Evaluation of "Accelerating progress to achieve health related MDGs in Nigeria"

Final Report

21 December 2016

www.kpmg.no
Contents

Acronyms and abbreviations .................................................................................................................. 3

Executive Summary ............................................................................................................................... 4

1. Background and overall approach ........................................................................................................ 1

2. Methodology ........................................................................................................................................... 2

3. Description of programme and local context ........................................................................................ 5

4. Assessment of relevance of programme ............................................................................................... 7

5. Case 1: The midwife and TBA training and mentoring programme ....................................................... 9

6. Case 2: Access to maternal and neonatal commodities ........................................................................... 12

7. Case 3: The referral and emergency transport services ....................................................................... 14

8. Case 4: The health management information system ............................................................................. 17

9. Overall assessment of effectiveness and efficiency of programme ....................................................... 19

9.1 Effectiveness ........................................................................................................................................ 19

9.2 Efficiency ............................................................................................................................................ 24

10. Assessment of sustainability .............................................................................................................. 26

11. Conclusion and recommendations ..................................................................................................... 31

References .................................................................................................................................................. 33

Annex 1: Term of Reference for Evaluation of “Accelerating progress to achieve health related MDGs in Nigeria” ......................................................................................................................... 34

Annex 2: Evaluation matrix ........................................................................................................................ 40

Annex 3 Itinerary and people consulted in Nigeria ..................................................................................... 42

Annex 4 Categories of respondents ......................................................................................................... 45
Acronyms and abbreviations

AOP  Annual Operational Plan
BEmONC  Basic Emergency Obstetric and Newborn Care
CBMIS  Community Based Management Information System
CHAI  Clinton Health Access Initiative
CHEW  Community Health Extension Worker
CTC  Core Technical Committee
DHID  Department for International Development
DHIS  District Health Information System
ETS  Emergency Transport Service
FMOH  Federal Ministry of Health
HPCC  Health Partners Coordinating Committee
LEC  Local Engagement Consultant
LGA  Local Government Authority
M&E  Monitoring and Evaluation
MBA  Motorbike Ambulance
MDG  Millennium Development Goal
MNH  Maternal and Neonatal Health
MNHC  Maternal and Neonatal Health Care
MNCH2  Maternal Newborn and Child Health Programme
NASG  Non-pneumatic Anti-Shock Garment
NGO  Non-Governmental Organisation
NORAD  Norwegian Agency for Development Cooperation
NURTW  National Union of Road Transport Workers
OIC  Officer in Charge
PATH2  Partnership for Transforming Health Systems Phase 2
PHC  Primary Health Centre
PPH  Post-partum haemorrhage
PRRINN-MNCH  Partnership for Reviving Routine Immunization in Northern Nigeria, Maternal and Child Health Initiative
RH  Reproductive Health
SHF  Secondary Health Facility
SMOH  State Ministry of Health
SOML  Saving One Million Lives
TBA  Traditional Birth Attendant
WDC  Ward Development Committee
Executive Summary

Introduction: “Accelerating progress to achieve health-related MDGs in Nigeria: a government-driven approach with a focus on rapidly reducing maternal and neonatal mortality in Kaduna, Kano and Katsina States,” is an innovative programme that has achieved rapid and impressive results. The programme is based on a tripartite agreement between NORAD, the Federal Ministry of Health of Nigeria and the Clinton Health Access Initiative (CHAI).

The MNH programme has as its over-arching goal to reduce maternal and neonatal mortality in Nigeria with a focus on the three Northern states with the highest burden. Cumulatively, Kaduna, Kano and Katsina States account for 20% of all maternal and neonatal deaths in the country.

The programme seeks to achieve its goal through the following objectives:

1. Strengthen National Coordination in maternal and neonatal care
2. Strengthen State Coordination in MNH, with a focus on six high-burden states
3. Increase the coverage and access to quality comprehensive and basic Emergency Obstetric and essential MNH in three high-burden states (LGA level implementation)

Programme implementation commenced mid-2014, and has been extended to last through 2016, with some activities continuing into 2017, before the federal and state governments take ownership of implementation process in 2017.

Method: This evaluation focuses on the third objective of the programme – the design and delivery of a programme to increase the coverage and access to maternal and neonatal health services in the three Northern states of Kaduna, Kano and Katsina. Four key programme interventions are treated as case studies: the midwife mentoring programme; commodity supply; the referral and emergency transport; and the Community Based Management Information System.

The evaluation was carried out using a mix-method approach of qualitative and quantitative techniques. First, a desk review was made of programme documents, implementation strategies, progress reports, reporting data and financial reports. Relevant health statistics and information on the programme environment were also collected and reviewed for contextual understanding.

Fieldwork was conducted in the Kaduna and Kano states, in addition to interviews with the CHAI national office, other donor programmes and the Federal Ministry of Health in Abuja. In Kaduna and Kano, interviews and focus group discussions were conducted with programme staff, government partners, health personnel, community volunteers and beneficiaries. In each state, two Local Government Authorities (LGAs) were chosen, and two communities in each LGA was visited, one urban and one rural.

Findings: The programme was found to be relevant at all levels. The government has participated in the planning and the programme is integrated into the government’s own plans. The officials interviewed from the FMOH unanimously stated that they felt strong ownership of the programme, and they also all displayed a very good knowledge of the programme. The same was the case at the state level. All beneficiaries interviewed stressed the importance of the programme and the positive impact it had on their ability to deliver or aid the delivery of quality maternal and neonatal health care.

The programme had an ambitious goal of achieving a 40% reduction in maternal and neonatal mortality in the 30 LGAs covered by the programme in the three states. Impressively, this goal was achieved. According to its own reported data, the project achieved a reduction in maternal mortality of 79% and in neonatal mortality of 60% in the 18-month period from January 2015 to June 2016. However, an independent evaluation of the data, concluded that the data collected in the first two quarters of 2015 included a much lower number of births than subsequent quarters, and that there was a danger of an overestimation of mortality, due to the lower numbers. The baseline was therefore moved to the third quarter of 2015. In the reduced time period of 12 months from July 2015 to June 2016, a reduction in maternal mortality of 37% and in neonatal mortality of 43% was documented.
Most likely this understates the achievements of the programme, as it does not include any reduction in mortality rates achieved in the first two quarters of 2015. Therefore, the programme almost certainly achieved the target of 40% reduction in maternal mortality rate in the covered LGAs.

It is beyond the scope of this evaluation to make a detailed assessment of the cost-effectiveness of the programme, but the project is considered to provide good value for money provided that the lessons gained are brought forward and used in future programmes.

The results have been achieved through a combination of three key components, the training / mentoring programme for frontline health personnel and traditional birth attendants, the supply of medical commodities, and the Emergency Transport Services for referrals. These three components have achieved a transformation in the quality and extent of maternal and neonatal health services in the covered areas.

**The training and mentoring component** reached about 90% of the targeted health workers. The workers interviewed all stressed the positive impact of the training and mentoring. The training imparted basic emergency obstetric and newborn care skills. The mentoring programme, which went over two rounds of three months, provided an important complement to the training.

The training and mentoring of Traditional Birth Attendants went beyond the national standard which restricted the role of TBAs to recognising danger signs and arranging referrals to medical facilities, while forbidding them from assisting deliveries. CHAI sought and gained approval from the states for supporting an expanded role for the TBAs, who were provided with key equipment and medicines, and taught how to use them. Although a number of officers from the federal to the state level, and also some of the senior officers from the Primary Health Centres, expressed concern about the TBAs going beyond their mandate, the majority of respondents agreed that the TBAs have played a large role in achieving the results.

The **commodities component** helped bring about a significant improvement in the quality of services delivered. The programme managed to deliver the identified key commodities in the first year of the programme. The medicines, particularly misoprostol (to prevent bleeding post delivery) and chlorohexidine (to disinfect the cord) had a large impact on the two major causes of maternal and neonatal mortality, respectively. The suction pump to aid newborns who had trouble starting breathing was also reported to have been particularly important. However, the last delivery to the facilities was done in May 2016 and by the time of the evaluation, all of the visited Primary Health Centres had started to experience stock-outs, and all centres were out of misoprostol, and many were also out of Clean Delivery kits.

The **referral and emergency transport services** provided the important link between the homes and the health facilities. The programme provided 250 motorbike ambulances (MBAs) to the communities in the targeted areas, and enlisted traditional leaders to identify drivers and mobilise community support to fuel and maintain the AMBs. TBAs and Community Health Extension Workers (CHEWs) were provided with phone numbers of drivers so that they could order transport for pregnant women in need of referrals.

The service worked well, and at the most, more than 4,000 referrals were done in a quarter. These are women that were at high risk, and it is certain that the referral services were an important factor in achieving the programme’s results.

The **Community Based Management Information System (CBMIS)** was (re)established building on an existing emirate system that was used formerly but had fallen into disuse. The CBMIS gathers information through traditional leaders from neighbourhoods, through wards, villages and districts. It records key data on live births, stillbirths and maternal and neonatal deaths. Since the official data collection system only captures events at health centres, the CBMIS has enabled the collection of the key indicators for the programme. The reports gathered through this system have also been used for sensitisation and have been discussed at community meetings.

A number of observations are made regarding the sustainability of the programme. On the one hand, the anchoring of the programme in the planning and management processes of the FMOH and the State Ministries of Health means that there is a strong commitment from government to carry the key components of the programme forward. Whereas the State’s budgets have been seriously cut due to the financial crisis following the steep drop in national oil revenue, the government has raised funds through a World Bank credit for the Saving One Million Lives programme. USD 1,5m for each state has been earmarked for strengthening Primary Health Centres.
In addition, other partners have committed to replicating the models designed and implemented by the programme. Of particular importance is the DFID financed MNCH2 programme, which has committed to expanding its activities in the three states supported by the programme.

On the other hand, it is doubtful whether the necessary capacities have been built at the LGA level for the LGA to take over full responsibility for the delivery of services. The role of CHAI’s Local Engagement Consultant (LEC) in each LGA has been central, and the discontinuation of this position is likely to have a negative impact of the LGA’s ability to continue the programme, even if they were to be provided with the necessary resources. There are also questions about the communities’ financial ability to keep the MBAs operational. Overall, the duration of the programme has been far too short to secure the necessary capacity building at the local level.

Probably the most critical concern is the sustainability of commodity supply. There are no firm commitments to ensure that supply level will be maintained, and shortages of medicines will have serious knock-on effects on all other aspects of the programme and its continued success.

**Recommendations for the continuation of the activities initiated by the programme:**

1. Secure recognition for the role that TBAs have played in the realising the results delivered by the programme, and lobby for change of policy so that TBAs are recognised as having the basic training required to attend home deliveries, when there are no identified signs of complications.
2. Work with government to develop a programme to formalise the training of selected TBAs (for example all TBAs who have secondary education), so that they could be formally accredited.
3. Design and conduct a household survey in order to obtain reliable data on maternal and neonatal mortality in the three states. Both CHAI LGAs and non-CHAI LGAs should be covered. Collect historical data so that baseline information can be retroactively available. Securing financing for the survey should be treated as a priority. The data on maternal and neonatal indicators could be then linked to existing data sets. Commissioning a household survey is also the main recommendation of the evaluation recently of the programme statistics (Sloan 2016, xiii).
4. Prepare an analytic final report, with a systematic presentation of the key components, clearly explaining what has contributed to the success of the programme (for example, recognising that equipping and training TBAs can lead to safer home deliveries, and that following up training with mentoring offers better and more sustained learning). Although this should be a standard requirement, the lack of this type of analysis in progress reports so far, has influenced the team to add this as an explicit recommendation.
5. Develop the capacity for both the collection, and use of data in every day decision-making at all levels of implementation. This requires training and mentoring approach for the promotion of evidence-based learning and continuous analysis of causes of maternal and neonatal mortality.

**Recommendations for future programmes**

6. For any programme that aims to build capacities for government service delivery, NORAD should generally aim to support programmes that last for a minimum of 5 years. And as far as possible, there should be add-on options for a further 5 years.
7. All programmes should have a strong data monitoring component. This needs to be adequately resourced and seen as a programme priority. The monitoring process should also seek to integrate with other relevant programmes, as well as national monitoring systems.
8. Build in the counter-factual as far as possible. This was an opportunity missed for CHAI in the States where they work in some LGAs and not in others – this provides “natural experiment” opportunities.
9. Donors should explore ways of using matching funds, result-based financing options or similar mechanisms to encourage more credible, long-term commitments for co-financing health services and substantially reducing dependency and donor-roll-over expectations.
1. **Background and overall approach**

This report presents an evaluation of the NORAD-funded health programme “Accelerating progress to achieve health-related MDGs in Nigeria”. This is an innovative programme that targets the key factors affecting Maternal and Newborn Health (MNH) together with strengthening state and national level data collection and coordination.

Norwegian support to the programme is connected to the co-chairing of the then Norwegian Prime Minister, Jens Stoltenberg, and the then Nigerian President Jonathan Goodluck, of the UN Commission on Life-Saving Commodities for Women and Children. The Clinton Health Access Initiative (CHAI) in collaboration with the Federal Ministry of Health (FMOH) and state and local governments are the programme implementers. Programme implementation commenced mid-2014, and was originally programmed to last through 2015. The severe drop in oil revenues for the Federal Government, led to a 2/3 reduction in federal transfers to the states. This had a negative impact on the States’ capacity to take over the programme activities as planned. A decision was therefore made to extend the project with another year, and the top-up financing from NORAD was available from March 2016. According to current plans, some activities will continue into 2017, before the federal and state governments take ownership of implementation process in the first half of 2017.

The MNH programme has as its over-arching goal to reduce maternal and neonatal mortality in Nigeria with a focus on the three Northern states with the highest burden, Kaduna, Kano and Katsina. Cumulatively, the three states account for 20% of all maternal and neonatal deaths in the country.

The programme seeks to achieve its goal through the following objectives:

1. Strengthen National Coordination in maternal and neonatal care
2. Strengthen State Coordination in MNH, with a focus on six high-burden states
3. Increase the coverage and access to quality comprehensive and basic Emergency Obstetric and essential MNH in three high-burden states (LGA level implementation)

The Terms of Reference called for key factors of the programme to be evaluated with particular reference to relevance, effectiveness, efficiency, institutional arrangements, and risk management and sustainability (attached in Annex 1). The evaluation matrix that was submitted in the evaluation’s inception report is attached in Annex 2.

After the start of the assignment, it was agreed with NORAD to narrow the scope of the evaluation, in order to concentrate the limited resources available on what were considered the key areas of interest. It was agreed that the focus of the evaluation would be on the effectiveness, efficiency and sustainability of programme results. Further, the evaluation would focus on the third programme objective of increasing the coverage and access to quality Maternal and Neonatal Health Care (MNHC) in the three Northern states. Four key programme interventions would be treated as case studies: the midwife mentoring programme; commodity supply; the referral and emergency transport; and the Community Based Management Information System (CBMIS).

In addition to presenting the findings on the components as cases, the report includes specific and actionable recommendations for the continuation of the activities initiated by the programme and for future programmes.
2. Methodology

The evaluation was carried out using a mix-method approach. Qualitative and quantitative techniques were employed for data collection and analysis. The evaluation team consisted of a team leader and an M&E expert, who were assisted during the field work by two research assistants.

It was decided to choose two of the three states for field visits. Considering the relative limited time available, it was decided that it would be preferable to cover two states in more detail, rather than trying to stretch the available resources to cover all three states. Kaduna was chosen as it had characteristics that were different from the two other states, as it represents a diverse mix of cultural and ethnic groups, many languages and a balance of Christianity, Islam and African traditional religious beliefs. Kano and Katsina are both more uniformly characterised by the Hausa language and culture, as well as the predominance of Islam. Kano was selected for logistical reasons, with the proximity to Kaduna and presence of an airport.

Taking security and safety into considerations, two Local Government Areas (LGAs) from those that are adjudged best and worst performing from either the perspective of the programme implementers and or from the inception document were selected from the two States. Two communities were then selected from each of the LGAs, one urban and the other rural. The evaluation proposal including tools, informed consent forms and evaluation factsheet were submitted to Kaduna and Kano States for ethical clearance. The ethical clearance letters were obtained from both States.

The evaluation team consulted with CHAI, who assisted in identifying the key stakeholders in the selected areas. CHAI provided contact persons for each state, who in turn facilitated contact with selected institutions. A list of persons for interviews was drawn up, with contact in each case being made directly by the evaluation team. The evaluation team drew up interview guides for the interviews and focus group discussions.

Open-ended questions with probing follow-up inquiry procedure, conversational style in-depth interviews were conducted with individuals. Group interviews were used where there were two or more individuals from different backgrounds and attributes (sex, age group, and language and religion). However group discussions were carried out with participants with similar attributes and were largely restricted to Traditional Birth Attendants (TBAs), Emergency Transport Service (ETS) drivers and service beneficiaries. Community meetings at the village head’s house were all conducted as group interviews. Interviews and discussions were one-on-one with the participants except in a few cases where officials could not be reached and interviews had to be done by phone. Informed consents were obtained in writing except where the participants preferred verbal consent in which case it was either noted or audio recorded. The evaluator made notes as the interview and discussion progressed. The notes were fully developed soon after the interaction and saved as transcripts. The transcripts were then code-filed and saved as confidential documents with one of the evaluators.

Although Katsina State was not visited, the analysis of indicators, official health statistics and the review of documents took the State into consideration. We acknowledge the importance of focusing on individual, community and state level actors in the implementation chain.¹ The evaluation team reviewed the information within the context of the objectives and identified the supporting quotes (or evidence) that best describe the situation and the theme of interest.

The team spent 10 days of field work. One day in Abuja, five in Kaduna and four in Kano, from 14 to 23 of November 2016. A total of 74 interviews were conducted and 24 group discussions held. A complete

itinerary is provided in Annex 3 and Annex 4 provides an overview of the different categories of respondents in interviews and group discussions.

The document review covered project documentation, including proposal, technical agreement/memorandum of understanding, progress reports, data collection sheets, log frame/theory of change, reference documents from government, and annual reports. Academic material on maternal and newborn care, policy and practice documents and guidelines on maternal and newborn care, as well as the delivery of social services in Nigeria were also consulted.

Interviews and discussions were conducted at all levels of the implementation process with individuals in charge of MNHC, primary health care, mobilisation and health information management at the Federal, State and Local Government where feasible. Health professionals at health facility level including officers-in-charge, midwives, nurses, community health extension workers and data desk officers were interviewed. At the community, group discussions and interviews, where feasible, were held with the traditional birth attendants, women and men opinion leaders, persons involved in local implementation (mobilisation, communication), the community head and the “ambulance” drivers.

In both States, interest groups, including relevant international development partners and Nigeria-registered non-Government organisations (NGOs) and the National and State officials of the CHAI were interviewed. NORAD officials were interviewed as well. A complete list of interviews and focus group discussions is detailed Annex 3.

By asking different actors at the local level about the same issues, it was possible to triangulate the information gathered. By interviewing TBAs, ETS drivers, District scribes, beneficiaries and health personnel, the team ensured that all respondent groups were heard.

Health statistics reviewed included statistics produced by the programme and the official national level District Health Information System (DHIS) on maternal and neonatal health. An attempt is made to triangulate the data from the programme’s own Community Based Information Management System and the official DHIS. There are obvious problems with this, particularly due to two factors:

- Differences in what is covered by the data – whereas the CBMIS seeks to achieve complete coverage in the communities, with collection of information directly from the communities, the DHIS only receives data from the health facilities, and does therefore not capture data from events, like home births, that take place outside the facilities.
- The quality of the data – both the CBMIS and the DHIS has a limited and not constant coverage, as can be seen from the recorded number of live births in each data set. CBMIS has a reporting rate of about 50%, while the DHIS fluctuates from month to month, with an average reporting rate around 60%. Also, the DHIS reports are often inconsistent, with reports not covering the same categories of data every time, while the CBMIS reports are more comprehensive and consistent.

The observations generated by the comparison of CBMIS and DHIS data, should therefore be viewed with caution. Any findings are only suggestive of areas for further analysis.

CHAI conducted a separate evaluation based on the available data that was completed while this evaluation was in process (Sloan 2016). One finding of this evaluation was that the project data from the first two quarters of the project captured too few births compared to the subsequent quarters, and that there would be a risk of overestimating mortality in these quarters. Therefore, the evaluation recommended using the 3rd quarter of 2015 (3Q 2015) as a baseline, which is what has been adopted in for this evaluation, as well.

The relative weakness of the data presents a limitation for this evaluation. Both the project data and the national health data has a relatively limited and uneven coverage (reporting rates of 50 to 60%). Any conclusions based on the statistics must therefore be treated with caution. The evaluation attempted

---

2 Programme supplied data: "MNH-PPFP ME Workbook_PPFP Update Oct2016_V2"
3 Point made by CHAI in comment on earlier draft, email 20.12.2015.
to compensate for this by triangulating different statistics sets, and by attempting to test the programmes theory of change qualitatively through interviews at all levels of the programme.

There were also limitations to the scope for qualitative testing, due to the relatively limited timeframe and resources available. The team strove to maximise its reach by splitting up for many of the interviews, and was also helped by the use of experienced research assistants that assisted with interviews, focus group discussions, transcriptions and statistical analysis.

A lesson for future evaluations would be to allow for more resources in the evaluation of a programme of this complexity.

This final report benefits from extensive comments provided by NORAD and CHAI on an earlier draft. The evaluation team wishes to acknowledge extensive support from CHAI in providing additional information and fact-checking right up to the final stages of report writing.
3. Description of programme and local context

This chapter gives a brief overview of the programme and the context of implementation at state level. This is in order to provide the programmatic, institutional and geographic context of the evaluation.

At the level of service delivery, the programme delivered four key components, which are covered as case studies in this evaluation:

- **Training-cum-mentoring** included health personnel and Traditional Birth Attendants in the targeted Local Government Areas.
- **The commodity supply component** provided key medical commodities and equipment that addressed the leading causes of maternal and neonatal mortality.
- **The referral component** aimed to strengthen the community based systems for Emergency Transport Services, or localised ambulances.
- **A Community Based Information System (CBMIS) for health**. This was built on a previously existing system that had fallen into disuse, which went through the traditional community institutions of ward, village and district.

The programme is embedded in official and traditional structures at the various levels of the Nigerian health service. As we can see from the diagram below there are three basic categories of institutions. The official structures are illustrated in the white boxes with solid lines, the traditional or "community" structures in white with a stippled line, while the CHAI offices and consultants are in light brown boxes.

The four interventions that are assessed are marked with lines in different colours, blue for training and mentoring activities, green for commodities, yellow for referrals and red for CBMIS.

**Figure 1 Institutional set-up for delivery of services in the CHAI programme**

Compiled by evaluation team, and verified with CHAI, Abuja
At the national level, the Federal Ministry of Health and CHAI National Office are in regular communication about the planning, coordination and monitoring of activities, but are not directly involved in the implementation of the state level activities covered by this evaluation.

At the State level, the State Ministry of Health (SMOH) and the CHAI State Office are likewise in close engagement on planning and coordination of state activities. The key offices in the SMOH are the DHIS officer, who is informed of the work done on the CBMIS, the Reproductive Health (or MNCH) Coordinator, who engages in all the areas covered by the programme, the Director of Community (or Public) Health Service, who engages on the community based activities, and the Hospital Management Board and the PHC Management Board or Development Agency.

Whereas the SMOH does play a key role in setting the frames for the work done by CHAI, its direct involvement in implementation and delivery of services through the programme is limited. The actual site of implementation is the Local Government Authority level. The key offices are the Reproductive Health (or MNCH) Coordinator, who is involved in both the training/mentoring programmes and the planning of the distribution of commodities, and the Monitoring and Evaluation (M&E) Officer, who is involved with the CBMIS and also does verbal autopsies with the TBAs.

At the LGA level, the CHAI employed Local Engagement Consultant (LEC), facilitates all activities, with responsibility for all logistics and financing of training, commodities and CBMIS, and who also oversees the running of the referral services.

The beneficiaries and implementers of the programme’s services are at the level below the LGA office, the Secondary Health Facilities (SHFs), Primary Health Centres (PHCs) and the Ward Development Committee. The latter is an official institution that has existed but fallen into disuse but revived to function as a convenor of discussions at the local level.

Additionally, there are informal or community actors and institutions. The Traditional Birth Attendants, the drivers of the Motorbike Ambulance’s (MBAs) and the union drivers (NURTWs), as well as the traditional community institutions, the traditional ward (different from the political ward, referred to above), the village and the district belong to this category.

The figure shows that the services provided through the programme are first and foremost CHAI services. The training, provision of commodities and operationalization of referrals and the data gathering is initiated and facilitated by CHAI. It also shows that at the LGA level, all activities are dependent on the LEC. These are factors that will be discussed throughout this evaluation, with a summing up assessment in the chapter on sustainability.

As to the selection of LGAs in each state, the programme informed the evaluation team that efforts were made to select the LGAs with relatively higher maternal mortality rates in each state. Statistical analysis of the official health data suggested that this had not necessarily been the outcome of the selection process (see data presented in chapter 9). Explaining this, CHAI explained that there were also security concerns playing a part in the selection process, which may have led to the de-selection of some LGAs with high mortality rates.
4. Assessment of relevance of programme

Nigeria is the world’s largest contributor to global maternal and neonatal mortality. Every year 58,000 women die in childbirth, which represents 19.1% of the global rate. The three Northern states that the programme focused on contribute 20% of the overall Nigeria burden of maternal and neonatal deaths. The critical importance of the programme for improving Maternal and Neonatal Health is therefore self-evident.

According to the OECD DAC definition, relevance refers to “the extent to which the aid activity is suited to the priorities and policies of the target group, recipient and donor.” The responses of the stakeholder community that were interviewed reflect the relevance of the programme. From the Federal to the community the programme was acknowledged as relevant and aligned with policy. The Federal and the State Ministries of Health officials demonstrated very good understanding of the programme and have participated in various stages of planning and implementation. For example, the Kaduna and Kano SMOH have annual operational plans (AOP) that all implementers of health programmes in the State jointly developed, which contains components of the CHAI programme. Both the State and Federal ministries claim ownership to the programme.

“The project is unique in that it was attracted to the country by the FMOH and the implementers jointly. Other projects are usually planned and implemented by the donors without the ministry. In fact, I say it is ours more than CHAI’s” FMOH Official, 14.11.16

“We plan and implement together with CHAI in planning – staff and other stakeholders. We developed work plan together, that is what is different from other projects” Kano SMOH policy Official, 21.11.16

Health professionals at the Primary Health Centres acknowledge the relevance of the programme, and highlight the positive impact of the combination of training, commodities and referrals. Health personnel acknowledge being empowered by the programme, through the acquired skills and access to resources necessary for providing quality care.

Community members are unanimous in their appreciation of the programme benefits which filled an important need, and that had improved maternal and neonatal health.

Two of the key providers in the programme, Traditional Birth Attendants and Emergency Transport Scheme drivers consist of community volunteers. The Community Based Management Information System is also built on the traditional institutions and their representatives. The strong community grounding of the programme has raised the interest of other programmes, who have come from other States to study the programmes approach with the intention of adopting relevant models.

“There is strong community participation in the CHAI programme which will encourage ownership and reduce extra-community input” MNCH2 Official, 15.11.16

The Emirate Council in Kano has expanded and scaled up some aspects of the programme such as the CBMIS. The Council made the collection of vital statistics a mandatory responsibility of the village head.

“As we did in the previous health programme, the community can continue the ambulance maintenance, monitoring commodities usage and the patient-health personnel relationship” Ward Development Committee Chairman, 16.11.16

44 OECD DAC. “DAC Criteria for Evaluating Development Assistance.”

5 UNFPA and MNCH2, Sultan foundation and the Chigari Foundation are other health partners that communicated to the team that had learnt relevant lessons from the programme. The Sultan Foundation, with support from UNFPA, has committed to adopting the CBMIS in all 19 Northern States.
However, some respondents were not very optimistic about the capability of the communities to take over the full responsibility and cost of the relevant programme components despite acknowledging the relevance of the programme to intended beneficiaries.

The main strength of the results framework is that the key performance indicators are at impact level, namely reduced maternal and neonatal mortality in the supported areas. It is rare that a programme can demonstrate such control over the achievement of targets at such a high level in the goal hierarchy. There are two programmatic choices that made this possible:

- Firstly the choice by the programme to target whole administrative areas (Local Government Authorities), rather than a selection of individual health stations, and
- Secondly, the inclusion of a monitoring system that captures maternal and neonatal mortality indicators for these areas, as there are no routine data collected through official channels that provides this data.

The programme also has a strong and logical goal hierarchy which shows how the three objectives will contribute to the programme’s goal. This includes 5 different intermediate outcomes under objective 3, which show the different components of the programme. Each intermediate outcome has clearly identified and quantified quarterly targets which are reported against in the annual reports.

Figure 2. Programme goal hierarchy

Although the goal hierarchy and results framework present a clear and logical theory of change, the programme’s progress reports do not go into much detail in the discussion of what has brought about the overall reduction in maternal and neonatal mortality.
5. Case 1: The midwife and TBA training and mentoring programme

This midwife training and mentoring programme covered health care professionals at the Primary Health Centres and Secondary Health Facilities including Community Health Extension Workers, nurses and midwives within the formal health care delivery system irrespective of whether they were under the State or Local Government employment.

The TBA training and mentoring covered Traditional Birth Attendants, who are community volunteers, not formally employed in the health system, with skills acquired through traditional practice for child delivery.6

The training and mentoring programmes were key to strengthening the delivery of services in the areas covered by CHAI. The standard format of the training and mentoring was a one-month course followed by three months of mentoring. The training covered the key identified causes of maternal and neonatal mortality including, among other factors, post-partum haemorrhage (PPH), eclampsia and prolonged labour. For Neonatal mortality this included cord infections and failure to breath at birth. CHAI organised the training with the LEC, taking care of the logistics and identification of trainees. Although in Kaduna the LGA Reproductive Health Coordinator was supposed to work alongside the LEC on the organisation of the training, as far as the evaluation team could ascertain, their role seemed fairly limited.

The programme aimed to reach all health workers in the covered LGAs, as well as Traditional Birth Attendants. As can be seen from the below table, around 90% of the targeted health workers received training and mentoring, although only 55% of those tested could demonstrate the required level of Basic Emergency Obstetric and Newborn Care (BEmONC) skills.

Table 1 Data training and mentoring programme in targeted LGAs

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2015</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of targeted health workers trained</td>
<td>39%</td>
<td>100%</td>
</tr>
<tr>
<td>Proportion of mentored health workers with demonstrated BEmONC skills</td>
<td>0%</td>
<td>90%</td>
</tr>
<tr>
<td>Proportion of targeted health workers mentored</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Proportion of trained health workers enrolled into mentoring scheme</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Programme supplied data: "MNH PPFP ME Workbook PPFP Update Oct2016_V2"

When asked about the relatively low level of demonstrated skills, CHAI responded that the key reason for the lower score was that the majority of trained personnel were Community Health Extension Workers who had very low skill levels prior to the training. They were tested against seven key functions, and required a pass in all of these to meet the required standard. CHAI informs that had the

---

6 Interestingly, training and mentoring of TBAs is not covered in the programme result framework, but numbers of TBAs trained and mentored is reported in the programme progress reports.
pass requirement been set at, for example, demonstrated knowledge of five out of seven function, the rate would have been substantially higher. Therefore, the apparently low pass rate, masks what is still a substantial increase in skill levels.7

All respondents stressed the positive impact of the training and mentoring.

“We have been empowered, what we did not know how to do before we now know how to do” Kano District Head, 22.11.16

“The training has Improved our knowledge and capacity on delivery and care of newborn.” Kaduna Health Worker, 15.11.16

According to the reported data, a total of 1,691 health workers have been trained and almost all of these (1,665) have also gone through the mentoring programme. The last training was held about one year before the evaluation. A repeat mentoring exercise was conducted in April/May 2016.

The content of the training of the Traditional Birth Attendants was different from the National Standard. The official policy is that TBAs should be able to identify signs of complications, in order to aid them arrange for referrals to health facilities for deliveries, but that TBAs should not take deliveries. The programme, however, sought and received agreement from the participating state governments for the TBA training to include skills for assisting deliveries. The justification for this was that there was a scarcity of health workers and that the majority of births took place at home. The TBA training was therefore designed as a proof of concept, and not based on the national standard.

The TBA training included the administration of key medicaments, such as misoprostol (to stop bleeding), and chlorohexidine (to disinfect the cord), as well as the use of Non-pneumatic Anti-Shock Garments (NASGs) to stabilise women suffering from PPH and resuscitation pumps for newborns with problems staring breathing. TBAs were provided with medical kits containing these medicines, NASGs, a resuscitation pump and clean delivery kits (with the necessary equipment to assist a clean delivery at home). A total of 2,980 TBAs were trained and mentored in 2015, and 2,615 of these received follow up training in the first half of 2016 (2016a, 6; 2016b, 5).

The TBAs were unanimously enthusiastic about the training and the positive impact it had on their abilities to provide better and safer assistance at birth. As told by a TBA from Kano:

“Before the training we used to deliver the baby with the mother lying on the bare floor with our bare hands, sometimes unwashed and not knowing it was a risk to us and to the mother and child and then wrap up the baby with the mother’s wrapper. We would then use hot knife to cut the umbilical cord before rubbing either ash or Vaseline cream on it. I feel so bad about this now ... Now we wash our hands with soap, wear gloves and take delivery with the mother lying on the plastic mat. We now use the towel in the delivery kit for wrapping the baby. Chlor cream is used for rubbing on the umbilical cord instead of ash. Thanks to CHAI for training us and giving us the kits. … In my 15 years of TBA work ... I lost about 4 of every 10 deliveries I took before CHAI came to train me. Now I have not lost a single baby or mother since 2014 after that training and I have taken not less than 30 deliveries. I feel very proud of myself. I am comfortable and am confident. I no longer have deaths. I am so good that twice now I had escorted mothers to the health facilities and was told by the health official to go ahead and take the delivery while they watch. I can identify jaundice and I know when to refer. I am highly respected by women in the neighbourhood and the men also give me adequate regards. Thanks to CHAI. They must not go. We want them to remain and continue to give us support through training...” Kano TBA, 22.11.16

The community members interviewed recognised the important services provided by the TBAs. One woman, who did not have personal experience with the TBAs, explained her reason for preferring not to go the health centres:

“I am not comfortable with the idea of going to the health centre because when you go there many women will gather around and see everything about you. ..... Again I don’t like the idea of using ointment for the umbilical cord, because when you use it will not fall until after one week or more but the one used, the toothpaste, will fall off after 3 days.” Kaduna woman, 16.11.16

7 Email from CHAI, 15.12.2016.
A few health workers were unenthusiastic about the TBAs abilities to perform deliveries. One in-charge from a PHC in Kaduna, for example, expressed concern about TBAs getting too confident as a result of the skills they acquired and the commodities and support they received:

“The one thing that needs improvement is that the TBAs should realize their limitations. Now that they are trained, they think they can safely deliver at home” – In-charge at a Kaduna PHC, 17.11.2016

Some were even more critical of the role played by TBAs:

“The TBAs have the medicines and feel that they are very capable to take deliveries themselves. There is usually some disagreement between the health workers and TBAs. Sometimes, it seems TBAs falsify figures on their tally sheets to make people feel they are capable of taking delivery” Kaduna health personnel, 16.11.16

In Kano, on the other hand, the health professionals were supportive of the TBAs. Before CHAI, the TBAs did not have any contact with the health facility and health professionals viewed them with suspicion. Following the training of the TBAs by the health professionals and regular review meetings, mutual respect and a robust collaboration between these two categories of health care providers blossomed. The trust that developed was a useful drive for referral to the health facility and also for safe delivery at home.

“If the delivery was done at home, then the TBAs bring the woman to the health facility to check them. I feel that TBAs should continue their work since they are trained. They also remind the women to come for postnatal care and the children for immunization” Kaduna CHEW, 22.11.16

There is an obvious tension between the positive effect of improving the TBA skills and equipping them to take delivery and the official policy that TBAs should not perform deliveries. This tension is particularly obvious in the context of the states where the percentage of home deliveries were estimated at 67% in Kaduna, 87% in Kano and 91% in Katsina at the start of the project. In this context, it may also be worth noting that Kaduna had near the double number of trained midwives and nurses compared with Kano, and Katsina had even less. This could also explain the more positive attitude of interviewed health workers in Kano, compared to Kaduna, of cooperating with TBAs on home deliveries. Their relatively strained human resource situation makes them more dependent on TBAs.

In conclusion, the training and mentoring programme has been delivered to about 90% of the health professionals and TBAs in the target areas. All respondents described how they had gained in skills and confidence, particularly as the mentoring had helped them internalise the skills and ensure the proper delivery of services and use of commodities. The training and mentoring of the TBAs are likely to have led to a dramatic improvement in the services provided to women delivering at home.

---

8 CHAI 2014, page 52.
9 This point was made by CHAI in a comment on an earlier draft of this report.
6. **Case 2: Access to maternal and neonatal commodities**

The strengthening of the access to commodities for health facilities is a key part of the programme. It aims to ensure the availability of strategic commodities, drugs and medical appliances, to address the key drivers of maternal and neonatal mortality. CHAI’s initial rapid assessment of the existing distribution system revealed that the majority of the LGAs did not have functioning medical stores. Therefore, a push system was developed to distribute commodities from the state stores, directly to the health facilities. This helped ensure rapid and regular access to the required commodities, and a system for replenishment when necessary. However, it also meant that the existing systems of distribution were at least partially by-passed.

The supplied commodities included misoprostol, chlorohexidine, Non-pneumatic Anti-Shock Garments and suction bulbs. The original basket of medicines and equipment also contained post-partum kits, that included basic supplies for a baby’s first three months, such as diapers, bath items, clean sheets and sanitary pads and a gift cloth for the mother. The latter proved to be particularly important as an incentive for women to deliver at health facilities. The programme procured and delivered the medicines and equipment, free of charge to the participating health facilities.

CHAI and the State health services developed a commodity distribution plan for the LGAs. The CHAI LECs allocated commodities to different PHCs within the LGA, conveyed them to the LGA, and invited the PHC officer in-charge (OiC) and the TBA focal persons to meet at the office of the RH coordinator where they took delivery of their allocation. The team did not see any records of delivery or receipts within the health system. Only the allocation sheet is left at the RH coordinator’s office. In Kano, however, commodity distribution by LEC is not central and the MNCH coordinator accompanies the LEC during delivery of commodities directly to health facilities.

It was a common agreement that access to free supply of commodities had played an important part in the documented improvement in maternal and neonatal health in the areas covered by the programme. Respondents consistently ranked access to commodity a close second to the training –cum-mentoring components of the programme as the most effective. Misoprostol was most often highlighted as having made a large difference since it is used for stopping after birth bleeding (post-partum haemorrhage). The TBAs referred to it as the “wonder tablet”.

"The post-delivery kits and medicines especially misoprostol has helped a lot" Kaduna TBA 17.11.16

The health officials stated that the system of supplies had functioned well for the duration of the programme. The last delivery made by the programme was made in May 2016 in both States. There was no ambiguity about the source of supply of the commodities. The statement, "supplied by CHAI" was clearly inscribed on the PHC medical stock cards. There was expressed anxiety among state and LGA officials about timely access to commodity supply at the end of the programme.

"The programme cannot be sustained without CHAI, with all the commodities they give free” Kano TBA 21.11.16

"We are short of the wonder tablet – Miso. The TBAs like it a lot. The in-charges also like it. It is indeed a wonder tablet” Kaduna LGA Staff, 18.11.16

The evaluation team observed stock outs of misoprostol in all health facilities visited, many of them had also run out of Clean Delivery Kits. There were concerns that stock-outs would be a major disincentive for women to deliver at the health facilities, a situation that will significantly erode current benefits.
One commodity that was cited as having worked well as an incentive for women to deliver at the facilities was the Post Delivery Kits.

“The free post-delivery kit has actually enticed many pregnant women to deliver in health facility” Kano TBA, 21.11.16

The supply of the Post Delivery Kits, however, only took place in the first round of supplies at the start of the programme. Respondents highlighted the supply of the kits as the initiative that was most effective in terms of incentivising women to deliver at the clinics. The non-prioritisation of continued delivery of this commodity may have therefore contributed to the failure to sustain an increase in the percentage of women delivering at the local health facilities rather than at home. The reason given for dropping this item was its high cost (roughly USD 35 per kit).  

The supply of commodities has played an absolutely crucial part in the programme. On the one hand, it has made possible the delivery of quality services at the health facilities. The availability of the most important medicines at the facilities has also provided incentives for women to deliver there. On the other hand, the supply of commodities to TBAs, combined with the training in their proper application, has also led to a dramatic improvement in the quality of support that TBAs can provide for home deliveries. The vulnerability of this component is very clear in the observed stock out of crucial medicines, such as misoprostol, in the Primary Health Centres visited.

---

10 Information provided in email for CHAI, 15.12.2016.
Case 3: The referral and emergency transport services

The referral and emergency transport services provide the important link between the homes and the health facilities. This is a strategic and relatively low cost intervention that provides a large value addition to the communities. In the informal poll performed by the evaluation team, the referrals were ranked as the third most important initiative by the programme.

The CHAI programme procured 250 motorbike ambulances (MBAs), motorised tricycles with a small cabin for the driver and a stretcher. These were delivered straight to the traditional communities.11 The LEC in each LGA contacted the Chiefs of the traditional Districts and asked them to identify drivers for the donated MBAs. The Chiefs used their own networks and the National Union of Road Transport Workers to identify the drivers.

The NURTW drivers already had a number of drivers that were registered as Emergency Transport Service (ETS) drivers. They had the incentive that every time they assisted pregnant women in the community with transport to a health facility, they would move to first place in the local taxi line, and pick up the next lift. In addition, they would also often receive compensation from the family of the patient that needed transport.

"Sometimes the relatives or the husband is happy with us and they will give us money or buy fuel for us" NURTW Driver, 22.11.16

Both the PATH2 and PRRINN-MNCH programmes had supported ETS drivers through the NURTW previously, but reportedly in a less systematic way than the one introduced by CHAI.

"We have been doing it before. The difference now with CHAI is that we give reports” NURTW Driver, 16.11.16

Following the identification of drivers, the MBA drivers as well as the existing NURTW volunteers, were provided with basic training from CHAI, on "how to transport pregnant women to hospital."12 This led first to an increase in the number of NURTW drivers who were engaged as ETS drivers, with the MBAs starting a bit later, as the limited number of MBAs already present were operationalised in May 2015, and the first new motorbike ambulances were delivered by the programme in the third quarter of 2015. Telephone details of drivers were consequently shared with health facilities and TBAs. Nominally, the communities were to be responsible for the provision of fuel and maintenance for the MBAs.

The DfID financed MNCH2 programme aimed to introduce an own-design referral programme in Kano, but were told by the State that it has decided to standardise the CHAI model.

The operationalisation of MBAs led to a significant increase in the number of documented referrals, as can be seen from the following figure.

---

11 Although they are formally owned by the States.
12 Interview, ETS driver, Kaduna, 17.11.16.
The number of MBA-assisted referrals has exceeded those of NURTW since the fourth quarter of 2015. The number peaked in the fourth quarter of 2015, at over 3000 MBA-assisted referrals and almost 1600 NURTW-assisted referrals. The combined number of assisted referrals has dropped by more than 1000, and the reduction is evenly distributed among the MBA and NURTW drivers.

According to CHAI’s second bi-annual report for 2015, the following was put in place to ensure effective operation of the MBAs:

“To ensure proper maintenance of the MBAs, CHAI has identified and trained state and community mechanics and maintenance officers to conduct routine maintenance and repairs. To ensure sustainability, CHAI worked with community district/village heads and WDCs [Ward Development Committees] to establish sustainable contributory schemes and initiatives to ensure continued funding. By December 2015, roughly 33% of the communities had taken full responsibility for the maintenance and operation of the MBAs.” (CHAI 2016a, 29)

This situation was not fully confirmed by the investigations of the evaluation team. Although interviews with LGAs confirmed that CHAI had assisted with the identification of mechanics who were trained to maintain the MBAs, it was also clear that there was very limited funding to conduct such repairs, and that there were no regular routines in place for maintenance. There were also contact points established between drivers and districts and or WDCs, but the extent to which any financing was made available for the drivers varied. All drivers consulted in Kaduna reported that they received no financial contribution from community leaders. In Kano, however, some of the visited communities had committed resources to the maintenance of the MBA vehicle.

Most of the interviewed drivers reported that they generally ended up paying for fuel themselves. Some of them even did minor maintenance on the MBAs. CHAI has taken responsibility for major maintenance, notably replacement of batteries and windscreens. The LEC is the contact point for the drivers.

“I usually fix any major maintenance such as the battery or others like that. LEC, 19.11.16

“The LEC came to replace the battery since I could not do it. Any cost that is beyond me I ask the LEC”

ETS Driver, 16.11.16

The beneficiaries acknowledged the usefulness of the ETS even though some of them have not used it and its effectiveness remains a subject of debate. A beneficiary’s experience in Kaduna represents many others that the evaluators met:

“I am aware that such a programme exists while attending ANC with the last pregnancy. We were told that if we need assistance we can call the TBAs and they will be there to help. I have been aware of it for 2 years now. I had twins last year at home but I sent for the TBA because she is my neighbour when I started labour. She came and called the ETS driver, but before the driver gets to my house I delivered
twins. I was bleeding after delivery but the TBA gave me drugs and the bleeding stopped. It is beneficial in the sense that before we only manage at home but now we can call for help and get assistance when there is complication and even when there is no complication” Beneficiary woman, 16.11.16

Almost all respondents raised concerns about the realism of communities to fund MBAs. Moreover, there is a lack of concrete plans for how community financing can be achieved and sustained. The opinion from the minority who still considered community financing to be a viable option, mainly at the state or federal level, was "community education" for them to "realised the importance" of the MBAs. Others dismiss this option as unrealistic:

"What is the point of educating the communities if they don’t have any money?" Kaduna SMOH official, 17.11.16.

LGA officials, by and large, express similar opinions:

"I don’t see how the community can do anything. They just leave it to the driver or the relatives of the patient to maintain the vehicle. Unless you people come to help us. I don’t see how the community can maintain the vehicle. LGA official, 17.11.16

In Kano, where the communities had come further than in Kaduna in establishing financing mechanisms for MBAs, there was a consensus that a longer duration than two years will be required before a dependable source of community financing could be developed.

There are plans to introduce 24-hour health care in all health facilities (Kano) and designated health facilities (Kaduna) as well as recruitment and training of many more CHEWS in Kano on MNCH activities to enable them take deliveries in emergency cases. These plans when complemented with increasing confidence and competence of the TBAs to timely recognise danger signs and refer will have an inverse relationship with the need for emergency transport drivers. It is possible that the decline in the number of ETS-assisted referrals could at least in part be a proxy indicator of programme success in the promotion of timely referral, education and declining number of birth-related complications.

In conclusion, the referral system provides an important link between services provided at home, through TBAs and CHEWs, and the health facilities. Although there is no strong data on this, it seems certain that the improved availability of ambulance services, has made an important contribution to the reduction in maternal mortality. The reliance of the service of financial support from communities, makes its sustainability vulnerable.
8. Case 4: The health management information system

The Community Based Management Information System (CBMIS) was set up by the programme to enable monitoring of the effects of the programme. As noted earlier, the existing national system for collecting health data, the District Health Information System (DHIS), relies solely on information collected from the primary, secondary and tertiary health facilities, which means that it does not capture data from home births. This obviously means that it is of only limited use for tracking maternal and neonatal health, and that the CBMIS fills an important information gap.

The Community Based Management Information System builds on an existing emirate system that was used formerly, but had fallen into disuse. The system builds on the collection and aggregation of reports through neighbourhoods or settlements (groups of 5 – 10 households) at the lowest level, to the traditional ward, to the village and up to the district. A chief, who has a secretary or “scribe”, who collects the reports from the villages in the district, heads the district. The district scribe then passes the information to the LEC. A total of 1,500 traditional leaders are/were involved in the gathering of reports (Sloan 2016, 18). The LEC compiles the reports from the district scribes in the LGA and passes them on to the CHAI state office. The LEC also shares the reports with the LGA M&E officer. The CBMIS collects information on the number of life births, still births, maternal deaths and neonatal deaths. Together this provides data for the programme’s key performance indicators.

"Deaths reported from the village head reporting system are verified by government staff and doctors through a verbal autopsy verification system, whose output is to confirm a maternal or newborn death and cause. Together, these systems provide comprehensive data on key maternal and newborn events that do not routinely find their way to the national reporting systems." (CHAI 2016b, 18)

The CBMIS process also served an important function through community sensitisation. CHAI revitalised the meetings of the Ward Development Committee (WDC) at the level of the political ward, were the data and matters relevant to the improvement of maternal and neonatal health were discussed. It was generally acknowledged that this formed an important part of the community sensitization conducted by the programme, which in itself contributed positively to maternal and neonatal health.

Whereas many of the health personnel at the PHC level had not even heard of the CBMIS, officials at LGA and State level were universally well informed about the system, and appreciated its importance:

"The CBMIS is very important. Without data you cannot manage. Data also helps with sensitization in the community. We need to know how many have died and what of. Kaduna SMOH official, 18.11.16"

Other donor supported programmes have expressed interest in adopting and expanding the system. MNCH2 and UNFPA are currently in the process of rolling it out in non-CHAI LGAs in Kaduna and Kano, as well as Katsina. The Sultan Foundation and Chigari Foundation have also showed interest in using this in other States.

"Another reason [CBMIS] has been successful is that other partners and organizations are willing to adopt some of the innovative strategies we have introduced to Kaduna State. Organizations like the Chigari foundation, which is been funded by the Bill and Melinda Gates Foundation ... have invited us to make a
There is also a spoken commitment from Kaduna and Kano states to take ownership of the programme. The chart below show the development of the number of reporting communities, and we see that as of September 2016, the number of communities reporting are less than they were at the beginning of the programme – from 438 communities in the three states in January 2015, to 363 in September 2016. At its peak, in August 2015, 561 communities submitted data. According to the CHAI progress report for the first half of 2016, by the end of 2015, reports were received from approximately half the communities from which reports were expected.

Figure 4 Number of villages submitting CBMIS reports

The figure above show a declining tendency in the number of villages submitting reports. It is clear, however, that the number of villages reporting only tells part of the story. As was pointed out by the recent evaluation of the CHAI data, the number of live births reported in the first two quarters of 2015 were substantially lower than the numbers recorded from the third quarter. This means that even if the number of reporting villages in January 2015 was on par or above the number reporting in early 2016, it is still certain that the data from early 2016 is more complete.

The data collected is triangulated at the LGA level against a parallel reporting system that is set up through the TBAs. There is a focal TBA in each political ward, who gather reports on the same events (live births, still births, maternal and neonatal deaths) from the TBAs in the ward, and pass the data on to the LEC. The findings from this system has found not to be as reliable as the system set up through the traditional leaders due to cases of double reporting where different TBAs report the same incidents. However, the findings have been found to correlate with the findings of the CBMIS, thus supporting its validity.

Concerns on the validity of the data was also the reason why CHAI commissioned its own evaluation of the data, and as noted above, this was found to be solid, with the exception of the first half of 2015. With a reporting coverage of only about 50% from the targeted communities, however, the system obviously remains vulnerable and will require continued support to be maintained at a good enough standard.

In conclusion, the CBMIS is a necessary supplement to the routine data collection of the official health management information system. Without it, one would be totally reliant on surveys to make estimates of maternal and neonatal deliveries. There is therefore a good case to be made for its being a cost-efficient and necessary part of the national health information system. Although there are still concerns regarding sustainability and the extent of its coverage, interest from other partners in continued support and expansion is promising.
9. Overall assessment of effectiveness and efficiency of programme

This chapter assesses the effectiveness of the programme as a whole and the separate components. The cost-effectiveness of the programme is also considered.

9.1 Effectiveness

According to the OECD DAC criteria, effectiveness is “a measure of the extent to which an aid activity attains its objectives.” The programme had exceptionally ambitious targets. It aimed to achieve 40% reduction required to achieve the MDGs for maternal and neonatal mortality within a period of 18 months in the three States. Consequently, the start of the programme was first delayed and then extended. At the end of the programme, it will have lasted just over 2 years. This evaluation considers the results achieved by the project up through June 2016.

The project progress report for January to June 2016 presented data that showed that the programme delivered well beyond its targets (CHAI 2016b). CHAI commissioned an independent evaluation to review and validate the reported results. The evaluation confirmed the positive impact of the programme, albeit with an adjustment of the baseline (Sloan 2016). The evaluation observed that the number of births reported in the first two quarters of 2015 were substantially lower than in subsequent quarters. The evaluation recommended that the number of births reported in the third quarter of 2015 (Q3 2015) be used as a baseline to avoid the risk of overestimation of the mortality rates. The data on programme achievement in the implementers’ original report and the independent evaluator’s adjustment are shown in Table 1.

Table 2 Goal achievement key mortality indicator

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal mortality (/100,000)</td>
<td>1,438</td>
<td>963</td>
<td>440</td>
<td>310</td>
<td>260</td>
<td>280</td>
<td>79%(^{14})</td>
<td>37%</td>
</tr>
<tr>
<td>Neonatal mortality (/1,000)</td>
<td>22</td>
<td>18</td>
<td>15</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>60%</td>
<td>43%</td>
</tr>
<tr>
<td>Still births (/1,000)</td>
<td>52</td>
<td>32</td>
<td>22</td>
<td>21</td>
<td>18</td>
<td>18</td>
<td>65%</td>
<td>15%</td>
</tr>
</tbody>
</table>

\(^{13}\) OECD DAC. “DAC Criteria for Evaluating Development Assistance.”

\(^{14}\) This percentage is calculated from the data originally reported by CHAI, which shows a marginally higher maternal mortality for the last four quarters than the cleaned data from the evaluation.
The adjustments showed a significant lowering of programme claim regarding the size of the reduction in maternal and neonatal mortality and the rate of still births. However, the programme was still very close to achieving the targeted 40% reduction in maternal mortality, and did slightly better than the 40% target for neonatal mortality. Since the programme commenced intervention in the first quarter of 2015, any gains before the third quarter of 2015 would be missed, the achievements are probably understated. Consequently, it is likely that the programme’s goal of a 40% reduction in maternal mortality was in fact achieved.

WHO estimated that Nigeria achieved a 40% reduction of the Maternal Mortality Rate between 1990 and 2015, over a period of 25 years.\(^\text{15}\) That the CHAI programme achieved the same rate of reduction in only 12 months is impressive.

The table also gives the data for still births. Although this is not an impact level indicator in the programme, it has been tracked throughout. The data shows that there was 65% reduction recorded since the first quarter of 2015. The rate of reduction from the third quarter is a lower, but still statistically significant 15%.

What was the importance of the different programme component in achieving these remarkable effects? The short answer to this question is that we do not know the relative impact of each component. There most likely is not enough data of sufficient quality to make a detailed assessment of what has brought about the decline in mortality and how. There has been little or no attempt in the programme reporting to analyse the impact of separate components. And the recent evaluation of programme data also observes that a professional survey would be required to describe in detail

*Given the magnitude and significance of mortality declines resulting from this program, it would be a wise investment to design and implement a household survey to produce rigorous, widely publishable results that serve to validate the current results as well as describe in detail which interventions had the most impact.* (Sloan 2016, xii)

The evaluation team did an informal poll with the respondents, asking them which component was had had the biggest impact. By far the most respondents placed training- mentoring and commodity supply in the first two places with a slight preference for training- mentoring. The ambulance services came in third overall, although quite a few also ranked them in the top two.

All respondents, without exception, stated that the training mentoring and the commodities had been instrumental in achieving the programme’s targets. At the community and LGA level, respondents agreed that the ambulance programme was an important factor. Several respondents at state level expressed doubt about the ambulance system, because they were not convinced that the Motorbike Ambulances were sturdy enough for the road conditions, particularly in rural areas.

One point made by many, however, was that the strength of the programme was in the complementarity of the three programme areas. The training and mentoring meant the health personnel was able to provide better quality services, and the commodities meant that they always (or mostly) had the most important medicaments and equipment at hand, and knew how to use them. Moreover, TBAs were now trained to provide better services, they were in a better position to identify signs of complications and to arrange referrals through local ambulances, and they could also themselves deliver safer, as they were trained and equipped to do deliveries at the mothers’ homes.

Increasing the share of births taking place at health facilities under the care of skilled birth attendants, which according to official definitions do not include TBAs, was one objective of the programme that was expected to contribute to the targeted decrease in maternal and neonatal mortality. The target for the covered Local Government Authorities in the states was 37% by the end of 2015 (Table 3).

Table 3 Percentage of facility level births

<table>
<thead>
<tr>
<th>Proportion of women giving birth at health facilities (%)</th>
<th>Baseline</th>
<th>Q1 2015</th>
<th>Q2 2015</th>
<th>Q3 2015</th>
<th>Q4 2015</th>
<th>Target 2015</th>
<th>Q1 2016</th>
<th>Q2 2016</th>
<th>Q3 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23</td>
<td>17</td>
<td>25</td>
<td>26</td>
<td>26</td>
<td>37</td>
<td>31</td>
<td>28</td>
<td>28</td>
</tr>
</tbody>
</table>

As a result of low reporting levels, the reliability of the quality of the data collected before the third quarter in 2015 should be used with caution. It is noteworthy that there is very little increase in the fraction of all births that has taken place at the health facility level from the 2nd quarter of the programme. This is an important factor to take into account when assessing what has caused the dramatic decline in the maternal mortality in the three states. The fact that the decreased mortality has been achieved in the context of a continued high level of home births, shows that improving the quality of services provided for women delivering at home is also a viable strategy. It is suggested that the TBAs may be more influential than perhaps previously thought.

One reason for the persistently low level of facility-level births is that health facilities at the primary level of care are accessible during the day whereas most births, according to the TBA cited below, are delivered in the night.

“Because women give birth most times at night, one challenge we have is that the nearest PHC does not run a 24 hour service. Which means we have to travel a distance to a 24 hour service health facility and this causes delay. So we want them to upgrade the nearest PHC centre to us” Kano TBA, 22.11.16

There are financial and human resource constraints to increasing the number of hours the health facilities remain open. It may be unrealistic to expect a significant increase in the number of health facility birth in the short to medium term. Future support to MNCH in Nigeria will need to take this important factor into consideration.

One would expect that the combined effect of training and mentoring of midwives and medical staff and the supply of commodities to have a positive effect on maternal mortality at the health facilities. The project has not, however, produced any data to show whether this is the case. The project data is generated from the CBMIS, which is based on the reports generated through the traditional institutions at district level and below. As noted above, more data is required to determine what the key contributing factors were in achieving the reduction in mortality, including for determining the role played by TBAs.

An attempt will be made here to take a closer look at the facility data based on some of the project data and data from the National Health Management Information System through the official database, District Health Information System (DHIS). First we look at the project data on deliveries at health facilities and maternal mortality rate segregated by the States. There are some interesting similarities and differences between the states.

Figure 5. Proportion of facility level births in each state

If we take the third quarter as the base (keeping in mind what we the earlier observed weaknesses in the data from the first two quarters of 2015), we see that there has been a slight increase in the

---

16 Source: CHAI 2016a, page 50 for data up to Q4 2015, and Excel file from CHAI ‘MNH PPFP ME Workbook_PPFP Update Oct 2016_V2’ for 2016 data. The baseline estimate for 2014 is from the CHAI provided Excel file: ‘MNH MDG Summary framework (Updated baselines) (30 LGAs only) 062916’.

17 Source: CHAI data – excel file: MNH PPFP ME Workbook_PPFP Update Oct 2016_V2’. The third quarter of 2016 shows a dramatic further decrease in maternal mortality, down to less than 200 for all states. It is difficult to explain this data, and it has been decided to leave it out and remain with the data up to Q2 2016 which has already been quality assured by the Sloan evaluation.
proportion of facility level births in Kano and Katsina, while there has been no change in Kaduna. This data should probably be treated with a bit of caution, as official data indicate that the proportion of women delivering at facilities is 35% in Kaduna, 20% in Kano and 9% in Katsina, which is very different from the picture painted by the project data.

Figure 6. Maternal mortality in each state

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaduna</td>
<td>1156</td>
<td>1020</td>
<td>424</td>
<td>199</td>
<td>360</td>
<td>170</td>
<td>360</td>
<td>-60 %</td>
</tr>
<tr>
<td>Kano</td>
<td>1156</td>
<td>760</td>
<td>393</td>
<td>412</td>
<td>170</td>
<td>269</td>
<td>170</td>
<td>-32 %</td>
</tr>
<tr>
<td>Katsina</td>
<td>2395</td>
<td>1176</td>
<td>579</td>
<td>320</td>
<td>375</td>
<td>450</td>
<td>375</td>
<td>-22 %</td>
</tr>
</tbody>
</table>

When we look at the registered maternal mortality rate in the three states, on the other hand, we see, as expected, that the maternal mortality rate has decreased in all states. Surprisingly, it has decreased most in Kaduna over a period when there was no increase in the proportion of women giving birth at facilities. And it has decreased the least in Katsina, where maternal mortality also remains the highest, despite having the highest recorded proportion of facility level births. The programme data, through the CBMIS, does not distinguish between maternal deaths at home or in health facilities, so it is not possible to use this data to analyse the development rates at the supported health facilities.

The official reporting system through the DHIS, on the other hand, does generate mortality statistics from the health facilities. Seeing that the CHAI programme covers 10 LGAs in each state, this also provides a “natural experiment” as the LGAs not covered by CHAI (non-CHAI LGAs) are effectively the counterfactual. The graphs below show the recorded Maternal Mortality Rates (MMRs) for the Primary Health Centres and Secondary Health Facilities in Kaduna, Kano from the 3rd quarter of 2014 to the third quarter of 2016.18

The DHIS data for Secondary Health Facilities in Katsina is largely missing, which indicates a very low reporting percentage. Therefore, for Katsina only the data from PHCs is included in the data presented below. Achieving a higher reporting coverage for the DHIS is one of the objectives of the programme.

---

18 Calculated from DHIS data
As we can see, the MMR at primary facilities in both Kaduna and Kano has remained relatively low at rates mostly below 300 maternal deaths per 100,000 live births, often much lower. The mortality rate at PHCs in Katsina is higher (notice the scale is different), and there is more of a reduction in non-CHAI than in CHAI LGAs.

At the secondary facilities, the mortality rates are higher, with rates exceeding 1,000 in Kano, and coming just up to 1,000 at the highest in Kaduna, although for both states the rate drops below 1,000 by the end of the period recorded.

Two aspects of this data are particularly noteworthy:

- The MMRs for the Primary Health Centres in both states are significantly lower than the MMRs for the Secondary Health Facilities. This is almost certainly due to women experiencing serious complications being more likely to be referred to secondary, rather than primary facilities. Thus, SHFs get more of the potentially fatal cases.

- There is little observable difference between the CHAI and non-CHAI LGAs. For most cases, the mortality rates follow each other fairly closely, and there is no big difference from the start of the two year period to the end. The biggest difference is in registered MMR at PHCs in Kano, where MMR is much higher in non-CHAI LGAs. There was, however, no bigger difference at the end of the period than at the beginning.

On the face of it, there appears to be little difference between registered maternal mortality at health facilities covered by the CHAI programme and the counterfactual, the PHCs in the non-CHAI LGAs. It
is important to keep in mind, however, that the increase in referrals from the Emergency Transport Service in CHAI LGAs (see figure 2, below), will have led to more women with serious complications having been brought to, especially secondary, health facilities. This in turn would have pushed mortality statistics up through the period of the programme.

A similar trajectory in the development of maternal mortality in the period of the programme between CHAI and non-CHAI LGAs could therefore mask a significant improvement in the services delivered in CHAI LGAs, if it is the case that a significantly higher number of referrals of women with serious complications has not led to an increase in the mortality rate. To ascertain if this has been the case, it would be necessary with more detailed analysis, and possibly more data than is available at the moment.

A significant corollary to this is that if there has not been a greater reduction in the mortality rates at health clinics than what is indicated by the DHIS data, then the larger part of the reduction in maternal mortality must have been brought about in the deliveries at home. This indicates the significance of the role that TBAs can have played in achieving the programme’s ambitious targets.

9.2 Efficiency

According to the OECD DAC criteria, efficiency “measures the outputs – qualitative and quantitative – in relation to the inputs.”\(^\text{19}\) It is beyond the scope of this evaluation to make a detailed assessment of the cost-effectiveness of the programme, but the project is considered to provide good value for money provided that the lessons gained are brought forward and used in future programmes. The shortness of the programme increases the risk that the gains of the programme are not institutionalised. There is therefore a good argument to be made for follow up support to ensure that the lessons of the programme are documented and analysed.

One aspect of the programme which has been considered costly is the mentoring component of the training and mentoring programme. When discussing this with the CHAI programme team, the argument was made that the training delivers so much information, both theoretical and practical, that it is not realistic to expect the trainees to internalise all the knowledge without the follow up mentoring programme. This perception was confirmed in the interviews with health professionals and TBAs who all emphasised the importance and benefits of the mentoring programme.

The referrals system is also a potentially cost-effective intervention. Although the cost of procuring the MBAs was substantial at more than a third of total programme costs in the second half of 2015 (2016a, 48), the running costs are much more modest, and they can thus provide a long-term cost-effective solution. However, this is dependent on continued maintenance and follow up that ensures that the majority of MBAs remain operational in the years to come.

Another aspect of the cost effectiveness of the programme that needs continuous attention at the federal level is the cost of procuring medicines. This is proving time consuming and costly, and there would be considerable gains to be made by getting a better federal system in place for efficient and cost efficient procurement of medicines and medical supplies.\(^\text{20}\)

The CBMIS delivers important information that is presently not captured by any other routine monitoring system in the health sector. The costs required are relatively modest. The fact that it is now being explored by a number of other programmes for further institutionalisation in the three target states and beyond indicates that this has been a good investment with a high benefit relative to cost.

On a whole, the very fact that the programme has delivered a remarkable reduction in maternal and neonatal in 30 LGAs spread over the three Northern States, indicates good value. The long term impact of the programme is also potentially substantial, due to the interest the programme and its approach appears to have gained at federal and state level, as a model to be considered for replication elsewhere. If on the other hand, there is limited follow-up, and the systems prove not to be sustainable, this would

\(^{19}\) OECD DAC. “DAC Criteria for Evaluating Development Assistance.”

\(^{20}\) Interview with CHAI programme officer by teleconference, 8.12.2016.
obviously detract from cost-effectiveness of the programme in a longer term perspective. The sustainability issue is the topic of the next chapter.
10. Assessment of sustainability

The handover of the project to the government has been delayed from early 2016, to early 2017 due to a national financial crises. Following the fall in oil prices and federal income, the federal transfers to the states have been reduced by two thirds. This has led to obvious problems for the states to honour previous budgetary commitments for the health sector. As a consequence of this the project was extended by a year, with a reduced budget, in order to make more time for the handover through securing government funding, as well as mobilising further donor support to carry the project forward.

According to the OECD DAC criteria, sustainability “is concerned with measuring whether the benefits of an activity are likely to continue after donor funding has been withdrawn.”[21] The Government at both Federal and State level are active participants in the planning and decision-making processes as co-implementers and lay claim to ownership of the programme. All the high level officials of the health system demonstrated adequate knowledge of the programme goal, process and an understanding of the mandate of CHAI to “accelerate the reduction” of the maternal mortality rate within a highly limited period. They expressed government’s commitment to sustain the benefits of the programme by maintaining the process that CHAI’s engagement had established.

The embedment of the process into the health system from the onset laid the foundation for the ownership of the strategies. The institutional frameworks for coordination include the following structures:

- The Health Partners Coordinating Committee (HPCC), at the Federal level, which has all the directors at FMOH involved and the decisions made at this level can only be changed by the national council on health. It meets quarterly and is chaired by the Minister. It did not meet in 2015, primarily due to the distractions caused by the elections, but has started to meet quarterly again in 2016.[22]
- The Core Technical Committees (CTCs) in each of the States were rejuvenated by CHAI, after having been largely dormant earlier.[23]
- The MNCH committee at LGA level, met quarterly through 2015. The committees, which were also rejuvenated by MNCH2 with CHAI support, have stopped meeting in 2016 as the funding from CHAI to run the meetings has stopped.
- The Ward Development Committees (WDCs) at the political ward level was rejuvenated by CHAI to discuss issues related to MNCH, including results from the CBMIS. It has stopped meeting after the logistical support and follow-up from the LEC ceased.

As can be seen, with the exception of the federal level, the structures of coordination and information sharing, although fully integrated with official government structures, are heavily dependent on the convening role of CHAI, which includes calling meetings and financing refreshments and transport. At the LGA and Ward level, the meetings have ceased with the end of CHAI’s financing. The failure of government to pick up these relatively minor administrative and financial burdens poses questions as to the strength of the government’s stated commitment to take over the programme.

CHAI has developed state transition plans for each of the states (CHAI 2016e, 2016f and 2016g). These present the process to date of handing over standing operating procedures for the different components, and the proposals for who will be taking over responsibility of the activities. The plans also mention lobbying for commitment from the states to provide for programme activities in their budgets. This shows that CHAI has attempted to address the difficult issue of handing over the programme to the States within the limited time at their disposal. It remains an open question, however, whether it is realistic to expect transition to take place as hoped, without active follow-up.

---

21 OECD DAC. “DAC Criteria for Evaluating Development Assistance.”
22 Telephone interview with CHAI, 8.12.2016.
23 Interview FMOH officer, 21.11.16.
The team’s assessment on the sustainability of the programme focuses on the four components of the programme and the institutional capacity of the LGA. The latter is considered first.

**The capacity of the LGAs**

The role played by CHAI is important and there is a general agreement that the institutional set up established through the programme should continue and be maintained. The main issue regarding how realistic it is for the LGA to take over ownership of the activities and processes set up by the programme is regarding the very central role that the LEC has played throughout.

Although the LEC is supposed to have been working alongside the LGA M&E officer (in the case of the CBMIS and referrals) and the LGA RH Coordinator (in the case of the training/mentoring programme and the commodities) the team has seen little evidence of a systematic approach to capacity building. As described in the previous chapters, the LEC appears to be the instrumental person in almost all the aspects of the programme activities that involves the LGA administration.

There is no systematic assessment of any capacity gap at the LGA level. When asked to what extent the LGAs had the required capacities to take over the programme, according to the government’s stated commitment, a senior SMOH officer replied that it is the responsibility of CHAI to perform the necessary coaching, and also the responsibility of CHAI to monitor and assess to what degree this has been done.  

Although it is clear that the LGA M&E officer and the LGA RH Coordinator have both been exposed to most of the tasks they would be required to take over, it is doubtful that they would be able to take over the tasks and perform them without the guidance of an external agent. The ability to perform the tasks is also dependent on this being prioritised by the LGA and the required resources being made available.

**Training and mentoring**

The CHAI programme has contributed significantly to building strong capacities among health workers. Even if all further training and mentoring were to stop, there would remain for a long time significantly enhanced skills for providing quality maternal and neonatal care at Primary Health Centres and Secondary Health Facilities.

At the same time it is clear that there is staff attrition and that there is a need for continued training and mentoring to maintain the present level of skills over the medium to longer term. As noted by one of the State level officials:

> "Things are dynamic, not static, there is a continuous need for training." SMOH official, 18.11.16

There are currently plans to make significant further investments. Under a USD 500m World Bank credit through the Saving One Million Lives (SOML) programme, USD 1.5m will be provided to each state. The Kaduna SMOH informed the team, that they would use this financing to strengthen 255 selected Primary Health Centres. According to them, this support will primarily go towards the employment of 800 additional medical staff, mostly midwives.

In all three programme states, the DfID financed MNCH2 programme is planning to expand to the CHAI LGAs. There is therefore good hope that the gains, in terms of strengthened capacity of the medical staff at primary and secondary facilities may be maintained or even further strengthened.

The sustained impact of training and mentoring the Traditional Birth Attendants is less certain. Even if it is likely that the achievements achieved through their training and mentoring will be sustained in the shorter term, there are obvious needs for regular top-ups of training for previously trained TBAs and training for new arrivals.

It is doubly important for the TBAs, that their significant role in the achievement of the programme’s results are appreciated. It is possible that their role has been underestimated, particularly by state and federal level officials. If they are to continue to receive further training and to be provided with the commodities they need to do their job, it is necessary that they get full official recognition for their role.

---

24 Interview with SMOH official, November 2016.
25 Interview SMOH official, 21.11.16.
and that they are prioritised accordingly. The official policy of TBAs not being qualified to assist deliveries works against the sustainability of their present role.

**Commodities**

The supply of commodities is the component of the programme that is most immediately under threat with the end of NORAD financing. As recounted above, the last delivery of commodities through the programme was in May 2016. All of the PHCs visited by the evaluation team in November already had stock outs. None of the visited PHCs had any misoprostol ("the wonder pill") left in stock, and many were also out of clean delivery kits.

All PHC staff were aware of their reliance on CHAI for the supply of key commodities:

> *There will be a problem when the programme finishes. The commodities have been coming from the CHAI store* – In-charge, PHC facility 17.11.2016

The supply chain for commodities under the CHAI programme is not well integrated into the government structure and is highly dependent on the LEC at the LGA level. This approach fast-tracks supplies and reduces bottlenecks that may affect the supply system.

A break in the steady supply of commodities is likely to have a negative impact on the sustained success of the programme. Both the health facilities and the TBAs depend on supply of and access to the vital medicines, especially Misoprostol, but also the others supplied through the programme. Besides the obvious benefits of having the medicines when they are required, a longer term absence of key medicines would have the likely impact of reversing the modest increases there have been in the percentage of women who come to the facilities to deliver.

The commodities component is probably the part of the programme that is most susceptible to the risk of corruption and/or leakages. The evaluation team therefore reviewed the documentation at all parts of the delivery chain, and was generally impressed by the controls in place. The files at the CHAI office, included signed copies of delivery sheets that confirmed that all supplies had been received at the health facilities. The CHAI procurement officer considered the risk of corruption to be relatively low, and that the systems in place provided reasonable guarantees that commodities would be delivered and used as intended. The risks of corruption would obviously increase, on the other hand, with a handover of the government.

**Referrals**

The continued functioning of the Emergency Transport Services delivered by the MBAs and the NURTW depend on support from the government or a donor. As discussed at some length above, it does not appear realistic to expect the communities self-finance the running and maintenance of the MBAs. The NURTWs function at the moment without any direct support from the programme, and it is more likely that they can continue, although they have also registered a reduced number of referrals since the peak in 2015.

Three out of the seven MBAs observed by the evaluation team were not functioning properly, and all drivers interviewed mentioned breakdown of MBAs and delays in repairs as a problem. Reportedly all CHAI LGAs have dedicated mechanics for their MBAs, which has been confirmed by the evaluation team in the LGAs investigated, but the delivery of the necessary maintenance and repairs would require financing that the LGAs do not currently have.

A decline in the level of services that can be provided by the ETS drivers would also have a negative impact on the programme. It is however positive that there are signs that other donor funded programmes recognise the importance of this service, and that in Kano, for example, MNCH2 is looking to support its expansion.

**CBMIS**

There is a general agreement at the State and Federal level, and among CHAI staff, that the data provided by the CBMIS plays a very important role for monitoring, policy analysis and identification of the main challenges for improving maternal and neonatal health. The official national data set, the DHIS,

---

26 Interview, Kaduna 18.11.2016.
only captures data from the health facilities, which means that they in the Northern states, fail to capture data from the large majority of the births taking place in the homes.

All federal and state level officials interviewed as part of this evaluation, state that the Government is committed to continuing and expanding the CBMIS, or a data system modelled on it. There is, however, a rather large step from this stated commitment to the identification of the financial and human resources required to maintain the system.

As described above, the CBMIS is based on the coordinated effort of a large number of traditional leaders, stretching through the neighbourhoods, traditional wards, villages and districts. The maintenance of the monthly reporting obviously depends on strong coordinating and convening function. This one is currently played by the LEC, and although the LGA M&E officer has been taking part to varying degrees, in Kaduna it does not seem likely that they are in the position to take over the full function of the LEC at the moment.

In Kano, on the other hand, the data collection through the CBMIS appears more sustainable because of the stronger role of the emirate there, relative to Kaduna. At the community level, there does not seem to be the need for external incentive for the regular collection of data. This does, however, still leave the issue of filling the role of the LEC in compiling the data and passing it on the state level. Also in Kano, it is not clear that the LGA M&E officers have received the required coaching on how to provide the services required by the LGA to keep the CBMIS running.

As of now, the PHCs have no role in the compilation and reporting of the CBMIS. Many of the health care workers had not heard of it. Also, the CBMIS reports are not discussed at the MNCH committee of the LGA.

On a more general level, there was a general scepticism regarding the state government’s financial commitments to take over funding of activities that had earlier been funded by donors, such as the CHAI programme. As expressed by one state official:

“The Government makes budget allocations in its annual action plans, but implementation is the problem. At the end of the year you find that there has been no budget releases.” SMOH official, November 2016.

For this reason, most of the persons consulted agreed that the continuation of would, at least in the short to medium term, depend on identifying alternative donors and donor financed programmes that could bring the gains registered forward.

In both States, as well as Katsina, some progress had been made in this areas, with the DfID financed MNCH2 programme is taking over after CHAI in the 10 LGAs covered by the programme. It is beyond the scope of this evaluation to assess to what extent this programme is able to deliver along the same lines as CHAI, particularly seeing that the evaluation team has not had access to any project documentation from MNCH2.

Some government officials were critical of the negative influence donor partners has on government funding. Government tend to focus on donor-funded projects and to not prioritise the use of the state funds for essential health care:

“Development Partners should have a way to ensure that the government is doing certain things. Donors should insist on cash from government before committing own funds. For how long will donors continue to take on government’s responsibilities?” – SMOH official, November 2016

The necessity of finding funding formulas that build on a commitment from the government to take on a progressively larger share of programme costs was a recurring theme in discussions with federal, state and CHAI officials. CHAI told of the example of a basket funding mechanisms that the Gates Foundation and Dangote have with a number of Northern states. Through this mechanism, the donor provides 100% of funding in the first year, 60% the second year, and down to 40% and 10% in the third and fourth year, respectively, with the government putting in the balance.27

This type of agreement, would serve the twin purposes of committing government to take over financing, and putting in place a framework for a gradual transfer of the responsibility for financing and implementing the reform.

On a whole, the programme provides a very good model for replication. All of the programme components evaluated are suited for replication and scaling. There is also a strong case to be made for combining them as in the present programme, as they are complementary and mutually reinforcing. There are, however, certain adjustments that could be done to ensure better integration with government systems, stronger systems of monitoring and learning and better sustainability. The final chapter discusses these adjustments and provides concrete recommendations.
11. Conclusion and recommendations

The programme has been extraordinarily effective in accelerating progress towards achieving MDG by accomplishing within one year (the 15th year) the same attainment that had taken the previous 14 years to achieve. By conservative estimates, the programme achieved an average of a 37% reduction in maternal mortality and a 43% reduction in neonatal mortality in its areas of operation.

These impressive results were achieved through a well-designed combination of initiatives:

- **The training and mentoring** of health personnel and traditional birth attendants has significantly increased the skills of the relevant people.
- The fact that the training was combined with the provision of **commodities** - key medicaments and equipment - and that the proper use of these were incorporated in the training and mentoring, increased the effect of both training and commodities.
- The further combination of **referral services** that helped get women experiencing complications to the nearest health facility further leveraged the impact of the aforementioned initiatives.
- Finally, the invigoration of the **CBMIS** has made it possible to obtain the data on maternal and neonatal mortality that is necessary to both assess the scale of the problem and to track and assess the impact of the interventions.

The fact that substantial parts of the programme was integrated with existing community resources and structures, particularly the TBAs, ETS drivers and the CBMIS data collector, means that ownership has been strengthened and that the programme has been made more visible in the community. This has also undoubtedly contributed to the awareness raising on good practices for reducing maternal and neonatal mortality.

Moreover, the preparatory work and continued involvement of federal and state governments ensured that the programme was well known within government, and went a long way towards building a feeling of ownership of the programme. The key policy makers at federal and state level are well aware of the success registered by the programme, which makes it much more likely that the government will support replicating the programmes model and taking it to scale.

There are, however, also a series of challenges with the programme as it has been planned and implemented:

- The programme interventions were to solve a problem within a much too short period. According to the original plans, there would be only 12 months from start to end of implementation in the target areas. This is not enough to build sufficient capacity in the partner institutions to take over and run a programme of this complexity. The one-year extension that was subsequently granted has given valuable extra time for stakeholders to internalise the programme, but this still leaves a very short time period, and the lack of a built-in phase 2 of the programme shows that sustainability cannot have been a key concern in the design of the programme.
- Although **data gathering** and, to some extent, analysis and learning was built into the programme through the CBMIS and the use of the data, the data collected is not sufficient to accurately assess what the contribution of different parts of the programme has been. Also, although the programme was ideally situated to provide for a counterfactual (looking at CHAI and non-CHAI LGAs in the same States), the monitoring system did not provide for a counterfactual. Also, the lack of a solid baseline makes it difficult to accurately assess the
results of the programme. A solid baseline would have required a professional household survey.

- The project documentation does not contain any systematic description of the institutions and or central actors in the programme. Similarly it does not include capacity and gap analysis indicating government requirements particularly the LGAs and community actors that will maintain the programme in the absence of CHAI. The attempt at mapping the relevant actors (Figure 1) clearly shows the present dependency on the LEC of all actors at LGA level and below.

The short timeframe of the programme is at least partly an explanatory factor for the other weaknesses of the programme. There was clearly a politically driven process, where to the focus was on delivering results quickly, rather than ensuring sustainability and systematic capacity building.

Two sets of recommendations are provided. The first set is aimed at the continuation or hand over of the programme. The second is more general, and provides advice for future programming, in light of the experience of the current programme.

**Recommendations for the continuation of the activities initiated by the programme:**

1. Secure recognition for the role that TBAs have played in the realising the results delivered by the programme, and lobby for change of policy so that TBAs are recognised as having the basic training required to attend home deliveries, when there are no identified signs of complications.
2. Work with government to develop a programme to formalise the training of selected TBAs (for example all TBAs who have secondary education), so that they can be formally accredited.
3. Design and conduct a household survey in order to obtain reliable data on maternal and neonatal mortality in the three states. Both CHAI LGAs and non-CHAI LGAs should be covered. Collect historical data so that baseline information can be retroactively available. Securing financing for the survey should be treated as a priority. The data on maternal and neonatal indicators could be then linked to existing data sets. Commissioning a household survey is also the main recommendation of the evaluation recently of the programme statistics (Sloan 2016, xiii).
4. Prepare an analytical final report, with a systematic presentation of the key components, clearly explaining what has contributed to the success of the programme (for example, recognising that equipping and training TBAs can lead to safer home deliveries, and that following up training with mentoring offers better and more sustained learning). Although this should be a standard requirement, the lack of this type of analysis in progress reports so far, has influenced the team to add this as an explicit recommendation.
5. Develop the capacity for both the collection and use of data in every day decision-making at all levels of implementation. This requires training and mentoring approach for the promotion of evidence-based learning and continuous analysis of causes of maternal and neonatal mortality.

**Recommendations for future programmes**

6. For any programme that aims to build capacities for government service delivery, NORAD should generally aim to support programmes that last for a minimum of 5 years. And as far as possible, there should be add-on options for a further 5 years.
7. All programmes should have a strong data monitoring component. This needs to be adequately resourced and seen as a programme priority. The monitoring process should also seek to integrate with other relevant programmes, as well as national monitoring systems.
8. Build in the counter-factual as far as possible. This was an opportunity missed for CHAI in the States where they work in some LGAs and not in others – this provides “natural experiment” opportunities.
9. Donors should explore ways of using matching funds, result-based financing options or similar mechanisms to encourage more credible, long-term commitments for co-financing health services and substantially reducing dependency and donor-roll-over expectations.
References


CHAI 2016d. "CHAI MNH Updates and Results," presentation to dissemination meeting in Kaduna State, June 2016.

CHAI 2016e.1 "MNH Update", presentation to the evaluation team made by the CHAI office in Kano.

CHAI 2016f. "Kano State MNH Program Transition Plan."

CHAI 2016g. "Katsina State MNH Program Transition Plan."

CHAI 2016h. "Kaduna State MNH Program Transition Plan."


Data excel workbook supplied by CHAI

- Analysis of reporting by village_CBMISv 5 workbook_September 2016
- MNH PFP ME Workbook_PFPF Update Oct2016_V2
- MNH MDG Summary framework (Updated baselines) (30 LGAs only) 062916
- MNH MDG Summary framework, 10NOV2014 for NORAD

Data from DHIS showing maternal and neonatal health statistics. CHAI assisted in the downloading of the data from the national database.
Annex 1: Term of Reference for Evaluation of “Accelerating progress to achieve health related MDGs in Nigeria”

1. Background

<table>
<thead>
<tr>
<th>Project Location</th>
<th>Nigeria (Kaduna, Kano, Katsina states)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name</td>
<td>Accelerating progress to achieve health related MDGs in Nigeria</td>
</tr>
<tr>
<td>Project Duration</td>
<td>July 2014-December 2016</td>
</tr>
<tr>
<td>Project Budget</td>
<td>NOK 96 848 000</td>
</tr>
<tr>
<td>Implementing Agency</td>
<td>Clinton Health Access Initiative (CHAI)</td>
</tr>
<tr>
<td>Donor</td>
<td>Norwegian Agency for Development Cooperation (Norad)</td>
</tr>
</tbody>
</table>

“Accelerating progress to achieve health related MDGs in Nigeria” is a programme to reduce maternal and newborn mortality in Nigeria, focusing on the states of Kaduna, Kano, and Katsina, which have among the highest mortality rates in Nigeria. The programme, funded through support from the RMNCH Trust Fund and formalised through a Tripartite Agreement between the Federal Ministry of Health (FMOH) in Nigeria, Norwegian Agency for Development Cooperation (Norad) and the Clinton Health Access Initiative (CHAI), covers 30 Local Government Areas (LGAs), which have a total population of approximately 11 million people.

The over-arching goal has been to reduce maternal and neonatal mortality in Nigeria with a focus on the three highest burden Northern states, which together account for 20% of all maternal and neonatal deaths in the country: Kaduna, Kano and Katsina. The main objectives to achieve the goal are:

- Objective 1: Strengthen National Coordination in maternal and neonatal health (MNH)
- Objective 2: Strengthen State Coordination in MNH, with a focus on six high-burden states
- Objective 3: Increase the coverage and access to quality comprehensive and basic emergency obstetric and newborn care (EmONC) and essential MNH care in three high-burden states (LGA level implementation)

In line with the FMOH’s vision for improved MNH outcomes through implementation of innovative solutions, CHAI identified a comprehensive approach to address critical gaps and create linkages through the entire health system – from the community up to the referral hospitals. The comprehensive approach focuses on averting the preventable deaths that can occur in the 24- to 48- hour window around the birth through the early identification of complications, the prompt and effective clinical management of delivery, and the timely referral to fully prepared treatment centres. It consists of strengthening management systems across four areas: In-Service Mentoring; Supply Chain; Referral and Emergency Transport; and Health Management Information Systems (HMIS). A community programme to ensure community acceptance, buy-in, and ownership was implemented across these four management systems.
Mentoring represents a crucial element within the comprehensive approach. CHAI developed a clinical mentoring model that focuses on capacity building of birth attendants. The approach builds on didactic training to support the application of complex clinical skills required to offer obstetric and newborn care, through coaching and mentoring provided over an extended period of time.

Reported results in 2015 show significant reductions in maternal and newborn mortality rates, and in reported stillbirths in the 30 LGAs.

2. Purpose
The purpose of the Evaluation is to assess the performance of the programme against its stated objectives, and to put forward clear recommendations for federal and state health authorities’ continued engagement in programme activities and potential future scale up or replication of the activities.

While all three objectives need to be taken into account, emphasis should be put on objective 3: Increase the coverage and access to quality comprehensive and basic EmONC and essential MNH care in three high-burden states (LGA level implementation). Field visits should also focus on objective 3.

The Evaluation will involve an assessment of the performance of the programme in terms of relevance, effectiveness, institutional arrangements, sustainability and risk management.

The primary audience of the Evaluation are the contracted parties (Nigeria FMOH, CHAI and Norad), which are expected to act on the findings and recommendations to improve continued efforts in the field of maternal and newborn health. Other relevant users may include other development partners in Nigeria and beyond.

3. Scope and Key Questions
Relevance
The Evaluation should assess the relevance of the programme. The relevance should, to the extent possible, be assessed in relation to needs and local context, government priorities and plans at different levels (federal, state and local government), and to other ongoing similar maternal and child health programmes in the three states, Kaduna, Kano and Katsina. The Evaluation should assess the relevance and quality of the programme results framework (logical framework), including the identified output and outcome indicators and means of verification.

Effectiveness
The Evaluation should assess how effectively the implementers of the programme operate. Major results of the programme should be assessed in relation to its stated objectives and intended results (impact, outcomes and outputs). As far as possible, this should be a systematic assessment of progress based on the programme’s monitoring data. Unexpected results that have been achieved through the programme should also be covered by the Evaluation. If any, describe major failures of the programme, explaining why they have occurred.

Efficiency
The Evaluation should assess the efficiency of the programme and its deliverables. The Evaluation should consider the extent to which results and benefits arising from activities have been commensurate with the level of efforts and resources. The Evaluation could take a broad view of
the efficiency of the overall programme management relative to the outputs. The Evaluation should assess whether particular areas of programme activities emerge as particularly efficient or particularly inefficient.

**Institutional arrangements**

Institutional arrangements refer to the programme’s internal institutional set-up, as well as in relation to external stakeholders. The Evaluation should assess the programme’s institutional arrangements, the different roles and responsibilities, and the processes. The Evaluation should also assess working relationships among the different partners and stakeholders.

**Risk Management and Sustainability**

The Evaluation should assess risk management and the sustainability of the programme. How has the programme dealt with risks such as changes in context and financial risk? It will be important to assess how lessons have been learned and incorporated back into programme operations. The assessment of sustainability should also include an assessment of the ongoing development of the donor exit strategy. The Evaluation should also assess financial management and financial sustainability: i.e. are the health authorities likely to have funds and political will to carry on programme efforts?

Other relevant issues to cover:

- The credibility and legitimacy of the programme and its implementers among stakeholders
- Is there evidence of organisations/partners/communities that have replicated or, scaled up the project activities beyond the immediate project area, or is it likely?
- Has monitoring data being collected as planned, stored and used to inform future plans?
- Retention of health personnel, skills levels

**Recommendations for the future**

The Evaluation will provide recommendations across all areas outlined above. In particular, it should aim to make recommendations, based on findings, for future federal and state health authorities’ continued engagement in programme activities and potential future scale up of the activities.

4. General Approach and Methodology

An external team of experts chosen through an international bidding process following publication on Tenders Electronic Daily (TED) and DOFFIN (Norwegian national notification database for public procurement) will conduct the Evaluation. This team is hereafter referred to as the Consultant.

Norad will manage the Evaluation process including the relation with the Consultant. The Consultant will keep Norad in close consultation during the implementation of the assignment. For learning purposes, Norad may join some of the interview meetings during the field visit.

Norad will make the necessary consultations in particular in relation to the approval of the Inception Report and comments to the Draft Report. Norad may also be involved beyond these consultations, depending on capacity and need. The Consultant is expected to further clarify their understanding of the Terms of Reference in the Inception Report. For the optional deliverable, NORAD will be involved in the writing of the manuscript made ready for submission to a peer review journal.
The Consultant will be responsible for collection of relevant documentation. In addition to the key documents shared upon signing of the contract, CHAI and NORAD will, upon request make relevant documents related to the programme, available. The Consultant is responsible for making appointments for interviews and for all other logistical arrangements related to the field visits, although NORAD and CHAI may be able to provide some support in this process. Requirements related to local ethical approval for the evaluation will be discussed with Norad as appropriate.

The Consultants will sign a declaration of confidentiality. Confidential documents and reports made available will serve as input to the work of the team. Quotations from substantial contents of the confidential documents and reports should not be in the final evaluation report, unless otherwise agreed.

The study will be carried out in three phases:

- **Phase 1** is a desk study, which will collect and assess key documentation. An Inception Report (maximum 8 pages) specifying the methodology, the focus and scope of the exercise, including evaluation questions, a critical analysis of the quality of provided documents and the data collection instruments, shall be submitted to Norad for approval.
- **Phase 2** will consist of key stakeholder interviews and field visits to Nigeria and the three states, Kaduna, Kano and Katsina. The team may choose to visit all or several of the states covered by the programme. The team is encouraged to visit more than one state in order to allow for a comparative cross-state analysis.
- **Phase 3** will be the compilation of the final report, based on outputs of previous phases. The draft report will be commented on by NORAD and relevant stakeholders decided by NORAD. The consultant at a teleconference will present the final report. Tentative time schedule for this presentation is January 2017.

5. Time Schedule and disbursement plan

<table>
<thead>
<tr>
<th>Date (TBD between NORAD and the Consultant)</th>
<th>Milestone</th>
<th>Disbursement, NOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 28 October</td>
<td>Desk review of relevant documentation. Preparation of inception report</td>
<td></td>
</tr>
<tr>
<td>28 October</td>
<td>Submission of inception report</td>
<td></td>
</tr>
<tr>
<td>2 November</td>
<td>Approval of Inception report</td>
<td>120 000,-(30%)</td>
</tr>
<tr>
<td>3 November-4 December</td>
<td>Interviews with key stakeholders. Field visit in Nigeria (8-14 days, including visits to facilities, meetings with stakeholders).</td>
<td></td>
</tr>
<tr>
<td>4 December</td>
<td>Submission of draft report by 10.00 CET covering all aspects of the ToR</td>
<td></td>
</tr>
<tr>
<td>8 December</td>
<td>Written feedback on the draft report provided by Norad</td>
<td></td>
</tr>
<tr>
<td>15 December</td>
<td>Submission of final report by 10.00 CET</td>
<td></td>
</tr>
<tr>
<td>16 December</td>
<td>Approval of final report</td>
<td>280 000,-(70%)</td>
</tr>
<tr>
<td>January 2017</td>
<td>Teleconference for presentation of final report</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>400 000,-(100%)</td>
</tr>
</tbody>
</table>
Option

NORAD has the option for the delivery of a manuscript prepared for submission in an identified peer review journal, including assistance to NORAD throughout the peer review process after submission. NORAD shall, by no later than 31 January 2017, notify the Consultant in writing as to whether or not the option shall be activated.

<table>
<thead>
<tr>
<th>Date (TBD between Norad and the Consultant)</th>
<th>Milestone</th>
<th>Disbursement, NOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 March 2017</td>
<td>Optional (to NORAD): Manuscript prepared for submission in peer review journal</td>
<td>40 000,-</td>
</tr>
</tbody>
</table>

6. Reporting

The report will be prepared by the Consultant containing an executive summary with main conclusions and recommendations, a concise main body of the Evaluation, including main findings and policy recommendations, with thematic notes as annexes, and a list of acronyms, tables and figures.

The report should be written in English and not exceed 30 pages, excluding executive summary and annexes. The report shall be submitted in Microsoft Office Word format and Adobe Acrobat Reader PDF-format.

The Consultant shall also present the findings and recommendations in the Final Report at a teleconference with a prepared powerpoint presentation shared ahead of the meeting.

The report should be professionally proofread, and presented in accordance with internationally accepted quality criteria, and in a way that enables publication without further editing.

The report and data analysis will be the property of NORAD. All raw materials must be cleaned and shared with NORAD by an agreed date.

If the option (production of manuscript) is activated, NORAD will participate as a co-author in the manuscript made ready for submission to an identified peer review journal. The manuscript will be the property of NORAD and the authors.

7. Key Informants

Key individuals/groups include programme team members at CHAI and counterparts at federal and state ministries of health, health personnel having received training, programme beneficiaries, other development partners involved in similar programmes in the relevant geographies.

A list of individuals consulted, together with their contact information and organisational affiliation should be included in the Evaluation. The list of persons interviewed should be gender balanced.

8. Documents to be Consulted

Project Memo
Action Plans
Progress Reports
Key outputs produced: research/ surveys conducted, Regulations and policies developed
Partnership arrangements
Previous evaluations and reviews
Other relevant documents

9. The composition of the Evaluation Team

Requirements
The evaluation team will be headed by a team leader. All members of the team must have relevant academic qualifications (minimum bachelor degree). The team leader must have substantial experience from international development work, evaluation of MNH programmes. The team must have relevant experience from the region. For travels to high-risk areas the consultants must prior to departure possess sufficient knowledge about first aid and stress management (and in some cases also about personal security).

Relevant qualification
The proposed team will be evaluated with reference to the award criteria for the external consultant attached. Inclusion of a local team member proficient in Hausa or another local language widely spoken in the three states Kaduna, Kano and Katsina will be important. Specific skills or characteristics needed in the evaluation team include:

Experience and technical knowledge from international development cooperation, monitoring and evaluation
Experience from maternal and newborn/child health interventions in low resource settings
Knowledge of the Nigerian political context/culture. Knowledge of Kano, Kaduna and Katsina states

The optional deliverable is a manuscript made ready for submission to an identified peer review journal and assist in further follow up. Demonstrated ability to publish in peer review journals is therefore preferred. Documentation of research ethics training will be important.

Team members’ competence will be considered only to the degree that the proposed work plan indicates that they will spend sufficient time and be given appropriate roles in relevant phases of the assignment.

10. Other related ongoing evaluations
A separate evaluation related to the programme will be carried out in parallel to this evaluation from September to November 2016. The evaluation will be primarily based upon analysis of the existing Health Management Information System (HMIS) vital events data reported throughout the programme to assess the impact of the programme on maternal and neonatal mortality and stillbirths. It is not expected that the two evaluations will overlap given that the ongoing evaluation is based on quantitative methods and programme collected data, while the tendered evaluation is an in-depth evaluation that will also collect new data from field visits and mainly use qualitative methods in its analyses. The Terms of Reference for the ongoing evaluation will be shared with the evaluation team to ensure complementarity of the two evaluations.
### Annex 2: Evaluation matrix

<table>
<thead>
<tr>
<th>Key questions</th>
<th>Research questions</th>
<th>Method</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relevance</strong></td>
<td>What is the extent of agreement between project and policy? … at federal, state and LGA level?</td>
<td>Document review of project documentation and official national and state policies. Interviews.</td>
<td>The focus will be on examining how the programme fits in with the state and local health policies, services and how the programme is perceived by the targeted beneficiaries. Also, does the programme link with other initiatives in a way that can realise synergies? This will include a critical review of the result framework to test the quality of the theory of change, also considering the above factors.</td>
</tr>
<tr>
<td></td>
<td>How well is the project priorities aligned with the needs at the local (LGA, Community) level?</td>
<td>Document review, Interviews, FGDs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How does the programme connect with other similar programmes in the three states</td>
<td>Interviews, FGDs with NGOs, Document review</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How important and beneficial do stakeholders consider the programme, its strategy and implementers?</td>
<td>Beneficiary interviews, FGDs, perception by stakeholders about benefits/satisfaction appraisal Assessment of result framework in Project Document Assessment of reporting against result framework in Progress reports</td>
<td></td>
</tr>
<tr>
<td><strong>Effectiveness</strong></td>
<td>How has the programme delivered in relation to its targets at impact, outcome and output levels?</td>
<td>Project reports Household survey for coverage; checklist Progress reports</td>
<td>What are the documented effects of the programme. Attempts will be made both to consider direct effects attributable to programme and indirect contributions to changes</td>
</tr>
<tr>
<td></td>
<td>What is the quality of the monitoring data?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Have there been any unexpected results (negative or positive)?</td>
<td>Progress reports Interviews Focus group discussions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What is the reason for any project failures or outstanding success?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Efficiency</strong></td>
<td>How does the programme deliverables stand in relation to the cost of the project?</td>
<td>Assessment of results. Value for money spent at each level of implementation. Comparison with comparable programmes</td>
<td>An attempt will be made to quantify the efficiency of the programme to see how its contribution stand in relation to comparable initiatives</td>
</tr>
<tr>
<td></td>
<td>What part of the programme might have been particularly efficient or particularly inefficient?</td>
<td>Assessment of results. Value for money spent by strategy (TBA, ETS, ) Comparison with comparable programmes</td>
<td></td>
</tr>
<tr>
<td><strong>Institutional arrangements</strong></td>
<td>To what extent is the institutional set up conducive to efficient delivery of outputs?</td>
<td>Document review Interviews</td>
<td>How does the programme support strengthening of permanent institutions? How have lessons been gathered? Has there been a change in programme in</td>
</tr>
<tr>
<td></td>
<td>To what extent does the institutional set-up ensure local participation in, contribution to and ownership of the programme activities?</td>
<td>Assessment of programme set up in relation to local institutional (community, LGA, State) set up. Quality of services provided at community level (TBAs, CHW)</td>
<td></td>
</tr>
<tr>
<td>Key questions</td>
<td>Research questions</td>
<td>Method</td>
<td>Comments</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------</td>
<td>--------</td>
<td>----------</td>
</tr>
<tr>
<td><strong>To what extent is the institutional set-up conducive to learning and adoption of lessons acquired?</strong></td>
<td>Assessment of reporting, information, education and management of programme.</td>
<td>response to lessons learned?</td>
<td></td>
</tr>
<tr>
<td><strong>Risk Management and Sustainability</strong></td>
<td>How well has the programme planned for and dealt with risks?</td>
<td>Interviews, document review, FGDs</td>
<td>To what extent have risks been identified and mitigated? Risks associated with corruption and mismanagement will be given particular attention. The question of whether any results delivered by the programme is likely to be sustained after the end of donor financing, will be central throughout the evaluation. Consideration will also be given to the possibilities of replication and scaling-up, and whether there are cases of this happening already.</td>
</tr>
<tr>
<td></td>
<td>To what extent is there a credible donor exit strategy?</td>
<td>How reliable/sustainable is exit strategy? Uptake of learning by stakeholders Ownership issues</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is it likely that relevant parts of the programme can be financed after the end of donor financing?</td>
<td>Assessment financial reports, final reports and audits Any reports of corruption?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Are the systems of financial management sufficiently strong?</td>
<td>Interviews with stakeholders Inference from document review</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is there political will to carry the programme forward at federal, state and local government level?</td>
<td>Interview of service providers Document review; comments, letters from other organisations and governments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To what extent are trained health personnel being retained in the health services?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is there evidence of organisations/partners/communities that have visited the project to study the process, initiated replication, replicated or, scaled up the programme activities beyond the immediate project area, or is it likely</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Annex 3 Itinerary and people consulted in Nigeria

<table>
<thead>
<tr>
<th>DATE</th>
<th>PLACE/LOCATION</th>
<th>PERSONS INTERVIEWED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ABUJA INTERVIEWS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monday, 14. 11. 2016</td>
<td>FMOH Abuja</td>
<td>FMOH and Member of the Project Coordinating secretariat. (Larry Nwaka, SDG),</td>
</tr>
<tr>
<td>Monday, 21.11/2016</td>
<td>CHAI Office, Abuja</td>
<td>Programme officer (Olufunke Fasawe) and CEO (Dr. Owens Wiwa)</td>
</tr>
<tr>
<td></td>
<td>Telephone interview</td>
<td>Deputy Director, HP-CU, FMOH (Mrs. Bak-Aiyegbusi)</td>
</tr>
<tr>
<td>Telephone interview</td>
<td></td>
<td>Assistant Director, Family Health Dept. FMOH (Dr. Hadiza Idris)</td>
</tr>
<tr>
<td><strong>KADUNA INTERVIEWS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuesday, 15/11/2016</td>
<td>CHAI office, Kaduna</td>
<td>Team Lead, State Team Lead, (Dauda Majandu)</td>
</tr>
<tr>
<td></td>
<td>MNCH2 Office, Kaduna</td>
<td>MNH Team Lead, (Sani Abubakar)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Program Officer Mentoring and training (Zainab Abdurrahman)</td>
</tr>
<tr>
<td></td>
<td>MNCH2 Office, Kaduna</td>
<td>Strategic Planning Coordinator (Tijani Maji)</td>
</tr>
<tr>
<td></td>
<td>SMOH, Kaduna</td>
<td>Demand Site Coordinator (Bashir Adamu Bashir)</td>
</tr>
<tr>
<td></td>
<td>PHCDDA</td>
<td>Executive Secretary, Director, PHC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health Educator</td>
</tr>
<tr>
<td>Wednesday, 16/11/2016</td>
<td>Kasua Mangani PHC, Kajuru LGA</td>
<td>TBAs Group discussions (Hassan Gambo, Rabi Umar, Biliksu Musa)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ETS Drivers Group discussions (Idris Shuaibu Madaki, focal person of the LGA.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Auwal Alhassan, Godwin Bidderu Mudi, cShehu Yau (Motor bike ambulance)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Officer in-charge Registered Nurse (Eunice Thomas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other health workers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>District secretary (Halidu Peter)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ward development committee chairman (Auwal Muhammad)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M&amp;E officer, (Idris Balarabe)</td>
</tr>
<tr>
<td>Thursday, 176/11/2016</td>
<td>Kajuru PHC, Kajuru LGA</td>
<td>Health Officer in charge, (Hannah L. Ladan)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LGA RH Coordinator (Mrs. Grace Madaki)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health workers Group discussions (Martina Yakubu, Laraba Jimari, Abani Atoni)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TBAs Group interview (Saudatu Iliyasu, Aisha Musa)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Woman who shunned the system interview (Hadiza Usman)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Women Beneficiaries interview (Madina Abbas)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>District Secretary interviews (Kajuru and Buda)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Officer in charge, CHO, PGDE (Pualina Tanze Haruna)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health Workers (Helen Caleb)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>District Scribe (Aminu Bala)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TBAs Group discussions (Hajara Lawal, Saadatu Abdullahi)</td>
</tr>
</tbody>
</table>
**Fatima Lafia, Bayi Maiyaya, Zinatu Ahmad,**

**Friday, 17/11/2016**

- SMOH
  - Ex-State RH Coordinator (Mrs. Bachiba Halid)
  - Current State RH Coordinator (Mrs. Cecilia Markus)
  - Director, State Community Services
- Chikun LGA
  - Chikun LGA Asst RH Coordinator (Mary Madaki)
  - Igabi RH Coordinator (Hajjiya Habiba Aliyu)
- CHAI
  - Chikun LGA CHAI Engagement Consultant (Umar Usman Magaji)
  - Kajuru LGA CHAI Engagement Consultant (Jummai Bappa)

<table>
<thead>
<tr>
<th>Date</th>
<th>Place/Location</th>
<th>Persons Interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday, 20/11/16</td>
<td>CHAI, Kano</td>
<td>MNCH Coordinator (Dr. Halima Sanda)</td>
</tr>
<tr>
<td>Monday, 21/11/16</td>
<td>SMOH, Kano</td>
<td>Director, Public Health (Dr. Tijjani Hussaini) State MCH Coordinator (Rahmatu Jibrin)</td>
</tr>
<tr>
<td></td>
<td>PHC, Jaba, Fagge LGA</td>
<td>In-Charge (Muktar Abdul) CHEW (Hafsat Abdulwahab)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>TBAs</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Biola Olaiya</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faith Oladipo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rashiddat Usman</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Iyabo Oyebade</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maiangwa Musa Usman</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maiangwa Abdulwahab Abdullahi</td>
</tr>
<tr>
<td>Tuesday, 22/11/16</td>
<td>PHC, Riijyar Lemu, Fagge LGA</td>
<td>In-Charge (Yusuf Lawal) Senior CHEW (Aisha Shehu Abubakar)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>TBAs</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amina Mohammed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fatima Mohammed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Saude Abdullahi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hussaina Sanusi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maiangwa Abdulrahman Danbaba</td>
</tr>
<tr>
<td>Tuesday, 22/11/16</td>
<td>Gando Albas PHC, Kano Municipal LGA</td>
<td>CHEW (Zainab Halliru)</td>
</tr>
<tr>
<td>Tuesday, 22/11/16</td>
<td>Gando Albas Village, Kano Municipal LGA</td>
<td>TBA (Asmau Dahiru) Village Head (Alkasim Yakubu) New in-charge (Hafsat Adamu Bello)</td>
</tr>
<tr>
<td></td>
<td>Kano Municipal LGA</td>
<td>MNCH Coord (Hajia Lami) M&amp;E Coord (Nasifi Mahmood)</td>
</tr>
<tr>
<td></td>
<td>Fuskar Gabas, Kano Municipal LGA</td>
<td><strong>TBAs</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mariam Ahmad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aisha Bala</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Halima Dauda</td>
</tr>
<tr>
<td></td>
<td>Fuskar Gabas Village Leaders, Kano Municipal LGA</td>
<td>Maiangwa Agadasawa (Inua Nasidi)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maiangwa Chediya Fero (Abubakar Manu)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maiangwa Bakinzuo (Rabiu Ali)</td>
</tr>
<tr>
<td>Date</td>
<td>Place/Location</td>
<td>Persons Interviewed</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>8.11.2016</td>
<td>Norad, Oslo</td>
<td>Mari Grepstad</td>
</tr>
<tr>
<td>8.12.2016</td>
<td>Teleconference with CHAI</td>
<td>Olefunke Fasawe, Dr. Owens Wiwa and Andrew Storey</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date</strong></td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>8.11.2016</td>
</tr>
<tr>
<td>8.12.2016</td>
</tr>
</tbody>
</table>

- Maiangwa Mazankware (Kamal Sherrif Lawal)
- Maiangwa Dukawa (Mohammed Hussaini)
- Driver (Bashir Mohammed)
- Driver (Mohammed Yahu Jibrin)
- Driver (Mahmoud Sani)
- Beneficiary (Rahama Ishak)
- Beneficiary (Bilkisu Abubakar)
## Annex 4 Categories of respondents

<table>
<thead>
<tr>
<th>Category or level</th>
<th>Description</th>
<th>Interviews</th>
<th>Group discussions/interviews (number in group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>Officials in the SDG programme involved in CHAI project</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CHAI officials</td>
<td>HQ, States</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Kaduna SMOH/partners</td>
<td>Directors and others at the SMOH, PHC agency, and their partners such as MNCH2</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Kano SMOH/partners</td>
<td>Directors and others at the SMOH, PHC agency, and their partners such as MNCH2</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>LGA officials</td>
<td>RH/MNCH/PHC Coords, M&amp; E desk officers,</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>PHC clinic official</td>
<td>Any health officials at the PHC clinic</td>
<td>21</td>
<td>5 (range 2 to 4)</td>
</tr>
<tr>
<td>TBAs</td>
<td>Traditional birth attendants</td>
<td>3</td>
<td>11 (range 3 to 25)</td>
</tr>
<tr>
<td>ETS</td>
<td>Emergency transport scheme drivers</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>District Scribe</td>
<td>Scribes to the district</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Community opinion leaders/community meeting</td>
<td>Most often attempts to interview community leader led to interviewing the community council. Leaders</td>
<td>-</td>
<td>4 (range 5 to 28)</td>
</tr>
<tr>
<td>Beneficiary</td>
<td>Persons that had benefitted from the programme and two others that did not like the programme and kept away from its services</td>
<td>2</td>
<td>3 (range 4 to 12)</td>
</tr>
</tbody>
</table>
Contact
Geir Sundet
Senior Manager
T  +47 40 63 30 78
E  geir.sundet@kpmg.no

Oddbjørn Vegsund
Partner
T  +47 40 63 99 19
E  oddbjorn.vegsund@kpmg.no

kpmg.no