2010 Annual Report

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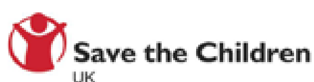
Partnership for Reviving Routine Immunisation in Northern Nigeria; Maternal Newborn and Child Health Initiative



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A. Foreword

The Annual Report is a chance to celebrate success, showcase innovative and effective initiatives, share lessons learnt and identify bottlenecks and challenges. 2010 has been a momentous year for the PRRINN-MNCH programme. The provisional 2010 NICS (National Immunisation Cluster Survey) data indicates that the programme is making a significant contribution to immunisation coverage. Other data also illustrates improvements in a number of areas. The programme has successfully won a contract extension to end 2013 and UKaid is asking other lead programmes (the State Accountability and Voice Initiative or SAVI and possibly the State Partnership for Accountability Responsiveness and Capability or SPARC) to extend their activities into the PRRINN-MNCH supported states in order to buttress and expand the work already initiated.

Once again an enormous number of activities have been completed and this reflects both the hard work of the team and the strong partnership with both state partners and federal level partners (e.g. NPHCDA, FMoH, NHIS). The ongoing work of strengthening MNCH services in the clusters continues and work will continue in 2011 on the second and third clusters. Governance and systems work abounds and is broad-based so as to incorporate all aspects of the six health systems strengthening building blocks as identified by the WHO. Two key studies (clustering of mortality and financial barriers to access) have influenced the programme's approach to dealing with issues of equity. The OR platform is starting to yield results that can be utilised.

This Annual Report does not hope to document all of the programme's activities during 2010. There are a number of other materials (e.g. technical briefs, factsheets, quarterly reports) that the reader can access[1] if more detail is required. The focus this year is on quantitative results. Data from a variety of sources (e.g. national surveys such as NICS, routine HMIS, programme collected data) is used to show significant changes in largely output and outcome indicators such as immunisation coverage, number of pregnant women transported during emergencies. It is hoped that with time that these improvements will transmit through to improved impact indicators (mortality and morbidity) and that the challenges implicit in the MDGs will be reached.

But, there must be more than the hard data. Thus, the report tries to identify the reasons for the improvements and unpacks the changes in systems, governance, advocacy, voice and accountability that have led to these improvements. A significant factor as the PRRINN-MNCH programme matures is the increasing evidence of integration. This occurs at multiple levels. Within the programme, the outputs have tended to merge and many issues are tackled jointly. The PRRINN-MNCH programme is also collaborating with a large number of state and federal level partners and with many other development partners.

As a reminder, the Partnership for Reviving Routine Immunisation in Northern Nigeria/ Maternal, Newborn and Child Health initiative (PRRINN-MNCH) is currently in its fourth year. The programme operates in four states – Jigawa, Katsina, Yobe and Zamfara – and at the federal level. The mandate is to improve MNCH services within the context of strengthening PHC systems. Ongoing support (both in terms of critical judgement and in terms of hands-on implementation) has been provided by UKaid and the Norwegian government. This support is critical in realising the ambitious aims of the programme.

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B. The PRRINN-MNCH programme

The Partnership for Reviving Routine Immunisation in Northern Nigeria (PRRINN) programme started in November 2006. Four states in Nigeria (Jigawa, Katsina, Yobe and Zamfara) were identified and programme staff started operations in early 2007. The consortium managing the programme consists of three partners (Health Partners International, GRID Consulting Ltd and Save the Children, UK) and several associates (Partnership for Appropriate Technology in Health, Health Reform Foundation of Nigeria and Johns Hopkins University, Centre for Communications Programme).

In September 2008, the same consortium with some additional partners (Liverpool Associates in Tropical Health, Mailman School of Public Health - Columbia University and Ahmadu Bello University) was awarded an additional contract to extend the PRRINN programme to a MNCH programme. Three of the four states (Katsina, Yobe and Zamfara) were covered by this programme. The funding for this extension was via the State Department of the Norwegian Government. The programme is run as a joint programme (PRRINN-MNCH) with UKaid as the co-ordinating development partner. The Partnership for Transforming Health Systems (PATHS2) programme will lead on MNCH activities in Jigawa.

While the focus is on MNCH, there was in addition a much broader mandate. The key shifts included a substantial emphasis on governance issues and the interlinkages between these and systems issues. In addition, a further component focussed on operations research (OR). As there was considerable overlap between the two programmes, the MNCH component mainly deepened and broadened the original PRRINN programme and its existing components

In 2010, the combined programme was awarded a programme extension to end 2013. The focus has shifted to output, outcome and impact indicators – the development partners would like the quantitative evidence to back up the resources that are being provided to improve MNCH services and thus see improved health indices for mothers and children under five. These indices are in northern Nigeria extremely poor.

The combined PRRINN-MNCH log frame is structured around 7 outputs:

1. Strengthened state and LGA governance of PHC systems geared to RI and MNCH
2. Improved human resource policies and practices for PHC
3. Improved delivery of MNCH services (including RI) via the strengthened PHC system
4. Operational research providing evidence for PHC stewardship, RI and MNCH policy and planning, service delivery, and effective demand creation
5. Improved information generation with knowledge being used in policy and practice
6. Increased demand for MNCH (including RI) services
7. Improved capacity of Federal Ministry level to enable States' MNCH activities (including RI).

C. What have we achieved

This is the third annual report and the purpose of this report[2] is to showcase results achieved, document some of the reasons for success, identify challenges and weaknesses and share what we have done in the last year. This report is about data. It is also about integration – within the programme and with partners.

[2]More details about the performance of the PRRINN-MNCH programme can be gleaned from the quarterly narrative reports and the quarterly M&E framework progress reports

1. Moving towards the Goal and Purpose Indicator Targets

The logframe for the programme has high level goal and purpose indicators with targets. These are the same as outcome and impact indicators. Data is presented in the table below. However, in summary and using available data from within the programme and from federal surveys, the following results in comparison with the baseline data can be shared:

- ***314% increase or an additional 222,141 children fully immunised children per annum in the four PRRINN-MNCH states.***
- ***431% increase or an additional 360,072 pregnant women appropriately immunised against tetanus per annum in the four PRRINN-MNCH states.***
- ***270% increase or an additional 24,748 women per annum attending ANC first visits in targeted facilities in the CEOC first clusters in the four PRRINN-MNCH states.***
- ***271% increase or an additional 13,998 women being delivered by SBAs per annum in targeted facilities in the CEOC first clusters in the four PRRINN-MNCH states.***
- ***Polio cases in 2010 were 9 in the four states – down from the baseline of 237***

Indicators		Baseline	Target – end of programme (2013)	Situation at end 2010	Comment
Goal	MDG4 - Target 5: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate.	153	140		No new data available since 2008
	MDG5 - % of births attended by a skilled birth attendant.	39%	50%	12% (targeted clusters)	M&E data from targeted clusters
Purpose	% of infants fully immunised by first birthday.	16%	38%	47%	Based on 2010 NICS
	% of women aged 15-49 have appropriate TT doses.	15%	50%	63%	Based on 2010 NICS
	% of women aged 15-49 have access to modern family planning services	1.18% (2010)	4.18%		No new data available since 2008
	Caesarean section rates in targeted CEOC clusters.	0.5%	1.25%	0.5%	M&E data from targeted clusters
	% of women receiving ANC.	21%	50%	31% (targeted clusters)	Note that the baseline is for the whole state. Data from HMIS
	Measles incidence reduced by 80%.	22 250	1 112	17,473	99% of these cases were from an outbreak in Jigawa and Zamfara. Data from HMIS/ISDR
	Polio incidence reduced to near zero.	237	0	9	All wild polio virus 3 – 6 in Zamfara and 1 from each of the other 3 states. Data from state M&E reports

In the four states, the FIC by one year (based on card and history) stands at 47% in 2010. Thus, 325,873 children out of a possible 710,269 were fully immunised. In 2007, in the 4 states the FIC by one year (based on card and history) stood at 16% (or 103,732 children out of 648,325).

This equates to a 314% increase or an additional 222,141 children immunised per annum.

In the four states, the % of the children who are protected against Tetanus at birth (children aged 0 – 11 whose mother received at least 2 doses of TT during her last pregnancy or 3 doses of TT any time before birth) stands at 63% in 2010. Thus 468,990 pregnant women out of a possible 745,781 were appropriately immunised against tetanus. In 2007, in the four states, the % of the children who are protected against Tetanus at birth stood at 15% (or 108,919 pregnant women out of 680,741).

This equates to a 431% increase or an additional 360,072 pregnant women immunised per annum.

In terms of maternal care the picture shows a significant increase in both ANC first visits and births attended by SBAs in the targeted facilities in the CEOC clusters:

- The number of ANC first visits in targeted facilities has increased from the baseline figure of 14,524 to 39,272 – an increase of 270%
- The number of deliveries attended by SBAs in targeted facilities has increased from the baseline of 8,172 to 22,170 – an increase of 271%. However, this is below the target for 2010.

Although there is a lot of good news, the maternal data will only significantly improve as the cluster system expands and the supply side factors (human resources, equipment, drugs) are fully operational. Immunisation coverage has shown significant improvement although the measles outbreak does show that there are still challenges to be addressed.

2. Integrated activities

Increasingly the PRRINN-MNCH programme has adopted an integrated and collaborative approach to the delivery of initiatives. This is seen in a multitude of different ways.

Within the programme, many of the activities reflecting the seven outputs will be planned and implemented together. All of these activities will be described in the report in some detail. The following examples illustrate this point:

- Output 6 (increased demand) and output 3 (delivery of PHC/MNCH services) collaborate in a number of areas – the emergency transport scheme (ETS), the community based service delivery (CBSD) approach to mention two.
- Outputs 1 (governance), 3 (delivery of PHC/MNCH services), 6 (increased demand) and 7 (improved federal level capacity) have collaborated closely on the minimum service package (MSP), free MNCH services involving the development of a service and investment plan and linking this, in particular, to the National Health Insurance Scheme (NHIS) and the MDG Fund.
- Outputs 1 (governance) and 7 (improved federal level capacity) have worked closely with NPHCDA and state governments on advancing the 'bringing PHC under one roof' initiative and in strengthening the GAVI scheme.
- Outputs 2 (improved human resources), 3 (delivery of PHC/MNCH services) and 7 (improved federal level capacity) have partnered with NPHCDA to strengthen the Midwives Service Scheme (MSS).
- Outputs 4 (operations research) and 5 (information and knowledge management) are providing the evidence for many of the activities under the other outputs. This is used for planning, tracking progress and measuring outcomes and impact.

But, the programme does not work alone. A dense network of supporting partners has ensured that the activities are owned by the participants, that the successes and challenges are shared and that the relationships that develop are meaningful and sustainable. During 2010, the programme has worked closely with state and LGA governments in all four states, with a variety of leaders, communities and NGOs/CBOs in the states and with a number of key federal level structures (e.g. FMoH, NPHCDA, NHIS, MDG Fund). This has meant that a number of activities have been significantly enriched. For example:

- Output 1 (governance) – close collaboration with NPHCDA on 'Bringing PHC under one roof'; with NHIS and MDG Fund on free MNCH services; with the Eminent Persons Group (EPG) on matters of advocacy at state level.
- Output 2 (improved human resources) – close collaboration with the EPG on advocacy; with state level structures on human resource mix and distribution.
- Output 3 (delivery of PHC/MNCH services) – close collaboration with NPHCDA on the MSS; with community structures on facility health committees; with the National Union of Road Transport workers on the ETS.
- Output 4 (operations research) – close collaboration with several universities (e.g. Ahmadu Bello University, Zaria and Usman dan Fodio University, Sokoto) on the Health and Demographic Surveillance System (HDSS)
- Output 5 (information and knowledge management) – close collaboration with local media on documenting success stories; with state level structures to strengthen routine HMI systems.
- Output 6 (increased demand) – close collaboration with state religious and traditional leaders on addressing the challenges unearthed in the clustering study; with multiple community level structures on the community engagement activities and the ETS.
- Output 7 (improved federal level capacity) – close collaboration with NPHCDA on the 'Bringing PHC under one roof' initiative and the MSS; with NHIS/MDG Fund on the free MNCH activities.

Finally, the PRRINN-MNCH team has worked closely with a number of development partners and other programmes funded by development partners. For example, there has been close collaboration with PATHS2 in Jigawa and several federal level initiatives related to the NPHCDA; with the USAID funded MAPS programme on net distribution in Zamfara; with SAVI on extending their activities to cover Zamfara and Yobe.

This integrated approach and collaborative way of working is one of the key reasons for the success of the PRRINN-MNCH initiative. Through this approach a more balanced, strategic and reflective basket of initiatives and activities are planned, implemented and reviewed.

D. Implementation

1. Output 1 – Governance

The first output focuses on the 'big picture' – the policy and strategy framework within which the health system functions. From the early days of the PRRINN programme it was acknowledged by all that improving immunisation coverage needed to occur within the context of improving the PHC delivery system. This approach has been carried over into the combined PRRINN-MNCH programme. The output has four initiatives that deal with policy and planning; partner co-ordination; advocacy and institutional change; and PFM. In the 2010 Annual Report, issues under this output to be highlighted include: Bringing PHC under one roof – from legislation to take-off, building trust around public financial management, introducing MOUs, whither free MNCH services and the Eminent Persons Group – an answer to advocacy .

Key achievements:

- ***SPHCB Bill passed in Yobe and Zamfara***
- ***Memo/guidelines on 'bringing PHC under one roof' approved by NPHCDA Board and memo prepared for National Council for Health (2011)[3]***
- ***Establishment of a pooled health fund in Jigawa***
- ***MOUs signed in Yobe and Zamfara[4] between the state government and UKaid and at LGA level (in the first clusters) between state/LGA government and PRRINN-MNCH***
- ***Integrating approaches to MSP delivery, free MCH services and resource availability (e.g. from government, inclusive of NHIS, NPHCDA and MDG Fund)***
- ***Request and UKaid's approval for SAVI to provide additional support for advocacy and institutional change in the PRRINN-MNCH supported states***

Bringing PHC under one roof: From legislation to take-off activities

Efforts at National Level

In late 2009 and early 2010, the National PHC Development Agency (NPHCDA) hosted two workshops exploring the need for and the concept of 'bringing PHC under one roof'. PRRINN-MNCH supported this initiative.

This led to the development of a policy and implementation guide which has been formally adopted by the NPHCDA Board.

In late 2010, PRRINN-MNCH supported the NPHCDA to prepare a memo on 'Bringing PHC under one roof' to take to the National Council for Health. This is now on the agenda for the upcoming NCH meeting scheduled for March 2011 (postponed twice since late 2010)

The fragmented PHC system in Nigeria does not allow for effective delivery of PHC services. By reviewing the status and systems and then moving towards a single PHC system in each state, the chances of reviving PHC are strengthened. Thus, the move to 'bring PHC under one roof' is a move that is ongoing in Nigeria as all states move purposely to implement what is contained in the proposed Health Bill.

[3]Together with output 7
[4]Katsina and Zamfara in early 2011

Over the last five years, an integrated and decentralised health system has developed in Jigawa (supported by PATHS1, PATHS2 and PRRINN-MNCH) and has led to the restructuring of health care services in that state. An integrated (PHC and SHC – secondary health care), unitary and decentralised system has emerged from the fragmented one that had existed. This has involved repositioning the SMoH and other state level bodies; moving managerial control of all facilities and human resources from the SMoH and LGAs to the newly created Gunduma Health Services Board (GHSB); creating a pooled fund for the GHSB; and agreeing and implementing the MSP which has included defining facility types and the packages of services to be offered at each facility (inclusive of human resources, equipment, services etc). Though still in its early stages, the process has shown potential for improving services as indicated in the 2010 NICS survey where Jigawa's performance[5] is well above most states.

Key Elements of the 'Bringing PHC under one roof' Policy

- **A single management body** with adequate capacity that has **control over services and resources** (at least human and financial). As this is implemented this will require repositioning of existing bodies.
- Enabling **legislation and concomitant regulations** (inclusive of the key elements).
- **Decentralized authority, responsibility and accountability** with appropriate span of control. Roles and responsibilities of the different levels will need to be clearly defined.
- Principle of "three ones" (**one management, one plan and one M&E system).**
- An **integrated supportive supervisory** system managed from a single source.
- **Integration** of all PHC services under one authority - at a minimum consisting of health education and promotion, MCH/FP, immunisation, disease control, essential drugs, nutrition and treatment of common ailments.
- **Effective referral system** between/across the different levels of care.

PPRINN-MNCH has used its experience in Jigawa and elsewhere in supporting efforts of Yobe and Zamfara stakeholders to pass relevant laws and set up structures for 'bringing PHC under one roof'.

[5]It is obviously difficult to attribute improved health indices to a change such as bringing PHC under one roof, but all the data (some of which is in the report) indicates that there has been substantial improvement in health services and health indices in Jigawa – some of this must flow from restructuring the services.

Key Outcomes at State Level

Steps	Jigawa	Yobe	Zamfara
Legislation Passed	2007	2010	2010
Regulations Established	Pending	Pending	Pending
Body established	Gunduma Health System (both PHC and SHC)	SPHCB (PHC only)	SPHCB (PHC only)
Board members appointed	From 2008	Late 2010	To be appointed in 2011
Management staff appointed	From 2008	Late 2010	To be appointed in 2011
Staff transferred from LGAs/MOLG/SMOH to new body	Completed in 2010	Priority for 2011	Priority for 2011
Repositioning of state bodies	Ongoing	Key activity for 2011	Key activity for 2011
Staff moved to new body	Completed in early 2010	Key activity for 2011	Key activity for 2011
Facilities moved to new body	Completed in 2009	Key activity for 2011	Key activity for 2011
Financial arrangements	Pooled fund created in 2010	Key activity for 2011 – start up funding approved in 2010	Key activity for 2011 – already have PHC development fund

In a sense (and based on experience in Jigawa and elsewhere) the journey is a long and tortuous one as there are no quick fixes. The key areas that need ongoing support include strengthening the transitional committee; ensuring the signing and then implementation of the Bill and regulations; repositioning the MDAs to their new roles and responsibilities; reorganizing the service components; and restructuring the HR and financial aspects of the new system.

Increasing Funding for Health Activities in Jigawa

The creation of the Gunduma Health Service has helped to solve one of the bottlenecks the health system had been suffering - funding of activities. The 2009 Gunduma Annual Report revealed that 672 million naira was budgeted for recurrent expenditure in 2009 of which N650 million was released and spent (a budget performance rate of 98%). Out of the total recurrent expenditure, 51% was spent on implementation of health interventions while the balance of 49% went into salaries and pensions.

Under the capital budget, items proposed were basically aimed at improving health infrastructure at both secondary and primary health care levels. Out of a total sum of N1,3 billion budgeted, only N412 million (31%) was released and spent on capital infrastructure - N377 million was from the MDG conditional grant scheme budget. The low capital budget release was due to the fact that some of the capital expenditures were incurred directly by the State Ministry of Health.

The information above, gives a picture of availability of funding. The above does not include funding support provided by PRRINN-MNCH, PATHS2, WHO, UNICEF and other actors in the health sector.

However, in 2010, the Government approved the establishment of a pool account for health services delivery and a budget of N4 billion. The operational modalities for the account have been developed to ensure a continuous flow of resources into the health sector. This ongoing story will be reflected on in the next annual report.

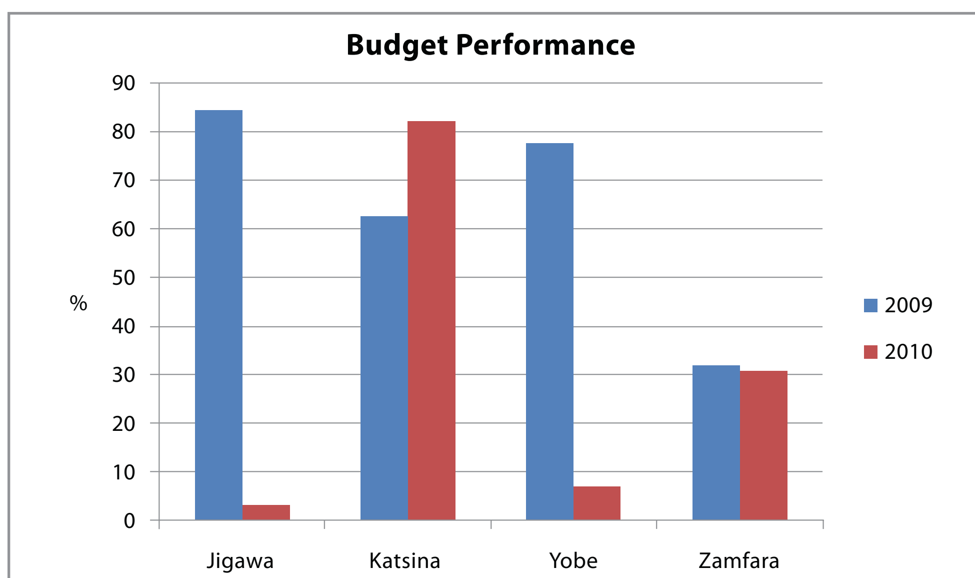
PFM – building trust

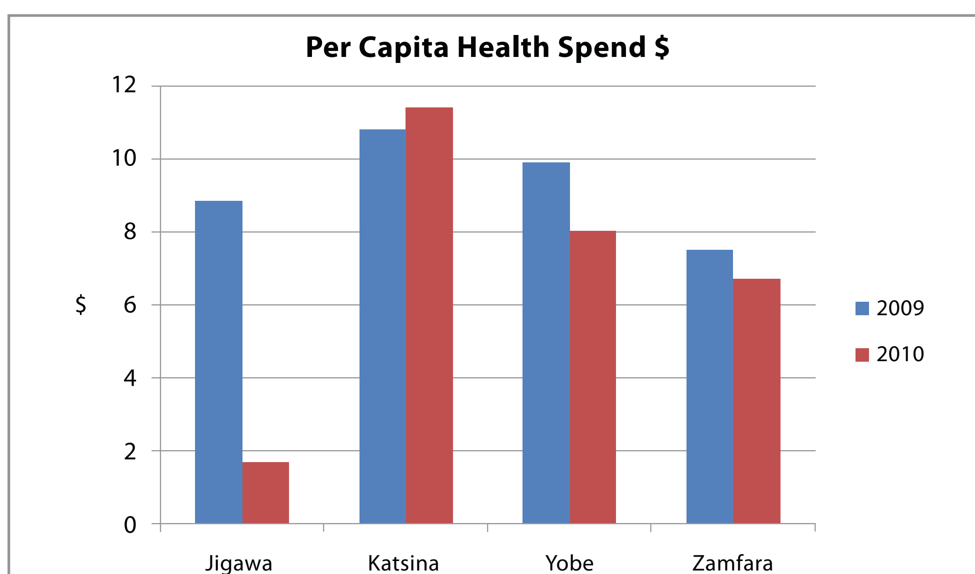
Management of public resources is a key component of good governance. The PRRINN-MNCH programme has supported planning and budgeting, the creation of specific funds (the pooled fund in Jigawa and the PHC fund in Zamfara) and strengthening the use of the GAVI funds. The PRRINN-MNCH programme has in 2010 worked with Federal level agencies (particularly NPHCDA, NHIS and the MDG Funds) to explore increased efficiencies and effectiveness in the use of the funds.

One of the key problems has been accessing reliable financial data. The data below (although incomplete) provides some pointers to budget performance and per capita spend.

PHC fund in Zamfara

Remittance into the PHC fund by LGAs was consistent in 2010. The LGAs remitted the sum of N45, 879,750.00 to the basket. Funds for IPD exercises in 2010 of also N33, 266,400.00 were also channelled into the fund because the fund was found to be transparently managed





As indicated, the data is incomplete – missing budget release data for Jigawa (2010) and Yobe (2010); all financial spend from development partners and Federal and LGA levels are not fully captured. However, the data does suggest that per capita spend (ranging from $2 to nearly $12) is well below what is regarded as sufficient[6]; and that budget performance is reasonable for where full data is available (except for Zamfara).

The key point is that financial data is more readily available which suggests increased transparency from government. In addition, this data can be used for advocacy purposes at all levels of government.

Whither free MNCH services?

Most state governments in Nigeria are committed to providing free MNCH services, but unfortunately the cost of free services is not fully grasped and thus budgeted for. In 2010, PRRINN-MNCH has assisted states to understand the implications of free MNCH services, has worked with key partners (in particular NPHCDA, FMoH, NHIS and MDG Fund) to see how these funds can be better applied in providing services in states and LGAs. The work is illustrated by using data[7] from two states (Katsina and Yobe) which was presented at workshops in January 2011.

6 Currently between S34 and 40 per capita per annum
7 The data is from a variety of sources

Numbers of infants and pregnant mothers dying per annum

	Katsina	Yobe	National
Infant Mortality Rate	91	105	86
Estimated infant deaths per annum	23,000	11,499	
Maternal Mortality Ratio	1,025	1,500	545
Estimated maternal deaths per annum	3,000	1,600	54,000

Some of the reasons for the high mortality rates were explored through the 2009 PRRINN-MNCH survey on the financial burden of emergency medical care. This concluded that:

- Average out of pocket expenditure by households on maternity care was N15,400.
- More if blood transfusion or Caesarean operation was involved which alone cost N6-7,000.
- Transport to get to health facilities – an average cost of N1,800.

This was in a community where:

- Over 60% of the population in the Northern States are classified as poor.
- The average cost of a maternal complication was more than the average monthly income of 78% of household heads in the three states.
- For many people in the three states, a maternal complication is a financial catastrophe.

Even though both States have a policy of free MCH services, this generally applied to state managed hospital facilities and to some LGA facilities some of the time. In addition, not all costs were included in all facilities (e.g. laboratory tests, drugs) and costs for patients to gain access (e.g. transport) were not covered.

In 2010, costing studies in the two States looked at the targets set for 2015 for MCH services in each State's Strategic Plan and estimated the recurrent cost to the State if it were to achieve these targets.

Yobe	Number/% of target pop accessing services		
	2009 (estimate)	2015 (target from plan)	**Increase 2009-2015**
Antenatal care	34,100 (35%)	93,555 (80%)	**59,455 (175%)**
Normal delivery	5,328 (5%)	74,844 (70%)	**69,526 (1,300%)**
EOC	160 (1%)	11,227 (60%)	**11,067 (6,900%)**
Child health care	77,220 (20%)	451,956 (80%)	**374,737 (485%)**
Katsina	Number/% of target pop accessing services		
	2009 (estimate)	2015 (target from plan)	**Increase 2009-2015**
Antenatal care	65,323 (20%)	278,281 (80%)	**212,958 (325%)**
Normal delivery	11,105 (4%)	129,990 (40%)	**118,885 (1070%)**
EOC	686 (1.4%)	45,879 (80%)	**45,193 (6,500%)**
Child health care	522,581 (40%)	1,070,508 (70%)	**547,927 (104%)**

Thus, the state targets imply

- A very large increase in activity anticipated.
- The need to increase capacity of facilities to manage increasing numbers of patients.
- The need to increase staff numbers to manage increased activity levels, and
- Significant additional running costs if services are to be provided free.

Increased recurrent costs to pay for free services for target numbers in 2015 were estimated at 3,762 billion naira in Katsina and 1,336 billion naira in Yobe. Actual allocations in 2010 for free MCH services were 210 million naira in Katsina and 240 million naira in Yobe. Thus, there is a significant discrepancy between what free services the states want to offer and what is funded.

In 2011 to address this problem, PRRINN-MNCH will work with the states to:

- develop a service and investment plan that will guide investments from all partners (state and federal government, additional funds such as NHIS, MDG, and development partner contributions)
- produce costing templates for free MCH service components based on a MSP approach
- Support advocacy to state level leaders on providing components of free MCH services that are within their resource envelopes and pool other funds for effective and efficient MNCH services.

Emmanuel Sokpo, National Health Systems Adviser for PRRINN-MNCH presented on the political economy of health system strengthening in Nigeria at the first Global Symposium on Health Systems Research (16-19th November 2010) in Montreux, Switzerland.

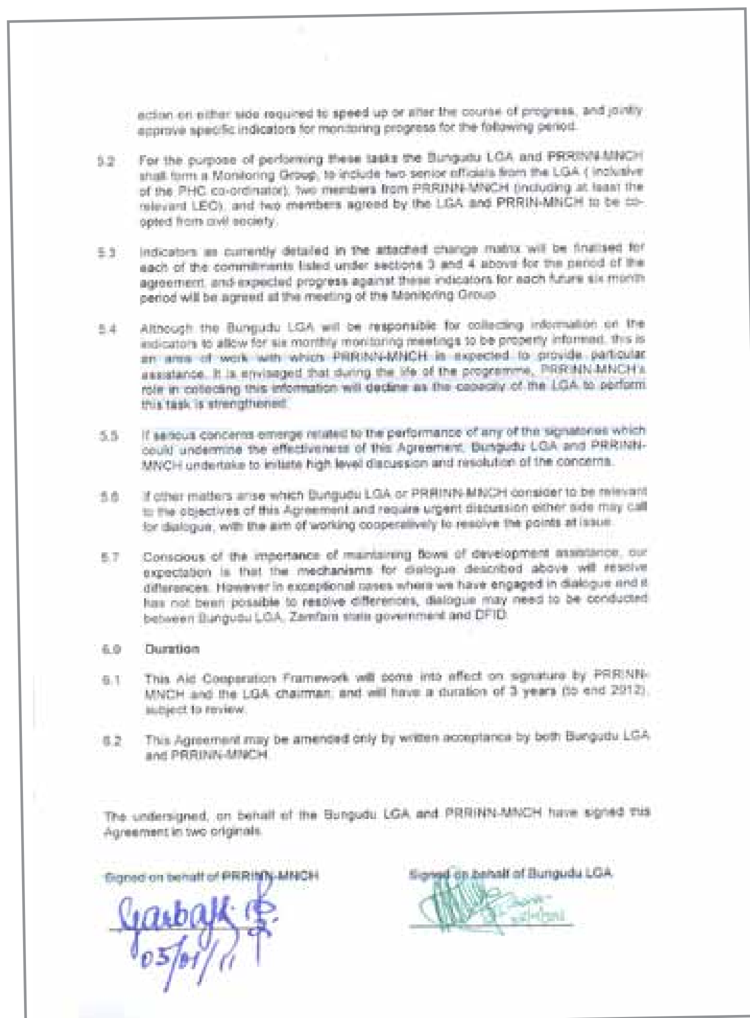
Working with SAVI

In late 2010, UKaid asked the State Partnership for Accountability Responsiveness and Capability or SPARC and the State Accountability and Voice Initiative or SAVI (two lead state programmes) to assess providing support to PRRINN-MNCH initiatives in two states – Yobe and Zamfara. This will lead to SAVI establishing a presence in Yobe and Zamfara (and possibly Katsina) in early 2011. Further discussions with SPARC are expected.

MOUs

In the 2009 Annual Report, we documented the initial work on developing MOUs or change matrices with the states. The purpose was to identify institutional performance in a number of areas or domains. Then a series of agreed realistic steps would be developed throughout the duration of the programme. These steps will relate to both partners and will define both the inputs and the expected outputs and outcomes in terms of institutional performance on an annual basis. Further inputs will depend on the agreed institutional steps being achieved. To date (early 2011), MOUs have been signed at state level (in Yobe and Zamfara) between UKaid and the State Government and between the LGAs in the first cluster in each state and the PRRINN-MNCH programme. In these agreements, the indicators need to be finalised (draft M&E frameworks are included) and the processes for collecting the data and reviewing performance agreed. This is a key task for the first quarter in 2011.

Extract from the Change Matrix/MOU signed with Bungudu LGA, Zamfara



action on either side required to speed up or alter the course of progress, and jointly approve specific indicators for monitoring progress for the following period.

5.2 For the purpose of performing these tasks the Bungudu LGA and PRRINN-MNCH shall form a Monitoring Group, to include two senior officials from the LGA (inclusive of the PHC co-ordinator), two members from PRRINN-MNCH (including at least the relevant LEO), and two members agreed by the LGA and PRRIN-MNCH to be co-opted from civil society.

5.3 Indicators as currently detailed in the attached change matrix will be finalised for each of the commitments listed under sections 3 and 4 above for the period of the agreement, and expected progress against these indicators for each future six month period will be agreed at the meeting of the Monitoring Group.

5.4 Although the Bungudu LGA will be responsible for collecting information on the indicators to allow for six monthly monitoring meetings to be properly informed, this is an area of work with which PRRINN-MNCH is expected to provide particular assistance. It is envisaged that during the life of the programme, PRRINN-MNCH's role in collecting this information will decline as the capacity of the LGA to perform this task is strengthened.

5.5 If serious concerns emerge related to the performance of any of the signatories which could undermine the effectiveness of this Agreement, Bungudu LGA and PRRINN-MNCH undertake to initiate high level discussion and resolution of the concerns.

5.6 If other matters arise which Bungudu LGA or PRRINN-MNCH consider to be relevant to the objectives of this Agreement and require urgent discussion either side may call for dialogue, with the aim of working cooperatively to resolve the points at issue.

5.7 Conscious of the importance of maintaining flows of development assistance, our expectation is that the mechanisms for dialogue described above will resolve differences. However in exceptional cases where we have engaged in dialogue and it has not been possible to resolve differences, dialogue may need to be conducted between Bungudu LGA, Zamfara state government and DFID.

6.0 **Duration**

6.1 This Aid Cooperation Framework will come into effect on signature by PRRINN-MNCH and the LGA chairman, and will have a duration of 3 years (to end 2012), subject to review.

6.2 This Agreement may be amended only by written acceptance by both Bungudu LGA and PRRINN-MNCH.

The undersigned, on behalf of the Bungudu LGA and PRRINN-MNCH have signed this Agreement in two originals.

Signed on behalf of PRRINN-MNCH

05/01/11

Signed on behalf of Bungudu LGA

Governor and Richard Montgomery (Head of DFID, Nigeria) exchanging signed copies of the MOU, Yobe

Richard Montgomery (head of DFID, Nigeria) signing MOU in Zamfara

2. Output 2 – HR

High quality human resource information is vital for effective management of the health sector. This is often problematic as issues of distribution, staff mix, recruitment and retention are often intricately entwined with political concerns. In most states in Nigeria the HR information systems (HRIS) are weak. Strengthening HR management is a major thrust of the PRRINN-MNCH programme as this is seen as one of the key bottlenecks to improving the PHC services in Nigeria.

Key Achievements:

- ***Developed and updated a HRIS in all 4 states***
- ***Tracked retention of MSS Midwives (MWs)***
- ***Established high level HRH 'taskteams' in the states***

Challenges in establishing a HRIS

One of the strategies put in place by PRRINN-MNCH to enhance quality health care delivery for improved MNCH coverage in Katsina, Jigawa, Yobe and Zamfara States is the strengthening of human resource planning, management and development. The process was initiated in 2008 with the conduct of an human resource audit in the four States. The data obtained during the HR Audit informed strategies and interventions for the development of a Human Resource Information System (HRIS) in each state.

An effective HRIS requires:

- reliable and accurate HR data
- HR management and administrative capacity to manage the system
- HR information management procedures
- Hardware and robust software to enable it operate in a resource-constrained environment.

Gathering and inputting accurate data on all employees in the health facilities in the states is key. The two initial phases of the HRIS process were the development of the software and the data gathering process to obtain micro-details on each employee in the state, which required the design and implementation of a paper-based HRIS and operating procedures.

Updating the HRIS

In 2010, states collected HR data to maintain their systems and to assess changes from the baseline audits. Data on employees was captured as follows:

Katsina State - 1138

Yobe State - 814

Zamfara State - 1004 (Zamfara is in process of collecting all health employee data)

Jigawa State - 4883 (Jigawa collected employee forms for all health workers)

Developing and strengthening the HRIS process resulted in the following:

- States have detailed HR information flow charts/procedures from data capturing to reporting and utilisation.
- States have HR information templates for collecting, verifying and reporting on HR information up and down stream.
- States have dedicated HRIS officers responsible for HR data.
- States can monitor staff movements through pre-selected criteria.
- States can report on HR indicators for annual HR planning and recruitment purposes.
- Greater awareness among policy makers and managers in the health sector about the need for quality HRH data to inform staff distribution, review gender issues and to compute HRH resource needs

Due to the fact that PRRINN-MNCH focuses on clusters within the states it was decided to implement the HRIS in the cluster and then to work with the MoH in each state to roll it out to the remaining LGAs. The development of the software progressed well and the software was combined with a paper-based approach to ensure that it would continue to provide HR management information. The HRIS was installed in all four states and selected officials were trained on its implementation. A basic HRIS user manual was developed with input from the end users and managers.

The HRIS system will be rolled out to cluster II & III in 2011. Lessons learned from the implementation of the HRIS in Cluster I will inform the roll out to the next two clusters.

Challenges - The implementation of a HRIS within a resource constrained environment needed a careful and cautious approach. Thus significant challenges have been experienced:

- Complete and accurate employee data in all the states remains a significant problem. This is as a result of a lack of data maintenance.
- Actual HRIS utilization in some states came to a standstill due to a lack of institutional memory. The end users that were trained with support from the PRRINN-MNCH programme were transferred, seconded or they resigned, leaving no one to operate the HRIS.

The teams are working hard to overcome these challenges

Comparison of staff in Jigawa

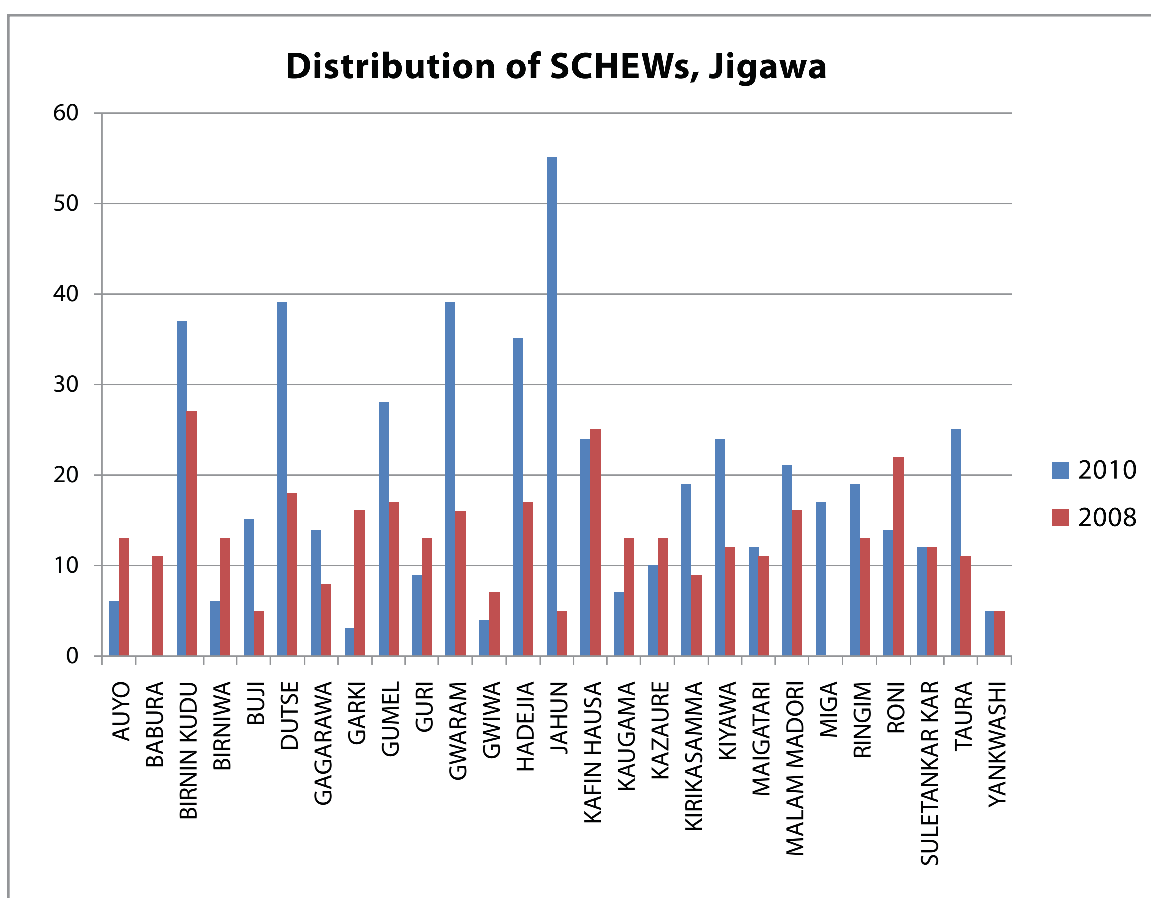
Jigawa has the most complete HR data set and it thus interesting to compare the data in the HRIS from 2008 and 2010. During this period, the Gunduma Board has assumed responsibility for all staff and in this process some staff (especially at lower levels) remained under the control of the LGAs.

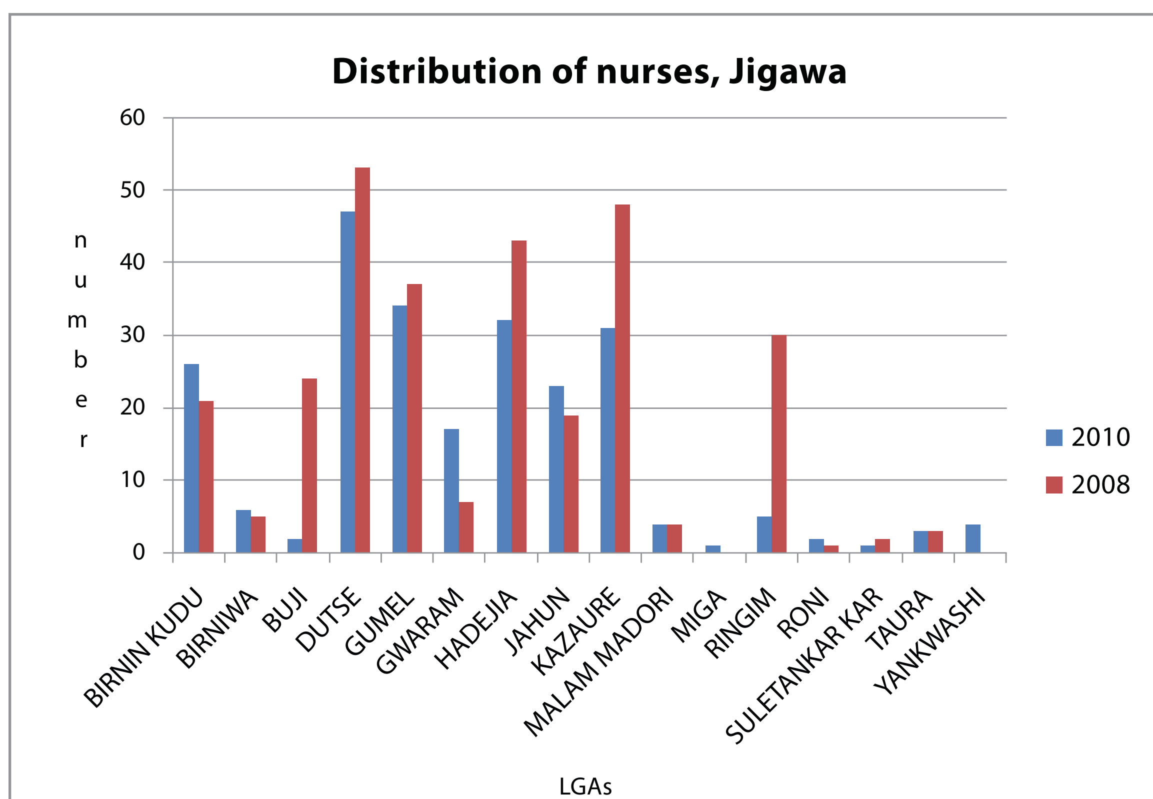
	2008	2010	Difference
Health Aids	2,036	1,232	-804
JCHEWs	1,264	1,041	-223
SCHEWS	346	502	+156
Medical Officers	32	21	-11
Nurses	297	240	-57
Midwives	1	43	+42

The data shows some interesting changes. While there has been an overall decline in the numbers of staff, this has been predominantly at the lower levels (health aids and JCHEWs). There has been a significant increase in the numbers of midwives and SCHEWs. Worrying is the decline in doctor and nurse numbers.

In terms of distribution there has been some improvement. The nurse midwives (42 extra as compare to the 1 MW in 2008) are spread over 12 LGAs. The distribution of nurses and SCHEWs (see below) also shows a more dispersed distribution.

But, what is important is that managers within the Gunduma Health System now have HR data (numbers and distribution) that they can use for managerial decision making





Midwives Service Scheme (MSS) – Retention of staff

PRRINN-MNCH has provided significant assistance to ensure the smooth functioning of the MSS. The table below shows close to a 75% retention rate in the first cluster clinics in the three states.

Number and distribution of MSS midwives in target facilities

States	PRRINN-MNCH target health facilities (Cluster 1)	Total number posted (Dec 2009- Jan 2010)	No. in post June 2010	No. in post Oct 2010
Katsina	Zango CHC	0	0	0
	Rogogo MCH	4	4	3
Zamfara	Dan Marke PHC	3	1	2
	Bungudu PHC	4	1	3
	Furfuri PHC	4	1	2
	Nahuche PHC	4	3	3
Yobe	Kelluri MCH	4	4	4
	Bayamari PHC	4	4	3
	Yunusari MCH	4	3	4
	Kanamma GH	2	2	0
	TOTAL	**33**	**23**	**24**

Establishing a Human Resources for Health Forum, Yobe

This high level forum composes 10 permanent secretaries and is tasked with improving human resources for health. Some of the decisions made include:

- Establishment of HR department in SMoH
- Upgrading the specialist hospital to accommodate medical housemen
- Pursuing accreditation of the School of Nursing and School of Health Technology – Bill on establishing formally the School of Nursing going through the State Assembly
- Converting existing facilities as hostels for nurse trainees
- Actively seeking and employing key health professionals – e.g. doctors and nurse/midwives
- Preparing and adopting a HR strategic plan

Support for the MSS has included:

- Orientation and ongoing support/training for midwives employed within the first clusters
- Developed tools for ISS and trained trainers on their use
- Developed M&E framework

3. Output 3 – systems and services

All the other outputs support improved MNCH service delivery – this is output 3. In addition, to the MNCH service delivery, output 3 also covers the immediate systems surrounding service delivery (drugs, transport, supervision, infrastructure and equipment).

CEOC clusters as the building block

Each state has selected one CEOC cluster as the initial site for the PRRINN-MNCH programme. The cluster serves approximately 500,000 people, has one CEOC facility, four additional BEOC facilities (each serving 100,000 people) and eight 24/7 PHC facilities. The programme will ensure that most of the activities supported are at a minimum taking place within these clusters. However, some of the work will be state wide (e.g. much of the governance and systems work). Each cluster comprises two or three LGAs. The LLGA and the Health Demographic Surveillance Site (HDSS) are LGAs within the first CEOC cluster. Following initiation of activities in the first cluster, second and third clusters will be selected for future work – this process started in 2010.

Kangaroo Mother Care

In Nigeria, around 45,000 neonatal deaths are due to low birth weight/preterm babies (birth weight < 2,500kg) who do not have appropriate care. 'Kangaroo mother care' (KMC) is an effective and affordable method of providing quality life-saving care to LBW/preterm babies especially in low resourced countries. KMC reduces the risks of major causes of death in LBW/ preterm babies especially from hypothermia, infections and cardio-respiratory problems.

PRRINN-MNCH supported the introduction of KMC from 2009 – initially in the first clusters. Data from the first clusters is presented below.

Indicators	Katsina	Yobe	Zamfara	Total
% of targeted facilities where KMC is operational	**62%** (8/13)	**46%** (6/13)	**15%** (2/13)	**41%**
Number of health care providers trained in KMC	**54**	**70**	**51**	175
Number of LBW babies admitted to KMC	**68**	**50**	**27**	145
Number of LBW babies admitted to KMC who were discharged	**66**	**48**	**27**	141
% of LBW babies admitted to KMC who survived to discharge	**97%**	**96%**	**100%**	97%
Number of KMC babies lost to follow-up (missed two subsequent visits)	**2**	**40**	**0**	42

From the clinic data above, there is very favourable survival rates (97%) of LBW babies managed in KMC centres in 2 states where full data was available.

In addition, the national KMC training packages were reviewed, revised and adapted for use in Nigeria.

Key achievements:

- ***Reviving KMC in the three MNCH states***
- ***Close collaboration with NPHCDA on MSS resulting in significantly increased ANC and delivery attendance at health facilities***
- ***Introduced maternal death audits***
- ***Significant improvement in immunisation coverage***

KMC practice at CHC Zango (BEOC Facility)

A woman blessed with triplets, being assisted with KMC position by Grandmother and a Midwife at Baure general hospital (BEOC facility in Katsina state)

Supporting the MSS (Midwives Service Scheme)

The NPHCDA initiated the MSS using resources from the Millennium Development Goal (MDG) fund. In each state four midwives (MWs) were deployed to each of the selected PHC facilities to ensure provision of maternal and child health care services on a 24/7 basis. A selection of four PHC facilities is clustered around the referral General Hospital with the creation of 156 clusters nationwide. Six of these clusters are in the PRRINN-MNCH target states (Katsina, Yobe and Zamfara). The first MWs were posted in late 2009/early 2010. This was followed by a second wave (both MWs and CHEWs in late 2010).

Specific areas/activities of collaboration between PRRINN-MNCH and NPHCDA have included:

- Participation in the recruitment of midwives for North-West zone.
- Sharing of relevant tools and reports including those for health facility baseline assessment, IMPACT manuals and tools, assessment of training institutions
- Sharing experience on planning and conducting baseline assessments, development of an M&E framework, and the CEOC cluster model used
- Participation in the planning of refresher training of midwives countrywide by NPHCDA-MSS
- Developing national integrated supportive supervision (ISS) tools - the ISS tools have been institutionalised and the ISS teams oriented nationwide
- Providing in-service training to MSS midwives in the three states based on training needs earlier identified during the induction workshop.

Number of MSS Midwives and CHEWs state wide as of December 2010

Posting	Cadre	Katsina	Yobe	Zamfara	Total posting	Total drop out	Total in post
Nov-Dec 2009	MWs	82 (15)	96 (27)	96 (23)	274	65	209
Nov -Dec 2010	CHEWs	72	67	69	208	-	208
	MWs	23	37	39	99	-	99
	Total	177	200	204	581	**65**	**516**

(#) in brackets are MWs who have left the MSS as of Dec 2010

Impact of MSS midwives in target health facilities (first clusters)

Findings from follow up of MSS MWs show some positive effects (early impact) including:

1. Significant improvements were observed in the utilisation of MNH services in all the PRRINN-MNCH facilities where MSS midwives are deployed as compared with the baseline data collected between August and October 2008. Overall, more significant increases were noted in ANC attendance when compared with intrapartum care (delivery). The following are some of the examples:
   - ✓ From no ANC visits and deliveries as noted from baseline data to 455 and 28 for ANC visits and deliveries respectively between April- June 2010 in Furfuri PHC, Zamfara;
   - ✓ from 44 ANC visits and 18 deliveries as noted from baseline data to 504 and 46 for ANC visits and deliveries respectively between May and July 2010 in Yunusari CHC, Yobe;
   - ✓ from 450 ANC visits and 54 deliveries as noted from baseline data to 581 and 40 for ANC visits and deliveries respectively in Nahuche PHC, Zamfara;
   - ✓ and although a decrease in the ANC attendance was observed – from 728 to 321 ANC visits, there was however significant increase in the number of deliveries (from 4 to 73) and PNC visits (from 0 to 122) since the arrival of midwives, Rogogo MCH, Katsina.
2. Significant improvement in documentation including keeping of registers and summary graphs and statistics in all facilities (and bar charts in some facilities).
3. Provision of 24 hours intra-partum care by running shifts in all PRRINN-MNCH supported Health Facilities where there are MSS midwives (at least 3-4 MSS MWs per health facility). For instance a night shift was introduced by MSS midwives on arrival at Baimari Maternity PHC, Yobe.
4. MSS midwives initiated community mobilisation activities to increase utilisation of MNH services especially skilled care at delivery.

Improving quality of care – maternal mortality audits: examples from Yobe

A key component of improving quality of care are maternal and perinatal mortality audits. The "three delays model" was introduced as a framework for analysing causes and contributing factors to maternal deaths, followed by the introduction of the concepts, principles, advantages and limitations of facility-based Maternal Death Reviews (MDRs), commonly called maternal death/mortality audits.

In workshops, the steps for initiating and conducting facility-based MDRs were discussed, after which workshop participants conducted in small groups actual MDRs, using case studies, followed by plenary discussion of the findings.

Some case studies from maternal mortality reviews in Yobe are presented below

The "three delays model" classifies delays as follows:

(1) First delay refers to the time spent at home before a decision is made to seek health care;

(2) Second delay refers to the inability to get to a health facility after having made the decision to go there (due to problems with transport, money, or poor roads); and

(3) Third delay refers to the time spent waiting for adequate management after arrival at a health facility.

LSS training, Katsina

General Hospital Dapchi (BEOC)

Quality Improvement team reported functional meetings, once a month on average.

Summary of case: "The deceased was an unbooked gravida 5, para 4+0 who presented to the hospital with severe anaemia in pregnancy (28 weeks) with impending heart failure. Had a lot of delay in obtaining blood for transfusion, but eventually was started on parental lasix (antidiuretic) and then a blood transfusion but her condition deteriorated and she passed away."

Direct obstetric cause of death: Anaemia

Health worker factors: Delay in starting treatment and poor monitoring of the patient during transfusion

Administrative factors: Non-availability of blood; lack of laboratory facilities (for PCV estimation)

Patient/family factors: Unsafe medical treatment (from drug vendors); delay in decision making to come to hospital; financial constraints; lack of spousal support (declined to donate blood)

Plan to improve future care: the team focused on what the **hospital** can do - which included making available patient vital signs monitoring charts and ensuring frequent monitoring and observation of patients on blood transfusion; an official request was made for a micro hematocrit centrifuge (for PCV); ensuring proper handover to appropriate staff before going off duty.

Family/community – liaising with Health Facility Committee for community and family sensitisation of danger signs and obtaining standing permission from husband; establishing community saving and emergency transport schemes in order to reduce first and second delays.

For each of the planned activities, responsibility for undertaking the activity and time frames were indicated.

General Hospital Kanama (BEOC)

Summary of case: Case file and MDR form missing. Was a patient suspected of ruptured uterus following prolonged obstructed labour. Patient died before transfer to next Health Facility for further management

Direct obstetric cause of death: unknown

Health worker factors: No case file (record); ANC card inaccessible – locked up by nurse in-charge; delay in starting treatment; inadequate monitoring

Administrative factors: No facilities for blood transfusion; no hospital transport for referral; lack of qualified staff - shortage of skilled birth attendants (1 doctor and 1 Nurse/MW)

Family/patient factors: Delay in reporting to health facility

Community factor: Failure to recognise danger signs

Two male nurses were reportedly posted to the General Hospital but were yet to report on duty. One of the key issues is that the midwife in-charge of the maternity 'moves away with her office'! In her absence, staff do not have access to the records/files of patients or any other materials, including protocols. Secondly the hospital has not reserved a room for keeping files despite having several vacant rooms.

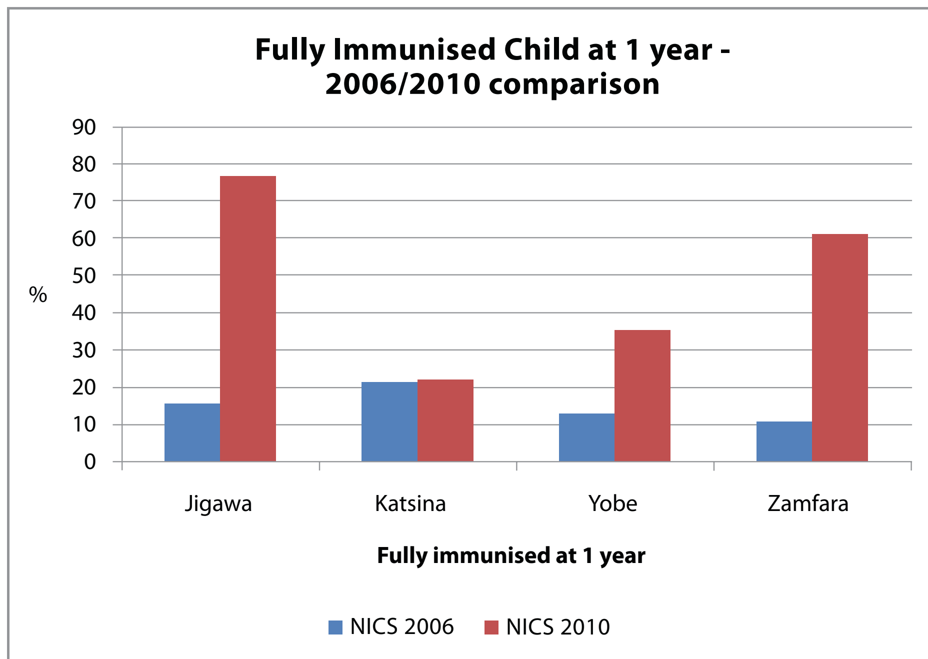
Recommendations: Set up a designated room for keeping patient records and assign a staff member to be responsible for record keeping and reorganising filing of records; orientation of clinical staff on emergency obstetric and newborn care protocols; provision of vital signs charts and orientation of staff to ensure proper monitoring of patients with an emergency; lobby HMB to set up a transfusion service in the hospital.

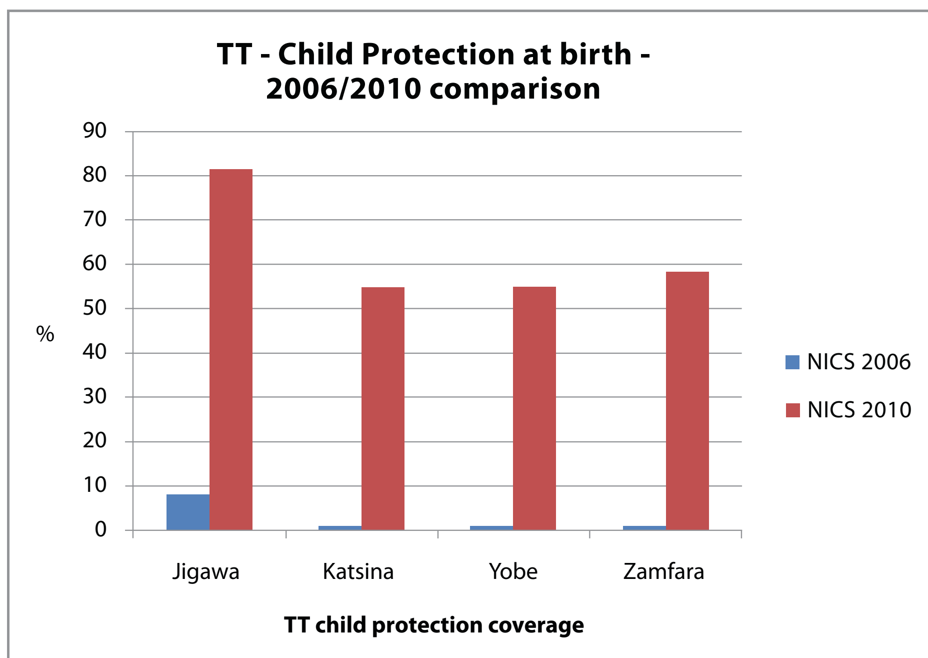
Immunisation Coverage – turning the corner in the four states

Based on the 2010 National Immunisation Cluster Survey (NICS2010) data, there has been substantial improvement in immunisation coverage in the four states

- By 2010, 47% of children were fully immunised by 1 year – up from 16% using either NICS2006 data or the 2007 baseline data. This equates to a 314% increase or an additional 222,141 children receiving their full immunisations each year. This also indicates that more children are receiving their immunizations through routine services and not just campaigns.
- Similarly the % of children protected against tetanus at birth rose from 15% (2007 baseline) to 63%. This equates to a 431% rise and an additional 360,072 pregnant women being appropriately immunised each year. If one uses the 2006NICS data the increase is even more astounding – from 3% which is a staggering 2,416% difference.

A Nurse completing an immunization monitoring chart during the training of Hospital based health workers on routine immunization (BGSP) as one of the strategies to increase immunization coverage in Katsina State.





One can see from the data that some states have performed better than others.

Why has there been this remarkable increase?

An increase in immunization coverage is also an indication of improved immunization systems (e.g. more efficient cold chain, better vaccine management, improved supply) and increased demand.

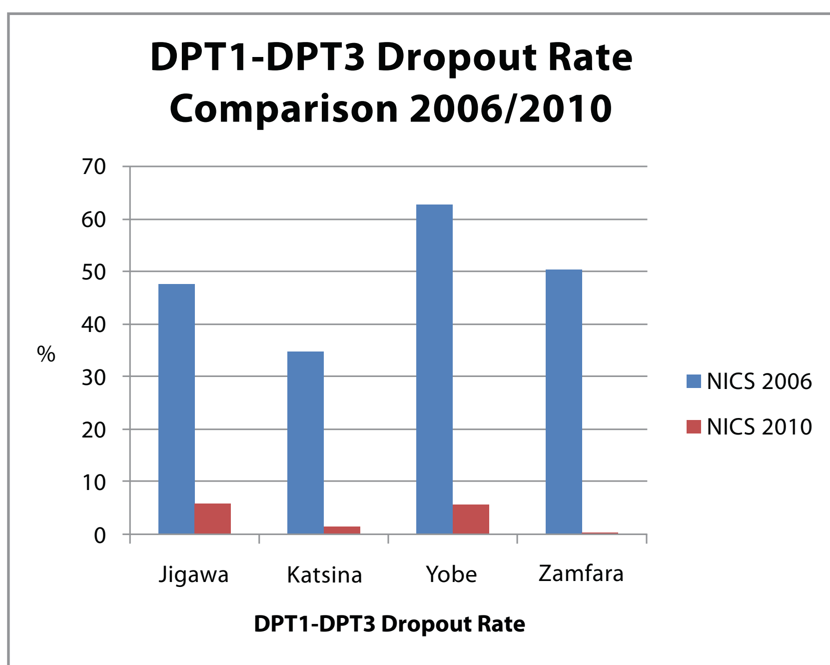
The Q4 2009 rapid immunisation assessment[8] showed considerable improvement in a range of immunisation services and activities. It also identified problems that states were addressing through out 2010.

[8]Rapid Immunization Assessment (Jigawa, Katsina, Yobe, Zamfara) by Obute Joseph and Anne McArthur, technical edit, March 2010

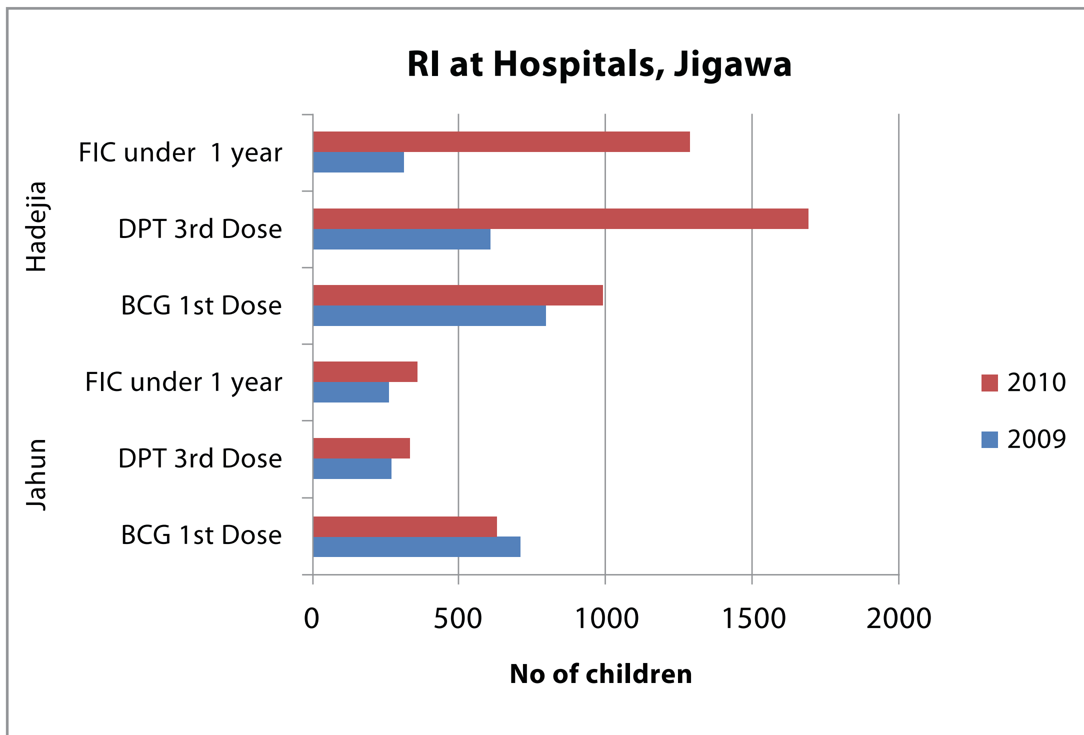
Results of 2009 Rapid Immunization Assessment compared to 2007 Supply Side Assessment

	Jigawa		Katsina		Yobe		Zamfara	
	2007	2009	2007	2009	2007	2009	2007	2009
LGA store stock outs of BCG *(% LGAs assessed reporting yes)*	38%	25%	14%	0%	83%	38%	50%	25%
LGA store stock outs of TT (% LGAs assessed reporting yes)	100%	25%	43%	0%	83%	75%	50%	50%
HFs reporting store stock outs of BCG (% HFs assessed reporting yes)	74%	50%	32%	65%	52%	38%	48%	25%
HF reporting stock outs of TT (% HFs assessed reporting yes)	61%	**13%**	19%	**25%**	52%	**50%**	17%	**0%**
The data below was not collected in 2007 but shows comparisons against PRRINN-MNCH milestones/targets								
% of LGAs with 1 month stock of all antigens for previous 3 months		**75%**		**100%**		**75%**		**100%**
December 2009 M&E milestone	**59%**							
% of HF with up-to-date micro-plan		**75%**		**75%**		**63%**		**75%**
December 2009 M&E milestone	**30%**							
% of HF with up-to-date monitoring charts		**63%**		**38%**		**75%**		**38%**
December 2009 M&E milestone	**40%**							

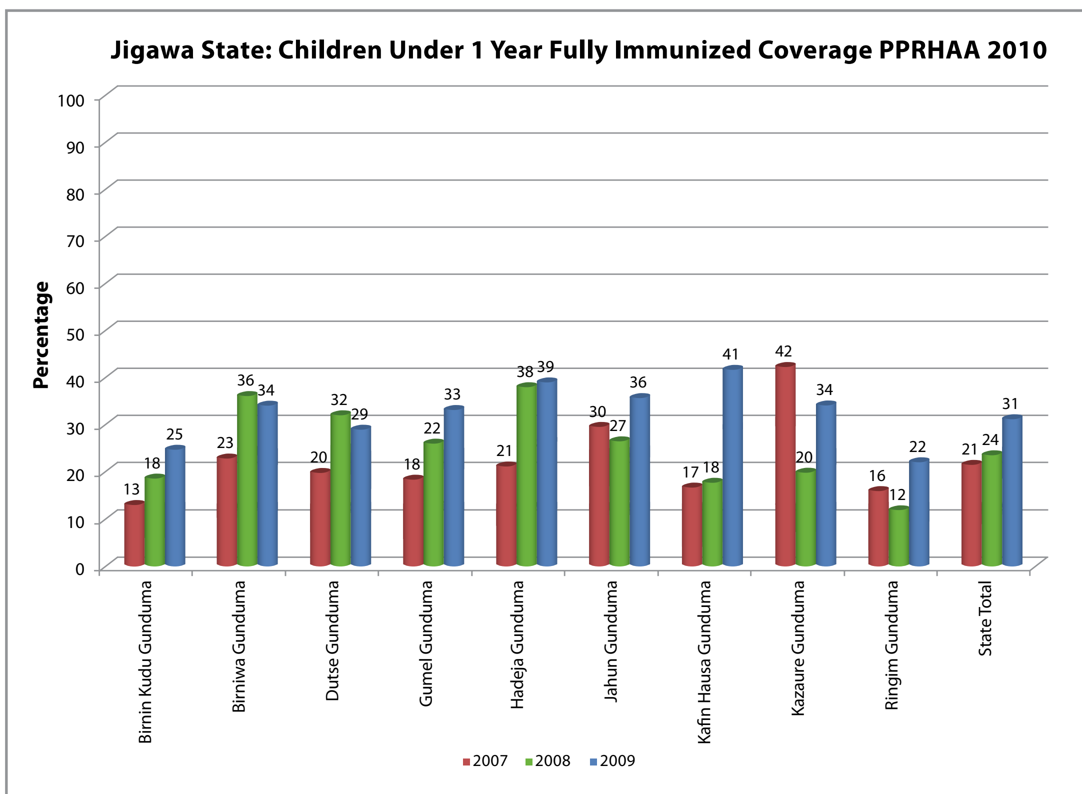
This improvement was confirmed by the NICS2010 study and can be illustrated with the comparison in dropout rates shown below (another considerable improvement shown by the decline in dropout rates).



In Jigawa, the 2009 Annual Report commented on missed opportunities for immunisation at general hospitals and measures to overcome this. This started in Hadejia hospital and spread to Jahun hospital. Routine HMIS data (shown below) show that in most immunisation situations there has been considerable improvement from 2009 to 2010



Finally, the PPRHAA data has shown a similar improvement in immunisation coverage in Jigawa[9]



What the PPRHAA data illustrates is that there has been an improvement from 2007 to 2009. However, it is not as substantial as reported in the 2010NICS (albeit this is over a year later) and it is not uniform across the Gundumas. This is important for managers as they can then target their resources on the poorly performing Gundumas.

[9]2010 Annual PPRHAA Jigawa State, by Sofa Ali-Akpajiak and Salele Abdul, September 2010

To increase demand, the PRRINN-MNCH programme assisted states to saturate the airwaves with songs and spots promoting the benefits and the timing of RI and the community engagement (CE) strategy showed both government and people that it was possible to raise the level of RI above 60%

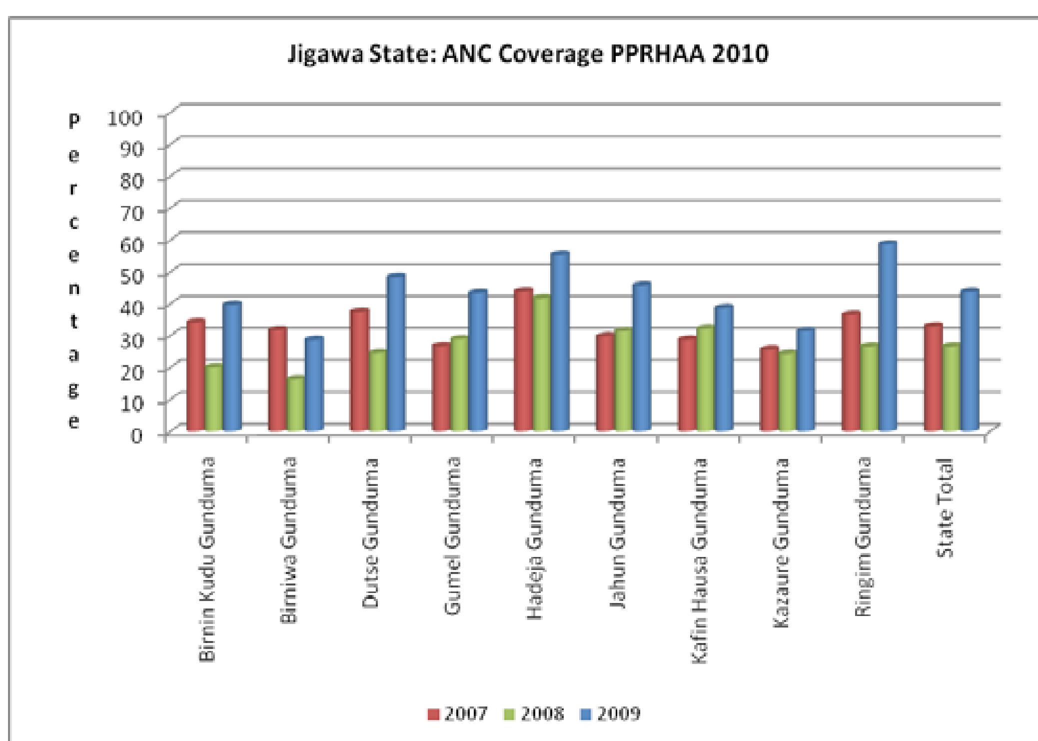
What does PPRHAA show us?

The Peer and Participatory Rapid Health Appraisal for Action is a tool that has been used in Nigeria for the last decade as a facility/institution appraisal tool, as an adjunct for planning purposes, as a capacity building approach for managers and a systems strengthening device.

The examples below from the 2010 PPRHAA exercise in Jigawa illustrate how the PPRHAA process can generate useful information for managers.[10]

Measures of coverage: <u>Antenatal coverage</u> (number antenatal first visits/total expected deliveries in population) x 100

Target is >75%

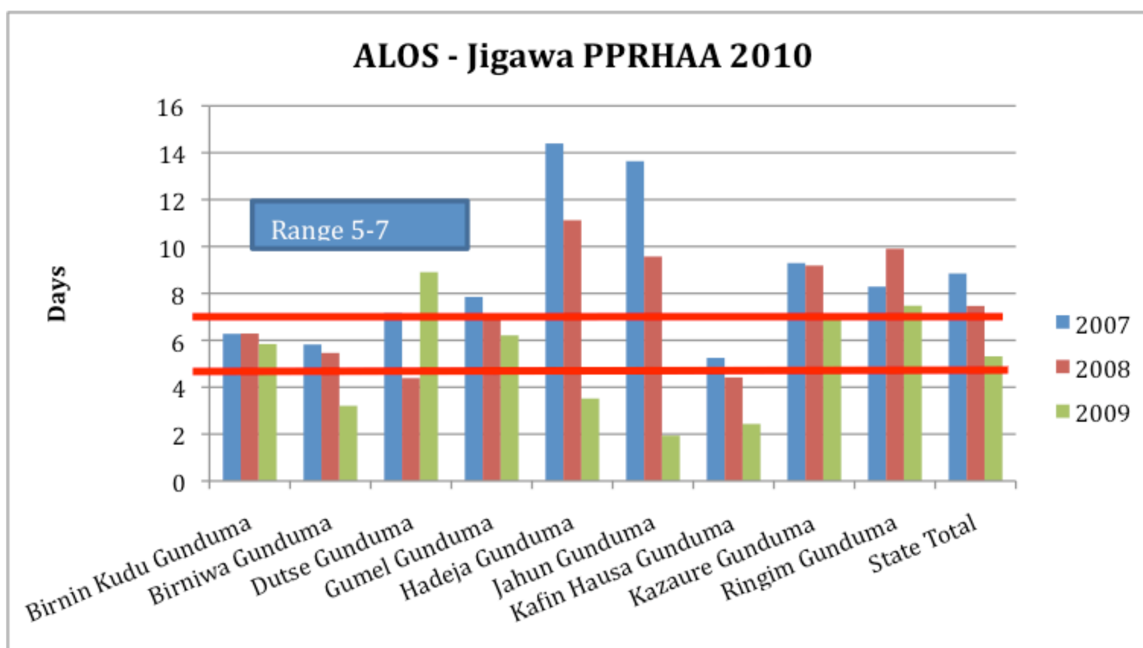


The data shows that there has been a steady improvement over the last three years (2007-2009) in ANC coverage in all Gundumas. Some Gundumas have performed better than others whilst the overall coverage rate is still well below the target.

[10]The full report and dataset is available from: 2010 Annual PPRHAA Jigawa State by Sofo Ali-Akpajiak and Salele Abdul, September 2010

Measures of efficiency: Average Length of Stay (ALOS) (Total (annual) in-patient days divided by total admissions) – this is for inpatient facilities

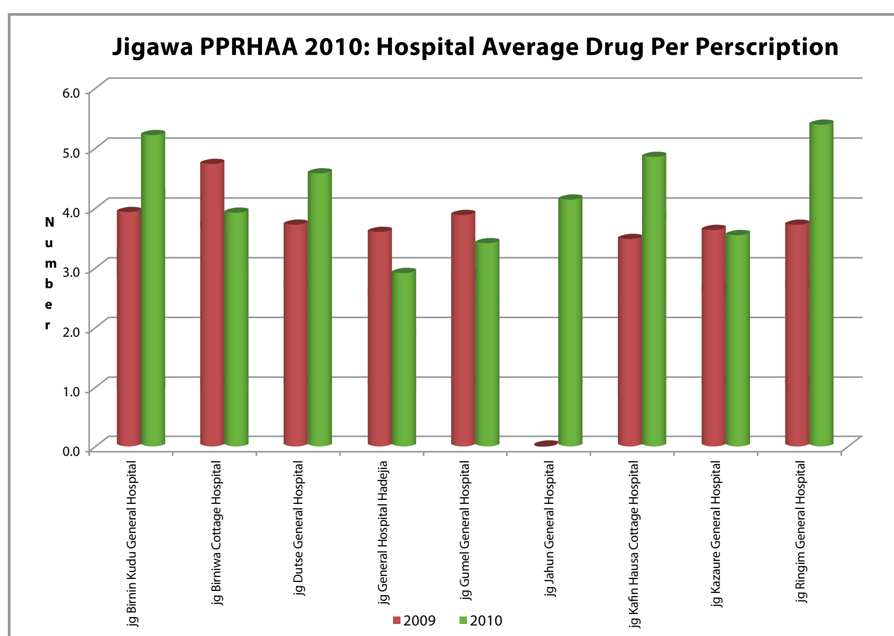
Target is 5-7 days



The data is showing that the ALOS have steadily declined, in some Gundumas quite dramatically. The state average is just on 5 days (which is within the optimal range). However, this does conceal some variation which again is important for managers to take note of.

Measures of rational drug use: Items per prescription (total items dispensed/number of prescriptions)

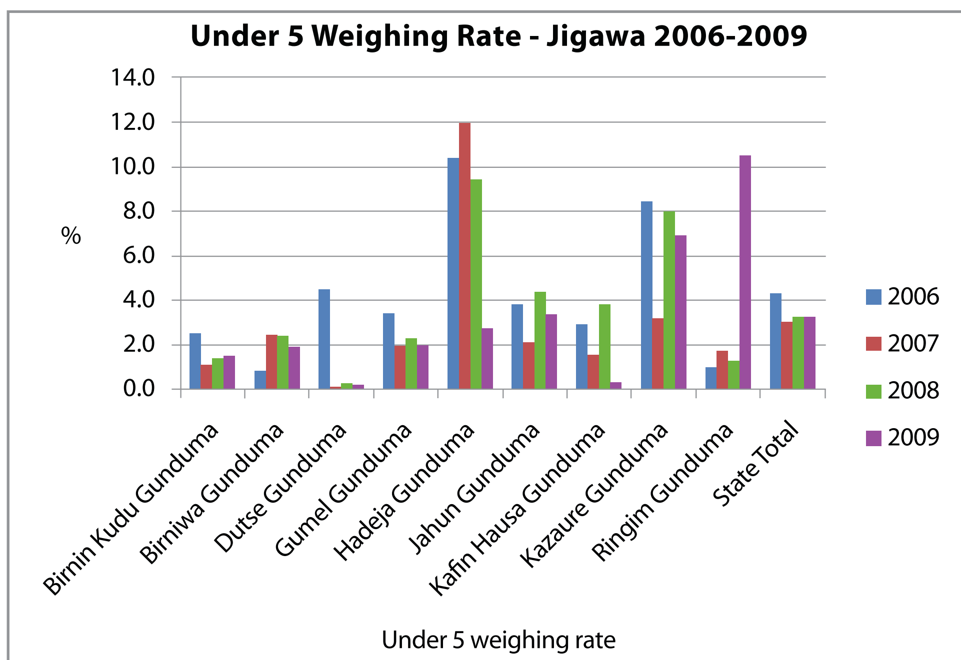
Target is 1-2



This data is showing us that all facilities are practicing polypharmacy and that the situation has worsened over the last year. Both clinicians and communities need to be educated on the dangers of polypharmacy.

Measures of quality of care: U5 weighing rate (Total U5s weighed/total U5s attendance) x 100

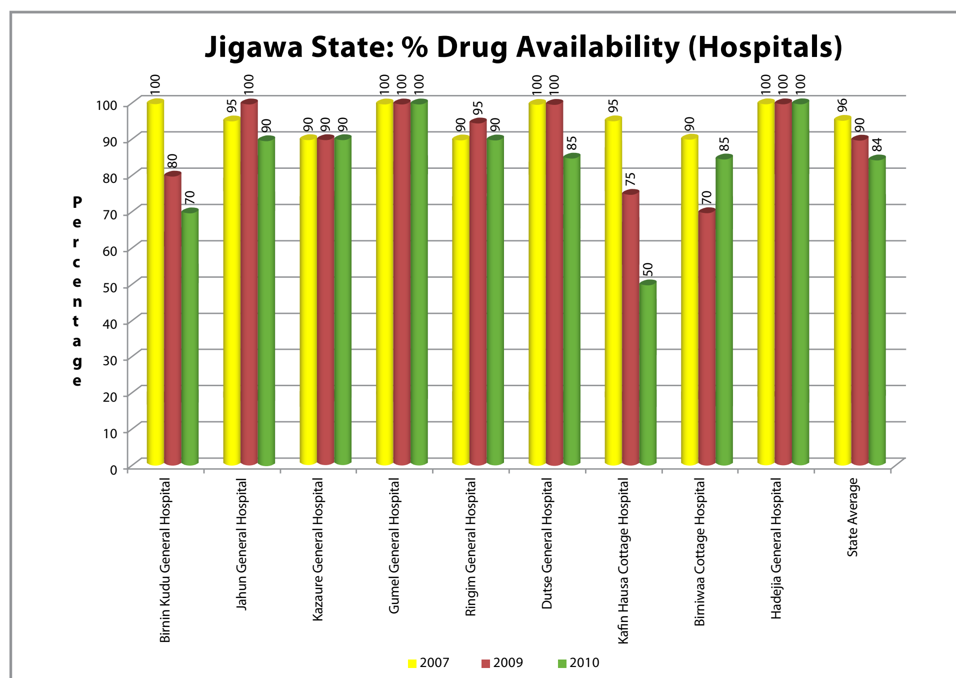
Target is 100%



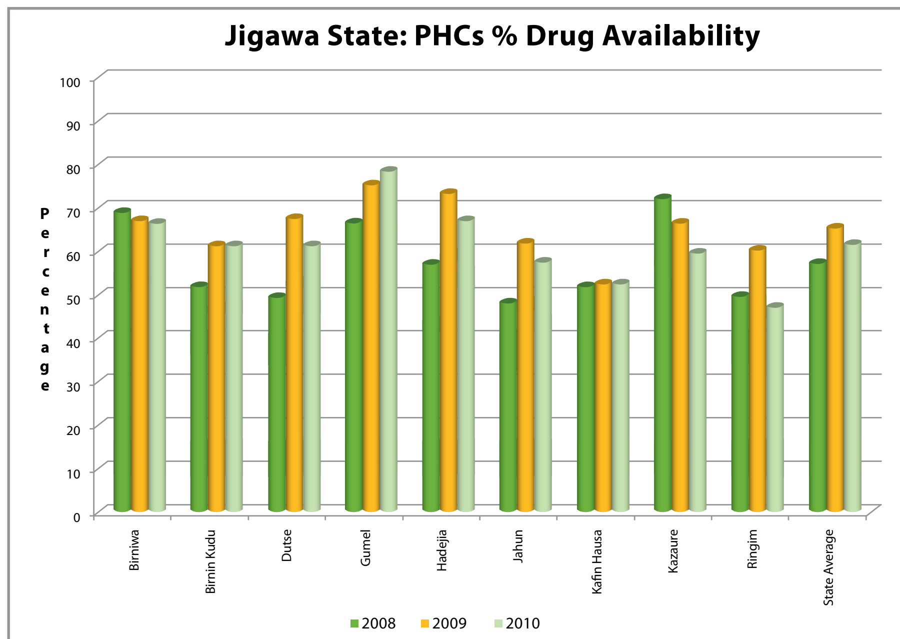
This data is showing us that very few children under 5 are weighed when they come to a facility and that there has been little improvement over the years. Weighing is a key step in monitoring nutritional status.

Measure of availability: Tracer drugs availability rate (Number of tracer drugs available /number on list) X100

Target is >90%

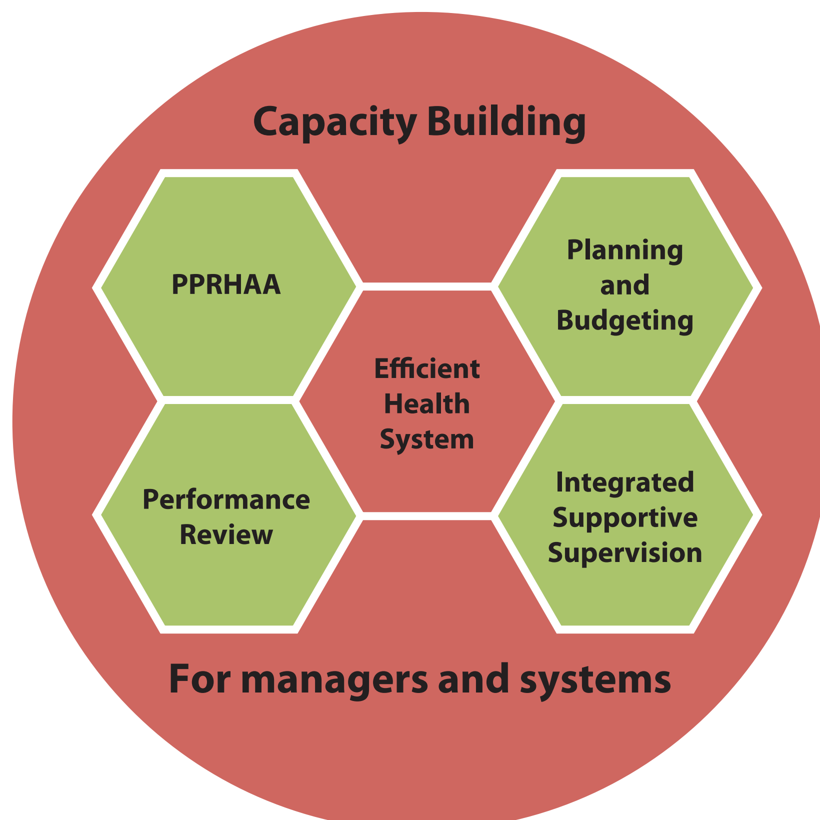


At hospital level, we are seeing sustained availability of drugs with some worrying drop off in 2010 in certain hospitals. At PHC facility level, availability is lower.



But PPRHAA is far more than just collecting and analysing data (and in many cases high quality data is not available for some years until the HMIS is strengthened and the PPRHAA matures within the state). The distinctive peer and participatory process allows the reasons for systems malfunctioning to be explored and discussed in an unthreatening way. Further, this analysis then feeds into the planning processes (action and operational planning largely) that allows managers to develop structured activities to tackle the problems identified.

PPRHAA is part of a broader management and systems strengthening process – IMPACT (Improved Management for Participatory Appraisal and Continuous Transformation). The different elements are depicted below.



Currently the PPRHAA and IMPACT tools are under review in order to make them more flexible and cheaper to implement. Through this mechanism, it is hoped that both the usefulness of the tools will be further appreciated and that the use across Nigeria will increase. It is hoped that once the tools are finalised and utilised in mid 2011, that discussions will be held with NPHCDA on the possibility of using them across the federation.

High political will, Katsina State Governor, Alhaji Shehu Shema flagged up the MNCH Week and LLIN distribution campaign in Zango LGA

His Royal Highness the Emir of Daura Alhaji Umar Faruk addressing the gathering in Zango

Strengthening the transport management system

The baseline transport management system assessment indicated that transportation was a major issue. Specifically:

- Transport management is not integrated with other aspects of health service delivery.
- At the LGA and health facility levels, 84% of health workers pay for fuel out of their own pockets.
- The lack of a transport policy means there are no rules, leading to lack of consistency in approach and providing opportunities for undisciplined use of transport.
- There was no planned preventive maintenance strategy and repairs are only carried out whenever there is a problem.
- 77% of the vehicle fleet had exceeded its economic lifespan and was in poor condition making it a drain on resources whilst not being adequately available for health service delivery.
- Weak referral systems to quickly move emergency cases from one level of care to another

Ambulance Driver Training in Northern Nigeria

Transaid was requested to lead two training sessions, in Yobe and Katsina, in order to build the skills and capacity of ambulance drivers. In each state the objective of the training was two-fold; firstly to develop a cadre of ambulance driver trainers, and secondly to monitor those trainers as they cascaded the training to a larger group of ambulance drivers.

Before the training commenced selection criteria were discussed with the Ministry of Health to ensure that only suitable drivers were put forward for training. In each state 6 drivers were chosen to be trained as trainers. The vehicles used for training were the same ambulances which the drivers were responsible for on a daily basis. Initially the trainers underwent a basic driving course to certify that they were at the appropriate standard to be trained as trainers. Following the basic driving course the trainers underwent a Training of Trainers course.

After the execution of the Training of Trainers, PRRINN-MNCH facilitated the step down training in the two states with a total of 49 ambulance drivers attending. The curriculum used for the step down training was the same as that used for the training of trainers.

At the conclusion of the training a total of 61 drivers had been trained across the two states using standards based on international best practices. The drivers were exposed to inputs from international trainers, the Nigerian Red Cross and the Federal Road Safety Commission. Each state now has a cadre of trainers with the knowledge and ability to pass down training to any drivers who might require it.

Some of the specific activities to address the above transport management system challenges are:

1) The development of state and LGA level transport policies/guidelines
2) Trained State and LGA Transport Officers on transport management (concepts, key performance indicators (KPIs), data collection, analysis and presentation, management)
3) Support to establish the Jigawa Routine Immunisation motorcycle system including loan agreements and contracts.

4) Trained ambulance drivers in Yobe and Katsina states and developed a core of master trainers for state wide roll out of the training.

5) Introduced the transport management system at the LGA level

6) Establishment of the Emergency Transport Scheme utilising taxi drivers as a transport service for maternal emergencies.

Work in all these areas has been undertaken.

Although there have been significant advances in transport management and in the introduction of processes and procedures, there are areas which are not being achieved and are not on target. A performance ranking process is now in use to assess LGA efforts to improve its transport services.

From the review at the end of quarter 4, 2010, 6 out of the targeted 10 LGAs have hit their performance ranking score of 75%.

A breakdown of the scores is as follows:

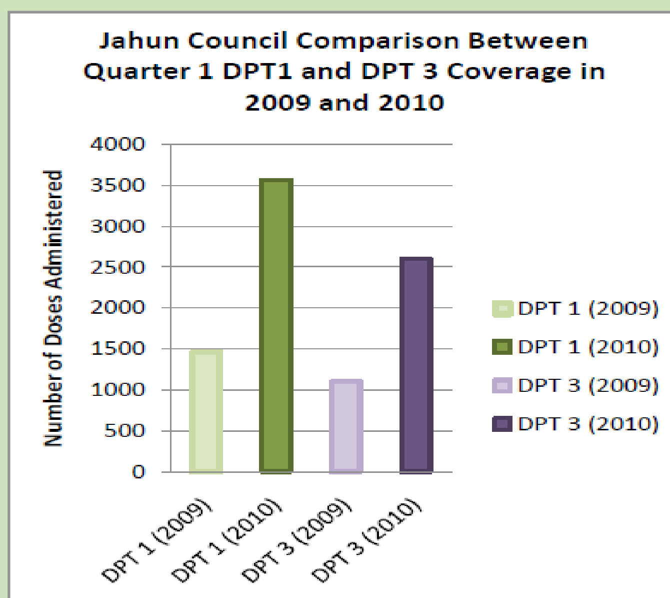
No. of LGAs achieving 75%

Katsina	0 out of 3
Jigawa	2 out of 2
Yobe	2 out of 3
Zamfara	2 out of 2

Rural immunisation motorcycle scheme – is it working?

In 2009, UNICEF provided the Jigawa State government with more than 300 motorcycles. These motorcycles were provided to Ward Focal Persons (WFPs) who undertake a number of roles including the provision of outreach immunization sessions. The WFPs purchased the motorbikes using soft loans (no interest).

In June 2010, an assessment was made of the scheme in Ringim and Kafin Hausa Gunduma Councils which included physical examinations of the records of selected WFPs as well as a review of the motorcycle log sheet data. Of 20 WFPs evaluated, 95% stated that they had seen an increase in the coverage of RI activities since the training of WFPs and the introduction of logbooks in February 2010. 85% of the WFPs stated emphatically that they had seen an increase in the availability of transport for RI since the Transport Management System training. All of the WFPs maintained that transport is no longer a constraint when planning/conducting RI activities. The loan process is functioning effectively with WFPs routinely having 2,500 Naira deducted from their salary on a monthly basis. The team conducting the evaluation also noted that the motorcycles are being maintained effectively and compared to motorcycles of a similar age are costing less to maintain. WFPs also observed that they were able to carry more vaccines to an outreach session in the knowledge that they could return surplus vials to the Cold Chain Officer at the end of the session – this solved the common occurrence of WFPs having to finish outreach sessions due to a shortage of vaccines while mothers still queued with their children.



In 2009 the first Gunduma in Jigawa State in which the motorcycle routine immunization system was established was Jahun. Data recently collected shows that there has been a significant increase in coverage rates. While the team is aware that low rates in 2009 could also be attributed to other factors (poor cold chain maintenance, lack of community engagement, supply issues at a national level) the motorcycles, and the efficient way in which they are now managed has gone a long way to ensuring the mobility of health workers and the execution of outreach immunization activities.

Transaid gave a presentation entitled "Maternal Health and Transport; Practical Solutions for a Practical Problem" at the AMDD/Gates Foundation meeting in New York, December 2010. Part of the presentation was based on their Nigerian work.

Using PLAMAHS – experiences from the programme

The PLAMAHS software (Planning and Management of Health Assets) introduction has provided the states with valuable information for physical assets planning. To date the following has occurred:

- Inventory information on medical equipment in clusters 1 and 2 captured
- National consultants, project staff and state team staff have been trained in the inventory process as part of the capacity building process to build the local knowledge base and ensure sustainability. Utilisation of the software at the state level, is planned to be rolled out in 2011
- Procurement quantifications for cluster 1 and 2 are based on the collected inventory (cluster 3 is based on extrapolation from clusters 1 and 2)
- Model equipment lists with specifications and budgets for the 24/7, BEOC and CEOC facilities are established in the system and will be adjusted following feed back from the field.
- The M&E component of the software has been developed as an additional capability of the software package to inform planning and implementation reviews.
- Training of the programme staff in M&E data collection has occurred. First M&E results are available for Q4 2010
- Inventory update of newly delivered equipment and development of state maintenance capacity is planned to be rolled out in 2011

Sustainable Drug Supply Systems (SDSS) – overcoming the challenges

Ensuring that drugs and medical supplies are available at health facilities is a key managerial function. A SDSS has nine operating components which include: procurement management; store documentation; pricing; inventory management; distribution, dispensing and use; service points' internal market; sales and cash handling (cash and carry); free service operational system and financial management system.

The overall approach has focussed on establishing sustainable drug supply systems in 13 facilities selected in the first cluster and then to roll out the process to the other clusters over the life span of the program; to support state efforts at strengthening the state medical stores to act as an assured source of quality essential drugs and supplies for all health facilities; and to guide state efforts to rollout the system to facilities beyond the PRRINN-MNCH clusters and financial resources.

The implementation of the sustainable drug supply systems consists of the following 12 key steps.

- Engagement, advocacy, systems review and design
- Facilities identification and readiness preparation
- Drug selection, quantification, and procurement
- Development of operational guidelines, training manuals and baseline books/records
- Develop state capacity to roll out systems
- Facility readiness and roll out of financial management systems
- Receive, price and distribute drugs/consumables
- Training of in-state facilitators in procurement and supply chain management systems
- Training of facility staff in strengthened drug management systems
- Mobilising communities and creating awareness on sustainable drug supply systems
- Roll out of Sustainable Drug Supply Systems
- Monitoring and supportive supervision

Government Buy in

It is noteworthy that the roll out of sustainable drug supply systems has elicited government buy-in in some states. In Zamfara State the State Government has commenced renovation of the medical store, bought 6 air conditioners and a generator for the store and also allocated a new vehicle that is dedicated for SDSS activities. The State is at the point of making a policy shift in strengthening its state medical store. In this regard, it has approved N30million for the procurement of drugs for the needs of the facilities as they endeavour to replenish their stock according to the principles of the system. More importantly, the Ministry of Health is working with the consultants to prequalify suppliers who will eventually be asked to bid for the supply of the drugs. In Yobe State, the government expressed its buy in with refurbishment and renovation of the central medical store, and other health facilities. In Katsina the government is currently renovating the central medical store while a Transitional Committee has been established to oversee all implementation activities that will transform the medical store to a drug management agency.

The set target was to roll out SDSS in 39 facilities across the first three CEOC clusters, one in each state, and also to support the strengthening of the Katsina State Medical Store by the end of 2010. The system has been rolled out in 26 facilities across two states (Yobe and Zamfara). In Katsina, where the programme faced some challenges, only the financial management system was rolled out while the training of the state facilitators and operational staff (the last activity before the actual system set up) is about to start.

Recommendations and proposals to strengthen and transform the medical store to a drug management agency have been accepted by Katsina State. A memorandum for the transitional management arrangements is being prepared for the Ministry of Health to enable it to obtain the State Executive Council approval.

Rehabilitating infrastructure – success in the first cluster

The PPRINN-MNCH programme's objective is to make basic improvements to the facilities and to provide essential equipment in 18 CEOC clusters across the three States of Zamfara, Yobe and Katsina. This will provide improvement in 18 CEOCs, 72 BEOCs and 144 PHC clinics in the three states within the life span of the project.

A limited budget is available to implement the most urgent rehabilitation of the facilities. Targeted rehabilitation is therefore planned to cover work in the following areas: the maternity unit, ANC, laboratory, theatre and outpatient department, drug stores and very limited work on utilities or waste disposal sections of the facility.

The implementation of the rehabilitation work will be carried out in close cooperation between the PRRINN-MNCH program and the State Ministry of Health. The program will reach an agreement with the SMOH on the roles of each partner in the rehabilitation project, for example all contractual agreements with contractors will be handled by the SMOH.

Results in 2010

- The building and utility inventory for cluster I and II have been entered into the PLAMAHS database system.
- The rehabilitation work in all 39 cluster 1 facilities from the three states has been completed to a satisfactory quality. The 15 CEOC/BEOCs and the 24 PHC facilities rehabilitated have met the minimum building status requirements.
- Solar light systems are planned to be procured during the recently started second procurement round and will be installed towards the end of 2011.
- A yearly inventory update of newly rehabilitated buildings and utilities can now be kept in the physical asset database and can be used for the planning of maintenance.

Newly renovated facility

Rehabilitated facility with solar panel, Yobe

4. Output 4 – OR

The operational research (OR) strand should not be seen as a stand alone output, rather it is a way of thinking and doing that permeates the programme. Besides conducting OR studies there is an emphasis on strengthening OR capacity and on the use and dissemination of the results.

The core activities of the health systems research component of the PRRINN MNCH project are to build a sustainable operations research capacity, conduct research (including performance based financing), and develop an HDSS site that meets international data quality standards.

OR Definition

It is the study of **factors under the control of managers** in the course of implementation. It uses research methods to identify **specific programmatic problems** and help select **alternative uses of resources** to achieve program objectives. It **supports decisions** with **evidence; arrives at best practices by comparison;** and **tests the effectiveness of service delivery innovations.**

Key achievements:

- ***State OR governance and institutional capacity development ongoing***
- ***Nahuche HDSS fully functional***
- ***OR studies in each state initiated***
- ***PBF studies initiated***

Creating capacity for OR

Building operations research (OR) capacity in the project states includes establishing and orientating OR governance institutions, constituting and training OR teams in each state, and creating linkages between the states and other OR institutions (academia) especially in the northern sector of the country. To date the following has been achieved:

- The established OR Advisory Committees and its technical, ethics, and advocacy subcommittees have remained functional in each state. The ethics sub committees have been trained in all states except Katsina but are yet to be registered with the National Health Research Ethics Committee (NHREC).
- The state OR teams have been trained in Operations Research in the first quarter and in Data Analysis (using SPSS and Excel) in the fourth quarter of 2010. The OR teams were supported throughout the year by consultants from the ABU community medicine department and the Nigerian Association of Health Economists.
- The INDEPTH Network and the Navrongo HDSS site (Ghana) continue to provide critical capacity building support in the areas of HDSS field demographic surveillance operations and database systems development to the Nahuche HDSS in 2010.

- Opportunities to collaborate with Usman dan Fodio University in Sokoto were explored during the year. Areas of collaboration being explored in December include research at the HDSS site and internship of MPH students from the University as short-term research assistants. The Vice Chancellor, PRRINN-MNCH and the Zamfara state government will set up a working group to define the modalities of collaboration and draft an MOU of collaboration.

Conducting OR – the first studies

Each state OR protocol consists of a series of mini-studies that contribute to answering the main research questions. The approved state OR protocols in Jigawa has 11 mini studies, Katsina 5, Yobe 6 and 8 for Zamfara.

The implementation of the state OR protocols have progressed through a stage of finalization and approval by the ORAC and PMB, through the implementation and dissemination of the pre-intervention mini studies in all states, to the initiation of the intervention phase in some states.

The initiation of the innovations is slow and is being held up in some states by obstacles within the health system such as lack of appropriate human resources, inadequate drug supplies, lack of accommodation for CHEWs in communities, and unavailability of transport. These obstacles are the learning points and have implication for scale up of successful innovations in the future.

Examples of OR Studies

Zamfara state is undertaking two main studies – the TICK and the WISH studies.

The TICK study is exploring the impact of some changes in the system of tallying immunizations at PHC facilities. This should impact on the accuracy and reliability of reporting of immunizations data on Fully Immunised Children. The TICK pre-intervention studies have been completed and the use of the Tick Sheet has commenced in the designated health facilities on August 1, 2010.

The WISH study explores the effectiveness of women's savings clubs in mobilizing savings and participation of women in health-related activities. It will also explore the best ways to combine social and financial supports to promote safe deliveries through the WISH model and the impact of alternative models for routing additional health subsidies through women's community savings groups, thereby linking WISH to Performance Based Financing.

The WISH pre-intervention qualitative studies have been concluded and a WISH manual that describes the nature and purpose of the groups and how they are constituted has been developed as a product of the pre-intervention studies.

Jigawa state is exploring the feasibility of implementing a community-based service delivery scheme. The Jigawa OR team has completed key pre-intervention studies and is currently at the point of relocating CHEWs into the targeted communities. A summary of key findings of the pre-intervention studies in Takalafia and Kadawawa communities document the barriers to accessing health services: cost of transport to access emergency obstetrics care is prohibitive, community members are not knowledgeable about danger signs of pregnancy and labour, poor quality of health services as evidenced by the lack of drugs, inadequate gender friendly human resources (female health service providers), and hostile staff attitudes.

Yobe state is exploring the feasibility and outcomes of extending maternal and child health services to underserved communities through outreach services. A summary of key findings of the pre-intervention studies that are of policy and programmatic significance are poor staff attitudes and low service uptake due to ignorance and several socio economic factors. It was also observed that the critical enablers of the intervention package (provision of outreach services to the targeted study communities), are human resource (CHEWs - preferably female), supply of drugs and basic equipment for ANC and child welfare clinic (CWC) activities, and transport to and from the target communities. Outreach services commenced in October 2010 and preparatory work for the tagged on PBF scheme started in December 2010.

In **Katsina state,** the primary study is the evaluation of the state wide mobile PHC services. The scheme extends mobile primary health care service to communities that are more than 10km from any fixed service delivery facilities. A summary of key findings of the qualitative pre-intervention studies are: the mobile PHC service requires an M&E framework and plan, communities feel monthly visits by the mobile teams are inadequate, and the quality of care (including privacy for clients and availability of essential drugs) is not adequate. In response to the preliminary findings, PRRINN-MNCH will provide technical assistance to SPHCDA to put in place an M&E plan for the mobile PHC outreach. During the fourth quarter, the state started the implementation of a supply side PBF scheme in Zango LLGA. The performance problems and performance indicators have already been defined. Health facility mapping and community and health provider consultation through Focus Group Discussions (FGDs) have been undertaken. An emerging threat to the successful implementation of the scheme is the inadequate manpower situation in the facilities. This is being addressed by the LLGA health managers.

Creating a Platform for OR - the Nahuche Health and Demographic Surveillance System (HDSS)

The key objectives of the HDSS are to:

a) monitor health and population changes

b) study interlinkages between Maternal, Newborn and Child Health service strategies and survival, and

c) monitor and evaluate the impact of health and livelihood programmes.

In 2009, the Nahuche Health and Demographic Surveillance System (HDSS), a longitudinal health and population registration system, was established to monitor health and demographic dynamics in Nahuche emirate, Bungudu Local Government Area (LGA), Zamfara State. The Nahuche HDSS is a collaborative effort with the Zamfara State Ministry of Health to support studies aimed at assessing the wider progress and impact of strengthening health systems by monitoring health and demographic events and populations at risk over time.

The Nahuche HDSS site consists of six districts: Bella, Gada, Karakai, Nahuche Keku, Nahuche Ubandawaki and Rawayya and 306 villages under the leadership of six district heads. Virtually all members in the study area are Hausa by ethnicity.

The baseline census was conducted between September and December 2010 (Round 0). The target population was 95,000 people based on the 2010 estimates from the National Population Commission. The HDSS sought a population large enough to detect events such as neonatal deaths within short intervals of time. The baseline census questionnaire collected information on names of household members, relationship to head of household, residence status, sex, date of birth, ethnicity, marital status, education, survival status of parents and household characteristics. The fieldworkers interviewed the head of the household or a responsible adult. A maximum of 3 revisits were carried out, following which a non-response was recorded. Beginning in January 2011, trained interviewers will be visiting compounds within the HDSS site in 120-day work cycles, recording events in registers, and reporting data to the Nahuche HDSS computer center for processing.

Within the HDSS structure, compounds or dwelling units (DUs) were grouped into clusters. This will provide an important opportunity to deploy selected interventions within selected clusters to allow for comparison. The cluster approach also enables fieldworkers to complete the enumeration rapidly and submit the completed forms to the computer center for processing. Worldwide, the number of DUs per cluster in HDSS sites varies. It is based on what is subjectively considered manageable. As a result, the 100 demarcated clusters were different in terms of size and number of compounds or DUs. A total of 8,152 compounds were registered in these clusters and the target was to visit all of the identified households in all of the clusters.

Household population and housing characteristics (results from unedited data)

The Nahuche HDSS enumerated a baseline population of 124,864 in 19,154 households. The average number of persons per household was 6.5 ranging from 5.6 in Karakai to 6.9 each in Nahuche Ubandawaki and Rawayya.

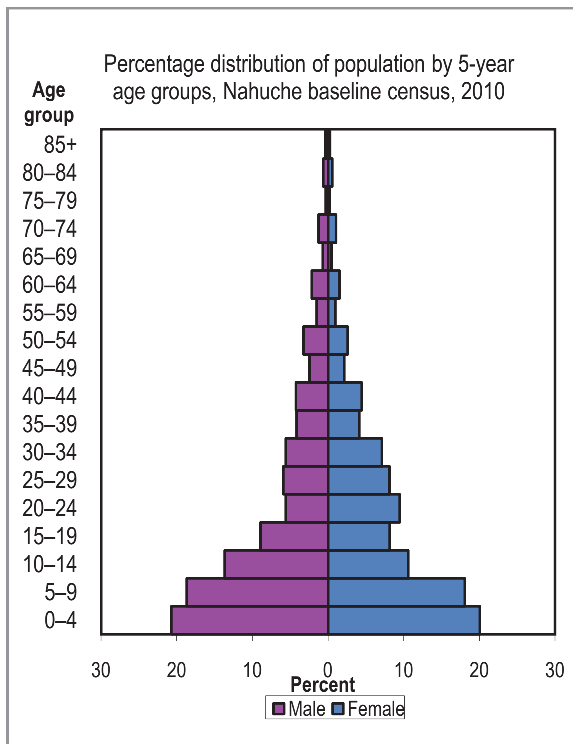
Selected characteristics of 124,864 individuals, Nahuche HDSS baseline census, 2010

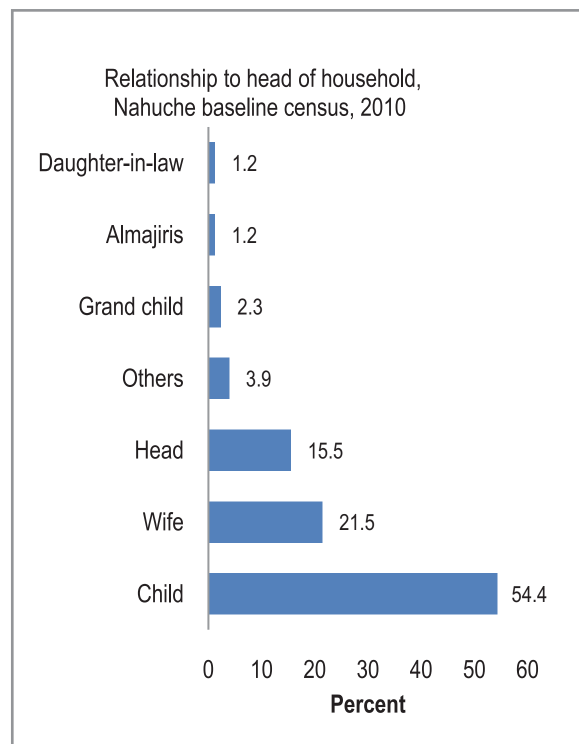
Characteristics	**Number**
De jure population size[a]	124,864
Male	62,615
Female	62,249
Ratio male to female	1.01
Number of households	19,154
Mean househol size[b]	6.5
% under five years	20.4
% under 15 years	50.9
% 65+ years	3.0
Mean age (years)[c]	19.6
Median age (years)	14.0

Notes: [a]De jure population: the permanent population plus temporary migrants. These are people who usually stay in the household for 3 or more months each year. [b]Based on de jure population. [c]Minimum age in years is 0 and maximum is 110.

Age and sex are important demographic characteristics. They form the basis of demographic classification and are also key variables in the study of mortality, fertility, migration and nuptiality. The distribution of the de jure (usual residents) population in the 2010 baseline census is presented in the Table. About half (49.9%) of the population was female, representing a sex ratio (males/100 females) of almost unity. The results show that the household population had a greater number of younger people than older people (see summary in Figure). About 51% of the total population was under 15 years of age while 3% was 65 years or older. The average age was 19.6 years.

The other figure displays the relationship to the head of the household of all the members enumerated in the 19,154 households. The predominant relationship was that of a child representing 54.4% of the household members followed by 21.5% of the members who were wives to the head. These households were headed by 15.5% of the members with 3.9% comprised of "other" relationships. Another 2.3% of the household members were residing with grandchildren and 1.2% of the members being *Almajiris*, that is, children who are taught the Islamic religion. The *Almajiris* are known to come from as far as Niger Republic. A similar percentage of households were staying with daughter-in-laws.





In addition, the baseline census collected information on a number of household possessions in the form of durable goods and other assets as well as livestock. This information is important since it provides an indicator of the wealth status of the household.

In quarter 1 of 2011, further data on the determinants of health, health seeking behaviour and health status will be collected.

The creation of a HDSS in an impoverished northern Nigerian population provides the opportunity to study the determinants of poor maternal and child health behaviours, and to investigate and document realistic interventions to address health problems in such settings. Thus, in Nahuche a platform for testing feasible interventions is in the process of being established.

David McCoy and Jenny Hall presented a paper on a tool to assess the performance of basic PHC facilities and the determinants of that performance at the first Global Symposium on Health Systems Research (16-19th November 2010) in Montreux, Switzerland. This tool was the outcome of several studies in Jigawa clinics in 2009/2010 commissioned by the PRRINN-MNCH programme.

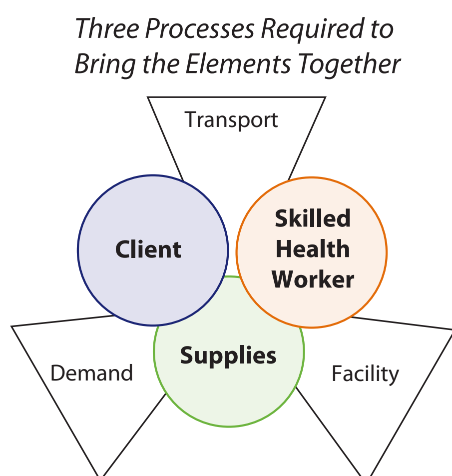
Looking across OR studies

During the course of 2010 a series of small-scale operations research (OR) studies were conducted. Studies addressed both state-specific questions (e.g. the strategies adopted by Women Investing Savings for Health [WISH] groups in Zamfara; the experience of access to ambulatory services in Katsina) and questions of general relevance across all states (e.g. regarding utilization of services; attitudes to community-based service delivery etc.) While each study addresses specific questions, there is also value in looking *across* these studies to discern general patterns of wider relevance.

In general the OR studies show the challenges facing the health system. However, the OR studies can also be viewed in another way. They provide valuable evidence that in some settings, for some services, and for

some members of the population, effective service delivery is in place. The strongest evidence for effective service delivery comes from studies of the Mobile Ambulance Service (MAS) in Katsina. The purpose here is not to seek to generalize the specifics of this MAS model, but to note conceptually that it successfully brings together elements of effective service delivery - skilled health workers (generally a team of three, including males and females), adequate supplies (exit surveys indicated 99% of clients had received prescribed drugs from the MAS)and clients (many LGAs served by MAS had provided services to over 1,000 patients). Stakeholder interviews and utilization data regarding the MAS further indicates three key processes at work in bringing the three main elements of a consultation together: transport; provision of an appropriate facility for the delivery of services; and demand to access the service.

Three Processes Required to Bring the Elements Together



WISH group in Zamfara

Women Investing in Health (WISH) groups in Zamfara also regularly raised the issues reflected in the framework above. Membership of WISH groups was consistently linked to greater utilization of services:

"Before the advent of the association, pregnant women were left at home to traditional attendants, but now the moment a woman is in labour, she will be immediately taken to hospital to deliver there."
"Our wives are taking themselves for ANC and immunization in our Health Centre, because of this women's group"

The groups – by mobilizing awareness and social support – have clearly increased demand. But they have also served as a mechanism to mobilize funds that have enabled procurement of drugs, access to facilities and – when necessary – transport:

"We noticed non-members hardly purchase their drugs when prescribed, but members of the group always buy the drugs."
"We are very committed, if it is close by we go ourselves and tell him, why so-so person is left in labour at home? He usually responds what do you want me to do? Then we say, she should be taken to hospital, sometimes he says he doesn't have money, then we say no problem we just bring a car and take her to hospital."

This framework has now informed discussions in advance of planned community-based service delivery (through deployment of female CHEWs at health facilities) held in the villages of Takalafia and Kadawawa in Jigawa state. The proposed model of community-based service delivery essentially places responsibility with LGAs for not only providing skilled health workers and supplies to local communities, but sustaining facilities in - and transport to - these communities.

5. Output 5 – Information management

Output five has initiatives related to HMIS strengthening, knowledge management and M&E.

Key achievements:

- ***Utilising data from the routine HMIS for a variety of purposes***
- ***Finalising and reporting quarterly on the PRRINN-MNCH M&E framework***
- ***Producing a wide range of KM materials***

Strengthening the routine HMIS – using data for management

All four states are using the routine national HMIS software – the DHIS. Data from the routine system is steadily improving and is used increasingly by government and the PRRINN-MNCH programme (for example, the PPRHAA data from Jigawa illustrated above is from the routine HMIS).

Improvements in data management - Zamafar

In Zamfara submission rates have improved considerably especially for ANC and delivery data. No ANC and delivery data existed in SMOH as at 2008.

Submission rates of reports have improved considerably as shown in table below

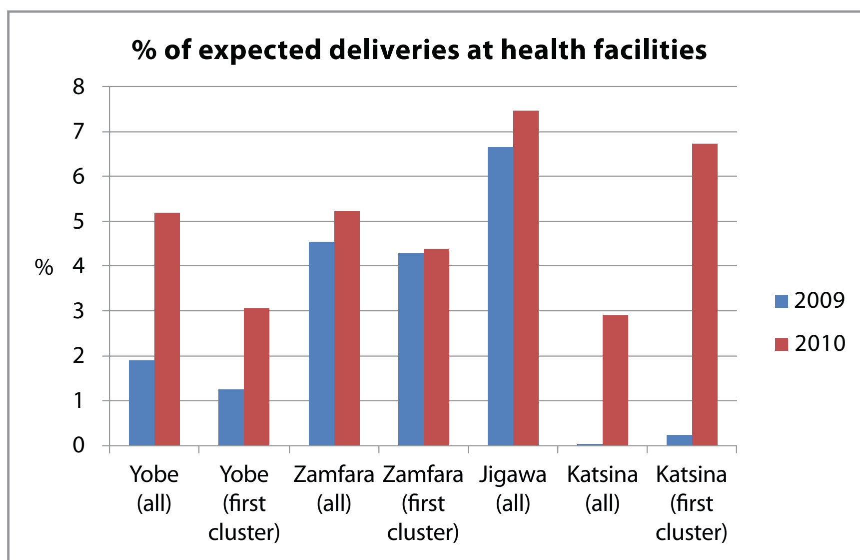
Period	Expected	Submitted	2009
2008	NA	NA	0
Q1 2009	193	193	100%
Q2 2009	213	201	94%
Q3 2009	217	194	89%
Q4 2009	219	189	86%
Q1 2010	303	303	**100%**
Q2 2010	333	331	**99%**
Q3 2010	357	343	**96%**
Q4 2010	357	301	**84%**
Overall 2009	842	777	**92%**
Overall 2010	1350	1278	**95%**

The databank has bee created with support from PRRINN-MNCH and all the 14 LGAs now use the DHIS software and some of tthem e.g. Bukkuyum, Shinkafi and Anka transmit their data via the internet using GSM modem. The state databank prepares quarterly feedback to the LGAs and some of the LGAs also prepare monthly feedback to the HFs

Using the routine HMIS for management purposes, providing feedback on the data and indicators to health workers, querying the quality of the data and interrogating the data will lead to improvements in the routine

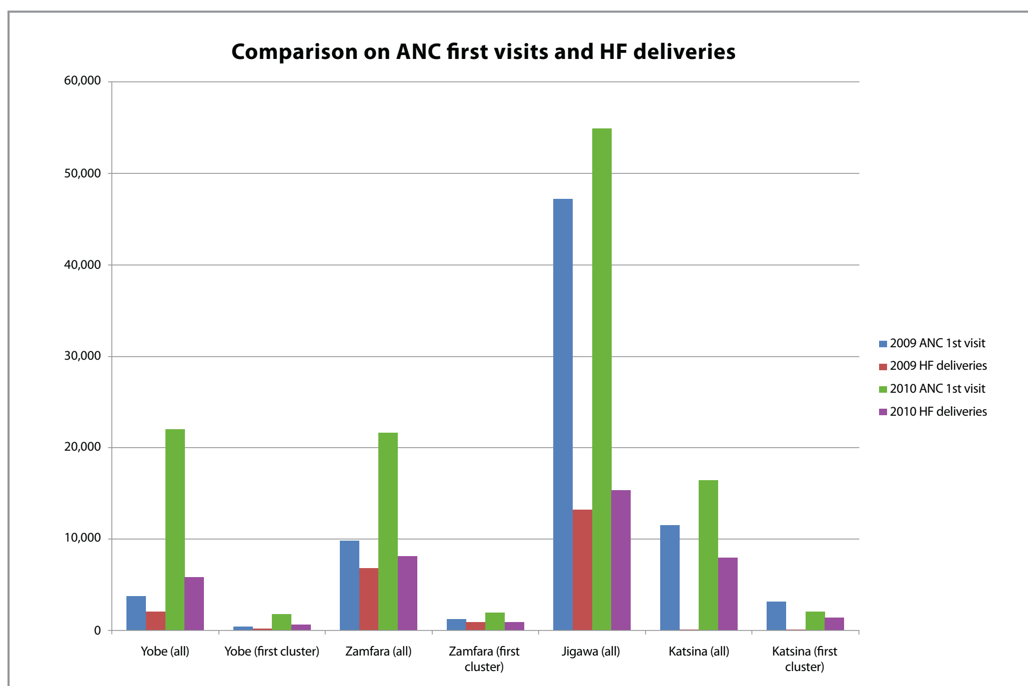
HMIS. In turn, this should reduce the fragmentation of the HMIS, often driven by development partner needs for quality data which they perceive as unattainable from the routine system.

The data presented below has been extracted from the routine HMIS in all the four states.



This graph only uses data from the first six months of each year (to accommodate for the lag in data returns). What the data shows is that there has been an increase in all states in deliveries in health facilities but that it is still a very small percentage of expected deliveries. States are between 5 and 7%. The first clusters are in fact lower than the average for the state. This is not unexpected as the equipping, resourcing and so on has not fully kicked in. It will be very interesting to track this data in 2011. The data for deliveries by SBAs shows a similar picture.

The graph below shows the drop off from ANC to delivery. Far less pregnant women come to deliver than are seen at least once at ANC. The graph also shows that both ANC attendance and deliveries is increasing from 2009 to 2010 in all states and clusters.



Improving Data Quality in Zamfara

Zamfara has been conducting DQS since 2007 and the capacity of state staff have been built. The SMOH Databank staff now conduct DQS quarterly from funds from the basket fund. This has led to significant improvement in data quality (verification factor) as shown in the chart below. The improvement in data quality has led to a decline in administrative figures for RI to a more reasonable level.

Trend in Data Quality in Zamfara State

Data Quality Audits – improving scenario in Jigawa

For the past 2 years (2009, 2010) Jigawa State has been consistent in conducting a Data Quality Self-Assessment (DQSA) and a Data Quality Audit (DQA) with the broad objective of assessing the quality of the routine immunization monitoring system[11] with an emphasis on assessing the quality of the data in terms of accuracy and completeness of the administrative reporting system. Other objectives were:

- To recount services data and compare with administrative data in order to calculate a verification factor by which the state could revise its administrative data if need be.
- To identify areas of systemic weakness in the monitoring system and recommend ways in which these could be addressed.
- To assess the areas of strengths in the monitoring system as identified in the DQSA.

In contrast to 2009 where the overall performance did not meet the optimal score of 75%, in 2010 most of the health facilities were above the 50% minimum point and many were around the 75% point when all the components of RI monitoring system were put together.

Preliminary analysis has shown that the system is strong in the following areas:

- Standardized tally sheets and registers are widely available.
- Vaccine distribution is adequate.
- Vaccination cards are used at most health facilities

[11]This is an integral part of the overall routine HMIS

- In most health facilities data can easily be retrieved even though the storage is poor
- Slight improvement in signing of immunisation registers

Weak points included:

- Weak supportive supervision in most of the HFs
- Weak monitoring of VPDs
- Poor data storage and understanding of the importance of data
- Virtually no feedback mechanism in place from the LGAs to the HFs
- Non documentation of interactions with the community
- Wastage and dropout rates not monitored

Unlike 2009, health facility recount data confirmed the administrative data at the LGA level, except for 1 LGA (10%) which was at variance for DPT3 reporting by a 1:1.22 ratio. Across the board there has therefore been significant accuracy in data reporting, 90% falling within the expected range of 1:0.85-1.22 for both DPT3 and OPV3.

Measuring progress – the PRRINN-MNCH M&E Framework

The PRRINN-MNCH programme has an M&E framework that has indicators and targets for the seven outputs, the 25 core initiatives and the numerous initiatives under these core initiatives. Each quarter progress against these indicators and targets is documented at state and national levels. This is then captured as part of the quarterly reporting system. Thus, at a glance evidence of the progress of the programme can be seen and used by programme management to adjust activities or strengthen areas of weakness, and by funders and communities to interrogate programme activities.

Progress against the Goal and Purpose indicators and targets was reported on in the first section of the report.

Sharing Knowledge

The programme has identified a number of different methods for communicating information about the programme. These include:

- The website at http://www.prrinn-mnch.org/
- Internal written materials such as the biweekly highlights and hiccups
- External written materials such as factsheets (used primarily for advocacy), success stories (used primarily to popularise successful initiatives/activities), technical briefs (used for informing practitioners), policy briefs (used for developing policy options).
- Regular reports such as this annual report
- Conference presentations and papers for peer reviewed journals (several in preparation)
- Communication activities as described in output 6 (DVD cinema, community engagement discussion groups)

These are all captured in the knowledge management strategy and the details are outlined in the accompanying matrix.

6. Output 6 – Increasing Demand for MNCH and RI Services

The focus of this output is to increase demand for MNCH services (including RI) within a strengthened PHC system. The approach involves supporting the community and LGA and state governments to build a sustainable community system that links up with health providers and policy makers to ensure **access** to quality maternal and child health services and increased **accountability.** The output has four initiatives

- Establishment of a community engagement approach to promote healthy MNCH behaviours and generate demand for RI and other MNCH services
- Build the profile of health promotion/communication at state/LGA levels
- Facilitate the establishment of voice and accountability initiatives
- Mainstream equity and social inclusion in policy and programmes

Achievements include:

- ***Increase in the number of communities involved in CE from 68 to 300***
- ***Under the ETS, 1,214 women (milestone was 150) were transported to hospital for maternal emergencies in 2010; a total of 4.2m Naira was saved with 145 families receiving EMC loans and 239 families receiving EMC grants.***
- ***Two critical studies (financial barriers to access and clustering of mortality) led to a revised approach and increased advocacy***

The focus of output 6 in 2010 was to implement an integrated RI and MNCH CE approach and to establish or strengthen functional and effective facility health committees. Baseline studies which provided vital information to feed into the development of strategies for addressing equity and social inclusion issues were conducted in the first quarter of 2010 and a strategy developed in the second quarter.

Community-based Service Delivery (CBSD)

CBSD is designed to treat simple childhood illnesses such as malaria, diarrhoea and pneumonia and also to be used as a means of building trust with the communities to, for example, close the gap between ANC attendance and hospital deliveries. Family planning services will also be delivered through CBSD.

Arrangements for the piloting of CBSD in some communities were almost completed in 2010 with the following activities executed:

- Training manuals and curriculum developed to train CHEWs on CBSD
- Monitoring tools and supervision checklists developed.
- Training of CHEWs started in October
- 32 CHEWs have been employed by the LGAs for CBSD
- Accommodation of 19 CHEWs secured.

In January 2011 the training of supervisors on their monitoring role and the purchase of seed drugs and vital equipment will be completed.

Implementation of the Community Engagement Approach - addressing the first and second delays

The implementation of the MNCH CE approach started in December 2009 with 48 communities and was rapidly scaled up to 102 communities (38 out of the 102 communities were neighbouring communities supported by the original communities with no support and intervention by PRRINN-MNCH). With 198 RI communities, the total of RI and MNCH communities is 300.

The Emergency Maternal Care (EMC) scheme included the following interventions in all the 300 communities which were managed by a set of community volunteers nominated by the communities.

CE Approach - VFM

A review of PRRINN-MNCH supported community engagement activities was conducted in January 2011. The Commonwealth Procurement Guidelines definition of value for money was used to assess performance. This focused on three measures: fitness of purpose, cost and flexibility. Two other measures were added to the assessment criteria: maximising resources and building long term capacity. The programme scored highly on four measures (fitness of purpose, flexibility, maximising resources and building long term capacity). In relation to cost, recurrent costs to government are being integrated into state and local government budgets, indicating that the approach is both 'affordable' and has the potential to be sustained financially. However, more work needs to be done to determine the overall cost effectiveness of the community engagement approach. This can be done once implementation has progressed further.

- Saturating communities with knowledge of the vaccination schedule and maternal and new born danger signs using body tools, and supporting communities to put in place safe pregnancy plans.
- Supporting the establishment of emergency transport schemes (ETS) to reduce the delays associated with reaching the health facility and to address the exorbitant rates that drivers commonly charged.
- Establishing community funds for maternal complications. The funds are used to pay ETS drivers and to support families that are unable to afford the cost of treatment and other indirect costs associated with utilising emergency maternal care services. Two types of scheme are in operation: loan and exemption schemes. Each community manages its own funds.
- Supporting the establishment of community blood donor schemes in 99 communities.

Mothers in Yobe practicing "fever" during a Community Engagement session.

Principles forming the bedrock of the CE approach

a. To save women's lives

b. The approach to be simple and flexible for the community to adapt and run with it as it suits the context

c. Community participation from the design to the implementation of the interventions through the participatory learning and action (PLA) techniques.

d. Use and improve the existing structures and systems to bring community transformation and to change health seeking behaviour

e. Create social approval to transform maternal and child health from individual/family responsibility to community responsibility.

COMPARISON OF SM CE PERFORMANCE IN YOBE, KATSINA AND ZAMFARA[12]

Indicator	Yobe	Katsina	Zamfara
Population of focal communities	90,499	94,725	93,680
Births	3,662	1,702	4,901
Neonatal deaths	NA	142	140
Neonatal mortality rate	NA	83	28
% Births in health facility	19%	NA	26%
Maternal deaths	59	19	84
Maternal mortality ratio	1,611	1,116	1,713
Maternal complications	390	533	551
% Maternal complications benefiting from any community ETS scheme	59%	93%	89%
EMC savings	N1,440,597	N1,452,540	N1,329,913
% Maternal complications benefiting from EMC savings scheme	25%	43%	16%
People donating blood	37	180	98[13]
Number pints donated	39	NA	108

The data is showing the unacceptable mortality rates common across the north of Nigeria but also that pregnant women in the communities are starting to use the community schemes that have been established to support access to EMC. It is anticipated that as the CE approach is rolled out that more and more women will make use of the EMC schemes and the mortality rates will decline.

[12]Note that the results in this table are tentative at this stage – checks on data quality are underway
[13]The Zamfara data relate to women who received blood as opposed people donating blood.

To generate social approval in the community the slogan "*cheton rai mai nakuda ibada ne* (saving lives of women with maternal complications is a religious obligation)" is used to emphasize the community and moral responsibility and to address the gender and social barriers associated therein, such as:

- A visit to hospital is not seen as a pleasure but a necessity
- Community takes up responsibility for emergencies
- Pregnant woman feel safe because community support is available
- Break barriers so that a man can take another man's wife with complication to hospital.

Piloting Financing Models for Emergency Transport Schemes for Obstetric Emergencies in Northern Nigeria (METS)

HPI has been awarded a two year grant from the MacArthur Foundation. The project will compliment and be implemented alongside PRRINN-MNCH as an implementation research initiative, generating evidence for policy and the potential for scaling up emergency transport schemes (ETS).

Participatory Communication Channels - providing good value for money

Communication provides good value for money especially for low literate populations where information gaps prevent people from making healthy decisions. The relatively high costs of communication interventions get spread over large populations resulting in low costs per person (usually calculated as per person over 15 years). Radio is known for its cost effectiveness because it reaches the most people; 80% of women reported listening to radio at least once a week (MNCH Household Survey, 2009) and presumably the same percentage of men are also reached. The upcoming KAP survey for the new clusters will provide data for demonstrating the effect of radio in communities that have benefitted from the PRRINN-MNCH programme and government sponsored radio jingles, songs and reality radio programmes.

Although Community Engagement has proved to be the most effective way to attain high levels of behaviour change, other less intensive participatory communication channels can provide the basic health knowledge that is a prerequisite for behaviour change. To reach the 60% of the population in the clusters who are not reached through Community Engagement, PRRINN-MNCH and the partner states have piloted Rapid Awareness Raising sessions for groups of 30 people and DVD shows for 50-100 people. Local facilitators, usually Ward Focal Persons or other health workers, facilitate 90 minute participatory sessions with separate female and male groups.

Each **Rapid Awareness Raising** session is participatory, drawing on the whole body communication tools used in the community engagement discussions. The local facilitators teach participants eight maternal Danger Signs using the whole body tools to help them recall the signs. For example, everyone illustrates *fever* by folding their hands over their chests and shivering. People have fun learning and practicing the body signs together so that they can easily recall them and share them at home. The facilitators also generate a discussion on the need for a safe pregnancy plan including knowing the danger signs, saving money, arranging ahead for transport and blood donors and knowing the nearest EOC hospital.

Comparison of knowledge of 4 maternal danger signs, pre and post Rapid Awareness Raising (RAR) sessions for females and males in the first cluster by state, December 2010							
SITE	FEMALE		MALE		TOTAL		Total Respondents (3 per session)
	PRE	POST	PRE	POST	PRE	POST	
Katsina	0	36	0	33	0	69	72
Yobe	75	180	65	180	140	360	360
Zamfara	0	90	0	90	0	180	180
3 STATES	**75**	**306**	**65**	**303**	**140**	**609**	**612**
Total respondents in 3 states					612	612	
% respondents in 3 states with knowledge					**23**	**100**	

We pray that you will come back again with such good work. It is really educative.
Sanusi Umar, Baure LGA

This type of information is vital to all people, rich and poor, educated and uneducated, rural and urban. We are not medical personnel, but we are the right people to pass on this type of information. Our religion saddled us with responsibility for the health of our wives and children. In fact, failure to look after them may attract the wrath of Allah…… My sermon this week will focus on maternal danger signs.
Mallam Hamza *Abubakar Lawan Kawuri, Imam, Jumaat Mosque, Geidam, Yobe State*

Rapid Awareness Raising is a very cost effective channel for increasing knowledge and for linking community members with the health services especially when the facilitator is a local health worker. Moreover, RAR easily supports gender equality. Equal numbers of women and men were trained as facilitators and equal numbers of sessions were held for the members of each sex. The major challenge is ensuring an audience in urban sites where people, especially men, are less likely to heed the call of the traditional leader; nevertheless, by networking with other influentials the implementing teams succeeded in reaching 11,343 participants along with many bystanders.

All for health – a gathering of men (Majalisa), Jigawa

The number of RAR sessions held and participants sensitized, disaggregated by sex per state and totals in the first Cluster, December 2010

	Number of RAR Sessions Held	Number Female Participants sensitized	Number Male Participants sensitized	Total Participants sensitized
Katsina	24	275	300	575
Yobe	124	2,973	3,153	6,126
Zamfara	60	2,800	1,842	4,642
Total	**208**	**6,048**	**5,295**	**11,343**

Since RAR is building on the CE experience and utilising national consultants, state facilitators, state health educators and LGA health educators who are experienced with the *Emergency Maternal Care Discussion Guides,* the training and rollout costs were kept to a minimum.

The operational budget for Yobe State shows how cost effective RAR can become when 120 sessions are organised. The entire budget came to Naira 1,167,380 (£5,076) which translates to N191 (£0.83) per person for ownership of the basic decision-making knowledge required to begin thinking about saving women's lives. Moreover, many implementers at all levels from the state down to the community level have acquired the skills to organize RAR sessions and will be able to easily organize a second RAR cycle on another health topic.

Motorcycle cinema, Jigawa

DVDs are also proving highly cost-effective. DVDs can ensure that everyone acquires the same knowledge and participatory communication skills whether the DVD is shown for participants during an RAR session or for trainees learning how to facilitate an RAR session. The *Polio-RI Training Sensitisation DVD* produced in 2009, integrated promotion of Routine Immunisation (RI) and the Polio Eradication Initiative (PEI), building on recognition that sustained polio eradication will be dependent upon high rates of RI. In January 2010, a dissemination/Trainer of the Trainer workshop was facilitated for the *DVD* with national stakeholders and members of the state social mobilisation groups from 8 states (health educators, NPHCDA, WHO, UNICEF, FOMWAN, and Rotary). The *DVD* has been distributed along with an electronic version of the *Facilitators Guide* including detailed guidelines on rollout options. NPHCDA has incorporated the bodyguard and

polio transmission mimes from the Polio-RI DVD into the national *Magiji* package (a travelling DVD and sensitisation package promoting polio eradication).

PRRINN-MNCH supported and evaluated a pilot intervention using the *Polio-RI DVD* to train six community volunteers per community (half women and half men, most of whom were illiterate) to facilitate a series of six Polio-RI RAR sessions immediately prior to IPDs in Bindawa LGA, Katsina State. The Bindawa Pilot Test Report provides strong evidence for utilising the DVD in high risk communities. The sessions overcame gaps that contribute to poor parental and community IPD compliance. For example, prior to the sessions, 55% of the respondents thought that repeated polio doses were harmful. Following the session, an average of 90% respondents demonstrated accurate knowledge in the post-session rapid assessment. Moreover, basic decision-making knowledge was very low; only 30% knew that:

- skipping campaign doses places a child at risk
- polio is transmitted via stool
- a child can catch polio from a person who looks healthy, and
- children need their measles vaccination at 9 months.

In addition, data generated by the IPD independent monitors demonstrated that the sensitisation sessions contributed to significantly reducing polio risk levels. Non-compliant households and missed children were both reduced by more than 80%. Furthermore, the combined OPV2 rate for the seven ward-level PHCs covering the sensitised settlements increased 59% between March and June. While many other factors influence this progress in these very high risk and high risk wards, the magnitude of change in this short time period warrants recognition that the sensitisation sessions were a significant factor.

Motorcycle cinema/DVD shows have proved even more cost effective than the RAR sessions facilitated by health workers or NGO representatives, despite start up equipment costs. The public likes seeing outdoor DVD shows on big cloth screens. They remind them of the Ministry of Information travelling cinema shows that were a major form of community education thirty years ago. However, setting up a cinema show that relies on a four-wheel drive vehicle, a driver and a state or LGA health educator is costly even if 200 people watch the show. Consequently, PRRINN-MNCH partnered with Hadejia Gunduma in Jigawa State to pilot motorcycle cinema. Ward Focal Persons were trained to organize two shows per night, one for women and one for men, using their own state hire-purchase motorcycles.

> *This is a wonderful strategy to create awareness. It makes my work easy. I enjoy watching people discussing the messages in the DVD. Unlike before when I have to keep on talking to convince people, people now generate discussions among themselves to explain how the polio virus spreads and how to protect their children against vaccine preventable diseases.*
> *Bala Ismail, Ward Focal Person. Matsaro Ward, Hadejia LGA*

> *I just got the knowledge that it is not only polio disease that can be prevented but other vaccine preventable diseases.*
> *Hadiza Mustapha, Mother testifying after motorcycle cinema, Hadejia LGA*

A cluster can rollout 300 nights of motorcycle cinema within a 6 month period, 100 nights per LGA based on 10 nights per WFP. Each night the WFPs can facilitate two shows, one for the women and one for the men so that the cluster reaches 24,000 viewers. Based on the small Jigawa pilot, the estimated cost per cluster for start up costs and rollout is N1,256,910 (**£5,464**) which amounts to N52 (£0.23) per youth/adult. Thus a child can be saved from being blind, deaf, crippled or even have his life saved by preventing polio and other childhood diseases at a cost less than the cost of a soft drink! PRRINN-MNCH is supplying each state office with the equipment to be used to rollout a demonstration of the benefits of motorcycle cinema in one LGA.

Admittedly, these costs will be higher when you factor in the DVD development and production costs which can range from one million to three or more million naira; however, these costs will be amortised over all the states and will ensure quality communication at the community level.

Voice and Accountability – are facility health committees the answer?

The focus of the programme's voice and accountability workstream is on strengthening health committees at primary and secondary health care levels. The rationale for supporting health committees is that they can, with the requisite support, become a channel for community voices on health issues, and a mechanism through which community representatives can begin to challenge service delivery failures.

Training of health committees includes:

For V&A

- Consulting with the community and representing community views on health issues
- Lobbying and advocating for improvements in service delivery
- Monitoring facility performance & the supply and use of free MCH and SDSS drugs

other

- Identifying the vulnerable/socially excluded and facilitating their access to essential health services
- Understanding the different and complex barriers preventing utilisation of core services and identifying solutions to these barriers
- Supporting/facilitating the work of local health volunteers

Some of the achievements of the FHCs include management of drug revolving funds; holding service providers and government accountable by returning expired drugs; and advocating to LGAs for outreach services on RI and ANC as well as posting or reposting of health workers.

Health committees have also taken on the challenge of quack doctors taking deliveries in communities (which often result in maternal and neonatal deaths) by reporting them to the authorities. A celebrated case was the one in Kanoma in Maru LGA, Zamfara where the quack doctor was taken to court, jailed and barred from taking deliveries.

In Kurar Mota community, a male cleaner was dismissed from the health facility for conducting deliveries over a long period - based on the actions taken by the health committee

FHC members supported by the Zango traditional leader and PHC Coordinator asked the police to compel a family to transfer a woman suffering from prolonged labour for three days to hospital.

Equity and Social Inclusion – rethinking our approach

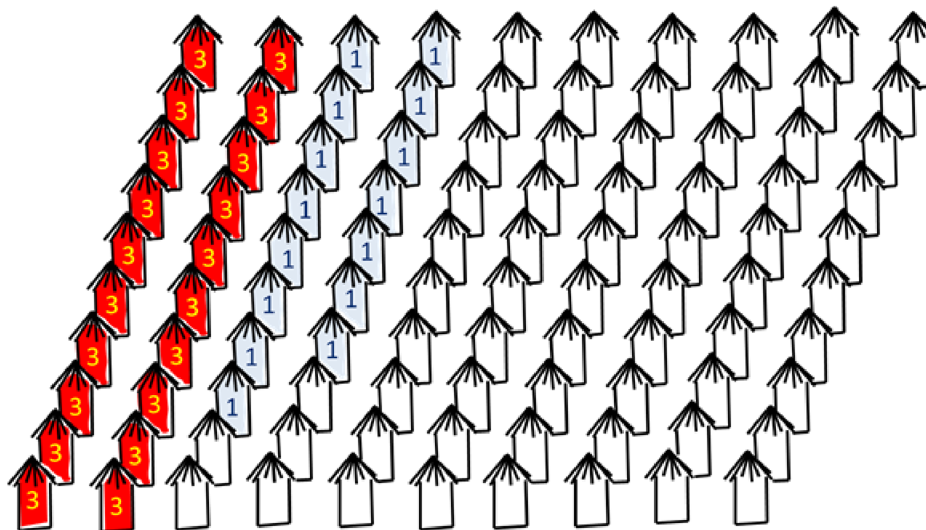
There is the recognition in this programme that even if services are made available in every community there are certain categories of people who would be excluded unless special attention is paid to them. PRRINN-MNCH is addressing equity issues from four perspectives:

- Geographic inequalities
- Gender inequalities
- Financial inequalities
- Social inequalities in terms of inadequate social support

PRRINN-MNCH was involved in two important studies in 2010:

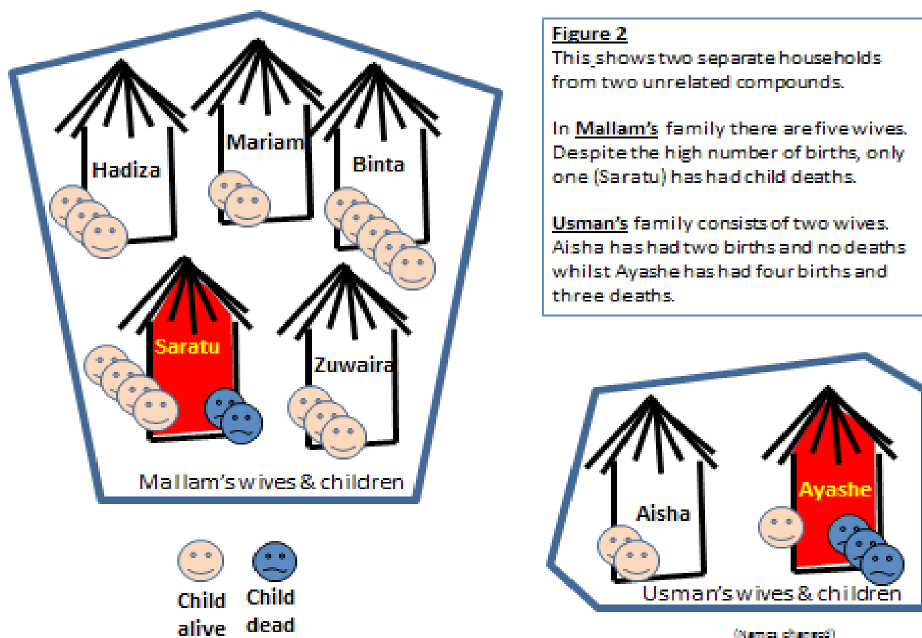
a) Clustering of under five mortality - adjusting health strategies to include women and children with the least social support

A recent study[14] has shown that child deaths were clustered among a small proportion of women. Twenty percent of the households involved in the study had 80 percent of the child deaths.



The clustering occurred even within polygynous households; some women and their children in these households were affected and some were not.

[14]See PRRINN-MNCH Policy Brief – Adjusting health strategies to include women and children with least social support by Tony Klouda (edited by Cathy Green), February 2011 based on studies in 2009/10



The heavy skew of child mortality was not related to child spacing, distance from health facility, religion, tribe, education, culture, polygyny, marital status, seclusion, or employment. Rather, a lack of respect and social support shown to a woman at family level were found to be highly important contributing factors to the clustering.

The least supported have the disproportionate burden of ill health and death

It has long been recognised that social factors have an enormous influence on health. Social factors account for the disproportionate burden of ill health and death amongst the least supported, those lowest in social hierarchies and amongst the poorest. The WHO Commission on the Social Determinants of Health in 2008[2] reviewed the evidence and found that although health services will always have some impact on health, their greater impact is on those in more powerful social bands.

[2]CSDH, 2008, Final Report of the Commission on Social Determinants of Health, Geneva: WHO

Six Factors Strongly Correlated to Child Deaths in Northern Nigeria

- The woman rarely or never had anyone older to look after the children
- The woman had no one to turn to for support if her children had difficulties
- The woman had no one to turn to for support if she herself had difficulties
- The woman believed she had no or little respect from relatives, in-laws, husband or others
- The woman had almost no general support from own relatives and in-laws
- The general appearance of the woman, the children and of the household was very poor

The policy implications of the Northern Nigeria clustering survey are considerable. Practical and feasible courses of action – both within and outside the health sector – exist and these should lead to greater social inclusion of women, to improved self-care and care of children, and ultimately to increased use of health services and improved health.

Key recommendations are as follows:

1. Modify training of all community workers, volunteers and institutions (from health and other development sectors) to:

   (a) understand the relevance of social factors and social support systems to their work;

   (b) recognise when people lack confidence or may neglect their children or themselves as a result of lack of social support;

   (c) adapt their advice or interventions to be relevant to the capacities of the women or families in question;

   (d) advise women and their families on resources available locally that might help them in their need for support at particular times.

2. Help community institutions and leaders develop a variety of locally available resources that will be helpful to women in general, but particularly those with poor support – in particular for child care, conflict resolution and savings schemes.

3. Stimulate the development of community mechanisms for including women with poor support in group and social activities. This will have a strong impact on the self-esteem and self-confidence of women whose belief in their capacity to improve their lives is low.

The findings of the study on clustering of child mortality has already led to plans to train CHEWs operating in communities to recognise high risk families and respond appropriately. In addition, revisions to the training of community volunteers are planned.

Considerable advocacy with government at all levels is required in order to support these changes. The shift from a medicalised model of Primary Health Care to one that balances social and service-based policies for a more holistic and effective approach represents a very significant change in direction. The Northern Nigeria clustering of child death studies demonstrate that the evidence base for such a shift in direction exists.

b) Financial Burden – Emergency Maternal Care (EMC)

A study in late 2009 explored the financial burden of EMC. The results of this study have been used for both programmatic and advocacy purposes.

Key facts

- Northern Nigeria has one of the highest maternal mortality ratios in the world – approximately 1,000 women die per 100,000 live births (i.e. 1%)
- Approximately 7,100 pregnant women die each year in Jigawa, Katsina, Yobe and Zamfara (1% of 710,000 live births per year)
- 15% of all pregnancies worldwide result in a maternal emergency
- On average, households spent N15,400 when seeking treatment for a maternal emergency
- The average cost of a maternal complication was more than the average monthly income of 78% of household heads in Katsina, Zamfara and Yobe

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Why do pregnant women seek care – what do communities see as a maternal emergency?

Danger Sign for Which Care Sought

Main sign	%
Heavy bleeding	28
Prolonged labour	27
Fever	12
Persistent unbearable pain	10
Fitting	8
Retained placenta	6
Hand or foot arrived first	3
Others	8

What does it cost?

Cost of Components of Treatment

Item	Average cost (Naira)
Laboratory investigations	990
Drugs	3,840
Consumables	1,150
X-ray	660
Ultrasound scan	800
Intravenous fluids	1,200
Blood transfusion	7,000
Caesarean section	6,000
Fuel for generator	1,300
Fuel for ambulance	1,800
Gifts to hospital staff	720
Bed fees	470
Registration	50

What treatment is provided?

Type of Treatment Given for Maternal Emergency

What treatment was given?	%
Intravenous fluids	70
Injection	88
Blood transfusion	38
Removal of placenta	13
Assisted vaginal delivery	17
Caesarean section	12
Drugs	90

On average, households spent N15,400 when seeking treatment for a maternal emergency.

Complicated cases (i.e. those requiring a caesarean section or blood transfusion and a hospital stay) are much more costly.

- 61% of the population in the North West and 65% of the population in the North East are categorised as poor. Only 22% of household heads earned a monthly income that was greater than the average cost of dealing with a maternal emergency (N15,400). For those individuals who paid more than the average cost of a maternal emergency, affordability was even lower.
- Any health care expenditure that forces a household to reduce its expenditure on food, on schooling, or on other essential items over time can be defined as catastrophic (i.e. likely to deepen a family's poverty). Thus, for many people a maternal emergency is a financial catastrophe.
- Many households used a mix of strategies to pay for a maternal emergency, including use of personal savings, sales of livestock, farm produce or land, and borrowing money from family, friends or money lenders.

But, it also means that pregnant women delay in seeking help for maternal emergencies

What can be done?

- Most states are committed to free MCH programmes but these need to be adequately funded, and their provisions clearly communicated to the public. Often assistance is required to cost different options (e.g.

free antenatal care services, free caesarean sections) so that what is offered is within available resources. Where funding constraints exists it makes sense for states to phase in free MCH services (i.e. start with a smaller package and then gradually increase the package of free services).

- State intervention is also required to address the indirect costs (transport, feeding, fuel etc) as well as the direct costs of emergency maternal health care. The indirect costs add substantially to the financial burden on families. Careful consideration will be needed as to what strategies can be used to this end. Options include blood donor groups, subsidized emergency transport schemes (with the involvement of National Union of Road Transport Workers), and community loan and saving schemes. All of these have been piloted in the north of Nigeria and need state support for roll out.
- The financial burden study found that the the average cost of a blood transfusion and a caesarean section was N7,000 and N6,000 respectively. The average cost of transport to a facility for a maternal emergency was N1,800. Government can use these figures to determine what services to offer and then scale up as other resources become available (e.g. from the National Health Insurance Scheme).

Leveraging resources from government

Community Engagement Sites by State and Source of Funding, October 2010

State	PRRINN-MNCH Funded Sites		Sites Where Government Contributin to Funding	
	MNCH	RI	MNCH	RI
Jigawa	0	27	–	40
Katsina	22	23	10	30
Yobe	32	11	–	20
Zamfara	34	41	4	6

Of the 300 communities involved in community engagement activities, 37% were funded either wholly or partially by government by October 2010. This bodes well for the future sustainability of the work. Yobe Ministry of Women Affairs budgeted N20m for CE work; and N5m has been released for scaling up MNCH CE in two additional LGAs.

In Katsina, Baure and Zango LGAs are partially funding the cost of LGA monitoring and coaching visits to communities. In Jigawa, the Gunduma Health Board is to fund the scaling up of routine immunisation community engagement activities and PRRINN-MNCH is to provide technical assistance to ensure quality.

7. Output 7 – Federal level

The role of the national office broadened in 2009 with the arrival of the MNCH component of the combined PRRINN-MNCH programme. While RI is still a key area, other MNCH issues have become important. The national office participates in a number of key groups/committees and continues to strengthen relations with government MDAs (e.g. FMOH, NPHCDA, MDG, NHIS, MSS) and other development partners/ programmes.

The national office provides the link between the implementation activities on the ground at state level and the policy makers and thought leaders at federal level. The office has played a key role in supporting output initiatives in a number of areas, for example:

- In conjunction with the governance output, driving the work on 'Bringing PHC under one roof' and maintaining the key linkages with NPHCDA
- With outputs 1 and 3, building key links between NHIS, NPHCDA, FMOH and the MDG office on exploring linkages between implementing the Minimum Service Package, the political commitment to free MNCH services and the move towards Community Based National Health Insurance Schemes.
- In conjunction with output 3, supporting the MSS initiative and liaising with NPHCDA on ISS and other issues

Achievements include:

- ***Ensuring the ongoing provision and use of the GAVI funds***
- ***Maintaining key links with federal level bodies and thus assuring interest in PRRINN-MNCH state level activities (e.g. 'Bringing PHC under one roof')***

Strengthening the mechanisms for the GAVI fund

In 2009 PRRINN-MNCH supported NPHCDA to develop Financial Guidelines for GAVI Fund management and provided appropriate training on the use of the Guidelines for relevant staff in its programme States and the Agency Headquarters. It was not possible then to implement the Financial Guidelines and effectively install the financial management systems in the programme States because the relevant baseline books and forms were not yet printed. NPHCDA also requested that PRRINN-MNCH should support the training of focal persons on the use of the Financial Guidelines and tools in the non-programme States.Thus, the programme provided further support to train relevant NPHCDA staff, as trainers to roll out implementation of the financial guidelines in all the states of the federation.

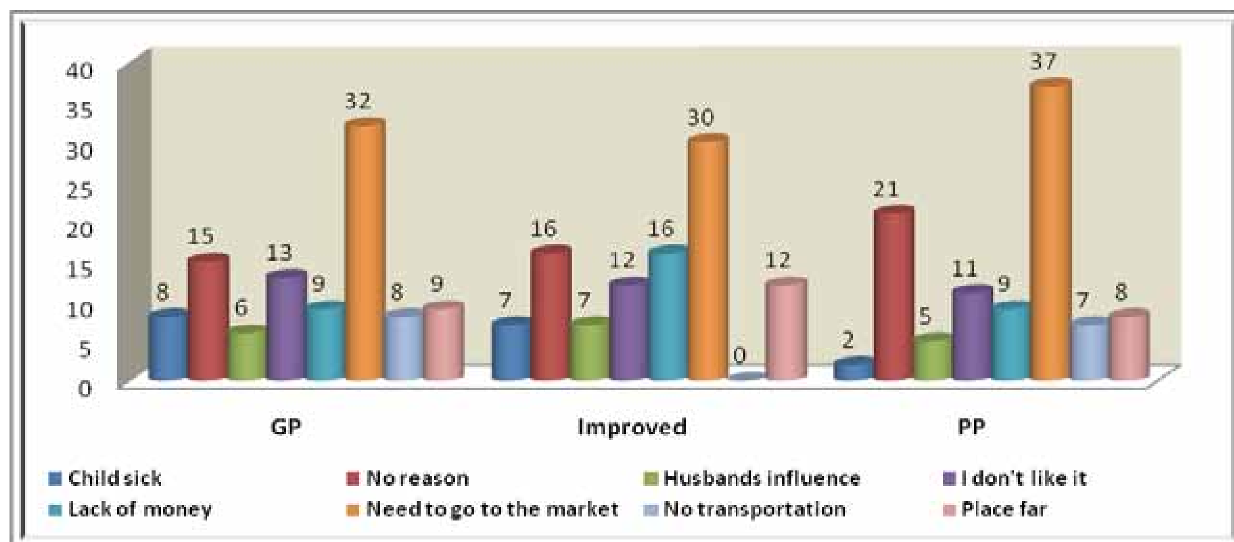
Twenty-two participants comprising of 6 senior staff from NPHCDA Headquarters, 2 representatives of the NPHCDA Offices from the six geo-political zones of the federation and GAVI Fund Accountants from the four PRRINN-MNCH focal States participated in the training workshop. The workshop enabled the participants to understand the use of the Financial Guidelines and equipped them with the capacity to train other relevant staff at the lower levels.

Supporting the PEI study – exploring reasons for non-vaccination

In 2010, the NPHCDA and PRRINN-MNCH co-funded a *Qualitative Assessment on the Role and Practice of Stakeholders on Immunization that Influence non-vaccination against polio in High-Risk States in the North West Zone of Nigeria*. The study, (results still in draft form), comprised of focus group discussions with mothers, fathers, and women's groups and individual interviews with State, LGA and Ward level health care providers, task force members and officials.

The following graph shows the results of focus group discussions with mothers in Good Performing, Poor Performing and Improved Performing LGAs. The mothers were asked the reasons for not going for immunization and in almost all LGAs, the most frequent answer was that the mother needed to go to the market.

The perspective of mothers on reasons for not going for immunisation classified by Good Performing (GP), Improved Performing and Poor Performing (PP) LGAs in Kano, Katsina and Zamfara States



Once the data from the study is fully analysed, it should feed into policy and plans to strengthen immunisation services.

NHIS, free MCH services – linkages with key federal partners

A key role for the national office is to strengthen the links between state level activities and the policy and plans from federal level actors. This role is perfectly illustrated in the discussions and activities concerning the Minimum Service Package (MSP), free MCH services and the burgeoning role of the NHIS.

In late 2009 and early 2010, the PRRINN-MNCH programme supported the states to cost the implementation of a MSP – based on the federal guidelines of what services, human resources, classification of facilities, drugs and equipment constitute a MSP. Once the work was completed the main cry from the states was that this was too expensive and thus unlikely to be implemented. There was a need for a MSP-lite. Since 2008, there has been a strong commitment from the Northern Governors to implement free MCH services. However, the political commitment was not adequately costed and thus not fully translated into action.

At the same time the federal level MDG Fund was pumping considerable resources into the states largely for PHC facility renovation and equipment/drugs. Similarly, the National Health Insurance Scheme was active in 6 LGAs in each state, working through Health Maintenance Organisations (HMOs) and providing considerable resources for MCH services. In 2011, the NHIS plans to expand and develop a community based NHIS (CBNHIS).

But, in most states the plans and integration between these initiatives was lacking and while the resources were being utilised this was not in the most efficient and effective way. What seemed to be missing was a service or investment plan which would be based on the MSP but would allow resources to be utilised more rationally. Jigawa had developed such a plan and it can be argued that it has allowed them to progress more smoothly.

Starting in 2010, the national office held a series of discussions with the relevant federal level bodies – FMoH, NPHCDA, NHIS and the MDG Fund. This has culminated in two workshops/roundtables (held in January 2011) where these issues were thrashed out. Thus, there is a more solid commitment to develop service/investment plans at state level (with PRRINN-MNCH support) and for the federal level bodies to liaise more closely with activities at state level. The outcomes of these meetings and decisions will be tracked closely throughout 2011.

Emmanuel Sokpo, national advisor for governance and systems, discussing free MNCH services at the recent roundtable

E. Challenges

Although there are multiple challenges facing a programme of this nature, this section will highlight a few key challenges. In the 2009 report six key challenges were identified which were - inadequate release of budgeted resources; lack of political will to effect necessary HR changes; imbalance between RI and IPDs; the failure of traditional social support mechanisms; absence of essential HMIS tools; poor co-ordination between partners and stakeholders.

While these remain significant challenges, there has been considerable progress in many of these areas in 2010.

- **Inadequate release of budgeted resources** is still a significant concern but the increasing government financial transparency, the creation of pooled funds for health in Jigawa and to a lesser degree in Zamfara, the improved budget performance and the increased allocation of resources indicates that the situation is improving. In addition, the substantial linkages established in 2010 between the PRRINN-MNCH programme and the NHIS, NPHCDA and the MDG fund should lead to more efficient and effective use of the available resources. This is an area in which the programme needs to expend considerable energy in the coming years.
- **Lack of political will to effect necessary HR changes** is a critical challenge. Maldistribution, ghost workers, embargos on new employment, poor training institutions, inadequate professional staff, indigene-only policies are all well known issues. There has been limited progress in these areas through the embedding of the HRIS and the establishment of fairly high level committees to drive the process of HR management. For both of these challenges the introduction of the SAVI team in 2011 (and possibly SPARC) will assist in moving the issues forward.
- **Imbalance between RI and IPDs** although a concern might be changing. There is an increased awareness of the need to strengthen the RI system to maintain the gains of the increased focus on immunisation as reflected in the 2010 NICS. The evidence from Jigawa where there has been substantial investment in RI activities (e.g. increased funding, motorbike scheme) linked to the reorganisation of the health system (the creation of the GHS) suggests that these changes are bearing fruit.
- **The failure of traditional social support mechanisms** as elicited by the clustering study has severe implications for marginalised groups that bear disproportionally the mortality and morbidity burden. However, the response from religious and traditional authorities, the openness to debate the issues raised in the study and the reorientation of the strategies to accommodate the findings all suggest that addressing the issue has started. There is, however, a long way to go.
- **Absence of essential HMIS tools** although still a problem is less a problem. Evidence from several of the states (e.g. the Jigawa DQA and Zamfara) indicate that the state is addressing this issue.
- **Poor co-ordination between partners and stakeholders** is an issue that has been substantially addressed in 2010.

While some challenges ameliorate, others rear their heads. These include:

- **The ongoing failure to pass the national Health Bill** has meant that the framework for developing a more integrated health system with clearer definition of roles is still not in place. In addition, the funding as envisaged in this Act is not available. This is a problem that has dragged on for over 5 years and needs resolution.
- **Strengthening the capacity of mid level managers** is seen as a priority by both the FMoH and the NPHCDA. But concerns remain over the numbers that are being trained under these schemes and the lack of co-ordination between them. It is imperative that these programmes get ramped up as the new Health Bill will need a substantial investment in management capacity.

F. Way forward

The thinking as captured in the 2009 Annual Report is still pertinent to the 2010 report and is retained with some minor changes.

In thinking of the way forward, the PRRINN-MNCH has many activities planned for 2010 and beyond. These are necessary for a broad-based change process to ensue. However, it is critical for a few key approaches to frame these activities. These include:

- **The correct balance between technical fixes and political will** is vital to ensure that many activities become sustainable. For example, to begin to resolve the HR challenges it is necessary to have the HR data available and to have the capacity and the structures for dealing with HR issues strengthened. However, implementation is as much dependent on the political will necessary for redistribution, addressing ghost workers and so on. Similarly, adequate budgetary releases to provide HMIS tools, drugs and equipment for MNCH services is dependent both on political will and the capability of the workforce and management to produce systems (inclusive of M&E) to ensure efficient and effective use of the resources.

- **Drafting an overall service delivery plan** based on a realistically costed MSP will allow different partners and programmes to allocate resources and expertise based on the plans and priorities of the government (both at state and LGA level). This will potentially ensure harmonisation between disparate activities (e.g. the NHIS CBHIS, the MSS initiative, the PRRINN-MNCH CEOC cluster approach). Without the overall service delivery plan, the continued risk of 'adhocracy' remains. Although some progress was made in 2010 on this issue, there is still a long way to go and it is clear that this will take substantial time to complete and implement.

- **Mainstreaming OR will lead to increased evidence-based activities and plans.** It is expected that the LLGAs and the HDSS will allow for innovations in service delivery to be planned, implemented and monitored within a Nigerian context. It is critical that the implementation results of these innovations are shared and utilised far beyond the bounds of the PRRINN-MNCH programme. This has started to happen but progress should be accelerated in 2011.

- **Closer collaboration with other development partner programmes** has substantially improved in 2010 but still needs to be a major focus of the PRRINN-MNCH programme.

- **Building stronger links between the KM, M&E and advocacy strands** of the programme and between the programme and the media is essential to create awareness, build coalitions for change and to publicise initiatives, innovations and results. Change is difficult in the Nigerian context and it is critical for the PRRINN-MNCH programme to maximise opportunities for dissemination of achievements, results, challenges and opportunities to as wide a spectrum of partners as possible.

G. Acronyms

ABU	Ahmadu Bello University
ALOS	Average Length of Stay
ANC	Antenatal Care
BEOC	Basic Emergency Obstetric Care
BOQ	Bill of Quantity
CBNHIS	Community Based National Health Insurance Scheme
CBO	Community-based Organisations
CBSD	Community Based Service Delivery
CE	Community Engagement
CEOC	Comprehensive Emergency Obstetric Care
CHEW	Community Health Extension Worker
CHPS	Community-based Health Planning and Services
CHV	Community Health Volunteer
CWC	Child Welfare Clinic
DFID	Department for International Development
DG	Director General
DHIS	District Health Information System
DHS	Demographic and Health Survey
DPRS	Director Planning Research and Statistics
DRF	Drug Revolving Fund
DSN/O	Disease Surveillance/Officer
DQA	Data Quality Audit
DQSA	Data Quality Self Assessment
DU	Dwelling Unit
ED	Executive Director
EOC	Emergency Obstetric Care
EPG	Eminent Persons Group
ETS	Emergency Transport Scheme
EXCO	Executive Council
FHC	Facility Health Committee
FIC	Fully Immunised Child
FMoH	Federal Ministry of Health
FMS	Financial Management System
FOMWAN	Federation of Muslim Women in Nigeria
FP	Family Planning
GAVI	Global Alliance for Vaccines and Immunisation
GH	General Hospital
GHB	Gunduma Health Board
GHSB	Gunduma Health Systems Board
GON	Government of Nigeria
HDCC	Health Data Co-ordinating Committee
HDSS	Health Demographic Surveillance Site
HERFON	Health Reform Foundation of Nigeria
HF	Health Facility
HMIS	Health Management Information System
HMO	Health Maintenance Organisation
HR	Human Resource
HRH	Human Resources for Health
HRM	Human Resource Management
HRIS	Human Resource Information System
HSDP	Health Systems Development Project

IDSR	Integrated Disease Surveillance and Response
IMCI	Integrated Management of Childhood Illnesses
INDEPTH	International Network for the Demographic Evaluation of Populations and their Health
IPDs	Immunisation Plus Days
ISS	Integrated Supportive Supervision
JCHEW	Junior CHEW
KAP	Knowledge, Attitude, Practice
KM	Knowledge Management
KMC	Kangaroo Mother Care
KPI	Key Performance Indicator
LEC/O	Local Engagement Consultant/Officer
LGA	Local Government Authority
LLGA	Learning LGA
LGSC	Local Government Service Commission
LLGA	Learning LGA
LLIN	Longlasting Insecticide Treated Net
LSS	Life Saving Skills
MAPS	Malaria Action Programme for States
MAS	Mobile Ambulance Service
M&E	Monitoring and Evaluation
MCH	Mother and Child Health
MDA	Ministries, Departments and Agencies
MDG	Millennium Development Goal
MDR	Maternal Death Review
MICS	Multiple Indicator Cluster Survey
MIS	Management Information System
MLSS	Modified Life Saving Skills
MMR	Maternal Mortality Ratio
MNCH	Maternal, Newborn and Child Health
MOBP	Ministry of Budget and Planning
MPH	Masters in Public Health
MSP	Minimum Service Package
MSS	Midwives Service Scheme
MOU	Memorandum of Understanding
MW	Midwife
NC	Newborn Care
NHIS	National Health Insurance Scheme
NHREC	National Health Research Ethics Committee
NICS	National Immunisation Cluster Survey
NIPD	National IPD
NPHCDA	National PHC Development Agency
NURTW	National Union of Road Transport Workers
OIC	Officer in-Charge
OPV	Oral Polio Vaccine
OR	Operational Research
ORAC	Operational Research Advisory Committee
ORAG	Operational Research Advisory Group
PATHS	Partnership for Transforming Health Systems
PBF	Performance Based Funding
PCV	Packed Cell Volume
PEI	Polio Eradication Initiative
PFM	Public Finance Management
PHC	Primary Health Care

PHCUOR	PHC Under One Roof
PLA	Participatory Learning Approach
PLAMAHS	Planning and Management of Health Assets
PMS	Programme Monitoring Site
PNC	Post Natal Care
PPRHAA	Peer and Participatory Rapid Health Appraisal for Action
PRRINN	Partnership for Reviving Routine Immunisation in Northern Nigeria
PS	Permanent Secretary
RAR	Rapid Awareness Raising
RAT	Rapid Assessment Tool
RI	Routine Immunisation
SAVI	State Accountability and Voice Initiative
SBA	Skilled Birth Attendant
SCH	State Council of Health
SCUK	Save the Children, UK
SCHEW	Senior CHEW
SDSS	Sustainable Drug Supply System
SHC	Secondary Health Care
SHMB	State Hospital Management Board
SIA	Supplemental Immunisation Activities
SIPD	State IPD
SMOF	State Ministry of Finance
SMoH	State Ministry of Health
SMoLG	State Ministry of Local Government
SPARC	State Partnership for Accountability, Responsiveness and Capability
SPHCB	State PHC Board
SPHCDA	State PHC Development Agency
SRIP	Support to Reforming Institutions Programme
STM	State Team Manager
TMS	Transport Management System
TT	Tetanus Toxoid
TOT	Training of Trainers
U5MR	Under Five Mortality Rate
UKaid	United Kingdom Agency for International Development
USAID	United States Agency for International Development
UNICEF	United Nations Children's' Fund
V&A	Voice and Accountability
VPD	Vaccine Preventable Disease
WFP	Ward Focal Person
WHO	World Health Organisation
WISH	Women Investing in Health

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Immunisation in Northern Nigeria;
Maternal Newborn and Child Health Initiative