incidence of each of the notifiable communicable diseases (specify)	No. of new cases of notifiable communicable diseases (specify) in a target group in a year x 1000 / Total population of target group in the same year	Routine NHMIS & Survey
21	Prevalence of notifiable non-communicable diseases (specify)	No. of new & old cases of notifiable non-communicable diseases in a target group in a year x 1000 / Total population of target group	Routine NHMIS & Survey
22	Prevalence of notifiable communicable diseases (specify)	No. of new & old cases of notifiable communicable diseases in a target group in a year x 1000 / Total population of target group	Routine NHMIS & Survey
23	% of establishments providing occupational health services	No. of establishments with 10 or more employees providing occupational health services x 100 / Total No. of establishments with 10 or more employees	Routine NHMIS
24	% of private health providers participating in the NHMIS	No. of private health providers participating in the NHMIS x 100 / Total No. of private health providers	Routine NHMIS
25	% of deaths due to notifiable communicable diseases (specify	No. of deaths due to notifiable communicable diseases (specify) in a year x 100 / Total No. of deaths in the same period	Routine NHMIS
26	% of deaths due to notifiable non-communicable diseases (specify)	No. of deaths due to notifiable non-communicable diseases (specify) in a year x 100 / Total No. of deaths in the same year	Routine NHMIS
27	% of deaths due to vaccine preventable diseases (VPD) (specify)	No. of deaths due to vaccine preventable diseases in a year (specify) x 100 / Total No. of deaths in the same year	Routine NHMIS
28	% of health facilities not experiencing stock out of essential drugs in the last 3 months	No. of health facilities that did not experience stock-out of essential drugs in the last three months x 100 / Total No. of health facilities in the LGA	Routine NHMIS
State Level			
1	Immunisation coverage rate	No. of children less than 12 months fully immunised in a year x 100 / Total No. of children less than12 months in the same period	Survey
2	Infant Mortality Rate	No. of U-1 year deaths in a year x 1000 / Total No. of live births during the same period	Survey
3	Maternal mortality rate	No. of deaths of WRA (15-49 yrs) resulting from pregnancy related causes, child birth and post-natal in a year x 100,000 / Total No. of live births in the same period	Survey

S/N	Indicators	Measure/Determination	Sources
4	Under-5 Mortality Rate	No. of U-5 year deaths in a year x 1000 Total No. of U-5 in the	Survey
5	Crude Birth Rate	No. of births in a year x 1000 Midyear population	Survey
6	Crude Death Rate	No. of deaths in a year x 1000 Midyear population	Survey
7	Contraceptive Prevalence Rate	No. of WRA (15-49 yrs) using modern contraceptives in a year x 100 Total No. of WRA (15-49yrs) in the same year	Survey
8	% of new born with low birth weight	No. of newborns with birth weight below 2.5kg x 100 Total No. of newborns	Routine NHMIS
9	DPT3 coverage	No. of infants that received DPT3 No. of infants that received DPT 1	Routine NHMIS
10	% of pregnant women that received antenatal care (ANC) in a year	No. of women that received ante-natal care (ANC) in a year x 100 Total No. of pregnant women in the same period	Survey
11	% of infants 0-6 months exclusively breast fed	No. of infants 0-6 months exclusively breast fed x 100 Total No. of infants 0-6 months	Routine NHMIS
12	% of deaths due to notifiable non-communicable diseases (specify)	No. of deaths due to notifiable non-communicable diseases (specify) in a year x 100 Total No. of deaths in the same year	Routine NHMIS
13	% of deaths due to notifiable communicable diseases (specify)	No. of deaths due to notifiable communicable diseases (specify) in a year x 100 Total No. of deaths in the same period	Routine NHMIS
14	% of deaths due to vaccine preventable diseases (VPD) (specify)	No. of deaths due to vaccine preventable diseases in a year (specify) x 100 Total No. of deaths in the same period	Routine NHMIS
15	Incidence of each of the notifiable communicable diseases (specify)	No. of new cases of notifiable communicable diseases in a year (specify) x 1000 Total population of target group in the same period	Routine NHMIS
16	Incidence of each of the notifiable non-communicable diseases (specify)	No. of new cases of notifiable non-communicable diseases in a year (specify) x 1000 Total population of target group in the same period	Routine NHMIS; Survey
17	Prevalence of notifiable communicable diseases	No. of new & old cases of notifiable communicable diseases in a year x 1000 Total population of target group in the same year	Routine NHMIS; Survey
18	Prevalence of notifiable non-communicable diseases	No. of new & old cases of notifiable non-communicable diseases in a year x 1000 Total population of target group in the same year	Routine NHMIS; Survey
19	% of establishments providing occupational health services	No. of establishments with 10 or more employees providing occupational health services x 100 Total No. of establishments with 10 or more employees	Routine NHMIS
20	% of private health providers participating in the NHMIS	No. of private health providers participating in the NHMIS x 100 Total No. of private health providers	Routine NHMIS

S/N	Indicators	Measure/Determination	Sources
21	No. Secondary Health facilities (Public & Private) providing voluntary counselling and testing for HIV/AIDS	No. of Secondary Health facilities (Public & Private) providing voluntary counselling and testing for HIV/AIDS	Routine NHMIS
22	No. of Secondary Health facilities (Public & Private) providing Antiretroviral (ARV) therapy	No. of Secondary Health facilities (Public & Private) providing Antiretroviral (ARV) therapy	Routine NHMIS
23	No. of Secondary Health facilities (Public & Private) providing blood screening service	No. of Secondary Health facilities (Public & Private) providing blood screening service	Routine NHMIS
24	No. of Secondary Health facilities (Public & Private) not experiencing stock-out of essential drugs in the last 3 months	No. of Secondary Health facilities (Public & Private) not experiencing stock-out of essential drugs in the last 3 months	Routine NHMIS
Federal Level			
1	Infant Mortality Rate	No. of U-1 year deaths in a year x 1000 / Total No. of live births during the same period	Survey
2	Maternal Mortality Rate	No. of deaths of WRA resulting from pregnancy related, child birth and post-natal causes in a year x 100,000 / Total No. of live births in the same period	Survey
3	Under-5 Mortality Rate	No. of U-5 year deaths in a year x 1000 / Total No. of U-5 in the population in the same year	Survey
4	Crude Birth Rate	No. of births registered in a year x 1000 / Midyear population	Survey
5	Crude Death Rate	No. of deaths registered in a year x 1000 / Midyear population	Survey
6	Contraceptive Prevalence Rate	No. of WRA (15-49 yrs) using modern contraceptives in a year x 100 / Total No. of WRA (15-49yrs) in the same year	Survey
7	% of new born with low birth weight	No. of new born with birth weight below 2.5kg x 100 / Total No. of newborns	
8	DPT3 coverage	No. of infants that received DPT3 / No. of infants that received DPT 1	Routine NHMIS
9	Immunisation coverage rate	No. of children less than 12 months fully Immunised in a year x 100 / Total No. of children less than 12 months in the same period	Survey
10	% of pregnant women that received antenatal care (ANC) in a year	No. of women that received ante-natal care (ANC) in a year x 100 / Total No. of pregnant women in the same period	Routine NHMIS
11	% of infant 0-6 months exclusively breastfed	No. of infant 0-6 months exclusively breast fed x 100 / Total No. of infants 0-6 months	Routine NHMIS
12	No. of deliveries in the States	No. of deliveries in the state	Routine NHMIS
13	% of deliveries by trained TBAs	No. of deliveries by trained TBAs in year x 100 / Total No. of deliveries in the same period	Routine NHMIS
14	% of deaths due to notifiable Non Communicable Diseases	No. of deaths due to notifiable non-communicable diseases in a year x 100 / Total No. of deaths in the same year	Routine NHMIS

S/N	Indicators	Measure/Determination	Sources
15	% of deaths due to notifiable communicable diseases	No. of deaths due to notifiable communicable diseases in a year x 100 / Total No. of deaths in the same year	Routine NHMIS; Survey
16	% of deaths due to vaccine preventable diseases (VPD) (specify)	No. of deaths due to vaccine preventable diseases in a year (specify) x 100 / Total No. of deaths in the same year	Routine NHMIS; Survey
17	Incidence of each of notifiable non-communicable diseases (specify)	No. of new cases of notifiable non-communicable diseases in a year (specify) x 1000 / Total population of target group in a year	Routine NHMIS; Survey
18	Incidence of each of notifiable communicable diseases (specify)	No. of new cases of notifiable communicable diseases in a year (specify) x 1000 / Total population of target group in a year	Routine NHMIS; Survey
19	Prevalence of notifiable communicable diseases	No. of new & old cases of notifiable communicable diseases (specify) in a year x 100 / Total population of target group in the same year	Routine NHMIS Data; Survey
20	% of establishments providing occupational health services	No. of establishments with 10 or more employees who provide occupational health services x 100 / Total No. of establishments with 10 or more employees	Routine NHMIS; Survey
21	% of private health providers participating in the NHMIS	No. of private health providers in the country participating in the NHMIS x 100 / Total No. of private health providers in the country	Routine NHMIS
22	% of Secondary Health facilities (Public & Private) providing voluntary counseling & therapy (VCT)	No. of Secondary Health facilities (Public & Private) providing voluntary counselling & therapy (VCT) x 100 / Total No. of secondary health facilities in the country	Routine NHMIS
23	% of Secondary Health facilities (Public & Private) providing Antiretroviral (ARV) therapy	No. of Secondary Health facilities (Public & Private) providing Antiretroviral (ARV) therapy x 100 / Total No. of secondary health facilities in the country	Routine NHMIS
24	No. of Secondary Health facilities (Public & Private) providing blood screening service	No. of Secondary Health facilities (Public & Private) providing blood screening service x 100 / Total No. of secondary health facilities in the country	Routine NHMIS
25	No. of Secondary Health facilities (Public & Private) not experiencing stock-out of essential drugs in the last 3 months	No. of Secondary Health facilities (Public & Private) not experiencing stock-out of essential drugs in the last 3 months x 100 / Total No. of secondary health facilities in the country	Routine NHMIS

Appendix II – Brief outline of visits, meetings and contacts made

A Stakeholders met at the State Ministry of Health on 23/04/2012

S/No	Department	Person Met	Designation
1	Permanent Secretary's office	Alhaji Umaru Gurama	Permanent Secretary
3	Department of Primary Health Care (PHC)	Dr. Nuhu Kumangh	Director, PHC
4		Mr. Abdul	Deputy Director, PHC
5		Mrs. Rejoice Bala Aliyu	Family Planning Coordinator/IDEAS initial contact point
6		Hajia Aishatu Haruna	MCH Coordinator
7		Hajia Maryam S. Abubakar	RH Coordinator
8		Danladi Sule	State M & E Officer for PHC
9		Mallam Sallau Mohammed Malami	State Health Educator
10		Alex Usman Bako	State Immunization Officer
11	Department of Planning, Research and Statistics (PRS)	Yerima Danzaria Kumo	Director, PRS
12		Alhaji Awwal Ibrahim	Deputy Director, Projects
13		Victor Ilia	HMIS Officer

B Stakeholders met at Shongom LGA Headquarters on 24/04/2012

S/No	Department	Person Met	Designation
1	LGA Department of Health	Dr. Doji J. Ngu	LGA Director, PHC/PHC Coordinator
2		Taminu Jalo	LGA Deputy Director, PHC/Deputy PHC Coordinator
3		Marina Bappa	Assistant Coordinator, Maternal and Child Health

C Persons met during the facility visits on 24/04/2012

S/No	Department	Person Met	Designation
1	Lalapido Maternity Clinic, Shongom L.G.A	Ruth Ali	Supervising Nursing Officer
2	Keffi Maternity Clinic, Shongom L.G.A	Florence G. Roy	Junior Community Health Extension Worker (JCHEW)
3	Mr. Victor Ilia – Guide from the State Ministry of Health	HMIS Officer, SMOH	Assistant Coordinator, Maternal and Child Health

D Non-Governmental Organisations officials met

S/No	Department	Person Met	Designation
1	Society for Family Health	Abare Galadima	State Program Manager
2	Society for Family Health	Larry	M & E Officer
3	Management Sciences for Health	Dr. Nwokedi Ndulue	Deputy Program Director

Acronyms

Acronym	Meaning
CBO	Community Based organisation
DIPH	Data Informed Platform for Health
FBO	Faith-based organisations
FOMWAN	Federation of Muslim Women's Associations in Nigeria
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IDEAS	Informed Decisions for Actions in maternal and newborn health project
LACA	Local government area (LGA) Agency for the control of AIDS
LGA	Local Government Area
LMIS	Logistics Management Information System
MCH	Maternal and Child Health
MOU	Memorandum of Understanding
MSH	Management Sciences for Health
OVC	Orphans and vulnerable children
PHC	Primary Health Care
PMTCT	Preventing Mother-to-Child Transmission [of HIV]
SFH	Society for Family Health
TBA	Traditional Birth Attendant
UAC Nigeria	United Africa Company of Nigeria
VPP	Voluntary Pooled Procurement
WHO	World Health Organisation

IDEAS project

IDEAS (Informed Decisions for Actions) aims to improve the health and survival of mothers and babies through generating evidence to inform policy and practice. Working in Ethiopia, northeast Nigeria and the state of Uttar Pradesh in India, IDEAS uses measurement, learning and evaluation to find out what works, why and how in maternal and newborn health programmes.

IDEAS is funded between 2010 and 2015 by a grant from the Bill & Melinda Gates foundation to the London School of Hygiene & Tropical Medicine.

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IDEAS project
London School of Hygiene & Tropical Medicine
Keppel Street, London, WC1E 7HT, UK

t +44 (0)207 927 2871/2257/2317
w ideas.lshtm.ac.uk
@LSHTM_IDEAS