Technical Report: Mobile Clinic Services to Serve Rural Populations in Katsina State: Perceptions of Services and Patterns of Utilization

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Summary

Introduction.

Topographical, cultural, socio-economic and developmental factors combine to create significant barriers to health services delivery in areas such as the North-West zone of Northern Nigeria. These barriers have resulted in poor health outcomes across the states of Northern Nigeria, including Katsina, a state bordering the southern fringe of the Sahara. As part of its strategy to improve service coverage, the Katsina State Ministry of Health has introduced a mobile clinic service to provide primary health care to particularly inaccessible communities. This study reports early evidence of beneficiary and provider perceptions of the service, and indicators of initial coverage.

Methods.

Key informant interviews were held with community leaders and service providers from communities receiving mobile clinic services from across six Local Government Areas (LGAs), selected to represent diversity of conditions across the state. Across three of these LGAs selected at random, exit interviews were conducted with a total of 455 service users. Data on utilization was collated from routine service records since commencement of the service in February 2008 and from a survey of a representative sample of households across the six LGAs.

Results.

Beneficiaries reported high levels of satisfaction with respect to most aspects of the mobile clinic service. However, there were significant differences in ratings of service quality on a number of indicators. Indicators of service provision suggested some weaknesses in quality of care, although again with significant variation between sites. Greatest concerns for beneficiaries were the lack of privacy provided and, with significant variation across LGAs, waiting times and lack of guidance on follow-up care. Providers of the service reported high levels of satisfaction with the work, highlighting the reach of services and the teamwork involved.

Discussion.

Data indicates positive valuing and appraisal of services by users, but some opportunities for strengthening quality of service provision. Variation across LGAs suggests the value of service supervision and monitoring – potentially linked to performance-based financing mechanisms – to raise general quality of care to those demonstrated as attainable in best performing LGAs. Provider reports suggesting high levels of motivation are notable in a general healthcare work environment with high rates of absenteeism. Seeing a tangible contribution of service delivery and experiencing close and supportive team relationships may be particular features of working with a mobile clinic service to hard-to-reach communities, but suggests elements that could be supported to improve work-based morale in other settings.
Key Policy Implications

The MAS mobile clinic service offers a model of service delivery that can create high levels of user satisfaction in communities served.

Significant variation in service performance across LGAs indicates the value for on-going quality supervision and monitoring – and the potential for performance-based financing.

High levels of staff satisfaction suggest the value for workplace morale of seeing tangible service delivery and strong teamwork.
Introduction

Demographic, cultural, topographic, socio-economic and developmental factors combine to create significant barriers to health services delivery in areas such as the North-West zone of Northern Nigeria (Ayeni et al. 1987; Callaway 1987; Wall 1998; Adamu and Salihu 2002; Centre for Reproductive Rights and Women Advocates Research and Documentation Centre 2008; Federal Ministry of Health of Nigeria et al. 2009). The low density of population (Chima et al. 2009; National Population Commission (NPC) [Nigeria] and ICF Macro. 2009) creates major geographical challenges for service accessibility. Cultural factors with regard to childbirth, women's mobility and decision-making and traditional practices frequently operate to create additional barriers to use of health services (Wall 1998; Babalola and Fatusi 2009). An average rainfall of less than 30 cm per year (Chima et al. 2009; Nnaji 2001) and the sandy conditions of the southern Saharan fringe, hostile to both agriculture and road infrastructure, amplify these challenges still further. Add weak investment in health systems and a chronic shortage of trained health workers (Awofeso 2010; Naicker et al. 2010) and these barriers are daunting indeed.

The poor health outcomes across the states of Northern Nigeria are, in these terms, unsurprising. The maternal mortality ratio (MMR) for the North-West zone is estimated at over 1,000 per 100,000 live births (Centre for Reproductive Rights and Women Advocates Research and Documentation Centre 2008; Federal Ministry of Health of Nigeria et al. 2009). Most recent estimates of infant mortality and under-five mortality rates for the zone are 91 deaths per 1,000 live births and 139 deaths per 1,000 children age 12-59 months respectively (NPC [Nigeria] and ICF Macro 2009).

Katsina, which borders the Niger Republic and the Sahara to the north, is in this regard typical of states within the zone. Indicators of service access are particularly low with, in 2009, less than 40% of women reporting access to ANC for their last delivery, fewer than 3% of children receiving full immunization by the age of one, and fewer than 15% of women reporting delivery of their last child at a facility under the supervision of a skilled birth attendant (Doctor et al. 2011).

Along with other states in the North-West, Katsina is working to develop the quality of its health facility infrastructure as a foundation for a revitalized health system to address such issues. However, the characteristics of the state – particularly the demographic and topographical features noted above – raise the question as to whether it is viable for primary care services delivered at facilities to which beneficiaries are required to travel to be the basis for health system planning. In the many, so-called ‘hard-to-reach’ areas of the state, consideration has accordingly been given to the establishment of a mobile clinic service that regularly brings health workers to communities to provide primary health care.

Mobile clinics have been used to provide primary and emergency health care to rural populations in many countries, diverse in culture, climate, geography, and degree of infrastructure development, over recent decades (Walker & Gish, 1977; Oniya & Sanda,
Typically, mobile clinics are used to provide immunizations, maternal health services, emergency health services, preventive health care, and communicable disease control. Although it is generally acknowledged that mobile clinics cannot match static health centers in consistency of health delivery and range of health services, studies suggest they can provide necessary health services with reasonable efficacy in areas that lack the infrastructure for permanent health centers. Mobile clinics are typically reported to be successful in delivering vaccines, medications, prenatal and antenatal care, specialist clinical rounds, and educational initiatives. Although improved health outcomes may be reported, impact is dependent upon the completeness of clinic services and the regularity of their availability (Walker and Gish, 1977; Fox-Rushby and Foord, 1996). Availability is constrained by costs associated with acquiring and fueling vehicles, the time it takes to reach rural catchment areas, and the development of road systems in rural areas (Vos et al., Fox-Rushby & Foord, 1996). Such factors can also result in poor utilization due to mobile clinics visiting communities at days or times that are incompatible with community work schedules or at locations that are still not especially convenient for communities (Aljasir and Alghamdi, 2010). Cultural factors and lack of community mobilization regarding preventive services are other factors that have been identified as limiting the effectiveness of mobile clinics (Loevinsohn et al., 1986; Aljasir and Alghamdi, 2010).

Katsina State introduced its mobile clinic service – referred to locally as the Mobile Ambulance Service (MAS) - in February 2008. It provides Primary Health Care (PHC) services in hard-to-reach areas of all the 34 Local Government Areas (LGAs) of the state. Each LGA has a ‘bus ambulance’ which has been modified and fitted with basic equipment in order to provide mobile basic PHC services, primarily immunization, antenatal care (ANC), skilled birth attendance, treatment of minor ailments growth monitoring and health education. All services are provided free at the point of use. Each vehicle is staffed by a driver and three health personnel, usually Community Health Extension Workers although some also have a nurse or midwife. All vehicles have at least one female health worker. Staff are permanently assigned to the mobile service, that is, they are not seconded from health facilities. Each LGA is responsible for drawing up an itinerary or schedule for the mobile service visits in collaboration with community heads, thereby ensuring that all remote and hard-to-reach communities in the LGA are visited at least once per month. Communities are also responsible for providing the mobile health staff with a venue in which to deliver PHC services. Hard-to-reach communities are defined as areas that are more than 10 kilometres away from static health facilities.

This study reports early evidence of beneficiary and provider perceptions of the service, and indicators of current coverage, as part of a broader evaluation of the effectiveness of the current strategy. With regard to the literature on mobile clinics noted above, particular concern was focused on satisfaction with the range of services offered, their perceived quality and relevance, and the timing of service provision.
Methods

Study design

Data collection was focused in LGAs, two from each of the three senatorial zones of Katsina State. Within zones, the LGAs that mobile clinic records indicated as attaining the highest and lowest ANC attendance and immunization coverage were selected. Key Informant Interviews (KIIIs) were carried out with community leaders and mobile clinical service providers for all six LGAs. Three of the six LGAs were selected at random for the completion of exit interviews. Data on coverage was drawn from two sources: State Ministry of Health (SMoH) routine data records regarding mobile clinic services, and a household survey of a representative sample of households across the six LGAs (Peters et al., 2011).

Key informant interviews

Key informant interviews (KIIIs) were completed with 12 health workers engaged with the mobile clinic service (including four drivers). Thirty-six KIIIs were held with community leaders (including women and religious leaders). KIIIs were also held with the PHC Coordinators of each LGA, the Director of Public Health (DPH) and one available LGA chairman.

The interview guide was pre-tested in a community with similar characteristics to the selected communities. The KIIIs were conducted by a trained interviewer and supported by a recorder. The language used for KIIIs with the community leaders and the health workers was Hausa, although notes were taken in English. English was used in KIIIs with officials. Informed consent was sought before commencing each session. Quality assurance was addressed by a supervisor who carried out review of record sheets on the day of the interview.

Exit interviews

In each LGA 200 exit interviews were targeted, based on the number of users of mobile clinic services anticipated in a single scheduled clinic day in a given community. Out of the 600 targeted interviews, 455 interviews were completed. The communities visited within the LGA were predetermined by the regular schedule of the mobile clinic service. The interview schedule collected information with respect to patients' age and sex and 16 'closed' questions regarding perceptions of care and services. Questions addressed issues of financial expenditure, use of prescription medicine, management of symptoms, waiting times to receive treatment, gender preference of provider, staff attitudes and general satisfaction with the service. Four interviewers administered the questionnaire in the local language, Hausa. Patients were selected consecutively as they left the point of service (a place set up by the community for consultation). Each time an interviewer was free on completion of the preceding interview, they approached the next patient leaving the facility. In cases where the patient was a child, their age and sex were collected but the rest of the questionnaire was administered to the
accompanying adult. Interviews for women were conducted either in the mobile van whereas for men they were conducted under the tree, far from other clients. Informed consent procedures were followed and clients were informed of their right not to respond to any question with which they felt uncomfortable.

Coverage estimates

Records held by the SMOH were collated to show the number of patients seen and services delivered across all LGAs in the state, providing estimates of coverage for all six LGAs considered in the current study. The household survey conducted in a representative sample (n=564) of households across these states in 2010 (Peters et al., 2011) provided broader information on patterns of health knowledge, health seeking behavior and service access across these LGAs.

Results

Demographic profile of interviewed service users

The age structure of mobile clinic users in Daura, Jibia and Musawa LGAs indicated by the exit survey is displayed in Figure 1. Approaching 50% of male users were children, and 34% female users were children. 49% of users were women of reproductive ages (15-49 years). The mean age of users across all three LGAs was 17.0 years, ranging from 14.7 years in Jibia LGA to 20.2 years in Musawa LGA. Over all three LGAs 67.9% of users were female.

![Figure 1: Age structure for male and female mobile clinic users at exit survey (all three LGAs combined)](image-url)
User perceptions of the service

Table 1 presents the proportion of those interviewed expressing specified views of the mobile clinic service. Although services were supposed to be free in all the LGAs, the results show that 2.2% reported spending some money, with significantly greater likelihood of this occurring in some LGAs (i.e. Jibia) than others (e.g. Daura, p<0.001).

<table>
<thead>
<tr>
<th>Item</th>
<th>Percent responding</th>
<th>Daura LGA (n=191)</th>
<th>Jibia LGA (n=119)</th>
<th>Musawa LGA (n=145)</th>
<th>All 3 LGAs (n=455)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% responding yes to...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you spend any money here today?***</td>
<td>0.0</td>
<td>6.7</td>
<td>1.4</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Do you think the health worker understood your problem as explained by you?***</td>
<td>100.0</td>
<td>94.1</td>
<td>99.3</td>
<td>98.2</td>
<td></td>
</tr>
<tr>
<td>Did the health worker explain to you what your problem was?</td>
<td>100.0</td>
<td>80.7</td>
<td>93.8</td>
<td>93.0</td>
<td></td>
</tr>
<tr>
<td>Was the problem that brought you here addressed?</td>
<td>99.5</td>
<td>97.5</td>
<td>100.0</td>
<td>99.0</td>
<td></td>
</tr>
<tr>
<td>Were you able to get the prescribed drugs at the MAS?</td>
<td>99.5</td>
<td>98.3</td>
<td>99.3</td>
<td>99.1</td>
<td></td>
</tr>
<tr>
<td>Did the health worker teach you how to use/take the drugs prescribed?*</td>
<td>99.5</td>
<td>95.0</td>
<td>97.9</td>
<td>97.8</td>
<td></td>
</tr>
<tr>
<td>Did the health worker tell you what to do in case symptoms persist or return?***</td>
<td>100.0</td>
<td>45.4</td>
<td>61.1</td>
<td>73.4</td>
<td></td>
</tr>
<tr>
<td>Do you think you had to wait too long before the health worker started attending to you today?</td>
<td>18.3</td>
<td>30.3</td>
<td>28.3</td>
<td>24.6</td>
<td></td>
</tr>
<tr>
<td>Do you think the health worker spent enough time with you?***</td>
<td>99.5</td>
<td>79.8</td>
<td>90.3</td>
<td>91.4</td>
<td></td>
</tr>
<tr>
<td>Do you think you had enough privacy during the consultation?***</td>
<td>12.6</td>
<td>74.8</td>
<td>85.4</td>
<td>52.0</td>
<td></td>
</tr>
<tr>
<td>If you had a choice will you prefer health worker that attended to you to be of the same gender with you?***</td>
<td>97.9</td>
<td>72.3</td>
<td>66.9</td>
<td>81.3</td>
<td></td>
</tr>
<tr>
<td>Are you satisfied with the skill of the health worker that attended to you?</td>
<td>100.0</td>
<td>98.3</td>
<td>99.3</td>
<td>99.3</td>
<td></td>
</tr>
<tr>
<td>Are you satisfied with the attitude of the health worker?**</td>
<td>100.0</td>
<td>96.6</td>
<td>99.3</td>
<td>98.9</td>
<td></td>
</tr>
<tr>
<td>Are you satisfied with the service you received today?</td>
<td>100.0</td>
<td>100.0</td>
<td>99.3</td>
<td>99.8</td>
<td></td>
</tr>
<tr>
<td>If you had a choice, would you prefer to go elsewhere?</td>
<td>0.0</td>
<td>9.2</td>
<td>10.3</td>
<td>5.7</td>
<td></td>
</tr>
</tbody>
</table>

Notes: *All responses are in percent except for age. p<0.05; **p<0.01; ***p<0.001.

In terms of satisfaction ratings, virtually all women (98.2%) indicated that the mobile clinic staff understood their problems. The vast majority of those interviewed also reported that the health worker was able to explain the nature of their problem, that their problems were addressed during the visit and that they were able to get all the prescribed drugs during their visit. Nearly all clients also reported that the mobile clinic
taught them how to use or take the prescribed drugs, they were satisfied with the attitude shown by the health workers and satisfied with the skills demonstrated by the health workers in providing care. The large majority would not wish to receive services elsewhere. While these findings are encouraging, there were significant differences between LGAs on a number of indicators, with clinic services in Jibia consistently receiving lower satisfaction ratings than those elsewhere.

In terms of items related to service provision, ratings were generally lower. For example, out of all women, only 73.4% of women were told by the health workers what to do in case symptoms persisted or returned. This percentage was much higher in Daura LGA (100%) compared with Musawa (45.4%) and Jibia (61.1%) LGAs (p<0.001). Long waiting times were a concern for about 1 in 4 users. The percentage was significantly higher in Jibia and Musawa LGAs compared with Daura LGA (p<0.05). More than 9 out of 10 users thought the health worker spent enough time with them in addressing their problems, though there were again significant differences by LGA (p<0.001).

Variation between LGAs on the issue of privacy during consultation was particularly marked. Only 12.6% of users in Daura indicated having enough privacy whereas Jibia and Musawa LGAs registered much higher ratings. Overall, however close to 50% of users considered that they were not afforded adequate privacy. Given the requirements for proper examination during ANC (especially palpation and use of a fetoscope) such lack of privacy may serve as a major disincentive for greater uptake of antenatal services.

Community leader views

The positive perceptions of the mobile clinical service were generally corroborated by interviews with community leaders. Comments included:

- They are committed to hard to reach communities and leave the comfort of health facilities in the cities for us.
- The health workers are committed to our children and women.
- They always attend to us and all other women from the neighbouring communities at no cost at all.
- Until the last patient has treatment the team will not leave the community except if they run out of drugs.

The only recurrent issue of concern was the frequency of service provision, which was typically once per month and was often seen as inadequate:

- [The mobile clinic] is saving our women and children from diseases and death but we only have access to it once a month. We are forced to use alternative care such as religious preparation the remaining 29 days of the month.
- We want them to be coming two to three times in a month.
Provider views

Nearly all the health workers interviewed described their experiences working with the mobile clinics in very positive terms, for example:

*The joy of saving life of a young child or woman keep me going, even during some period we have to trek some kilometers to deliver our service.*

*We relate like brothers and sisters, this is the driving force that has been keeping us going despite the various challenges we encounter.*

The pride in service delivery to ‘hard-to-reach’ communities reflected in these remarks was a recurrent theme. ‘Team work’ was also frequently referred to:

*Gender, religion, or tribe has nothing to do with our work. We are all professionals and we are trained to work together and because of this we do not have any problem.*

*We are comprising of two male and one female CHEW and the driver and his assistant. We have our division of labour: while the female among us conducts ANC, one carry out immunization and the other sees patients.*

The managers unanimously expressed satisfaction at the commitment of their teams to the communities they serve. They acknowledged the demand for more frequent visits to communities, but saw current levels of coverage as the best available option for communities without a health facility. The challenges noted in providing services were principally around transport logistics, with road conditions difficult and repairs to vehicles typically having to be completed outside of the LGA, and resulting in disrupting of the planned schedule of visits.

Coverage of the service

Table 2: Routine Summary Statistics for MAS service across the six LGAs (last full year)

<table>
<thead>
<tr>
<th>LGA</th>
<th>Population</th>
<th>Expected pregnancy</th>
<th>Estimated &lt;1 year</th>
<th>No. of patients seen</th>
<th>No. receiving ANC</th>
<th>%ANC coverage</th>
<th>No. immunized</th>
<th>%Antigen coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baure</td>
<td>222,204</td>
<td>8,888</td>
<td>8,888</td>
<td>1,438</td>
<td>943</td>
<td>10.61</td>
<td>1,190</td>
<td>13.4</td>
</tr>
<tr>
<td>Daura</td>
<td>247,298</td>
<td>9,892</td>
<td>9,892</td>
<td>535</td>
<td>31</td>
<td>0.31</td>
<td>474</td>
<td>4.8</td>
</tr>
<tr>
<td>Faskari</td>
<td>196,035</td>
<td>7,841</td>
<td>7,841</td>
<td>2,035</td>
<td>935</td>
<td>11.92</td>
<td>1,861</td>
<td>23.7</td>
</tr>
<tr>
<td>Jibia</td>
<td>169,748</td>
<td>6,790</td>
<td>6,790</td>
<td>3,852</td>
<td>2,124</td>
<td>31.28</td>
<td>1299</td>
<td>19.1</td>
</tr>
<tr>
<td>Kaita</td>
<td>184,401</td>
<td>7,376</td>
<td>7,376</td>
<td>636</td>
<td>64</td>
<td>0.87</td>
<td>15</td>
<td>0.2</td>
</tr>
<tr>
<td>Musawa</td>
<td>171,714</td>
<td>6,869</td>
<td>6,869</td>
<td>760</td>
<td>57</td>
<td>0.83</td>
<td>105</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Table 2 summarizes routine data collection for MAS services collated across the six LGA sites for the last full year of operation. This indicates very marked differentials in coverage secured across the LGA by means of MAS services. For example, an ANC coverage rate of over 10% of pregnant women in the LGA was achieved by MAS
services in Baure, Faskari and Jibia, with the latter achieving ANC coverage of over 30% by MAS. In contrast, ANC coverage through MAS services was less than 1% in Daura, Kaita and Musawa. A similar pattern is in evidence for immunization coverage.

Further indication of the reach of the MAS service in Katsina is provided by data from the household community survey of the same six LGAs. Across all women interviewed in these LGAs (see Table 3), a CHEW at a mobile clinic was reported as having been responsible for ANC provision to others in their community for 16.5% of respondents, but for respondents themselves for just 5.3% of women. A CHEW at a mobile clinic was reported as having been responsible for 16.4% of provision of information on maternal danger signs during pregnancy received during the course of ANC and 13.4% of provision of information on the benefits of immunization. The proportion of coverage achieved through CHEWs with the mobile clinic service was much lower for other issues, such as the care of newborns or sick children, reflecting a major gap in the current scope of services provided.

**Table 3: Proportion of respondents receiving selected services from CHEWs via mobile clinic van**

<table>
<thead>
<tr>
<th>Service/Indicator</th>
<th>% responding ‘CHEW on mobile van’</th>
<th>Number of all women responding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received antenatal care</td>
<td>5.3</td>
<td>381</td>
</tr>
<tr>
<td>Source of ANC for other women in community</td>
<td>16.5</td>
<td>564</td>
</tr>
<tr>
<td>Source of information about maternal danger signs during pregnancy among women who attended ANC during last pregnancy</td>
<td>16.4</td>
<td>122</td>
</tr>
<tr>
<td>Learnt about maternal danger signs during childbirth</td>
<td>10.6</td>
<td>199</td>
</tr>
<tr>
<td>Respondents believe that other women in the community learn how to take care of their newborns from the mobile van</td>
<td>4.4</td>
<td>385</td>
</tr>
<tr>
<td>Learnt about caring newborns</td>
<td>3.4</td>
<td>384</td>
</tr>
<tr>
<td>Learnt about taking care of ill children</td>
<td>5.3</td>
<td>226</td>
</tr>
<tr>
<td>Learnt about protective effects of immunization</td>
<td>13.4</td>
<td>224</td>
</tr>
</tbody>
</table>

Source: Peters, et al. (2011). Note: These data come from a total sample of 564 women who were interviewed in the household survey.
Discussion

The data clearly indicates positive valuing and appraisal of services by users. Together with the strong motivation and morale reported by staff and the wide coverage of essential services like immunization and ANC attained in some contexts, this suggests that the mobile clinic service represents a potentially important model for delivery of primary health care to communities in geographically and topographically inaccessible areas.

However, this positive assessment needs to be qualified by a number of considerations. For example, the current study did not attempt a health economic analysis of the costs and benefits of the mobile clinic service that would allow comparisons with other potential strategies of service delivery to such populations. Such an analysis would be important to inform the potential for scaling up of such provision in other parts of northern Nigeria or beyond.

There are other qualifying considerations that emerge directly from the data presented. There is clearly very wide variation in the coverage of service through mobile clinics across LGAs in Katsina. This may in part reflect issues of demand and logistics in specific LGAs, but it seems likely that the performance of the clinical team is also a major source of such variance. In this regard, regular monitoring of service provision against established benchmarks – linked to supportive supervision and also potentially to performance-based financing – is warranted. Recent moves by Katsina SMoH to establish a monitoring and evaluation framework for the MAS service across the state is thus to be welcomed. The aim should be to raise general quality of care to those demonstrated as attainable in best performing LGAs.

It is appropriate to recognize that in the data reported here there was little correlation between satisfaction ratings by users and performance metrics based upon coverage. For example, for the service to Daura LGA 100% of clients at exit interview were satisfied with the service received and with the attitude and skill of the service provider. However, in terms of performance metrics this service had weak ANC and immunization coverage. It is unclear how such in congruence can best be explained. For example, the clinic may provide excellent quality service but to a small number of clients (with wider barriers to service utilization preventing positive reports of service quality leading to an increase in utilization). Alternatively, questions at exit interview may not have captured dissatisfaction with service quality that keeps overall utilization low. Then again, with weak demand for services, users in Daura may have low expectations of services, and appreciate provision that service indicators suggests is functioning sub-optimally.

Notwithstanding such ambiguity, there are a number of service improvements that can be made on the basis of findings. It appears that there are frequent missed opportunities to address care of newborns and young children, for example. Concerns regarding privacy could be addressed through collaboration with community leaders, with communities providing designated places for focused ANC and clinical examination. Support systems to ensure greater functionality and effectiveness of the
service would include supportive supervision and improved vehicle maintenance management. Referral systems and community partners such as Community Health Volunteers would usefully complement the work of the visiting mobile team and provide some basic services for periods between visits.

Finally, provider reports suggesting high levels of motivation are notable in a general healthcare work environment with high rates of absenteeism. Seeing a tangible contribution of service delivery and experiencing close and supportive team relationships may be particular features of working with a mobile clinic service to hard-to-reach communities, but suggests elements that could be supported to improve work-based morale in other settings.

References


Mobile Clinic Services in Northern Nigeria


Peters, GO., Doctor, H V., and Findley, S E. 2011. Northern Nigeria Maternal, Newborn and Child Health Programme: Results from the 2010 Baseline Household Survey of

