

Qualitative study to identify solutions to local barriers to care-seeking and treatment for diarrhoea malaria and pneumonia in select high burden countries

Report on findings from Nigeria



November 2012
Maternal, Newborn and Child Health
Working Paper
UNICEF Health Section, Program Division

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Qualitative study to identify solutions to local barriers to care-seeking and treatment for diarrhoea, malaria and pneumonia in select high burden countries. Report on findings from Nigeria (1 of 3 country reports)

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November 2012

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PHOTOGRAPHS: Children and parents in Cross River and Kebbi States, Nigeria
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MATERNAL, NEWBORN AND CHILD HEALTH
WORKING PAPER

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Report on findings from Nigeria
(1 of 3 country reports)

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Keywords: Africa, Kenya, Nigeria, Niger, community case management, care-seeking, treatment, diarrhoea, malaria, pneumonia, child health

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Acknowledgements

We would like to thank Clement Adebamowo, the Chairman of the National Health Research Ethics Committee of Nigeria for granting permission to undertake this study, and for the support of the State Ministry of Health in Kebbi and Cross River. In Kebbi State Ministry of Health particular thanks are extended to Umar Jabro Ahmad, the Permanent Secretary, and Hafsa Rasheed, Deputy Director of Public Health and Reproductive Health Coordinator, and in Cross River State Ministry of Health, to Chris Ita, the Permanent Secretary, John Osang Odok, Director of Primary Health Care and Disease Control, and Affiong Eborly, Integrated Management of Childhood Illnesses Coordinator. In Kebbi State, we would also like to thank Ahmed Aliyu and Na'omi Maidawa at the WHO, Mustapha Musa, and UNICEF personnel Abdullah Ibrahim, Ruchin Sharma, Umar Garba, Balkisu Musa, and Dahiru Garba Gummi. In Cross River State, we thank Josephine Eji, Lovina Usetu, Magdaline Adomi, Atitu Basse, Pauline Odang, Catherine Odang, Ovai Elobe, Ojong Edet, Sunday Effiong and Glory Etta. Preliminary results were discussed with John Quinley at USAID, and Binyam Woldetsadik Gebru and Abimbola Williams at Save the Children UK. From the UNICEF country office in Abuja, we would like to thank Naawa Sipilanyambe, Emanuelle Gemade, Noma Owens-Ibie and Josephine Okide and from the UNICEF office in Enugu we thank Felix Nnakwe. From UNICEF Head Quarters in New York, we thank Mark Young, Nick Oliphant, Thomas O'Connell, Deolinda Martins, Natalia Winder Rossi, Susan Mackay and Jeffrey Bates for their positive engagement and ideas, and Shanelle County and Paola Canahuati for their logistical support. We are particularly grateful to Alyssa Sharkey for her commitment, patience and good humour throughout.

We thank research assistants Dorcas Kadangs and Onikepe Owolabi for their invaluable contributions to the study, and Anthrologica associates Olivia Tulloch and Benj Conway. Particular gratitude is extended to the mothers, families and health workers who participated in this research.

The research was made possible by a grant from the Bill and Melinda Gates Foundation.

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Executive Summary

Background and objectives

UNICEF is a member of the UN Commission on Life-Saving Commodities for Women and Children, a consortium convened to recommend innovative strategies for increasing the availability, accessibility and rational utilisation of selected commodities for maternal and child health. A key aspect of this involves developing strategies to raise awareness of and strengthen demand for lifesaving products amongst end users. Against this backdrop, this research focuses on solutions to local barriers to care-seeking and treatment for malaria, diarrhoea and pneumonia identified in three select high burden countries: Kenya, Nigeria and Niger. The research has three main objectives:

- To access perceptions and experiences of childhood malaria, diarrhoea and pneumonia and associated care-seeking and treatment (non-)uptake.
- To determine the barriers and challenges intended beneficiaries face in accessing treatment for malaria, diarrhoea and pneumonia in children under five years.
- To identify local solutions to overcome barriers identified that promote and facilitate more timely access to appropriate healthcare for these childhood illnesses.

Methodology

This report appertains solely to the research conducted in Nigeria. Data collection was carried out over ten days in July 2012 in two states, Kebbi and Cross River. In each state four Local Government Authorities were visited. In Kebbi: Koko, Augie, Gwandu and Bernin Kebbi. In Cross River: Obubra, Abi, Yakurr and Akampa. Primary carers of children under five years who did not (regularly) engage with health services or present their child at a health facility during illness episodes were purposively selected for interview. In Kebbi, 13 interviews were completed: 11 with primary caregivers and two with fathers of children under five years. Two focus group discussions (FGDs) were held: one with fathers of children under five, the other with Volunteer Community Mobilisers. In Cross River, 11 interviews with primary care-gives were completed, an FGD with fathers and an FGD with Community Health Workers. In addition, an informal discussion with women community leaders was also held in Cross River. All interviews and FGDs were conducted by the English-speaking primary investigator with a research assistant translating consecutively between English and Hausa in Kebbi, and English and Pidgin in Cross River. Each interview lasted approximately 90 minutes and audio recordings were made using a digital voice recorder. Informed consent was given by signature or thumbprint of all those participating. The primary researcher was responsible for the complete thematic analysis of the data using grounded theory.

Report structure

The report is presented in three sections: results and thematic analysis (organised around causation and prevention, and care-seeking behaviour); barriers and solutions to care-seeking and treatment (including a table summary); discussion, conclusion and programmatic implications.

- **Causation and prevention**

Malaria – Given priority by carers, in both states, as the most common illness. The causal link between mosquitoes and malaria was not always clearly expressed and several mothers did not know what caused malaria. Those who linked mosquitoes with malaria, associated it with bad blood. In Kebbi, many mothers claimed that malaria, like all illness, comes from Allah. In both states bed nets were widely used. Some carers used nets to avoid being bitten, but did not link this to malaria prevention. Often, there were insufficient nets for the whole family, and older children would routinely sleep unprotected. Health workers emphasised there was unmet demand for nets at the community level.

Diarrhoea – Discussed as a ‘normal’ condition for children, diarrhoea did not necessarily warrant treatment unless the condition continued for many days or grew increasingly severe. It was attributed to a variety of different factors, particularly a ‘dirty’ stomach. Many suggested that it was not possible to prevent diarrhoea. Household water sources, sanitation and hygiene were discussed.

Pneumonia – Carers had limited knowledge about the causation or prevention of pneumonia, beyond linking it to the cold although clear association was made between pneumonia and the ribs, and this influenced care-seeking for pneumonia, much of which focused on traditional massage. No mother in Kebbi reported their child having had pneumonia.

Local theories of causation – Mothers in Kebbi frequently attributed all illness to Allah, a fatalistic attitude that may have precluded preventative measures, but did not appear to prevent treatment-seeking as Allah also provided treatment. Should a child die it was regarded as Allah’s path for the child. This sentiment was also expressed by Christian mothers in Cross River. Health workers in Cross River also claimed that child deaths were often attributed to spirit attack or witchcraft.

- **Care-seeking behaviour**

Plant medicine – Termed ‘Hausa medicine’ in Kebbi and ‘native medicine’ in Cross River. In both states it was the frontline treatment option for diarrhoea, and although was used for malaria and pneumonia in Cross River, in Kebbi plant medicine was less frequently used. Plant medicines were made from leaves (fresh and dried), bark, roots, ashes and, in Cross River, chalk or clay. The majority of respondents claimed that local medicine worked well, and several emphasised that it was so effective they never needed to visit the health centre. Administering plant medicine also provided parents with time to collect the money necessary to seek other forms of care.

Traditional healers – In Cross River respondents sought care from experienced women who acted as sources of knowledge about local treatments and specialised in plant medicine, massage and/or traditional birthing practices. Traditional massage was the frontline care for pneumonia and many carers asserted that this was the only method of effective treatment. In Kebbi, fathers recounted taking a child with pneumonia to a bone-setter and discussed pneumonia as an illness of the rib cage that restricted breathing. In cases of spirit attack, it was believed that traditional healers could both identify the source of the evil and treat it, and were also able to offer means of protection.

Spiritual healers – Respondents explained that prayer often formed the basis of traditional treatment. In Kebbi, carers perceived that all sickness came from Allah, yet only a few recounted praying to Allah when their child was ill. This usually happened privately as home, and the mosque had no formal role. Rather, spiritual aspects were incorporated into treatment, as the spiritual healer

would spit on the chest of the child and recite a series of prayers specifically for illness. In Cross River, praying was a central part of care-seeking, both at home and in church, independently and with a pastor.

Chemists and self-medication – There were many points of access to ‘English medicine’ including specialised shops (chemists or pharmacies), patent medicine vendors (PMVs), and general stores or kiosks selling medicine (both above and below the counter) alongside general household supplies, all of which played a major role in care-seeking for childhood illness. Respondents in both states discussed two routes to obtain medicines from the chemist: being referred from a health centre to collect prescription medicine; and going directly and independently for medication, particularly in cases of malaria and diarrhoea. Patronising a chemist in preference to a health facility offered several key advantages. They were seen to be closer (physically and socially) to the community, have longer opening times and be accessible at night. Having money to buy medicine was a key issue and carers would opt for different brands and quality of drugs depending on what they could afford. Great emphasis was also put on the chemists’ willingness to prescribe according to what a carer was able to pay and many respondents could obtain medicine on credit, facilitating the child’s treatment whilst the parent gathered funds to pay for it retrospectively. Several respondents warned that some chemists had poor reputations and going to them directly, rather than via a health facility, risked misdiagnosis and incorrect treatment.

Health facilities – Carers suggested that the medicine and services offered at health facilities were of higher quality and more reliable (due to tests and examinations) and the training and qualification of health professionals was also seen to be beneficial. The perceived severity of a child’s condition was often the determining factor prompting treatment-seeking at a health facility, and many carers would ‘wait and see’ how the condition developed, often leading to delayed presentation. The dominant issues raised in relation health facility attendance were the cost and lack of drugs. Several carers explained that whilst they went to the health centre for routine immunisation and even for ante-natal care, they would not consider attending if the child was ill. A clear distinction was made between different services and relative benefits offered by health facilities in comparison to other sources of treatment.

Decision making and agency to act – In Kebbi State, there was an interesting distinction between care-givers and care-seekers: mothers were the primary care-givers, it was their responsibility to care for the children and administer to them if they were ill; but the father was the primary care-seeker, because of the restricted movement of women outside their household’s compound (*kulle*). The decision to treat a child therefore lay with the father in real terms, and the divergence between primary care-giver and care-seeker was seen to impact the effectiveness of care given. In a number of cases, delays caused by waiting for the father to take the child or give his permission for the child to be taken to the health centre, resulted in a child’s death. Health workers suggested that the situation may be starting to change, with mothers increasingly presenting at MNCH clinics unaccompanied, but the majority of carers concluded that women continued to be confined to their husband’s compound and were not active in care-seeking. In Cross River, the mothers would inform the father of a child’s illness, but many also discussed the illness with the child’s grandmother (most often the paternal grandmother) who played a larger role in both care-giving and care-seeking than in Kebbi. In Cross River, a mother may be accompanied to the chemist or health centre by the child’s father, but more often, she sought treatment alone or with other female relations. A proportion of women also had the ability to pay for treatment themselves, due to their engagement with small business.

- **Barriers to care-seeking and treatment**

Financial barriers – The majority of participants in both states identified financial barriers as the primary factor preventing care-seeking for childhood illness. Whilst some respondents were aware that free medicine for children and pregnant women should be available from health facilities (in line with the national policy), most explained that there was rarely any stock. Frequently, parents were required to purchase the prescribed drugs from a chemist. Even if free medication was available at a health facility, parents were still faced with additional charges, such as equipment costs and fees for lab tests. Many carers described situations in which they had wanted to seek treatment but had been unable to do so because of lack of funds. Several discussed borrowing money from their relatives or neighbours to fund treatment, but others were reluctant to do so and often expressed a level of suspicion and distrust about being in debt or lending to others. Many carers emphasised their inability to save money.

Access barriers (distance, transport and location) – Carers rarely discussed poor access as a barrier to care-seeking, and only raised problems of distance and transport in relation to emergency cases or if they needed to attend a larger health facility. CHWs and VCMs emphasised the difficulties they faced in accessing the wider community due to lack of transport.

Knowledge and information barriers – There was limited knowledge about the causation and prevention of childhood illness in both Kebbi and Cross River, and this impacted care-seeking behaviour, particularly regarding pneumonia for which local treatments were continually used in the belief that biomedicine was ineffective. Similarly, certain types of diarrhoea were left untreated and generalised fevers were routinely treated as malaria. A lack of ability to identify risky symptoms, poor knowledge about when to seek treatment, and a perpetuating attitude of ‘wait and see’, all contributed to the late presentation of cases. The majority of carers called for more education, especially on child health. Mothers suggested that male members of their household or community had little understanding of childhood illness and were not involved in child care. This was problematic if a father’s limited knowledge prevents effective and timely care-seeking, especially in Kebbi, where a mother’s agency to act independently was tightly restricted and contributed to a lack of knowledge about community activities. In both states, a divergence between knowledge and practice was evident.

Socio-cultural and religious barriers – Restrictions on the movement and societal interactions of women in Kebbi, resulting in the juxtaposition of mothers as the primary care-givers and fathers as the primary care-seekers, was a barrier to accessing effective, efficient and timely healthcare. In Cross River, fathers had little involvement with child rearing, and this, according to several respondents led to decreased responsibility and curtailed support of the family. There did not appear to be any gender-bias in treatment-seeking for children, nor was any distinction made in treating children of different wives in a polygamous marriage. Religious barriers were identified in both states. In Cross River, a number of Pentecostal denominations reportedly prohibited biomedical treatment. In Kebbi, there were reports that religious authorities preach against health services. Rumours circulated about the polio campaign remain in the community’s collective memory and contribute to a negative undercurrent regarding the implementation of immunisation and other health initiatives.

Health facility and biomedical deterrents – Aspects of health services were also identified as barriers to care-seeking. In Kebbi, a proportion of carers distrusted biomedicine, there was suspicion of free medicine and in addition to the negative rumours, the polio campaign impinged on carers’ tolerance

for interaction with health services. Both carers and health workers alike concluded that parents were 'at saturation point'. In Cross River, such a distrust of medicine was less evident. The environment of health facilities and attitude of health staff was seen by some respondents to discourage attendance. A major issue deterring attendance at health facilities was the lack of available medicine. Stockouts actively encouraged carers to seek treatment from other sources, often ones where the risk of misdiagnosis, mismanagement and self-medication were increased. Health workers also lamented the lack of drugs at health facilities. There was a sense amongst mothers in Cross River that, largely because of supply-side issues, health centres were a place to go for immunisation and ANC, but not when their child was ill.

- **Solutions to barriers identified**

Solutions to financial barriers – Carers suggested that treatment costs should be fixed and publicised. If costs were competitive, it may reduce the attraction of chemists that offer price flexibility dependent on brand, quality and dosage of drugs purchased, and would also deter health staff from over-charging or incorporating false costs. Concerns were raised over the feasibility of community saving schemes, yet fathers in Kebbi suggested something akin to their farmers' cooperative but for the support of families and children. A village in Cross River was interested in subscribing to the Community Health Insurance Scheme, but did not know how to do so. The need to empower women economically was stressed by many respondents, both male and female.

Solutions to access barriers – Many carers called for increased door-to-door service delivery, a system that has gained traction with the community as a result of the polio campaign. In Kebbi, mothers suggested that a door-to-door service would allow them to better engage with healthcare for their children as it would increase their ability to directly access services despite the restrictions on their movement outside the household compound. A number of carers also suggested that an ambulance service would solve problems of access, especially in emergency situations. CHWs in Cross River suggested that each health centre should be equipped with one motorbike to better facilitate delivery of services, and to enable more effective and efficient outreach, tracing and follow-up. This was also discussed by the VCMs in Kebbi.

Solutions to knowledge and information barriers – More strategic, targeted and sustained health education is needed in both states, and was repeatedly requested by carers. Participants suggested that all sectors of the community could be better educated about child health issues, not only parents. It was strongly felt that women should be taught at home. Although several mothers confirmed they had received education at health facilities during pregnancy and various rounds of immunisation, the majority thought that house-to-house education, given by a woman educator, would have greater impact. In Kebbi, this was suggested mainly as a way of overcoming restrictions on women's movements. Gathering men for community meetings on child health was generally thought to be the most conducive way to educate fathers. Respondents suggested conveying messages through the churches and pastors in Cross River and the mosques and imams in Kebbi. Health workers also stressed the need to engage with other treatment providers.

Solutions to socio-cultural and religious barriers – To counter the instances of religious beliefs (both Christian and Islamic) precluding treatment-seeking, carers and health workers stressed the need for education and sensitisation of religious leaders and spiritual healers to promote health facility attendance and, in Kebbi, to overcome negative rumours about biomedical treatment. They also

emphasised the need to engage with all sectors of the health system including local healers, TBAs and PMVs, to advocate at the community level and prioritise health facility attendance above the use of local treatment. Working within local leadership structures was seen to be important in overcoming socio-cultural barriers, particularly if influential community members led by example. Respondents in both states stressed the need for the social empowerment of women in parallel to the education of men.

Solutions to health facility deterrents – Solutions focused on two broad and interrelated areas: measures to improve patient experience and measures to improve service delivery. Carers asserted that improving both the environment of health facilities and the attitude of the staff would encourage attendance. They suggested that health staff should be better sensitised and not quarrel with their patients. To improve service delivery, carers emphasised the need to resolve conflicting messages about the availability of free medicine and to publicise fixed costs. They also stressed the need for a reliable supply of free medicine to be available at the health facility. This was reiterated by health workers in both states who were also keen to provide better services by having equipment in place, improve diagnostic capabilities and develop coverage through outreach, tracing and follow up. Participants suggested that building trust in the health services delivery would overcome barriers associated with the negative perceptions of biomedicine and would encourage communities to regard the health centre as ‘the right place’ to treat childhood illness. Both carers and health workers discussed the need to maximise positive experiences at health facilities. Several health professionals suggested that the government should increase their support of primary healthcare and argued that the introduction of iCCM would help overcome many of the deterrents to health facility attendance and positive treatment-seeking.

- **Conclusion and programmatic implications**

UNICEF intends that the UN Commission on Life-Saving Commodities for Women and Children use the empirical evidence this research has generated to recommend innovative strategies that raise awareness of, and strengthen demand for, lifesaving products among end users. In line with UNICEF’s mission to achieve equity for, and realise the rights of, the world’s most marginalised children, a number of key implications for policy and programming in Nigeria are highlighted in relation to communication for development, financial and social protection, health system strengthening, development of human resources for health and supply-side interventions. These are summarised in a table of action points at the end of the discussion. Nigeria is a diverse and complex country facing particular challenges to health and healthcare. If Nigeria and its partners can combine resources and expertise, however, they could make a significant and positive impact on the health and survival of the most disadvantaged women and children, and enable Nigeria to accelerate progress towards achieving its Millennium Development Goals.

Abbreviations

ACT	Artemisinin combination therapy
AL	Artemether-lumefantrine
ANC	Ante-natal care
C4D	Communication for development
CAQDAS	Computer-assisted qualitative data analysis software
CHW	Community health worker
COPE	In care of the people (conditional cash transfer programme)
DRG	Debt Relief Gain
FGD	Focus group discussion
iCCM	Integrated community care management
IEC	Information education communication
IMCI	Integrated management of child illness
LGA	Local government area
LLITN	Long lasting insecticidal treated net
MDG	Millennium development goal
MNCH	Maternal newborn and child health
MSS	Maternity service scheme
NDHS	National demographic health survey
NPHCDA	National primary health care development agency
NHIS	National health insurance scheme
NURHI	Nigerian urban reproductive health initiative
OECD	Organisation for Economic Co-operation and Development
ORS	Oral rehydration salt
ORT	Oral rehydration therapy
PMV	Patent medical vendor
SIGI	Social institutions and gender index
TBA	Traditional birth attendant
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
VCM	Volunteer community mobiliser
WHO	World Health Organisation

Introduction

The United Nations Secretary-General's *Global Strategy for Women's and Children's Health* highlights the inequitable access to life-saving medicines and health supplies suffered by women and children around the world and calls on the global community to work together to save 16 million lives by 2015 [1]. This challenge was taken up the UN Commission on Life-Saving Commodities for Women and Children, part of the Every Woman, Every Child movement [2]. The Commission was convened to recommend innovative strategies for increasing the availability, accessibility and rational utilisation of select life-saving commodities in 50 of the world's poorest countries that account for more than 80% of all maternal and child deaths.

Evidence from developing countries suggests that, in addition to overarching health system and financial impediments for both governments and end-users, three main obstacles prevent women and children from accessing and using appropriate commodities: the insufficient supply of high quality health commodities; the inability to effectively regulate these quality commodities; and the lack of access and awareness of how, why and when to use them, resulting in limited demand [2]. A key aspect of increasing access to simple life-saving commodities therefore involves developing strategies to raise awareness of, and strengthen demand for, these products among end users (as outlined in Commission's seventh recommendation: demand and utilisation) [3].

Against this backdrop, UNICEF, as co-host of the UN Commission during the initial phase of work, commissioned this research to focus on solutions to local barriers to care-seeking and treatment for malaria, diarrhoea and pneumonia in three select high burden countries: Kenya, Nigeria and Niger.

Malaria, diarrhoea and pneumonia remain the three largest killers of children and together account for approximately half of all child deaths during the post-neonatal period (ages 29 days to 5 years). Globally, they pose significant problems, particularly in communities with high rates of under-five mortality, and place a huge burden on families and communities, often the poorest and most vulnerable, and on health services functioning in resource-scarce settings.

Simple, inexpensive treatments are available for malaria, diarrhoea and pneumonia, and in many countries, including Kenya, Nigeria and Niger, efforts are being made to expand access. Yet, too few children receive appropriate and timely care due to problems relating to the supply of commodities and quality of services provided, in addition to issues relating to access to, poor demand for, and utilisation of, effective healthcare. As a result, high rates of childhood morbidity and mortality continue and for certain countries, have a negative impact on their ability to achieve their Millennium Development Goals (MDGs), particularly targets for Goals 4 and 5.

Research brief and objectives

UNICEF is therefore seeking an in-depth understanding of barriers to demand with the aim of developing context-specific strategies to address barriers identified. Building on previous work, including the systematic review of qualitative evidence from sub-Saharan Africa on household recognition and response to childhood malaria, pneumonia and diarrhoea [4] and a desk review of

published and grey literature relating to barriers to care-seeking in high burden countries [5], the current research is an in-depth qualitative study to identify solutions to local barriers to care-seeking and treatment uptake for diarrhoea, malaria and pneumonia in Kenya, Nigeria and Niger. Because of the lack of data available from the remote areas of the target countries, particularly Niger, the study also provides new empirical evidence regarding demand-side barriers.

The research has three main objectives:

- To assess perceptions and experiences of childhood malaria, diarrhoea and pneumonia and associated care-seeking and treatment (non-)uptake.
- To determine the barriers and challenges intended beneficiaries face in accessing treatment for malaria, diarrhoea and pneumonia in children under 5 years.
- To identify local solutions to overcome barriers identified that promote and facilitate more timely access to appropriate healthcare for these childhood illnesses.

This report focuses solely on the research undertaken in Nigeria.

Situational analysis

Nigeria is the second largest global contributor to the under-five mortality rate [6]. Estimates developed by the UN Inter-agency group for child mortality estimation, indicate a 2011 infant mortality rate of 78 per 1,000 live births and an under-five mortality rate of 124 deaths per 1,000 live births [7]. 64% of the population live below the poverty line and life expectancy at birth is 48 years, below the Sub-Saharan average of 52 years [8]. Achieving the MDG target for under-five mortality (71/1000) remains hugely challenging [9,10].

The Essential Childhood Medicines Scale-up Plan (2011) indicates that the leading causes of death in the under-fives are malaria (20%), diarrhoea (19%) and pneumonia (16%) [11]. Together these account for 55% of the country's under-five mortality and kill nearly 600,000 children per year [11]. For all three conditions, effective treatments exist, yet in cases of diarrhoea, only 25% of children under five receive Oral Rehydration Therapy (ORT) and less than 1% receive zinc (the two recommended treatments). 33% of febrile children under five are given anti-malarials, but only 20% receive Artemisinin Combination Therapies (ACTs). 23% of children under five with suspected pneumonia receive antibiotics [11].

The National Demographic and Health Survey (NDHS) highlighted the disparities in child mortality rates and coverage of essential interventions across the country. This was taken into consideration in UNICEF's selection of Kebbi and Cross River States as the focus for this study. In both the north-west and south-east zones, where Kebbi and Cross River are respectively located, the infant mortality rate is above the national level at 95/1000 in the north-west and 91/1000 in the south-east. The under-five mortality rate was lower than the national level in the south-east zone at 153/1000, but higher in the north-west at 217/1000 [12].

UNICEF is heavily invested in Kebbi, a UN target state. Nigeria remains the only country in Africa where polio is endemic and the northern states carry the largest burden. UNICEF has recently implemented a Voluntary Community Mobiliser programme to support the national polio eradication campaign in Kebbi, Sokoto and Kano. In Kebbi, it is running in 11 of the state's 21 Local Government Areas (LGAs) with 200 Voluntary Community Mobilisers (VCMs) each responsible for up to 300 households. The state is also a focus for the Joint Programme on Maternal and Newborn Health Project by UNH4+ (WHO, UNICEF, UNFPA, UNAIDS and World Bank) and has been the recipient of various UNICEF interventions, including the distribution of 1.4 million bed nets in 2009-2010 as part of the Roll Back Malaria Initiative.

UNICEF does not have such a presence in Cross River and its work in the state is managed from the regional office in Enugu. It was included as the second fieldsite as a good counterpoint to Kebbi. The two states are socio-culturally and geo-politically very different, and the findings reflect important variations between diverse communities. Kebbi borders Niger and Benin and is part of the dry and arid Sahel region. It is populated mainly by Hausa-speaking peoples and is Islamic. The practice of *kulle* (literally meaning 'shut-in'), where women are restricted to the home, is widespread. Cross River borders Cameroon, and with its warm climate and tropical rainforest, is often billed as Nigeria's primary tourist destination although it remains an important trade route. It is predominantly Christian, and home to a number of different ethnic groups including the Efik, Ejagham and Bekwarra.

Methodology

The research was conducted in line with prevailing ethical principles to protect the rights and welfare of all participants. Permission to undertake the research was granted by the Chairman of the National Health Research Ethics Committee of Nigeria. It was supported by the state Ministries of Health in Kebbi and Cross River and by the UNICEF Country Office in Abuja and UNICEF staff in Kebbi and Enugu.

Research team

The research team consisted of Dr Juliet Bedford, the Director of Anthrologica, who as the primary investigator led the research, supported by two Nigerian research assistants, Dorcas Kadangs (in Kebbi) and Onikepe Owolabi (in Cross River) who participated in the interviews and focus group discussions as joint facilitator and translator and were also responsible for transcribing the audio recordings of interviews and discussions held. Logistical support was provided by UNICEF. Additional analysis was undertaken at the conclusion of the research by Dr Olivia Tulloch, an Anthrologica Research Associate.

Study site

Data collection was carried out over ten days in July 2012 in two states: Kebbi and Cross River. Specific fieldsites were agreed in collaboration with the Ministry of Health in each state. In Kebbi, four Local Government Areas (LGAs) were visited: Koko (Hilin Harisu and Wurya settlements), Augie

(Tiggi village), Gwandu (Tamawah and Kuraigishiri villages) and Birnin Kebbi (Takalau and Kofar Kola settlements). Also in Cross River, four LGAs were visited: Obubra (Lyamoyong village), Abi (Ebom village), Yakurr (Mkpani village) and Akampa (Oban village). (See map, Appendix 1). Koko and Birnin Kebbi are urban areas, the others are rural towns. No fieldsite was extremely remote and all were accessible by road.

At each site we visited the primary health centre. In Cross River State, each primary health centre was being supported by the Tulsi Chanrai Foundation. Mkpani primary health centre (Yakurr LGA) also benefited from its inclusion in the Maternity Service Scheme (MSS) run by the National Primary Health Care Development Agency (NPHCDA) [13]. In Oban (Akampa LGA) there was a cottage hospital in addition to the primary health centre. In Kebbi State, Koko, Augie and Gwandu LGAs had, in addition to primary health centres, new health facilities built by the LGAs. With the exception of Gwandu, where the new health facility was starting to provide basic routine maternal and child health services, the new facilities were standing empty and unused as they had not yet been commissioned.

Participants and recruitment

In Kebbi, the research team worked with UNICEF communication consultants (employed as part of the polio eradication programme) in Birnin-Kebbi, Koko and Gwandu LGAs. They arranged for Volunteer Community Mobilisers (VCMs) to introduce the research team to the community. In Augie LGA, a health educator (rather than the UNICEF consultant) acted in this capacity. We were accompanied to Koko, Augie and Gwandu by representatives of the State Ministry of Health. In Cross River, the State Ministry of Health introduced the research team to local facilitators: in Obubra and Akampa LGAs to the Principal Community Health Extension Worker; in Yakurr LGA to the Assistant Chief Community Health Officer; and in Abi LGA to the Cold Chain Officer. These personnel liaised with the communities and facilitated the team's introduction to carers of children under five years old. In some cases, the facilitator had made prior contact with the primary carer to seek informal permission for the research team to visit their home.

Primary carers of children under five years who did who did not (regularly) engage with health services or present their child at a health facility during illness episodes were purposively selected for interview. In both states, 11 interviews with primary caregivers were completed. In Kebbi an additional two interviews were completed with fathers of children under five years. Four structured focus group discussions (FGDs) were held. An FGD with fathers was held in each state, plus an FGD with VCMs in Kebbi, and an FGD with CHWs in Cross River. The latter brought together CHWs from different areas around Akpabuyo LGA (a LGA not otherwise visited by the research team). An informal discussion was also held with women community leaders in Cross River (Yakurr LGA).

Data collection

Based upon the literature reviews undertaken prior to the start of this research [4,5], the primary researcher devised a series of methodological tools including a topic guide that highlighted key issues and was the basis for the design of the semi-structure interview framework and FGD frameworks, that included a broad spectrum of research questions and probes (see Appendix 2). Specific questions and

probes were reviewed and refined during the research period in light of themes arising. Although the direction of each interview was determined by the interviewee and largely focused on issues they self-prioritised (rather than on what the research team may have presupposed to be important), the key topics were addressed in each interview and therefore allowed generalisation of themes across participants.

All interviews were conducted by the English-speaking primary investigator with the research assistant translating consecutively between English and Hausa in Kebbi, and English and Pidgin English in Cross River. Each interview lasted for approximately 90 minutes and audio recordings were made using a digital voice recorder. The focus groups were conducted in a mixture of English and Hausa or Pidgin, again with the primary researcher facilitating the discussion and the research assistant translating. Audio recordings were also made of each group discussion. The primary investigator and research assistant made extensive notes during each interview and FGD.

Interviews were conducted at the primary carer's home and were held in as much privacy as possible. The two FGDs with fathers were held in village clearings. In Kebbi (Tiggi village, Augie LGA) the village chief was in attendance, and in Cross River (Mkpani village, Yakurr LGA) the village chief selected the participants but was not present himself. The informal discussion with women community leaders in Cross River was held at the primary health centre in Mkpani. The FGD with VCMs in Kebbi was held in the offices of the National Agency for the Control of AIDS, and the FGD with CHWs in Cross River was held at the offices of the Akpabuyo LGA.

At the start of each interview and focus group, it was made clear to the interviewee or participants that their involvement was optional and voluntary and would not affect any future referral or medical service required or received. The study's consent form was read and explained in detail (see Appendix 3). Informed consent was given by signature or thumbprint of all those participating.

Data analysis

At the conclusion of each day of data collection, the research team compiled and transcribed their interview notes. The audio recordings of all interviews and FGDs were transcribed in full with sections of narrative being translated and back translated as appropriate. Preliminary analysis was conducted in-country throughout the research process. Using an inductive approach, initial findings were discussed throughout the fieldwork and at its conclusion in two round-table debrief sessions between the research team and key staff at the UNICEF office in Birnin Kebbi, and the country office in Abuja. Preliminary findings were also discussed with USAID and Save the Children UK, in Abuja. Key findings were presented at a final debriefing session with the Health Section at UNICEF Head Quarters in New York in October.

The primary researcher was responsible for the complete thematic analysis of the interviews using grounded theory [14,15,16]. Dominant themes were identified through the systematic sorting of data, labelling ideas and phenomena as they appeared and reappeared. Coding and analysis was done by hand. The emerging trends were analysed according to the research objectives using the critical-interpretive approach of medical anthropology [17,18,19]. At the conclusion of the research in all three countries (Kenya, Nigeria and Niger), a second qualitative researcher undertook analysis of a

sub-set of data from Kenya using computer-assisted qualitative data analysis software (CAQDAS). The transcripts of interviews and focus group discussions were imported into QSR NVivo software (version 9.2) and analysed using a framework approach [20]. No major inconsistencies were found between the manual and computer-assisted analyses. This allowed the Kenya analysis to serve as a benchmarking tool for the analysis of material gathered in Nigeria and Niger. The second qualitative researcher reviewed the final reports, but not the transcripts of material from Nigeria or Niger.

Methodological limitations

The study was carried out in a challenging research environment and was conducted with limited time and manpower. Throughout, we sought to mitigate or minimise the impact of these constraints by employing a methodology carefully designed to be pragmatic and by deploying resources efficiently.

Inevitably, a number of limitations remained. Risks associated with misinterpretation are inherent in consecutive translation, but a number of strategies were used to improve accuracy. In translating between English and Hausa/Pidgin, the researchers planned translation and interpretation styles in advance and decided how to best capture colloquialisms, abstractions, idiomatic expressions and jargon. We used short units of speech and careful phraseology that was refined during the finalisation of the interview and FGD frameworks. During the interviews, the research team validated sections of narrative that were transcribed *ad verbatim* and certain responses were reiterated to the interviewee for clarification and confirmation. Full transcriptions of all interviews and FGDs were made by the research assistants and included the translation and back-translation of both questions and responses. During the first phase of analysis, transcripts were cross-referenced with the research team's notes, and any areas of digression highlighted and discussed. That the research team had full visibility of the growing data and were able to query potential anomalies throughout the study, served to mitigate the risk of errors in the translation and transcription process.

All interviews were conducted in English and Hausa in Kebbi, and English and Pidgin in Cross River. Efik (the primary local language) was not used in Cross River. It is not thought that this rendered different findings than if the interviews there had been conducted in English and Efik, as all the primary carers approached spoke fluent Pidgin.

It is possible that interviewees expressed what they perceived to be appropriate or socially desirable responses. This is a risk in most interview-based qualitative research, but was not seen to be a major limitation, as we conducted informal, private interviews, the interviewees did not know the research team, and the semi-structured interview format allowed questions to be asked in multiple ways and responses triangulated. The FGDs also provided data sets similar to those in the individual interviewees and this strengthened their validity.

Although relatively small, the sample size resulted in saturation of findings. This acted to lessen the impact of convenience sampling. The results are likely representative of the population in the states of Kebbi and Cross River, but are not generalisable and cannot be extrapolated to a wider Nigerian context, although they are broadly corroborated by other literature (as discussed below).

The coding and thematic analysis upon which this lyreport is based was conducted by the primary investigator. At the conclusion of the overall study (i.e. after fieldwork in Kenya, Nigeria and Niger), a sub-set of transcripts from Kenya were coded again by a second qualitative researcher using QRS NVivo software. Layers of coding were not shared between researchers until the analysis was complete. The findings were compared and used as a benchmark for the reliability of analysis across the whole study. Triangulating results using separate researchers and techniques ensures the rigor of the analytical process, enhances the credibility of the final results and is regarded as best practice.

Report structure

This study provides new empirical data contributing to our understanding of local barriers to care-seeking and treatment for childhood diarrhoea, malaria and pneumonia in Nigeria, specifically in the northern state of Kebbi and the southern state of Cross River. It explores the complex issues around the low uptake of health services for childhood illness and identifies and assesses particular influencing factors and local solutions to overcome these perceived barriers. It was designed primarily to be of operational use to the UN Commission of Life-Saving Commodities for Women and Children, and to UNICEF and its partners at local, national and international levels.

The report comprises three main sections: results and thematic analysis; barriers and solutions identified (including a table summary); a short discussion and programmatic implications, and conclusion. This is the final report. Prior to its completion, UNICEF stakeholders were given the opportunity to provide written comments and verbal feedback that were incorporated as appropriate into the final manuscript.



Results and thematic analysis

Demographic details

Twenty-two in-depth interviews were conducted with the primary carer of a child or children under five years of age: 11 mothers in Kebbi State, and 11 mothers in Cross River State. In addition, two fathers were also interviewed in Kebbi.

In Kebbi, all interviewees were Muslim. The mothers were aged between 26 and 47 years (approximate ages given, two mothers did not know their age) and had between two and seven children in their care. Two mothers had experienced the death of one or more children. Ten mothers were married and one was widowed and had not re-married. Of those who were married, five were in polygamous marriages (three as the first of two wives, one as the second of two wives, and one as third of three wives). Most mothers said they were married around the age of fifteen to older husbands.

One mother had attended primary school, four had attended 'Arabic school' (Islamic madrasa) and six had no schooling. Three mothers did not know if their husbands had attended school. Of the eight who did report on their husband's schooling: three husbands had attended mainstream school, but the mothers did not know to what grade; three had attended Arabic school; and one had not been to school. All mothers reported that their children were in school: the children of five mothers were in Arabic school; five were in mainstream school; and one mother explained that her children attended both mainstream and Arabic schools in parallel.

Seven mothers reported that their husbands were farmers or casual labourers. The other four husbands were a butcher, teacher, driver and government employee. None of the mothers knew their husbands' income or could estimate household expenditure. Nine mothers were engaged in small business, making and selling homemade snacks and drinks. One processed and packaged rice for market, and another sold ice and 'pure water' (sealed bags of purified drinking water). The income mothers generated varied between 500–3,000N (Nigerian Naira) per week (approximately 3–19USD per week).

In Cross River State, all mothers interviewed were Christian: seven attended Pentecostal churches; two were Catholic; one was Anglican; and one did not attend church. The mothers interviewed aged between 24 and 30 years (approximate ages given, three did not know their age) and cared for between one and seven children. Three mothers had experienced the death of one or more children. Six mothers were formally married (although the age of marriage appeared to be slightly older than in Kebbi State). Five mothers were unmarried: three lived with their partners; two lived in their parents' home. Six mothers had borne children with more than one man. This was not reported in Kebbi.

Nine of the eleven mothers interviewed in Cross River had attended school and five had been to secondary school, indicating a higher education level than the mothers in Kebbi. Nine mothers reported on their husbands' or partners' schooling: five had attended secondary school; three had attended primary; and one had not had any schooling. Four were farmers, two were construction workers, two were in business, two were managers and one was a tailor. Three mothers estimated

their husbands' or partners' income to be between 5,000–10,000N per month (31–62USD per month) and four were regularly given money. Eight mothers were involved in small business including sewing, producing garri (staple food made from cassava), making and selling snacks or cooked food, selling bread or farming. Their income ranged from 500–7,000N per week (3–44USD per week) and one mother reported earning as much as 4000N per day (25USD) selling cooked food. This was a higher bracket of income generation than in Kebbi State.

In both Kebbi and Cross River States, over half of the mothers interviewed confirmed that at least one of their children had experienced at least one episode of malaria in the previous six months. Regarding diarrhoea, five mothers in Kebbi but all eleven mothers in Cross River claimed at least one child had suffered from at least one bout in the previous six months. In Kebbi, no mother reported a child having had pneumonia, although in Cross River four mothers confirmed one of their children had experienced pneumonia at some point during their life. Because of the climate, a higher rate of pneumonia was expected in the southern state.

	Kebbi State (n=11)	Cross River State (n=11)
Religion	Muslim	Christian
Marriage	10 (1 widow not remarried)	6
Polygamous	5	0
Child with more than one man	0	6
Education level	Lower	Higher
Income level	Lower	Higher
Malaria episode in 6 months	6	7
Diarrhoea episode	5	11
Pneumonia	0	4

Causation and prevention

Malaria

In Kebbi, malaria was referred to as *zazzabin cizon sauro* in Hausa. In Cross River, it was variously called *otuwenyi* (in Obubra LGA) *egom* or *efure* (in Abi LGA) and *mbom* (in Yakurr LGA). It was identified by mothers as one of the main illness frequently experienced by children in both areas. The causal link between mosquitoes and malaria was not always clearly expressed by mothers. Several mothers did not know what caused malaria, and many suggested mosquitoes as one of several potential causes including, in Kebbi, a dirty environment, and, in Cross River, dirty sources of food or water, or the weather, particularly sun and heat.

In both states, mothers who linked mosquitoes with malaria, associated it with bad blood. Some suggested that the bad blood came directly from the mosquito, '*mosquitoes bite the body and they put the sickness in the body, it sucks people's blood and puts in the sickness, puts in bad blood*'. Others thought the mosquito transferred bad blood between people, '*malaria comes from mosquito bites, if the mosquito bites somebody else then they bring the bad blood from that person into the body of a healthy person*'.

In Kebbi, many mothers claimed that malaria, like all illness, comes from Allah. One mother explained, *'I don't know what causes malaria, it is just an act of Allah,* whilst another asserted, *'Allah brings these things upon us, he created mosquitoes so malaria comes from that'*. As a consequence of regarding health and sickness as 'both acts of Allah', many mothers concluded that any prevention strategy was limited in its effect.

If Allah brings malaria you can't do anything to prevent it, there is nothing you can do if the child is going to be sick. We sleep under mosquito nets, and they help, but if the sickness comes the child will get sick anyway.

Such fatalism was not seen in Cross River, although in both states a number of mothers concluded that there was no way to prevent malaria, or they did not know how to avoid it. For the majority of mothers in both states, however, using bed nets was regarded as the primary way to prevent malaria. In Kebbi, several mothers asserted that the frequency and severity of malaria episodes had reduced since they started using bed nets. Similarly, in Cross River, one mother explained, *'with the nets, the malaria left, but now when the nets are spoilt it starts to bother people again'*. Several mothers discussed their use of nets to avoid being bitten, but did not link this to malaria prevention. In Cross River a mother claimed that she used the nets *'to stop getting bitten as this gives a person small boils on their skin'*, whilst another mother in Kebbi concluded,

You use the net because you don't want the bites. You can hear the mosquitoes around you, but they don't bite if you are in the net. We use the net to prevent the bites. It's the bites that we don't want. I don't know if that prevents malaria or not. We are not sure malaria comes from the mosquitoes, just that the hospital calls it the fever from mosquitoes.

The majority of carers in both states had bed nets. Some had received these for free during recent government or NGO distribution campaigns (by UNICEF and the Red Cross), whilst others had been given the net(s) by a primary health centre during pregnancy. One mother explained that her local health centre sold bed nets, whilst several others had purchased nets from the market. These cost between 500 – 2000N depending on their size and quality. Several mothers confirmed they had not had nets prior to the free distributions as the cost of buying them from the market was prohibitive. Carers in both states complained that their nets were getting old, and although some had made an effort to patch them, others had thrown the nets away and were again sleeping unprotected. Of the carers whose households did not have a net, few had considered buying one. Other families only used the nets infrequently. One mother explained that her baby cried when he lay under the net, and therefore she no longer used it. Health workers in both states recounted parents complaining of skin rashes and difficulty in breathing due to the nets' impregnation.

Many households had too few nets for their inhabitants. During recent distribution rounds, two nets were given per household, but this was often insufficient to protect the whole family. In such cases, it was customary in both states, for the mother and youngest child to sleep together under one net. The second net was often used solely by the father who slept alone, or if the father was absent, by a number of other children. Often, older children would routinely sleep outside a net. As one mother in Cross River explained,

We have two nets the government gave us for free. My husband uses one and I use one with the baby. The other children don't sleep with a net. I feel it for them, because some days the mosquito bites and it disturbs you. All the children have had malaria.

Health workers, particularly in Kebbi, emphasised the communities' demand for nets and several VCMs recounted how families had refused to allow their children to receive the polio vaccine because the VCM was unable to provide mosquito nets. Health workers also suggested that bed nets were being used for other purposes. The research team only saw one example of this, in Kebbi, where a net was being used to protect a vegetable patch, but health workers also mentioned nets being used as pillows and to strain garri. One health worker explained that during a recent distribution they had been given nets without the bag they normally came in, to prevent their onwards sale at the market.

Participants also suggested other ways to prevent malaria including giving the child good food, putting netting on the windows to prevent insects entering the house, and burning incense. A mother in Kebbi emphasised the need to keep the environment clean, a point stressed by fathers in their focus group discussions in both states. In Cross River one father explained, *'you must keep the environment very clean, there should be no stagnant water and the stream and ponds need to be treated so that malaria doesn't come'*. In Kebbi, fathers discussed,

Father 1 – *malaria is from the mosquito bites, so to prevent it we use mosquito nets to sleep*

Father 2 – *there is no other way to prevent it*

Father 3 – *there are other ways, although mosquito nets are a big help, but if the women keep the children outside the net they might still get it*

Father 1 – *you can spray insecticide*

Father 3 – *stray water, gutters and wells bring mosquitoes*

Father 4 – *so make sure the houses are clean and the gutters are clean so the water doesn't stay, and then the disease will reduce*

Father 5 – *and with environment, personal hygiene is also important.*

This highlighted a difference between knowledge and practice. Although the fathers asserted that a clean, well-drained environment was important, the research team saw gutters full of stagnant water despite the lack of rain. As a mother in Kebbi concluded, *'some people don't bother and that's why we have problems with malaria'*.

Diarrhoea

In Kebbi, diarrhoea was referred to by the Hausa terms *gudawa* or *gudanawa*. In Cross River, various terms were used. 'Purge' was the most common and widely used generic term, and also *jedi-jedi* and *ehomakpao*. These categories of stomach related illnesses caused diarrhoea but local explanatory models varied. In general, diarrhoea from *jedi-jedi* (literally 'eat your bum-eat your bum') was described as being yellow and green and of a slimy water consistency, whereas *ehomakpao* diarrhoea presented only children, was less watery, and was green and frothy. 'Purge' was the term used in relation to any watery stool and frequent bowel movement. Other terms for diarrhoea

included *erepu* or *erepa* (in Abi LGA), *kenenvwoi* and *kogari* (in Yakurr LGA) and *otoro* (in Akampa LGA).

Diarrhoea was often discussed as a 'normal' condition for children, particularly young or teething children, and such cases did not warrant treatment unless the condition continued for many days or grew increasingly severe. In Cross River mothers emphasised that all children have diarrhoea, and several explained '*they are born with it*' or '*it comes from the womb*', meaning that it is a normal state (not that the child actually had diarrhoea at birth). Mothers variously described the age at which 'normal' diarrhoea stopped to be around the time a child starts to walk or eat peppery food (i.e. when a child transitions to solid adult food. Cross River State is renowned for its pepper soup). Although regarded as normal, diarrhoea was still seen to be a debilitating condition, '*it can grip the child and put the child on the ground because it is weak*'.

In older children, many respondents did not know the cause of diarrhoea. As one mother explained, '*I am not in the stomach, so I don't know what causes it*'. Others, however, attributed it to a variety of different factors, particularly a 'dirty' stomach. In Kebbi, this was related to mixing different types of food or over eating ('*eating until overload*'). In Cross River, particular foods were seen to lead to diarrhoea, including beans, sweet things, and eating 'hot gari' (freshly cooked garri that has not had time to settle). Other causes included fever and malaria, heat from the sun, dirt from flies or the environment, and unwashed fruit, vegetables and cooking utensils. One mother suggested diarrhoea came from water, whilst another concluded it was due to not washing hands after going to the toilet. In the majority of cases, carers provided multiple causes for diarrhoea.

As with malaria, mothers in Kebbi attributed diarrhoea to an act of Allah. One mother concluded, '*it is just Allah that brings diarrhoea and illness, I am not a doctor, Allah brings it*'. Others echoed the view that '*if it is the will of Allah then you can't prevent it*' whilst several more suggested that although '*there is nothing you can do to stop it, if Allah brings it, you can buy medicine and bring the child back to normal*'. A number of mothers in Cross River also concluded that there was no way of avoiding diarrhoea. Preventative measures suggested by a few included cleaning plates and utensils, washing hands, and, in particular, protecting food and regulating consumption.

Carers were also questioned about household water sources, sanitation and hygiene practices. In both states, water was sourced from public taps, boreholes, pumps, and rainwater was collected. In addition, several carers drew water from household wells in Kebbi, and in Cross River, they also collected water from streams and water pipes. In Kebbi, a distinction was frequently made between sources of cooking and drinking water. No respondent in either state treated their water chemically prior to drinking. In Kebbi, three mothers claimed to sometimes boil water before use. In Cross River, water was routinely boiled for young children, but not for older children or adults, who drank directly from the source or storage containers. One mother confirmed that she prepared a container of boiled water to carry with her if she was taking the baby to the farmstead. Few mothers, however, could explain why they boiled water. A number concluded that it stopped the child getting sick, but it was only seen to be appropriate action for babies. A child would start to be given non-boiled water between the ages of five months and one year, when they refused warm water and would only drink cold water, or when it was 'time to shave their head' (a practice that differs between areas, but usually occurs when the child is five to six months old). One mother confirmed that she had started

to give her child 'pure water' after his recent bout of cholera, and two other carers explained that they would give bottled water during illness episodes.

All carers interviewed in Kebbi confirmed that they had access to a pit latrine. Some compounds had a latrine used by one household, whilst others shared latrines or used public latrines. Latrines were only used for defecation and several mothers confirmed that they were often unclean. One health worker concluded that, having worked extensively across different areas of Nigeria, the sanitation in Kebbi was the worst she had experienced. In Cross River, carers used a combination of public ('general') pit latrines, the bush (sometimes leaving the faeces uncovered), bamboo sticks (small holes dug in the earth and covered by a basic lattice of bamboo); and public dustbins. Urination could occur anywhere, most often at the back of the house (or as one mother concluded, '*close to the kitchen*').

Hand washing practices were generally of a high standard in Kebbi, due partly to carers' regular ablutions before prayer. Also in Cross River, interviewees and their children were observed to have clean hands. Most respondents asserted that they washed with water and one mother explained that soap was only used if they were bathing. If their hands were particularly dirty, having touched charcoal or after work on the farm for example, then several carers said they would wash their hands with ashes. Most confirmed that, in relation to the toilet, they only washed their hands after defecating and not urinating.

Pneumonia

In Kebbi, pneumonia was termed *ciwon sanyi na hakarkari, lamuka* or *rangaza* in Hausa, and in Cross River *osekpakpo* or *izazai* (Obubra in LGA), *owo* (in Abi LGA), *ejo* or *eyo* (Akampa LGA) and *lotita, etitankao* or *kofelike* (Yakurr LGA). There was a clear association made between pneumonia and the ribs, and several respondents in both states referred to the illness as 'hooking the ribs'. In Yarkurr, for example, it was explained that *etitankao* referred to the ribs and *kofelike* was the hooking action of the bones. This influenced care-seeking for pneumonia, much of which focused on traditional massage (discussed below).

There was limited knowledge about pneumonia in both Kebbi and Cross River, and even in the southern state where more cases were reported, it was clear that only carers who had experienced pneumonia directly were confident in discussing its causation, symptoms and treatment. Even when the research team described key symptoms, several mothers in Kebbi were unable to identify the condition. No mother in Kebbi reported their child had had pneumonia and most confirmed that they had not heard of any case. Of those who had heard of the condition, several did not know the cause. In Kebbi, the main symptoms identified were difficulty in breathing and a heaving chest, and these were widely attributed to misfortune from God. Several mothers interviewed and the fathers in the focus group in Kebbi concluded that pneumonia was also caused by the cold. This was the main causative factor put forward in Cross River, where pneumonia was associated with a cold 'breeze' entering the body. Several carers suggested that the number of pneumonia cases increased during the raining season. Other causes put forward in Cross River included 'insufficient blood', 'too much work' and 'stress', in both children and adults.

Again, several mothers suggested that there was no way to prevent a child contracting pneumonia. Those who did describe preventative measures focused on practical ways to prevent the child from getting cold: dressing the child in warm clothes and keeping them covered; keeping the child in the house; giving them warm tea to drink; and bathing them in hot water.

Local theories of causation

As described, mothers in Kebbi frequently attributed all illness to Allah. Although their fatalistic attitude that should *'Allah bring sickness there is nothing you can do'* may have precluded preventative measures, it did not appear to preclude treatment-seeking and a number of mothers attested that Allah provided treatment. Should the child die, however, it was regarded as Allah's path for the child. One mother explained, *'If Allah ordains that a child's days are full, then they will die whether they are sick or not'*, whilst another affirmed, *'sometimes the time has just come for the child to die'*. This sentiment was also reflected by mothers in Cross River. One mother who had lost three children between the ages of three months and three years concluded, *'I am not worried my child died as he went to heaven. God took and carried them. Whether I cry or not they won't come back'*. When asked if there were many child deaths in their community, the majority of mothers in Kebbi responded that they did not know because they stayed in their household's compound (discussed further below). In Cross River, however, several mothers concluded that fewer children die now than before. One mother explained, *'children used to die in the past, but now with healthcare they don't over die'*, and another confirmed, *'some children die, but not as many as those days when plenty died'*.

In their focus group discussion, CHWs in Cross River claimed that whilst few children die, their deaths are often attributed to spirit attack or witchcraft. Although malaria, diarrhoea and pneumonia were not directly associated to local theories of causation, spirit attack or witchcraft may present as one of these conditions with symptoms that cannot be resolved. As one mother in Cross River concluded,

There are many things that cause sickness, even the environment and from our enemies. But, from the enemies, the sickness will show in another way. Through a mosquito bite the child will get malaria, and if it doesn't get better, then you know it's from your enemies and you have to cure it through prayer.

Similarly, another mother explained,

If somebody looks at the child and is evil, then the child will get ill, the child will get malaria, headache, stomach turning. It seems a small thing but then the child dies. If the child is sick already, then there is nothing to do, it will die.

Another condition caused by spirit attack is *obanje*, in which a newly born child 'has come again' and evil spirits present in the child to torture its parents. One mother recounted,

If there is obanje, the child gives parents trouble with sickness, then you have to go [to a traditional healer] to confirm the identity [of the ancestor that is causing the spirit attack]. This happened to my child. He died in 2005 at seven months. It was a spirit attack that poisoned the child. He had

ehomakpao and jedi-jedi [diarrhoea] and the child went very thin. He was sick for four or five days with dusa [measles].

Another mother in Cross River moved to stay in the church compound in her third trimester to ensure the welfare of her and the child because *'there were plenty of spirit attacks'*. The mother concluded, *'even now, the child has been attacked many times, this one will shake and shout out in the night. It is from my father's family. To stop it, I have to fast and pray hard'*.

Care-seeking behaviour

Plant medicine

Local plant medicine was commonly referred to as 'Hausa medicine' (*maganin gargajiya*) in Kebbi and 'native medicine' in Cross River. In both states it was frequently the frontline treatment option for diarrhoea. In Cross River, plant medicine was also used for pneumonia and malaria, although in Kebbi it was frequently reported that there was no Hausa medicine available for malaria.

Plant medicine for diarrhoea and malaria were home remedies using leaves (fresh and dried), bark, roots, ashes and, in Cross River, chalk or clay. Some leaves were crushed ('twisted') to produce juice that was mixed with water and swallowed. Other leaves, bark and roots were boiled and strained, and the liquid consumed when cool (one mother explained that she mixed the liquid with porridge to encourage the child to take it). Chalk was either nibbled as a solid, or again, mixed with water. For cases of measles, skin rashes or to soothe a fever, the cooled liquid could also be used to bathe the child. In Cross River, measles (*'dusa'*) were also treated by rolling the child in a mat spread with cool ashes when they slept, again to soothe any skin irritation. In some oral treatments, plants were mixed with palm oil, alcohol, bitter kola nut, bitterleaf, and 'scented leaves' (lime, guava, mango, pawpaw and lemongrass). The treatments would be administered several times a day from the onset of the condition until the child was better.

The table below shows the different leaves used in combination for diarrhoea, malaria and fevers, and pneumonia, as discussed in Cross River. Plant medicine appeared to be less frequently used in Kebbi, and mothers interviewed often did not know the names of the plants, recognising them only by sight.

In both states, plant medicines were made by mothers who had been shown by their elders or female relations, and all intended to pass this knowledge onto their daughters. In several cases, treatments were made by the child's grandmother. In Kebbi, due to the restricted movement of most mothers, it was usual for fathers to collect the plants from the bush to take home for their wives to make the medicine. In Cross River, mothers collected the leaves, bark and roots themselves, and were able to talk in detail about the different plants and methods of preparation.

For malaria, we pluck the leaves to give to the baby. When the day is down [in the evening] you go to pluck the leaves, from behind here, it is a bit far but you can walk. You take the leaves, ovarewa, ogora and okpakpamakun, and you twist them together to give the juice.

Local treatments plant / bark / root	Diarrhoea	Malaria / fever	Pneumonia
Ovarewa	✓	✓	
Ogora	✓	✓	
Ofrakhuni	✓	✓	
Ohera	✓		
Obene	✓		
Odikpa	✓		
Ugwugwu	✓		
Okpakpamakun	✓	✓	
Idipende	✓	✓	
Oporokpogba		✓	
Owokpakpavawa		✓	
Yarboboibe		✓	✓
Kokalikum		✓	✓
Ipepeluwa			✓
Malina			✓

We also have leaves for pneumonia, kotalikum and ipepeluwa. We crush the kotalikum and mix it with palm nuts and then wrap it and tie it in the big ipepeluwa leaf. Then we put it in hot ashes so that it has heat and the palm nuts start to make it draw [go sticky and stringy in consistency]. And then we take it out and twist it so the juice comes out and give that to treat pneumonia and also convulsions.

The majority of respondents claimed that local plant-derived treatments worked well, and several mothers emphasised that they were so effective they never needed to visit the health centre. As one mother explained,

When we give local medicine, the child will get better and people don't go to the health centre. Then to go is a waste of time. Some people never go, they just think that it is enough to give our medicine.

Health workers in both states also agreed that some local treatments worked well for diarrhoea and may help to reduce a fever. As a CHW in Cross River concluded during the focus group discussion,

There are herbs used across all illnesses, for diarrhoea, stomach pain, measles. Even for malaria. Malaria herbs work effectively for them. There was one child brought to me yesterday, he had been given herbs for malaria. When he came he had no symptoms, but I did a test and he had malaria, his test was positive. The herbs had reduced the symptoms, but the condition was still there.

In Cross River other home remedies discussed included salt and sugar solution for diarrhoea. A local alternative to ORS (Oral Rehydration Solution) which was rarely available, the reported quantities of salt, sugar and water combined to make 'S and S' varied considerably. Also in Cross River, mothers

frequently mentioned their use of 'pump'. A liquid solution of water and plant extracts was put in a small hand pump, the end of which would be inserted into the child's anus, and the water pumped as a local form of an enema or method of colonic irrigation. This was often used when children had stomach ache, diarrhoea and fever, but also to 'cleanse their system' in preparation for administering 'English medicine' so that it would be more effective.

You grind the leaves and then filter them with water and use the water to pump the child. You do it when the child is small to flush the stomach, if they have eaten too much food, or bad food, or when the child is hot. You can also flush them before you treat them. Paracetamol is soft medicine, so you can give that on the same day as you pump, but if you want to give stronger medicine, English medicine, then you have to wait until the next day.

I prepare leaves and the pump the stomach if there is internal heat. The leaves are called nchok. You squeeze and squeeze and the colour comes out and then you mix it with ofem [chalk] for our native medicine. You do this if the child is hot. If the child has stomach ache or is purging [diarrhoea] then you just give a little hot water to pump them.

An advantage to using local medicine as the first treatment option was the fact that it did not require any financial expenditure. As one mother in Cross River explained,

If the child is sick, I tell my husband. He tells me to go look for treatment, but then he doesn't pay the money, so he tells me to go to the health centre only if it will be free. He prefers local medicine to the health centre so that he doesn't have to pay.

Administering local treatments first also provided time for parents to collect the necessary money to seek other forms of care should the condition require it (discussed further below).

Traditional healers

In Cross River, a number of mothers discussed buying plant-based medicines from experienced women who acted as sources of knowledge about local treatments. They did not refer to these women by any special title, rather they were renowned in the community as skilled in traditional treatments (but were not seen to be 'herbalists', a category imbued with negative connotations). Mothers would visit different women depending on their specialisation, choosing between those skilled in plant medicine, massage or traditional birthing practices (*omaremare*, literally 'one who makes someone born'). Some women were skilled in more than one area, and several mothers reported visiting them when '*the child needs pumping*'. The role of these women in community-based care was emphasised by a CHW in the focus group discussion in Cross River,

There is a traditional birth attendant in my area who is also doing local medicine made from leaves. Many women take their babies there. So I go there to do routine immunisation as many mothers are always there and I can get to them more easily than at the clinic.

Seeking treatment from women specialising in massage was the frontline care for pneumonia and many respondents asserted that this was the only method of effective treatment.

For pneumonia, you go to the old mother. She uses palm oil with special leaves and she rubs the chest. It costs 1000N and you give her palm oil, palm wine and soap. You continue to go everyday until the thing is finished. It can take up to one week. At the health centre or chemist they shoot injections, but the illness will come back. Only this woman can finish it.

When the pneumonia started I didn't know what it was. I thought it was malaria so I brought medicine from the chemist, paracetamol and chloroquine. Then when the child didn't improve, I went to the woman. The woman used fresh palm oil and mixes it with a local leaf and rubs the chest. She collected 1000N. The day you go you pay 500N and then when the child is healed you bring the other 500N and also a rubber [jerry can] of palm wine. I don't know if the health centre can cure that illness, but I knew the woman can, so I took the child to her.

When the weather is too cold and it enters the child's body and they get chest pain and difficulty in breathing, then I carry them to the woman for rubbing. With the youngest child when he was one or two years old, I recognised what it was when he couldn't breathe, and everybody told me to carry the baby to that woman. She gives something to drink, and then she heats a knife in the fire and rubs palm oil on the knife to warm it between her hands, and then she rubs it on the body [motions up and down the sides of the torso]. The drink is medicine from the leaf that she puts with the oil. You go twice a day for two or three days until it is finished. You give 2000N and oil and soap as part of the treatment. You put 500N on the ground first and then you give the other 1500N at the end. If you go to a health centre anywhere in this country it won't work. It is just that treatment that works. There is no English medicine for pneumonia.

In Kebbi, fathers in the focus group explained their practice of taking a child with pneumonia to a bone-setter (*mai gyaran kashi*) and discussed pneumonia as an illness of the rib cage that restricted breathing.

The traditional healer (likitan gargajiya) we go to for pneumonia is the bone-setter. He holds the child around the chest and massages the rib cage. When they can't breathe it is because there is hooking in the ribs. So the bone-setter massages the child. He can also spit and say prayers [discussed below]. It is not expensive, maybe 500 or 1000N.

Fathers in the focus group in Cross River emphasised that in addition to pneumonia, other conditions, particularly epilepsy, convulsions and 'madness' were more effectively treated locally by a traditional healer than by biomedicine at a health facility. In cases of spirit attack (discussed above), native doctors could both identify the source of the evil or attack and treat it, and were also able to offer means of protection. As one mother in Cross River explained,

You take the child to the native doctor when they are not fine, when they are holding themselves strongly [rigidly] and are seeing bad things, seeing demons. This is caused by evil. The native doctor will give some leaves [plant medicine] and then light fire wood with pepper [put pepper into the fire] and then will give you a small mark on your face or body [a cut with a small blade heated in the fire].

They will give you the wood to put under the bed to stop the child's demons. They can collect 300, 500, 1000N and you buy them drink, you buy them schnapps for the treatment. If a person makes you sick, they will carry you there. Or if you want to protect yourself, you can go to the native doctor. Some sickness you will know when you see it that somebody has done it because it is a sickness that you have not seen before, it could be a sickness that has not yet been discovered. You can protect yourself so that they don't kill you or talk about you. The native doctor will give you a mark, 'egba' [talisman] and you can put it in your house or wear it.

Spiritual healers

As the previous two quotations illustrate, traditional healers often incorporated spiritual aspects in their treatment. One father in Cross River emphasised the need to 'appease the gods' before starting treatment.

There is a street here that you don't pass as the shrine causes illnesses, so you have to give it something to appease it, the native doctor will tell you. You give native kola and oil and dry meat to appease the gods before any treatment. You use leaves and hold the child over a smoking fire to warm them.

The fathers in Kebbi explained that the bone-setter 'spits and prays'. This was also described by mothers who took their child to see a spiritual healer (*mallam mai adu'a*), a practice in which the healer spits on the chest of the child and recites a series of prayers specifically for illness. More often, mothers explained the use of prayer, forming the literal basis of treatment given.

They touch the child and say prayers. Then they write the prayers down on the board [with chalk on a small blackboard] and wash the board, and then the child drinks the water. Or you can also wash the child in the water. You could give about 300 to 400N. It is not just for anything, we only go for pneumonia and it helps very much.

Although many mothers in Kebbi explained that all sickness came from Allah, only a few recounted praying to Allah when their child was ill. This usually happened privately as home, and the mosque had no formal role. In Cross River, however, praying was a central part of care-seeking, both independently at home and with the pastor. When asked who was the first person they told when a child was sick, two mothers replied they first told God, 'when the child is ill, first I will tell to God, then I will call my husband, then I will tell the neighbours'. Several mothers echoed the statement, 'there is no sickness that God can't cure' and a number of CHWs agreed that 'when the pastor prays you will be alright'.

If the child is sick, you go to the pastor and he prays for the child, then you will see a change. Any sickness he can pray for. Sometimes you start treatment, or sometimes you pray first. You can pray at the same time as the chemist or hospital. You can go to the church after the service and they pray for the child, and you can carry the child to the pastor on any day. God is our healer.

Most mothers stressed that whilst they did not pay the pastor for his services, they did make a small monetary offering to the church, *'to give testimony to thank God when you see what God is doing for you and your child'*. Some mothers also gave small items or produce (garri, cucumbers, yams) to the pastor as a token of their appreciation, especially if they were seeking protection. One mother, quoted above, had given birth within the church compound to be protected from spirit attack. She also explained, *'if my child cries and cries at night and I don't know why, then I am afraid, and that night I will take him and go and sleep at the pastor's house to be safe'*.

Several mothers described their pastor advising them to present the child at the health centre, or suggesting medicine they might take. One mother explained, *'last time he was ill, we feared the child might die, so we carried him to the pastor and the pastor prayed and told us about another medicine to buy from the chemist which helped'*. Similarly, a CHW concluded,

Some pastors, if you take the child to them, even though they pray, they invite you for medicine, even some will take the child to the hospital. Also, if there is a nurse in the church [as part of the congregation] the pastor will call the health staff if the case is difficult.

Chemist and self-medication

For the majority of respondents, local chemists or pharmacies played a major role in their care-seeking for childhood illness. There were many points of access for 'English medicine' including specialised shops (chemists or pharmacies), patent medicine vendors (PMVs), and general stores or kiosks selling medicine (both above and below the counter) alongside general household supplies.

The 2008 NDHS [iv] indicated that although shops, pharmacies and PMVs occupy a substantial place in the market, their use varies by zone. In treating childhood fever, for example, the national figures for 'place of care' show pharmacists and PMVs at 27% and shops at 5%. In the north-west zone (including Kebbi), pharmacies and PMVs account for 12% and shops for 11%, whilst in the south-east zone (including Cross River), pharmacists account for 46% and shops for 0%. Although chemists and shops were regularly discussed by respondents in Kebbi as their point of access to medication, in Cross River, the multitude of chemists was staggering – the research team visited one village that contained 26 chemists. There is a strong union of PMVs in the south, and this may account for the lack of shops selling medicine in Cross River. In this study, however, it was not always possible to disaggregate the different types of vendor with which interviewees were engaging.

Respondents in both states discussed two routes to obtain medicines from the chemist: being referred from a health centre to a chemist to collect prescription medicine (discussed in detail below); and going directly and independently to the chemist for medication, particularly in cases of malaria and diarrhoea (although not pneumonia, which, as discussed above was primarily treated with traditional massage). As one mother in Cross River explained, *'diarrhoea affects people quickly, it has a lot of power, it puts the body down fast, even in a big person, and you can even shit blood. We are afraid of diarrhoea so we quickly go to the chemist'*.

Patronising a chemist in preference to a health facility offered several key advantages. Mothers often claimed that the chemist was closer to their home than the health centre, and therefore offered more

convenient access to healthcare. Geographically, this was not always true, but the chemists were routinely perceived as 'being closer' to the community. Chemists were also seen to have longer opening times and to be accessible even at night. As one mother in Kebbi explained,

Normally we go to the chemist. You could go to the hospital during working hours, but we go to the chemist first as it is close by. If the child is sick in the evening or at night, then the hospital will be closed anyway. Also, the hospital is further away, and we don't have transport, so we go to the chemist.

A mother in Cross River suggested similar reasons for attending the chemist, adding that 'we know the lady at the chemist shop and we have her number so that we can always call if we need medicine'. Several mothers suggested that medicine obtained at the chemist was more effective than that from the health centre and appreciated being given 'combination' or 'compound' medicine, 'from the chemist they gave one white, one yellow, one red, one black, all different pills to help the child for 50N'. One mother even referred to her local chemist as 'the personal hospital'.

For the majority of respondents, having money to buy medicine was a key issue. As a consumer, there was felt to be more choice at the chemist, where you could opt for different brands and quality of drugs depending on what you could afford. Great emphasis was also put on the chemists' willingness and ability to prescribe 'according to your means', calculating the dose according to a patient's ability to pay. Many respondents were 'customers' of a particular chemist, and this allowed them to obtain medicine on credit, facilitating the child's treatment whilst the parent gathered funds to pay for it retrospectively.

You have to do your best to get medicine from the chemist for your child when it is sick. There are always medicines that are more expensive and medicines that are cheaper and you have to make a choice between the better quality drugs or not, depending on what money you have. You must try to get money so that the child is saved, but the chemist can give you the medicine and then you pay later. Any amount of money you have, the chemist will consider you.

A family's selection of chemist was the product of a combination of factors: location, cost, and reputation. In a village with several chemists, mothers may express a preference for a particular one, but would be prepared to visit others if the required medicine was not available at their normal chemist or from their normal vendor.

There are two chemists in the village and I go to both of them. I like the one on the road more because the aunty there knows tablets better. She knows how to treat children. I will go with 100N and tell her what the problem is and then she will give me a mix of tablets and show me how to give them to the child over a few days. I normally grind the tablets and put them with water and then give it to the child on a spoon. Sometimes the chemist will help you. They give you medicine and, if they know you, you can pay them later when you have found the money.

Some respondents purchased medicine from the chemist as they might any other consumable and were effectively self-medicating. A mother quoted above, for example, had interpreted her child's symptoms as malaria and had therefore purchased and administered chloroquine from the chemist,

before deciding that the condition was more likely to be pneumonia and visiting a local healer. At no time was the child clinically examined. Similarly, another mother from Cross River was confident to administer directly to her child.

The child was coughing for one week, so I gave her piriton for the catarrh and 'ambitray' [?] for the cough. I just asked for those drugs at the chemist. The syrup costs around 200N but I asked for tablets only, even at the health centre they say that tablets are better because they are stronger. The piriton tablets cost 15N each. How many you get depends on the money that you have in your hand. For malaria I give chloroquine and paracetamol when the child has fever. And for diarrhoea, I use septrin syrup and flagyl syrup. The septrin costs 250N and the flagyl 300N. There are six chemists in the village, so I go first to the one that is close by, but if they don't have the drugs I want, then I will go to ask at another.

Self-diagnosis and self-medication is problematic. Health professionals and community members alike admitted that any fever was routinely treated as malaria. Clearly this has major implications for misdiagnosis, incorrect dosage and potential drug resistance. Although artemether-lumefantrine (AL), used as part of artemisinin-based combination therapy (ACT), is officially the frontline treatment for malaria in Nigeria, no respondent ever discussed it, and chloroquine was the most commonly cited drug for malaria treatment.

A number of respondents in both states described taking the child to the chemist so that he or she could see the symptoms, diagnose the condition and provide the correct medication. In a several cases, it was reported that the chemist performed examinations and tests.

If the child has malaria, you go directly to the chemist with the child. They check the eyes and weigh the child. They can even test the blood. Then they will see what medicine is right to treat the child.

Several respondents warned that some chemists had poor reputations and going to them directly, rather than via a health facility, was risky because *'they have not studied medicine and they might give the wrong medicine for your condition'*. Similarly, women community leaders in Cross River stressed that *'chemists are businesses, they can sell any drugs but they don't know what they are giving you'*. Summing up the use of chemists, fathers in the focus group in Cross River concluded,

Father 1 – *we can't deny the fact that we take the child to the chemist*

Father 2 – *we have many chemists here, so you go to the one that is closest to you*

Father 3 – *but there is ignorance and lack of training, somebody with nothing [no qualification] can give you drugs*

Father 1 – *most need more training*

Father 3 – *there is irrational drug use, they can give you incompatible drugs, not all even have a thermometer*

Father 2 – *there is individual differences between the chemist shops, so you can go to the cheapest one, to somebody with a cheap rate, but then they don't know [are not qualified] and at the other end [later on] you may have to rush to the health centre*

Father 4 – *the ability of the medicine store depends on the ailment, its severity, so you decide to rush to the one that knows what to do for you*

Father 5 – *you can pay the little you have and the rest in balance, but still treat the child*

Father 6 – *if you are a regular customer*

Father 5 – *yes, then you can send the money later*

Father 3 – *but for a smaller amount of money they don't give you the full dose*

Father 4 – *that is where training and experience comes in.*

Health facilities

Although some respondents preferred medicine obtained from the chemist (as discussed above), others suggested that medicine and services offered by health facilities were of higher quality and more reliable (due to tests and examinations) and the training and qualification of health professionals was seen to be beneficial. Whilst the interviewees were purposively selected as parents who did not regularly engage with health services, a couple of respondents did claim to attend health facilities exclusively and did not use plant medicine nor seek treatment from local or spiritual healers or chemists. As one mother in Kebbi concluded,

Before there was ignorance, but now there is knowledge and the people know how to get help. Some people still use Hausa medicine, but the medicine from the hospital is stronger. If you start with local medicine at home, then you end up going to the hospital, so its not worth it to start home, it is better to go straight to the foreign medicine. As I experience it, the health centre is the best place. When the child is sick, I carry them and go to the health centre so that the body calms down and is treated well.

Respondents did not always interact with their local primary health centre, however, electing instead to present at a larger health facility, even if it incurred them greater expenditure in terms of time and finance. In some cases, local health workers presumed that the interviewee did not access healthcare as he or she was not their patient, where as the interviewee themselves claimed to regularly access healthcare from another facility. Reasons given for attending a larger health facility were similar to those forwarded by carers who preferred health centres over chemists: the perception that the quality of medicine and services was superior.

The dominant issue raised in relation health facility attendance was cost. Opinion in both states was widely divided concerning the cost of treatment at a health facility: some carers asserted that it was free (always or on occasion); others thought that it was cheaper than the chemist; and a number concluded that it was the most expensive source of medication. The financial implications of seeking treatment at a health facility, including both direct and indirect costs, are discussed in detail below (see section on barriers).

In both states, however, the perceived severity of a child's condition was often a determining factor prompting treatment-seeking at a health facility. As a mother in Cross River concluded, even if a child was ill, it was not necessary to attend a health facility if their condition was not like 'snap the picture', referring to the often explicit health posters on the wall of many clinics. Many carers would 'wait and see' how the condition developed, often leading to delayed presentation. The majority of

participants regarded attending a health centre to be 'more of an event' than buying medicine at the chemist.

Several carers explained that whilst they went to the health centre for routine immunisation and even for ante-natal care, they would not consider attending if the child was ill. A clear distinction was made between the different services and relative benefits offered by health facilities in comparison to other sources of treatment. An important factor here was the availability of drugs at the health centres. A mother in Cross River explained,

There are no drugs at the health centre. Last time we went for immunisation, the nurses complained there was not enough medicine, every time they complain. And even if God gives them the drugs, then sometimes you have to buy them from their hand. In this area, all pregnant women go for ante-natal care, and all children go for immunisation. But for sickness, no, we don't go.

Supply-side issues are discussed further below.

Other sources of treatment

No participant reported attending a private clinic in either Kebbi or Cross River States, but it is worth mentioning briefly a few additional sources of treatment from which particular parents sought care for their child. In Kebbi, two parents in different LGAs explained that '*government health workers walk around and we call them into the house if the child is sick*'. It was unclear who these health workers were. A local health professional suggested that they may be students from the schools of health and nursing, whilst another thought they could be VCMs or health educators who were giving advice, but in neither area were formal health outreach services in place.

In Cross River, two other informal points of access were highlighted. In their focus group discussion, a CHW explained the presence of 'bicycle vendors' in her community: men, usually on push bikes, who pedal their pharmaceutical wares. She recounted that the previous week,

I had a case where the mother had got the medicine from a bicycle vendor. He had not given her the right medicine, so the child was still purging when they came to me. There is a problem with such drug vendors.

A mother, again in Cross River, temporarily confounded the research team by explaining that she brought drugs from the 'Metro Blue', a government-run service where cheaper medicines were sold from the bus that came past the village twice-a-day (at 9am and 3pm) from Monday to Friday. Upon closer investigation, it became apparent that rather than a government-run outreach service, the mother was in fact referring to an entrepreneurial drug vendor who rode up and down the 'Metro Blue' bus line each day, selling drugs out of a suitcase and capitalising on his potential customer base, rather than working out of a static location or using a push bike.

Decision making and agency to act

In Kebbi State, as mentioned previously, there was an interesting distinction between care-givers and care-seekers: mothers were the primary care-givers, it was their responsibility to care for the children and administer to them if they are ill; but the father was the primary care-seeker, because of the restricted movement of women outside their household's compound (*kulle*). When a mother recognised her child was ill, she would inform her husband, and it was then the child's father who collected plants for the mother to make local medicine (as discussed above), who went to the chemist to buy medicine, or who presented the child at the health facility. If the child was breastfeeding then the mother would accompany the father and baby, but if the child was older, the father would go alone. Should a child be admitted to the health facility then usually both parents would stay with them, whilst an older sibling or relation cared for other children at home.

If the father takes the child and they are admitted, then somebody from the family must stay with the child whilst the father goes to fetch the mother, or they send a message and somebody else brings her to the hospital.

The ultimate decision to treat a child therefore lay with the father. As one mother in Kebbi explained, *'my husband makes the decisions. He prefers to go to the chemist not the health centre. We [the mother and the husband's second wife] don't have a say. Whichever he goes to is fine with me'*. A father interviewed in Kebbi explained that sometimes conflict arises within the household if one parent wants to take the child for treatment and the other parent does not, a view echoed by another mother who concluded,

When a child is sick and the husband takes them then it is fine, if he doesn't then you must also obey him, but it doesn't happen often that there is disagreement, when a child is sick there can be no arguing in the house.

Several other mothers admitted that although it remains ostensibly the father's decision, *'there are ways to persuade your husband, especially for the sake of the children'*. Similarly, a VCM asserted, *'the main problem is with the fathers, but we tell the mothers to go to the health facility anyway, because you know the way to calm your husband'*.

The lack of agency with which mothers may act, has ramifications upon the health status of women in Kebbi. One mother, who estimated her age to be around 43 years and had five children aged between five and twenty, was eight months pregnant at the time of her interview. The VCM had told the research team that the mother had not come for any ante-natal care (ANC). When asked about this, she explained,

I haven't asked my husband if I can go. I don't know if he would let me. But I would like to go for ANC, I have heard good things about it, but I have just never asked. My husband doesn't like me going out in the daytime. He has not forbidden ANC yet, but I am nervous to ask in case he will say no, so I don't want to. All my pregnancies have been good, there have been no problems, so thank Allah, I don't need healthcare. In all my pregnancies I have reached ten months, so I am expecting the same for this

one. If Allah wills it, this will be my last, otherwise, I may have more. Only Allah knows what will happen.

In terms of seeking care for childhood illness, many carers explained that fathers had to seek treatment because they controlled the finances to purchase medicine. The fathers in the focus group asserted that *'most women don't have money, but the husbands have, so we have to pay'*. Even in cases when a mother was permitted to seek treatment, the father still had to buy the drugs. As one mother explained,

I tell the father as soon as the child is ill. Then you prepare to go to the health centre. The father is the one to say 'take the child'. He gives me money for the transport on the bike, but then if you need to buy the medicine from the chemist or if the child needs an injection, then you come back and the father goes to get it. Most of the time I take the child to the health centre, and sometimes we go together, but it is always the father's decision to take the child, and it is always the father who buys the medicine.

The divergence of primary care-giver and care-seeker was seen to impact the effectiveness of care given. According to a number of health workers in Kebbi, it was problematic if the father was not familiar with the child's symptoms when he presented at the health facility. As one clinician explained, *'I have had cases where the father has arrived at the clinic and I have asked what is wrong with the child and he can't tell me, only that the mother said the child was ill'*. Similarly, several mothers interviewed were unable to discuss the medication they were giving to their child. One confirmed,

I never go out, I am always in the house, so the father took the child to the chemist. I never go. I don't know what the medicine is. There are some tablets and a syrup. When my husband got back, he gave me the medicine to give to the child. He told me the amount to give and the time to give it, based on what the chemist had said.

In several cases, mothers described sending a child to the chemist or health facility with an older sibling. This happened for both routine immunisations and also treatment. One mother explained,

Even now some of the children are not well. They have stomach upset so we took medicine from the chemist. I sent another child to the chemist to buy the medicine. I described the illness to the older child and they went and told the chemist and then bought the medicine home. At other times, when the town crier tells us to gather at the Emir's Palace for vaccinations, then the younger children go with the older children. All my children have been vaccinated.

If the husband is absent, then it is often acceptable for a mother to seek treatment herself, and the widow interviewed confirmed that for her, it was not a social problem for her to leave the compound. Several fathers explained that if they were not at home and their wife was unable to contact them in advance, then she would be permitted to take the child to the hospital. One father in the focus group explained that he always left a little money with his wife in case of emergencies, and several women echoed the sentiment that *'the husband will be upset if his wife has made the decision to take the*

child, but she will explain and he will see that she made the decision for the benefit of the child, so eventually he will calm’.

In some cases, however, delays caused by waiting for a father to take the child or give his permission for the child to be taken to the health centre, resulted in the death of a child. A mother in Kebbi recounted,

Recently I had a baby girl, but I couldn’t get the medicine and my husband wasn’t around, and the baby died. She was six days old, not up to one week. Her stomach was swollen and there was fever, that is when she died. My mother-in-law tried Hausa medicine but it didn’t work. We needed to go to the hospital but there was no money in the house and we didn’t have the opportunity to find it. My husband was in Abuja, he wasn’t around. There is nothing I can do, I must just accept it. It was 40 to 50 days ago.

When the research team discussed the dominance of fathers as primary care-seekers with health professionals in Kebbi, many said that the situation was starting to change with MNCH clinics and routine immunisation, which mothers were now attending unaccompanied. This, they explained, was partly because husbands understood that it was a clinic specifically for mothers and children and therefore their wives were unlikely to be seen by other men. When the research team reported this reasoning to a mother in Kebbi, she laughed and replied, *‘yes, maybe that is true, but we still have to get from the compound to the clinic’.*

Similarly in Cross River, the majority of mothers informed the father of a child’s illness, but in this state, many also discussed the illness with the child’s grandmother (most often the paternal grandmother) who played a larger role in both care-giving and care-seeking than in Kebbi. Several mothers explained that the child’s grandmother helped prepare local treatments and would often accompany the mother and child to the chemist or health centre, especially if the father was absent or in cases where the mother was unmarried. A number of mothers in Cross River concluded that whilst parents may decided together if treatment should be sought, they emphasised that they would not act against the father’s wishes. One mother explained that her husband did not agree with the use of local medicine, and the family therefore used ‘English medicine’, despite her belief that local treatment would be more effective and the fact that the child’s grandmother was very skilled in local plant medicine.

In Cross River, a mother may be accompanied to the chemist or health centre by the child’s father, but more often she sought treatment alone or with other female relations. A proportion had the ability to pay for treatment themselves, due to their engagement with small business, and several borrowed money from the child’s grandmother. One unmarried mother explained,

If the child is ill, I first tell my mother. She tells me to go to the chemist and she will do the native medicine. When the child’s father comes, then I tell him. When I need money for medicine, my mother helps me to get it, and then I ask the father and he sometimes gives it.

During their informal discussion, women community leaders in Cross River asserted,

Men in this village don't care for the mothers or child, they don't care at all. The fathers don't give any money and mothers must find money and come by themselves. Pregnant girls are brought by the mothers for ANC and grandmothers come with their daughters and grandchild. The bride-price is low, but girls don't wait and it is their waywardness that is a problem. They just carry their things and go to the man's house, but then the man doesn't take care of them.

In their focus group, fathers echoed this. One concluded,

Even if they know the right thing to do, fathers pretend. At times, the mother needs to come to the health centre but the father doesn't have the money and the health centre can't just give the drugs, so the mother has the burden of taking the child home. Fathers don't take responsibility but the mothers are more than we men [i.e. stronger] and we must confess to that.

CHWs also discussed the role fathers played in care-seeking in their communities.

CHW 1 – the fathers give money for treatment

CHW 2 – the father is the one that has the authority to say take the child to the clinic, but if the mother is absent, then the father can bring the child to the clinic himself

CHW 1 – here, in this area, the understanding of health services is very high. Ignorance still exists, but it is negligible, so it depends on the background of the father, if he doesn't permit English medicine, then there is a problem, but if the father has understanding, then there is no objection

CHW 3 – the father has no hand in the child, he doesn't do anything, it is fully the mother's burden

CHW 2 – but we do have men who understand their wives well and bring them on a bike to the gates of the health centre

CHW 3 – in my place, still there is no compliance. It doesn't matter how much they have been told, still they close their ears.

In Cross River, several cases were reported in which influential male members of the community, either the pastor or health extension worker took the child to hospital instead of the father. One woman community leader concluded,

The mother will tell the father that the child is ill, and the father will tell the mother to get treatment. But sometimes it happens that even if the child is very sick, the father does not go with the mother, even if she has to go to the general hospital. Then the doctor gives him notice. The doctor will contact the father and force him to go, only then will the father go'.

Pathways of care

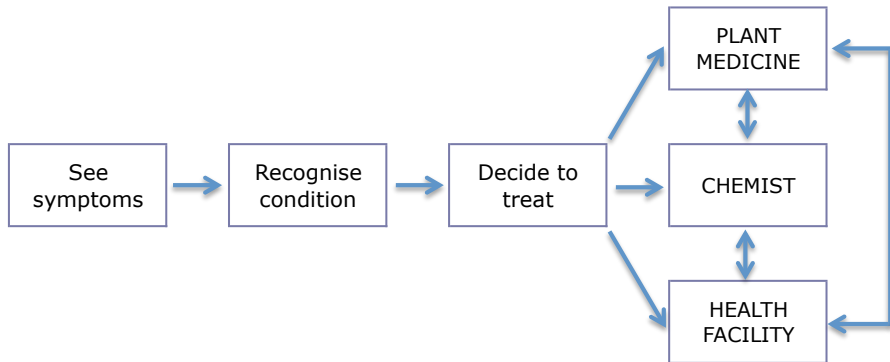
Respondents conveyed a range of determinants that influenced their care-seeking behaviour, and it was clear from their narratives that parents were making pragmatic choices in an attempt to make the most of their constrained circumstances.

Care-seeking for malaria, diarrhoea and pneumonia in Kebbi and Cross River followed similar yet distinct pathways that incorporated a range of treatment sources and healthcare options. To graphically represent the pathways identified risks over simplification. Diagrams cannot fully take

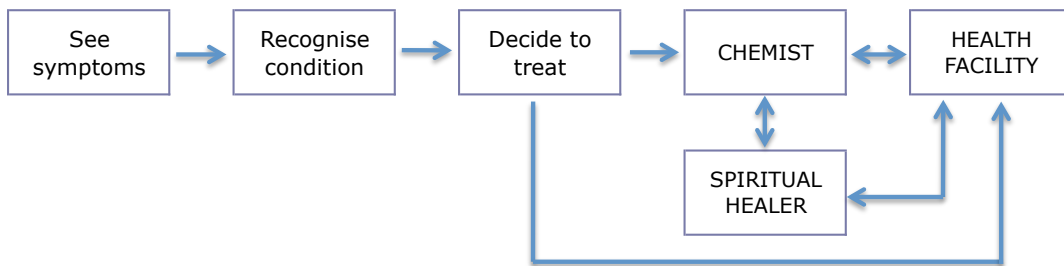
account of the variety of influences that impact when, where and why treatment is sought. Nor can they accurately represent the ways in which different treatments are sought in parallel or the flexibility and non-linear nature of care-seeking. With these caveats in mind, however, the following may be useful guides to better understand how carers in Kebbi and Cross River navigate the treatment options that may be available to them for the three childhood illnesses.

Diagram 1 – Pathways of care, Kebbi

Diarrhoea



Malaria



Pneumonia

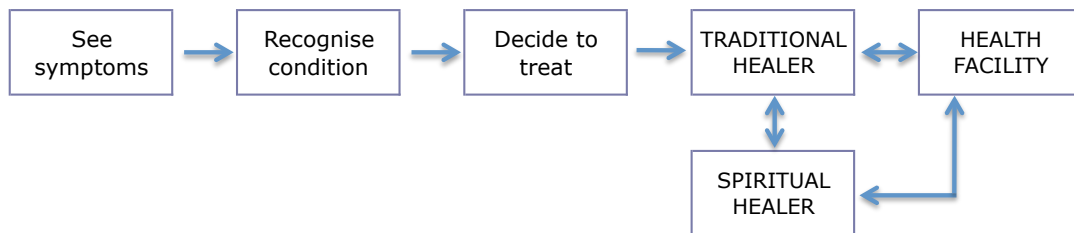
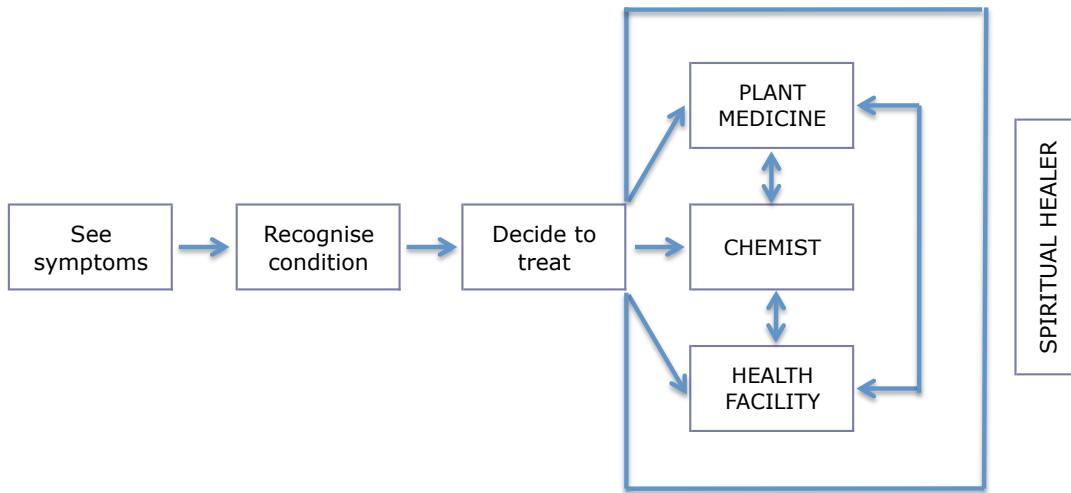


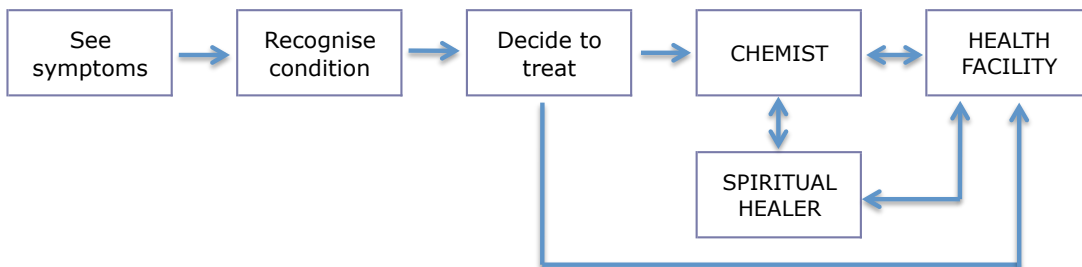
Diagram 2 – Pathways of care, Cross River

Diarrhoea and Malaria



NB – the ‘spiritual healer’ box encompasses the other treatment options, as attending a spiritual healer was likely to occur throughout the pathway of care and in parallel to other treatment options.

Pneumonia





Barriers to care-seeking and treatment

Throughout the interviews and focus group discussions, participants identified barriers encountered when seeking treatment for childhood malaria, diarrhoea and pneumonia. These were triangulated with evidence from the thematic analysis and five categories of barrier were delineated: financial; access; knowledge and information; socio-cultural and religious; and health facility and biomedical deterrents. It should be noted that because of the interrelatedness of these barriers, some issues have natural overlap.

Financial barriers

(1 USD = c.161 Nigerian Naira)

The majority of participants in both Kebbi and Cross River prioritised financial barriers as the primary factor preventing care-seeking for childhood illness. Low incomes and scarce household resources meant that it was difficult to fund any additional expenditure that may be required to seek treatment during an illness episode. As one mother asserted, *'money is the main challenge when the child is ill. You can't plan for sickness, it doesn't respect your plans, so you just try to do your best'*.

Whilst some respondents were aware that free medicine for children and pregnant women should be available from health facilities (in line with the national policy), most explained that there was rarely any stock. Frequently, parents were required to purchase the prescribed drugs from a chemist. Even if free medication was available at a health facility, parents were still faced with additional charges, such as equipment costs and fees for lab tests. One mother explained.

Yesterday I went to the health centre because the child is ill and they gave her an injection. It didn't cost any money for the injection, but I had to buy the medicine from the chemist and also the syringe. I bought two small bottles that cost 35N each and then went back to the health centre. They injected one yesterday and then I will take the other to the health centre today for the second injection [shows plastic bag containing syringe and remaining bottle of crystalline penicillin].

Similarly, a CHW in Cross River explained,

Consultation is free and treatment is free, but there are other costs. So even for delivery, we don't charge for the delivery, but we do charge for the cotton swabs, the spirit, even for the kerosene to give light if the delivery is at night.

Because of this, the majority of carers rightly concluded that attending a health facility always incurred cost. The following two quotations are representative:

They never treat you for free, they are not so quick to help. As far as I know, you must always go with money. Even when they say there is free medicine, you go but you still have to pay, you still have to pay something. If you go without money, then nobody pays you attention, but if you have money then you can get the attention you need.

You get whatever medicine you can with the amount that you have. Even if you beg, beg, beg, they can't give you it for free, so sometimes you only get one medicine, even if they have told you to get two.

Many carers described situations in which they had wanted to seek treatment but had been unable to do so because of lack of funds. In such cases, local plant medicine was frequently the only treatment option available, although acquiring drugs on credit at the chemist was a possibility for some parents. In two interviews, mothers recounted situations in which a lack of money had resulted in the death of their child. In one case, in Kebbi, quoted above, the father of the child was away and although the mother and grandmother had tried Hausa medicine, they had been unable to find money to attend the health centre and the six day old baby died. In the second case, in Cross River, the mother explained,

The boy was sick, his stomach came out [swollen] and he couldn't breathe. I went to the health centre, but they wouldn't help because I didn't have money. I went five times. After two weeks I found some money and brought malaria drugs and blood tonic syrup from the chemist. I was so worried about the child I wasn't thinking. Then my husband was able to borrow money from a friend because we wanted to take the child to the general hospital. We were actually on the river road [taking a boat up river to the hospital] when the child died on the river. It was the year before last, he was nine months old.

Indirect costs, such as transport or losing a day's work due to attending the health centre, were not raised by carers as an issue. Rather, it was the cost of treatment (consultation plus drugs) that was the main barrier and some respondents were forced to prioritise money for medicine over other key expenditure.

If I have the money, I get up and take the child to the health centre. I use the money for food if I have to. Last week my daughter was sick with a fever. They said it was malaria and gave her an injection and some pills. It cost 250N. I used the money that I had made for food, and then I had to borrow money from others around to feed the other children [mother to six children]. Sometimes if one is sick, I can't get treatment because of lack of money, and because I must feed the others. Then I have to leave the child at home and just pray to God they get better.

One mother described undertaking particular transactions to directly generate funds for treatment,

It has been a while since a child was very ill. Last time I had to sell an animal to pay for the treatment. It was a goat. I got a good price because it was a pregnant goat. I got 5000N. The child was vomiting and had serious chest pain. I used 3000N for the medicine and taking care of the child.

Whilst several carers discussed borrowing money from their relatives or neighbours to fund treatment, or related costs ('we try to get the money so that the child can be saved, but sometimes, when you are a poor person you wake up and there is nothing, so you have to borrow'), others were reluctant to do so and often expressed a level of suspicion and distrust about being in debt or lending to others. One mother claimed, 'a lot of time, people aren't good and even if you cry and cry that you

have a need, they don't help, there is nowhere to borrow from'. Another explained that, 'some people distance themselves because they don't have the money', whilst another added,

Some mothers really want to go but they have no means and they are too proud to ask, so they stay at home with the sickness and try home remedies. People would be more willing to go [for treatment] if it was free.

Several carers emphasised their inability to save money, as one mother in Kebbi stated, *'I am always forgetful to save, the children always need something and there is never enough money'*. Another mother in Cross River asked, *'we think of saving money, but when only 200 or 300N enters the house, how do you find the spare?'* One mother, in Cross River, whose household income increased slightly when her husband had occasional work on a palm oil estate, concluded *'sometimes we have money and sometimes we don't. If you have, then you can save money with others, or you can hide something. I hide something in the house'*. 'Saving money with others' referred to small, often informal, collection schemes at a community level. This mother was part of a women's group in her settlement in which *'you give 50N, 50N every month and then anything that is collected we share in December so we have money to buy the child shoes or clothes'*. Larger schemes were run by committee and enabled contributors to borrow from the group, usually with a 10% interest rate on re-payments. Whilst such societies were championed by the women community leaders in Cross River, other respondents emphasised that *'even if they had money, people here would not share it beyond the family'*, again referring to the instability of their financial situation and distrust in others.

Access barriers (distance, transport and location)

The fieldsites selected for study in both states were a combination of urban and rural areas, but none was particularly remote, and all were accessible by road. Because of this, participating carers rarely discussed access as a barrier to care-seeking. In most cases, mothers reported being able to walk a short distance (under 20 minutes) to a primary health centre, or if they took a motorbike, prices ranged from 20 to 100N one way. Only if carers wanted or needed to attend a larger health facility did respondents raise issues of distance and transport. In the fathers' focus group discussion in Cross River, participants explained that three villages in their area were located far from the health centre and their inhabitants were therefore less likely to seek treatment. They also stressed that in emergency cases, access to the nearest general hospital was problematic as it took an hour by car or two hours by motorbike. Normally it cost 500N one way, but in an emergency situation, carers had been known to pay up to 5000N to secure transport. In several cases, CHWs or other influential community members, including pastors, had facilitated hospital access by driving patients in their private vehicles. No health facility had an ambulance other than for referral, and fuel was often scarce. A mother in Kebbi noted that if a family member died at the general hospital it was hard to bring the body home, and having paid for the transportation costs, it was difficult to afford a coffin.

In their focus group discussion in Cross River, CHWs emphasised the difficulties they faced in accessing the wider community due to lack of transport. One CHW explained, *'there are some places that we do outreach, where we have to climb on motorbikes [hire motorbike] on the main road and there are heavy trucks, so it is risky work on our side'*. Another concluded,

Primary health isn't like secondary, we need to get closer to the people, but how can we get to the catchment area? Cross River government doesn't support its primary care, they don't equip the health workers. At times we fail in our services because we can't access the community. We should have mobility to facilitate us to take the services directly to the doors of people.

The idea of house-to-house service delivery has gained traction with the community because of the polio vaccination campaign (discussed below).

Knowledge and information barriers

As discussed, there was limited knowledge about the causation and prevention of childhood illness in both Kebbi and Cross River: pneumonia was the least known of the three conditions; there was little association made between diarrhoea and water, hygiene and sanitation; and the link between mosquitoes, malaria and the use of nets was weak in both states. This had an impact on carers' treatment-seeking behaviour, particularly regarding pneumonia for which local treatments were continually used in the belief that biomedicine was ineffective. Similarly, certain types of diarrhoea were left untreated (when a child was teething for example), and generalised fevers were routinely treated as malaria. A lack of ability to identify risky symptoms, poor knowledge about when to seek treatment, and a perpetuating attitude of 'wait and see', all contributed to the late presentation of cases. As one assertive mother in Cross River concluded,

If they don't demand, they just keep the child at home, then they only go when the situation is worse, and they must rush the child to hospital – I've seen it many times'. If the child is suffering, then you should go out and look for help somewhere not stay at home and pray to God only.

Carers reported learning about child health from a variety of sources. In Kebbi, the most cited source was the VCMs who deliver key health messages with the aid of a flip-book as part of the house-to-house polio campaign. Several carers also discussed fathers getting information from their imam. Health workers admitted that whilst they had worked with imams to deliver key health messages, they did not know the extent to which imams were discussing health, nor the impact of their messages.

Participants in both states confirmed that health facilities, the radio and community elders were sources of health information, although in Cross River, the role of both elders and health facilities appeared greater. As one mother stated, '*when we are pregnant, they teach us at the health centre about how to live, what to do when the baby comes out, but we also learn from our mother and mother-in-law and grandmothers, from 'we-we' [meaning other women]*'. In Cross River a couple of mothers mentioned health talks that had been held in the community by local and international NGOs, '*they called the mothers together to one place, to the hall, and some foreign people came and taught us about how to care for ourselves and our children*'. Similarly, in Kebbi, fathers in the focus group concluded, '*big world organisations have come and joined with the community and traditional leaders, they tell us there are certain things to notice in the child and if they are sick to take them to hospital*'.

Despite these various sources of health education, respondents asserted that ‘ignorance’ and ‘non-compliance’ remained, and the majority of carers called for more education, especially on child health. The majority of mothers interviewed suggested that male members of their household or community had little understanding of childhood illness and were not involved in child care. This is problematic if a father’s limited knowledge prevents effective and timely care-seeking, especially in Kebbi, where a mother’s agency to act independently is tightly restricted. As one mother concluded,

Some husbands can be taught, but it doesn’t matter, because even if they are taught the advantages of healthcare, then they are still in the position to let the mother go or not, some may allow it, others may not, it depends on the man. They know it’s a good thing to get treatment, but it is just up to the man himself.

In Cross River a CHW confirmed, ‘*it is very rare to get [an opportunity to educate] the men, they don’t have time and they are not interested, the burden of children lies with the mother*’. Even the male participants admitted that mothers had a greater knowledge and understanding of children’s health. However, when comparing responses given by mothers during interviews with those of fathers in the focus group discussions, fathers actually appeared to have an elevated and more developed knowledge about illnesses, particularly their cause and prevention strategies. This may have been due to fathers being more socially confident to voice opinions and more versed at expressing their own ideas than mothers. The focus group format may also have encouraged the participants to build on what others were saying, where as mothers had to self-generate ideas and views in their individual interviews.

In both states, however, a divergence between knowledge and practice was evident. For example, as discussed above, fathers in the focus group in Kebbi discussed the need to keep the environment clean without stagnant water, yet the gutters were full with fetid water. Similarly, several carers knew that sleeping under a mosquito net helped to prevent malaria, but admitted that they did not always do so.

Socio-cultural and religious barriers

As discussed, restrictions on the movement and societal interactions of women in Kebbi, resulting in the juxtaposition of mothers as the primary care-givers and fathers as the primary care-seekers, was a barrier to accessing effective, efficient and timely healthcare.

There were suggestions that the situation may be gradually changing. A number of respondents who engaged with health facilities, albeit infrequently, asserted that, contrary to strict *kulle* they did see other mothers accompanying children. Similarly, health workers claimed that increased numbers of mothers were being permitted to attend ANC. The majority of participants, however, concluded that women continued to be confined to their husband’s compound and were not active in care-seeking. The limited interaction between women of different households also contributed to a lack of knowledge about community activities and an unwillingness to comment upon the situation of others, due to a combination of remoteness and distrust. One mother explained ‘*we don’t know of other women’s troubles*’, whilst another concluded, ‘*I don’t know why some people don’t go to the health*

centre, I haven't heard of anything. My life revolves in the house and I don't go out and ask people these things'.

Not only in Kebbi, but also in Cross River, fathers had little involvement with child rearing, and this, according to several respondents led to decreased responsibility and curtailed support of the family. A male CHW in Cross River concluded, *'it is the husbands who are the problem. They should have the number of children they can cater for. Malnutrition arises when there are too many children for the father to adequately feed and care for'*. It is interesting to note that there did not appear to be any gender-bias in treatment-seeking for children, nor was any distinction made in treating children of different wives in a polygamous marriage.

Religious barriers were also identified in both states. In Cross River, a number of Pentecostal denominations (e.g. Apostolic Faith, Four Square Gospel Church, Olumba) reportedly prohibit biomedical treatment. Although no carer described the practice of not seeking care on religious grounds, respondents spoke openly about such beliefs in their communities. A father in the focus group explained, *'there are those here that believe a prayer can cure, that the Church will cure, and so they don't take the child for treatment'*. This also caused much discussion in the CHW focus group,

CHW 1 – their beliefs can be a problem. You go for community mobilisation, you go to their doorstep and explain, but some say they don't want to come. Then you need to give education because it is their belief. Some say they have traditional treatment so they don't need to come, but others say it is their religious beliefs

CHW 2 – if they attend a certain Church, for example, the Apostolic Faith, then they won't go to the health facility. In that Church you can't take drugs [medication] so they refuse to come

CHW 3 – some will only go to the pastor to pray if there is illness

CHW 4 – they go and fast and wait for a voice from heaven

CHW 5 – it is divine healing

CHW 6 – one child was brought to my health centre with over weakness, anaemia. They needed a transfusion, but the woman refused. They took the child to the church to pray and the child died.

In Kebbi, as discussed above, several respondents suggested imams were a source of positive health education. There were also reports, however, that imams and the religious authorities preach against health services. In relation to the polio campaign, the opposition has been widely publicised [21]. In brief, it was rumoured as early as 2003, that the vaccination caused infertility and that house-to-house immunisation activities were part of an effort by the government (supported by international agencies) to sterilise children. The subsequent suspension of activities led to a large outbreak of polio that spread outwards from northern Nigeria. The campaign was again implemented in 2008, and further revitalised by UNICEF commitment and implementation of the VCM programme in 2011, yet still these condemning rumours remain in the community's collective memory and contribute to a negative undercurrent regarding the implementation of immunisation and other health initiatives.

Health facility and biomedical deterrents

Aspects of health services were also identified as barriers to care-seeking. In Kebbi, a small proportion of carers distrusted biomedicine. In addition to the rumours about the polio vaccine,

other (perhaps related) issues were also raised. Several carers asserted that they did not allow their child to have injections because they thought it would cause heat in the body and cause the child to cry, thereby upsetting the child and disturbing the household. There was also a suspicion of free medicine. One mother described her husband's attitude,

He does not understand why some medicine is free. Is that medicine a different standard [substandard]? Why do we have to pay for medicine for adults, and then they give medicine for the children for free? Because of poverty we don't get the vaccinations at the health centre, because when you go it costs so much money. But the other vaccines that are free [polio], he does not permit the children to have them. We don't trust anything that is free. You have to pay at the health centre, so why is it free when they come to your home? My husband doesn't have a problem going to the chemist when the child is sick, only it is the free vaccinations that he does not trust.

In Cross River, such a distrust of medicine was not evident, although several carers did comment that, 'at the hospital they don't always give you good drugs, sometimes you might get local chalk'.

The polio campaign in Kebbi has also had an impact on carers' tolerance for and willingness to interact with health services. Both carers and health workers alike concluded that parents were 'at saturation point'. From a programmatic perspective, the focus on polio eradication has detracted from other health interventions, and health professionals frequently commented that other key areas were being under-resourced as a result. In contrast to this, a number of mothers in Kebbi discussed the polio vaccine as if it was a 'wonder drug' to cure all childhood illness, and perversely, their faith in the vaccine deterred other treatment-seeking.

I took my youngest son to the hospital. He was sick and I didn't know what was wrong. This was the first time I was involved in the polio vaccine. It helped him to get better. I am very supportive of the polio vaccine, I have seen its usefulness and I really like it. It has many benefits. It is a long time since I heard of a pneumonia case. Since they started the polio vaccine, the number of cases has decreased and children are more healthy, they don't need medicine now.

The environment of health facilities was seen by some respondents to discourage attendance. Carers commented that there was frequently no electricity and that they had to pay for kerosene for deliveries at night. Others claimed that there were often mosquitoes around the health centre and that there should be netting on the window. Several mothers said improvements could be made to make the health centres look more inviting, and CHWs in Cross River also emphasised the need to keep the surroundings clean and tidy.

There is no labour to help us keep the environment around the health centre clean. We have to become labourers overnight. The sanitation of the health centre is important, it is not a good impression if the environment is dirty. When the HIV team from the LGA visited, they said to us, the bush is high around the centre, how do you expect to educate the community to clear if you don't?

Most carers did not perceive waiting times to be problematic and the majority said they rarely had to wait longer than an hour to be seen, although the consultation itself could take time. In their focus group discussion in Cross River, CHWs explained that due to staff shortages and a lack of resources,

they often had to play multiple roles and as a result, patients often had to wait for an extended period.

CHW 1 - In my clinic there is no lab technician, so I have to do it, and everything, from when the patient arrives to when they leave, can take five hours.

CHW 2 – Working at a primary health centre you have to be the cleaner, labourer, registration clerk, nurse, lab technician, pharmacist, even consultant – all in one person.

Several carers in both states testified to the positive attitude of health staff, referring to particular health workers who had impressed them with commitment and attentiveness. The women leaders in Cross River singled out one key health worker and concluded that *'he has made a big difference, the women are very comfortable with him, he talks nicely to the mothers'* before adding that, *'there are individual differences with some staff and some are harsh so then some women don't like coming'*. Other carers related particular examples when health staff had treated them poorly. One mother explained that at her local health centre, *'you go and sit down and no one attends to you, although there is no queue. They just waste time, so then you get vexed and leave'*. Another mother described,

If you don't have good clothes to go to the health centre, you will be embarrassed. The staff won't talk well and they will ask you why aren't you dressing the child properly. You must dress fine and dress the baby fine. If you don't have money in your hand, the nurse won't even talk to you.

Several other mothers recounted instances of quarrelling and abuse of patients by nursing staff. In Cross River, one mother concluded,

If the child is really sick and if you don't go on time, then the nurses will hit you and quarrel with you. For me, they have never beaten me, but I have seen it done to another person. More often they treat you well, but it is well known that they quarrel like that.

The negative experience of one individual can have a ripple effect through a community and be detrimental to care-seeking in general. In one area, several mothers related different issues they had encountered with one local health worker, including being over-charged for services, and treatment being refused without prior payment. In one case, the mother attributed the death of her child to the negligence of this health worker.

I gave birth at the health centre and two days later the baby's stomach swelled. The nurse came and said it needed an injection and told me to come back to the health centre. I went and the man [CHW] asked 8000N for the injection. I cried and said to consider me for 5000N, but he said no. So I called my mother to bring 2000N, but she hadn't even arrived and the baby died. We didn't pay. He didn't tell me what was wrong, but that 'doctor' [CHW] didn't help my child because he wanted an advance payment. If I could have given it after he had given the injection, then maybe things could have gone differently.

Several carers wanted access to better skilled staff, and were keen to be treated by a doctor rather than a nurse or health worker.

One of the main barriers deterring attendance at health facilities in both Kebbi and Cross River was the lack of medicine available. This has been discussed in detail, but it is worth emphasising that stockouts at a health facility (particularly a primary health centre) actively encouraged carers to seek treatment from other sources, often ones where the risk of misdiagnosis, mismanagement and self-medication were increased. As fathers in Cross River stressed in their focus group discussion,

The government service is announcing free treatment, but they are not doing it. The women rush when they hear the jingle [the radio announcement or advertisement] but then they are told to go and buy drugs from the chemist. We are having to pay heavily for this.

Government health professionals also lamented the lack of drugs at the health facilities and on several occasions, the research team was asked why UNICEF had reduced their supply of ORS, even in emergency situations (such as a recent cholera outbreak). Whilst supply-side issues are beyond the scope of this study, problems with reliable drug supply, lack of materials and equipment, limited diagnostic capabilities, and inadequate tracing and follow-up, all contribute to barriers preventing effective and efficient care-seeking and resulted in the communities' non-uptake of health services. There was a sense amongst mothers in Cross River that, largely because of supply-side issues, health centres were a place to go for immunisation and ANC, but not when their child was ill.



Solutions to barriers identified

Having highlighted the barriers, difficulties and challenges faced by carers when attempting to access treatment for childhood malaria, diarrhoea and pneumonia, participants were asked to share ideas and possible solutions to the challenges identified. They were asked to suggest ways in which the barriers could be overcome, and encouraged to consider what would be needed, from their perspective, to enable carers to seek and access appropriate and timely treatment for childhood illness. Although some carers found it difficult to consider solutions in the abstract and were not accustomed to being asked their opinions, ideas and practical measures to improve care-seeking were raised throughout the interviews and focus group discussions, and these were analysed in relation to the empirical evidence collected.

It should be noted that the ideas presented here are not hard and fast 'solutions'. The barriers identified are complex and entrenched – issues such as poverty and lack of infrastructure cannot be solved by health interventions or demand-generating activities alone. Rather these ideas, devised at the community level and from the perspective of the beneficiaries, should be seen as a platform upon which a series of 'local solutions to local barriers' can be developed. In this way, community-derived solutions may be incorporated into and supported by more systemic policy solutions. Programmatic implications are explored further in the discussion and conclusion. Here, for ease of reference, solutions raised by participants are presented according to the five categories of barrier identified.

Solutions to financial barriers

Carers acknowledged that the total cost of treatment depends on the illness, its severity, the type of treatment and the medicine required. However, many had experienced paying different costs for what they perceived to be ostensibly the same treatment and medication. Although service delivery (e.g. consultation and administering treatments) is free at health centres, other items (drugs, supplies, equipment, laboratory tests) fluctuated in cost and were sometimes free (depending on supply). Carers suggested that the costs they had to bear should be fixed and publicised. If costs were competitive, this may reduce the attraction of chemists that offer price flexibility dependent on brand, quality and dosage of drugs purchased. It would also deter health staff from over-charging or incorporating false costs. One mother suggested that health centres should offer credit or 'payment by instalment', in line with the chemists.

During the research in Kenya, fathers in the focus group mooted the idea of a small-scale community-based fund. When this idea was shared by the research team in Nigeria, many participants raised concerns about the feasibility of local community saving schemes, although fathers in Kebbi suggested that something akin to their farmers' cooperative but for the support of families and children may be possible. Women community leaders in Cross River claimed their 'society' worked well and had previously lent funds to facilitate hospital treatment in emergency situations, but emphasised their system of blackballing people who were unable to repay the loan. One village in Cross River was interested in subscribing to the Community Health Insurance Scheme, but did not know how to do so. This scheme, recently established in Nigeria with MDG funds and run by the

National Health Insurance Scheme (NHIS), requires the community to mobilise its members to manage contributions.

The need to empower women economically was stressed by many respondents. In Kebbi, fathers suggested, *'there should be help for women to start businesses, so they can pay for taking the child to the health centre'*. A mother in Cross River stressed, *'money is the main problem for us, there should be a way to help women to make small business to take care of their children'*, a view shared by the VCM focus group who concluded that, *'every married woman should be helped with business'* although raised concerns that *'even if the mother makes something, the father could take it'*. Discussing women's cooperatives, fathers in the focus group in Cross River suggested that whilst such organisations gave assistance based on community collaboration, they did so only for *'big women, not all women in the village'*. This was echoed by another mother in Cross River who concluded,

The chiefs in this village gather together and sit with the leaders and the women leaders and talk about issues. But they never help us. If the government has anything to distribute, they must give it to the elders, but then they only share it amongst themselves, they never give anything to the poor people.

Solutions to access barriers

Access (distance, location and transport) issues were not identified as a major barrier by carers in Kebbi nor Cross River. Despite this, however, many called for increased door-to-door service delivery. This system has gained traction with the community as a result of the polio campaign in which children are methodically vaccinated at home. In Kebbi, mothers suggested that a door-to-door service would allow them to better engage with healthcare for their children as it would increase their ability to directly access services despite the restrictions on their movement outside the household compound. Carers regarded the practice of VCMs bringing services and health education to mothers and children as very beneficial.

A number of carers also suggested that an ambulance service would solve problems of access, especially in emergency situations. Currently, the few ambulances that are attached to larger health facilities and are only used for referral between facilities. Several fathers had heard of motorbike ambulances, and suggested that these may be of use, especially across difficult terrain and during the raining season.

CHWs in Cross River emphasised the difficulties they faced in accessing communities, and suggested that each health centre should be equipped with one motorbike to better facilitate their delivery of services, and to enable more effective and efficient outreach, tracing and follow-up. This was also discussed by the VCM focus group in Kebbi. As members of the communities they serve, VCMs live and work in their settlements and must cover a smaller area than that designated to a CHW. Several VCMs explained, however, that a considerable proportion of their monthly stipend was spent on funding expenses incurred during routine work, and suggested that they be given additional allowance to cover transport costs.

Solutions to knowledge and information barriers

To overcome barriers of knowledge and information, more strategic, targeted and sustained health education is needed in both states, and was repeatedly requested by carers. Carers suggested that all sectors of the community could be better educated about child health issues, not only parents. It was strongly felt in both states that women should be taught at home. Although several said they had received education at health facilities during pregnancy and various rounds of immunisation, the majority thought that house-to-house education, given by a woman educator, would have greater impact. In Kebbi, this was suggested mainly as a way of overcoming restrictions on women's movements,

Women are not allowed into community gatherings, so if you asked them to come out, many won't be able to. So, to educate mothers, you need to go house to house, to every household.

In Cross River, mothers argued for house-to-house education so that they could learn 'eye-to-eye', but also because it would be difficult to gather in one place. One mother explained, 'house to house will be better, because then it will enter the head plenty. If there are too many women together they will make noise and not be interested, only in themselves'. Another concluded, 'you can't gather the women here like that, women have a lot to do, you can't ask them to go one place for a meeting. We are more busy than men, men can be gathered'.

Gathering men for community meetings on child health was generally thought to be the most conducive way to educate fathers. Whilst fathers in both focus groups called for increased education of men, and most mothers regarded the education of fathers as important, female respondents claimed that men were usually too busy or disinterested. In Cross River, several mothers asked 'how will you get hold of the men?' and CHWs concluded that, 'it is a good idea to have a meeting for men, but it is very rare to get them, the response would be low'. This contrasts with the general view of VCMs in Kebbi, that fathers, although initially opposed to their presence, often show a keen interest in finding out more about child health. A VCM explained,

The men will ask me what is in my bag. They don't like a stranger in their house, especially now with the security reasons. Often they will leave the house when I arrive. Even if they are educated people, it takes extra levels to convince them. But then they often come after me and ask me about what I have told their wives, and ask me to educate them about the same things.

A couple of carers suggested that parents should be taught together at home. One mother asserted,

You should teach couples together, as I am sitting here, so my husband should be here also if you are telling things about child health. It is better when the child is sick that it is not just one person who is stressed and not sleeping, the parents should be in it together.

Most carers, however, concluded that men and women should be taught separately. A female educator was seen to be the only option for teaching women. For men, several carers said the gender of the teacher did not matter, and one mother suggested 'if a man teaches the fathers, they won't regard it, it has to be a mother to teach the men'. The majority of respondents, including the fathers

interviewed and in the two focus group discussions, preferred a male to educate men. Several carers explained that they shared information with their partner or spouse, whilst in contrast, others raised problems with knowledge exchange. One father commented, 'well, women are very stubborn, so it takes a long time to educate them. If you teach them, then some teachings they will accept, some they won't'. A mother in Kebbi concluded,

There is a need to educate the men because when a man is knowledgeable and he comes home and teaches his wife it becomes accepted in the house. But if the woman teaches the man, he often doesn't agree. If it comes from the woman, he will say, no, she is just saying these things because she wants to go out of the house.

To increase knowledge and information at a community level, it was suggested that key members of the community should be involved, not only carers. Respondents suggested conveying messages through the churches and pastors in Cross River and the mosques and imams in Kebbi. Health workers also stressed the need to engage with other treatment providers. In Cross River, a community leader who was also a TBA explained,

The health centre trains the TBAs and we cooperate with them. The TBAs don't attend to women who haven't registered [at the health centre] or been tested [for HIV]. If the labour is strong, then we immediately bring them to the health centre to take them to the general hospital.

During their focus group discussion, CHWs also stressed the value of building positive relations with PMVs.

CHW 1 – it is better to get them nearer to you, they are stressed because they think that you are reducing their livelihood

CHW 2 – we need to establish a good relationship with the chemists and vendors, irrespective of their negative touch. They see some cases, and if they are liberal, they will refer them to you. It happens at my place that the patient was referred by the PMV to the health centre. I can even buy drugs from him as a practitioner. They are closer to the people and lean between us and the community. The people go to them first, so we should build a good relationship.

Many positive communication strategies have already been deployed in both states. In Kebbi, for example, the research team were told about the following social mobilisation activities that have been employed in selected settlements as part of the polio campaign:

- Radio and TV announcements
- Public announcements (town crier)
- Mobile film screenings
- Mosque and church announcements
- Community dialogues
- Compound meetings for women
- House by house mobilisation
- Street quizzes
- Street rallies
- Distribution of IEC materials
- Education through Federation of Muslim Women Association of Nigeria (Islamia night schools for women)

Mothers who had been visited by a VCM in Kebbi or CHW in Cross River confirmed that they were a positive influence in delivering key health messages.

Solutions to socio-cultural and religious barriers

To counter the instances of religious beliefs (both Christian and Islamic) precluding treatment-seeking, carers and health workers stressed the need for education and sensitisation of religious leaders and spiritual healers to promote health facility attendance and, in Kebbi, to overcome negative rumours about biomedical treatment. They also emphasised the need to engage with all sectors of the health system including local healers, TBAs and PMVs (who are frequently seen as being closer to the community, both physically and socially) to advocate at the community level and prioritise health facility attendance above the use of local treatment. Similarly, participants suggested that socio-cultural barriers would be more easily overcome if influential community members led by example. In several localities in both Cross River and Kebbi, it was necessary for the research team to be presented to the local Chief and elders to seek permission to enter the village and conduct the study. As one health professional concluded, *'we need to better understand the role of opinion leaders to facilitate demand for services. What are the influences, hierarchies, the orbits of influence?'*

The social empowerment of women in parallel to education of men was stressed in both states. In Kebbi many respondents urged, *'husbands need to be told to allow their wives to go out'*. Similarly, in Cross River, respondents emphasised, *'men need to be educated about how to treat their wives and take care of their families'*.

Solutions to health facility and biomedical deterrents

Solutions to overcoming health facility deterrents focused on two broad and interrelated areas: measures to improve patient experience and measures to improve service delivery. Carers asserted that improving both the environment of health facilities and the attitude of the staff would encourage them to attend. They suggested that health staff should be better sensitised and not quarrel with their patients. To improve service delivery, carers emphasised the need to resolve conflicting messages about the availability of free medicine and to publicise fixed costs. They also stressed the need for a reliable supply of free medicine to be available at the health facility. This was reiterated by health workers in both states who were also keen to provide better services by having equipment in place, improving diagnostic capabilities and developing coverage thorough outreach, tracing and follow up. Participants suggested that building trust in the health services delivery would overcome barriers associated with the negative perceptions of biomedicine and would encourage communities to regard the health centre as 'the right place' to treat childhood illness.

Both carers and health workers discussed the need to maximise positive experiences at health facilities. A mother in Kebbi asserted,

For those who don't support going to a health centre, then you should lead by example. If your child is sick, you get medicine and your child gets better, then this could be a good example. They don't want their child to suffer, so next time they might take it for treatment. That is a way to encourage their thinking.

In Cross River, one of the health centres visited had recently been brought under the maternity service scheme (MSS). Health workers suggested that because there was an expanded staff and carers knew there was always a health professional at the centre, even during the night, there had been an increase in the level of positive interaction between the community and the centre in general, not only concerning MNCH.

Several health professionals suggested that the government should increase their support of primary healthcare and argued that the introduction of iCCM would help overcome many of the deterrents to health facility attendance and positive treatment-seeking.

Table 1 – Summary of community identified barriers and solutions suggested

Identified barrier		Suggested solution
Financial	<ul style="list-style-type: none"> • Lack of money • Cost of treatment (direct and indirect) • Inability to save (distrust of others) • Limited empowerment of women (economically) 	<ul style="list-style-type: none"> • Publication of fixed fees for services, treatment and medicine • Offer credit system at health facilities • Equitable economic empowerment of women (income-generating activities) • Village involvement in Community National Health Insurance Scheme
Access	<ul style="list-style-type: none"> • Distance • Location • Lack of transport 	<ul style="list-style-type: none"> • House-to-house service delivery • Provide CHWs with motorbikes to access the community (CR) • Remunerate VCMs' travel expenses. • Ambulance / motorbike ambulance
Knowledge & information	<ul style="list-style-type: none"> • Limited knowledge on causation, prevention and treatment for childhood illness • Use of local treatments (especially for pneumonia) • Lack of strategic and targeted health education at community level 	<ul style="list-style-type: none"> • Strategic, targeted and sustained health education (particularly directed towards men as household decision makers) • Demand-creation activities at a community level • Involve key community members (religious leaders, TBAs, PMVs)
Socio-cultural & religious	<ul style="list-style-type: none"> • Religious prohibition of treatment-seeking • Dependency on spiritual healers (CR) • Divergence between care-giver / care-seeker roles (K) • Limited empowerment of women (socially) 	<ul style="list-style-type: none"> • Educate and sensitise religious leaders and spiritual healers • Positively engage all sectors of the health system (local healers, TBAs, PMVs) • Collaborate with multiple leadership structures • Advocate health facility attendance (in preference to local treatment) • Social empowerment of women (and education of men)
Health facility & biomedical deterrents	<ul style="list-style-type: none"> • Conflicting messages about free treatment • Distrust of biomedicine • Health centre environment and attitude of staff • Perception health facility for immunisation, ANC but not treatment of childhood illness (CR) • Supply-side issues (lack of drugs, equipment and diagnostic capability, limited tracing and follow-up, lack of government support for primary healthcare) 	<ul style="list-style-type: none"> • Improve patient experience • Improve and build trust in service delivery (resolve issues of free treatment) • Counter negative perceptions of biomedicine • Encourage health facility to be seen as frontline in prevention and treatment of child health • Maximise positive patient experiences • Supply side issues (manage resources to avoid stockouts and equipment shortage, improve diagnostic capabilities, enhance tracing and follow-up, implement iCCM, increase support for primary healthcare)



Discussion and implications

The care-seeking behaviour and associated barriers to treatment for childhood illness identified in this study are supported by similar findings in the published literature. Although most work focuses on southern Nigeria, studies located in the north of the country provide an interesting counterpoint.

Despite ethno-linguistic, socio-cultural and religious diversity in Nigeria, a number of consistent patterns emerge in the literature. Most noticeable, is the limited knowledge carers displayed about the cause of childhood illness, particularly malaria. Although mothers consistently reported a high prevalence of perceived childhood malaria, the majority did not associate malaria with bites from infected mosquitoes [22,23]. All febrile illness was commonly regarded as malaria, and attributed to causes including too much sun, or too much work [24,25,26]. Enato and Okhamafe [22] found limited use of bed nets, many in poor condition, and suggested that correcting misconceptions about the cause of malaria, may influence the utilisation of preventative strategies. In contrast, Ango et al [27] in a rapid assessment of the use of bed nets in Kebbi and Kaduna in 2010, found high levels of usage. This may be due to the large distribution of LLITNs in Kebbi as part of the Roll Back Malaria campaign that was held in collaboration with Child Health Week in 2010, and for which UNICEF donated 1.4million nets to the state. Although the campaign attempted to conduct a survey of utilisation, only a few LGAs responded, and an evaluation of uptake and usage is still outstanding. Increasing the number of LLITNs to encourage universal coverage in malaria endemic areas should be considered.

In comparison to the literature on malaria, studies focusing on causation, prevention and treatment-seeking for diarrhoea and pneumonia are less numerous and were not included in the literature review undertaken prior to the start of this research [5]. Information about pneumonia was scarce, and as the National Action Plan for the Prevention and Control of Pneumonia in Nigeria stresses, 'pneumonia has unfortunately been sadly neglected' [28]. The lack of community awareness about pneumonia was clear throughout this research, particularly given that in Kebbi, no carer reported a child having had pneumonia. The need to raise the profile of pneumonia and dedicate more resources to address this 'forgotten killer' [29], particularly in relation to decreasing under-five mortality rates, is emphasised by the Global Action Plan for Prevention and Control of Pneumonia [30].

In Cross River, participants identified various types of diarrhoea, and both perceived causal factors and severity had a bearing on treatment-seeking behaviour. This was similarly reflected by Omotade et al [31] in a study of diarrhoea in Oyo State that delineated various classifications of diarrhoea and their associations with other illnesses. Diarrhoea caused by teething, for example, was frequently regarded as 'normal' diarrhoea that did not require treatment [c.f. 32]. Teething was also seen to be a cause of febrile illness. Iwelunmor et al [33] found that 34% of mothers in their sample at an outpatient clinic in Lagos regarded teething as the cause of their child's fever, despite the positive malaria diagnosis given by a physician. The fact that perceptions of illness, local causation and the ability to readily identify symptoms impact on care-seeking behaviour and outcomes is explored across much of the literature, and as Iwelunmor et al [33] emphasise 'it is not uncommon for people to engage in multiple patterns of treatment that are customary and may or may not correspond with biomedical standards'.

That plant medicine is an established treatment option for childhood illness in southern Nigeria is apparent throughout much of the literature [34,35]. Falada [23] found that the preference for herbal medicine differed between men and women and between rural and urban settings. Reasons for giving it as frontline treatment included the accessibility of the plants, the fact that elders had passed on the 'recipes', and belief in its effectiveness [23]. The use of traditional or spiritual healers was frequently linked to the severity of illness. Okeke et al [25] conclude that while traditional healers were not often used in the treatment of uncomplicated malaria, they were consulted for severe conditions such as convulsions. Falada et al [23] suggest this practice derives from the cultural belief that convulsions are separate disease entities with a spiritual basis.

The role of PMVs highlighted in the literature, corresponds closely to the findings of this research. As Okeke et al [25] conclude, PMVs are providers perceived to be geographically and economically most accessible to the community. Falade et al [23] found that 70% of the respondents in their study chose to patronise PMVs as frontline care providers because of the proximity of the PMV to their home, the availability of drugs, the freedom to purchase the quantity of medicine they could afford, and the availability of credit when necessary. Similar reasons were recorded by Idowu et al [24] and Chirdan et al [26]. Issues of counterfeit, substandard and expired medicine were also widely addressed, as were concerns over self-medication, inappropriate dosage and the development of drug resistance [36,37]. In their more detailed study, Brieger et al [38] discussed the interaction between PMVs and customers, and suggested that through training and policy changes, the contribution of PMVs to primary healthcare could be standardised and legitimised [39,40]. According to USAID, the Nigerian Urban Reproductive Initiative (NURI) baseline survey, funded by the Gates Foundation, found a proportion of PMVs and chemists are clinicians with some medical training. In line with this, the research team in Cross River was informed about a PMV who was a retired nurse now selling medicines from her home, and another who was the wife of a local health worker. Only one study was found to explore the perspectives of PMVs themselves [41]. Whilst the extent to which PMVs are offering clinical advice remains unclear, they may form a de facto cadre of clinical providers, not currently acknowledged nor regulated by the health system. This, and the role PMVs could play in delivering integrated care, requires further research [42,43].

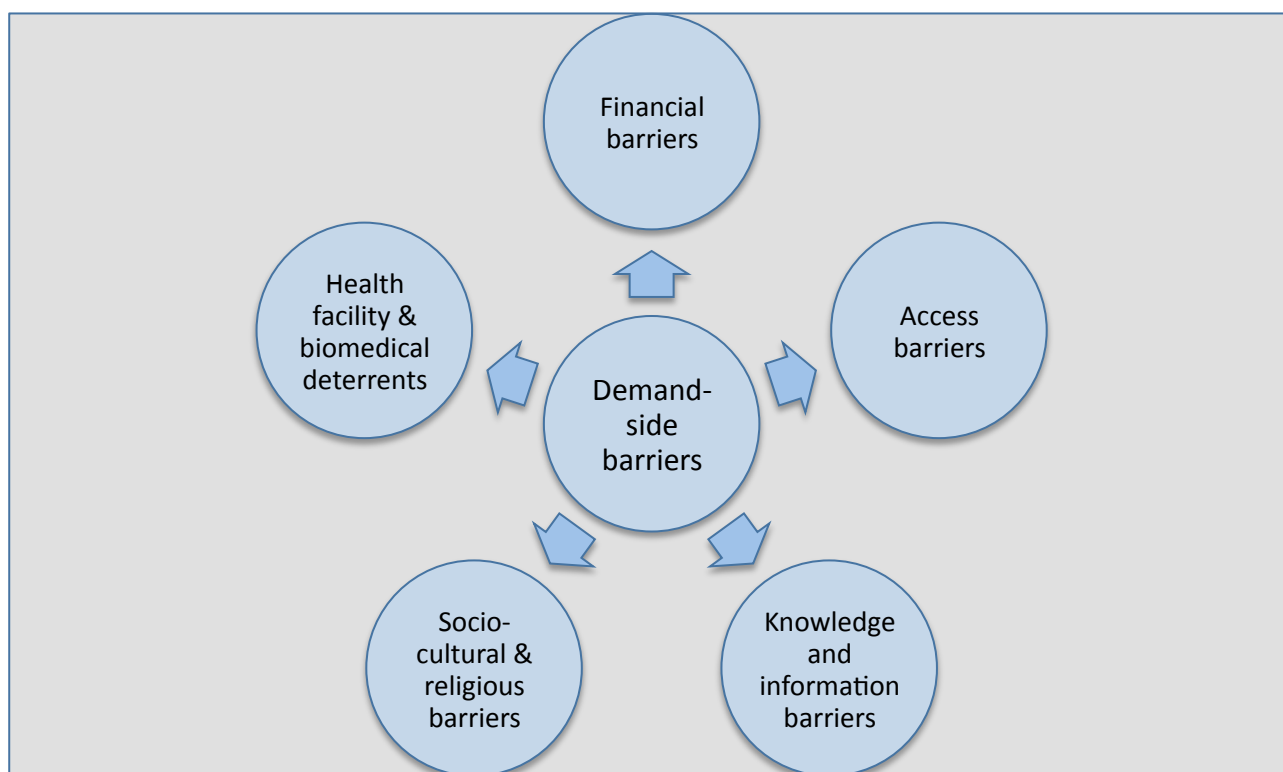
Determinants influencing care-seeking behaviour are addressed from various perspectives in the literature. Whilst Iwelunmor et al [33] use a model that relates cultural beliefs and practices to critical health behaviours which should be encouraged, acknowledged and/or discouraged, Charles et al [44] use the Health Belief Model to explore the role of mothers in health-seeking behaviour at a household level in relation to childhood febrile illness in Cross River. Decision-making paradigms also weave through the literature. Many studies emphasise that whilst the decision to seek treatment usually lies with the father, other influences including familial relations, neighbours and experiences of the individual and collective community shape the course of action adopted, in addition to more logistical concerns such as distance and transport to health facility [31,40].

No previous study was identified that examined the role of fathers as care-seekers in northern Nigeria as a result of women's restricted movement. This is surprising, given the evidence gathered during this research. Promoting gender equality and empowering women has been shown as an important strategy in global health [45]. Singh et al [46] define autonomy as the ability to make decisions through the control of resources and information, and to be able to act upon those decisions. They argue that autonomy at the household level is particularly important for health behaviours and outcomes and reference other studies demonstrating that when women

have more decision-making influence within the home, more resources go to children. In this way household autonomy may be associated with a woman's ability to access health services for her children[47,48]. Again, more research in this area is urgently required, particularly in relation to the variant levels of autonomy and agency found in different ethno-linguistic and socio-cultural groups [49].

In their systematic review of qualitative evidence from Sub-Saharan Africa on household recognition and response to child malaria, pneumonia and diarrhoea, Colvin et al [4] identified five main themes: how households understand these illnesses; how social relationships in families and communities affect the recognition and response to these illnesses; how households act to prevent and treat these illnesses; how households perceive, experience and access different forms of healing; and pathways of care and decision making. These issues cut across the current study, but the synthesis of material echoes the 'guide to demand-side barriers' developed by UNICEF, that outlines four barriers: financial; distance and location of health facilities; socio-cultural and gender dynamics; education and information. [5,50].

Diagram 3 – Framework of demand-side barriers



The current research developed a demand-side barriers framework that added a fifth barrier, as depicted above. The fifth barrier, health centre and biomedical deterrents, collated the qualitative data on participants' perspectives of supply-side issues that influence their care-seeking and highlights the complex relationship between different determinants of a health system.

Demand for services plus provision of services does not necessarily equate with uptake of services. A critical component that has often been lacking in health interventions is a clear understanding of care-seeking behaviour. This study therefore used a participatory approach not only to assess demand-side issues (both barriers and drivers to care-seeking) from the perspective of the

intended beneficiaries, but also to identify a series of related solutions, grounded in empirical data and developed at the community level to encourage and enable care-seeking for childhood illness.

As a platform upon which to develop and promote interventions that are equitable, relevant, appropriate and acceptable, UNICEF should seek to incorporate this information into ongoing policy and programming at international, national and local levels (see summary table below). A number of programmatic implications have already been discussed above: the need for a rigorous assessment of bed net use; the potential for a policy shift with regard to the role of PMVs in the health sector; and the strengthening of women's autonomy through socio-economic empowerment. The research also offers new information to support the efforts of the Federal Ministry of Health, UNICEF and other partners working to improve child survival in Nigeria, and to realise the goals of key initiatives including the Essential Childhood Medicines Scale-up Plan [11], Polio Eradication [51,52], and the Primary Health Care and Health Plan Review being undertaken by the National Primary Health Care Development Agency (NPHCDA) as part of the National Strategic Health Development Plan [53].

From a programmatic perspective, the focus on polio eradication has detracted from other health interventions, and health professionals frequently commented that other key areas were being under-resourced as a result. A health professional at the State Ministry of Health in Cross River concluded,

Immunisation is the only intervention receiving attention now, mainly because of the polio campaign, but Cross River has been polio free for many years, and other initiatives are suffering. For example, promoting health in the community and care-seeking behaviour change are being neglected. There is no awareness of pneumonia or diarrhoea. The First Lady, the Governor's wife did a campaign last year to create awareness about pneumonia, but there has been nothing else. We did a lot for malaria with the net distributions in 2010 and 2011, but the nets are getting old and if there is not a clear understanding of cause, it will come back.

A positive outcome of the polio eradication campaign, is UNICEF's investment in developing the VCM network. Like CHWs in Cross River, this cadre of health volunteer engaged at the community level throughout Kebbi and other northern states, has the potential not only to deliver but reinforce health messages. They are well placed to effect change in daily behaviour, ensuring that knowledge is practically implemented and disease prevention methods are strengthened. In addition to their polio-focused work, VCMs currently convey key health practices. Building on this, the network could effectively raise awareness of existing services, connect families with health facilities (e.g. engage with static services, not only outreach) and play a role in referral, tracing and follow up.

Strengthening this cadre will also support IMCI initiatives in which the treatment of childhood malaria, diarrhoea and pneumonia is shifted to the community to expand coverage. There is ample evidence in the published literature showing that IMCI improves both access to health services and care-givers' home management of common childhood illness. For example, Ebuehi et al [54] found that in Osun, better home management practices were demonstrated in community IMCI compliant LGAs than in non-compliant LGAs. The proportion of care-givers who gave appropriate home treatment for malaria during their child's illness episode was significantly higher, and they also demonstrated better treatment practices for diarrhoea and cough. Ebuehi et al [54] concluded that 'community resource persons' were a major source of information on key practices in the compliant LGA. Clearly, community health workers present new opportunities (as

well as challenges) for human resources for health. UNICEF is recognised for its experience in community mobilisation, particularly with an equity focused framework in which ongoing community mobilisation processes can be sharpened in a way that communities can start highlighting an equity focus in their own work [55,]

Ongoing monitoring is built into the VCM programme, and it is crucial that all communication and health education strategies be rigorously evaluated to assess their effectiveness and impact, so that lessons learnt may be applied directly to the improvement of future demand-generating activities. This research has emphasised how communication strategies must be tailored to meet the needs of specific communities, target certain groups and convey concise and memorable key health messages in a sustained way. These issues were well understood by a UNICEF communication for development (C4D) specialist in Nigeria, who stressed the need to better appreciate and engage with sources of information seeking and sharing at the grass-roots level. As he concluded, *'material and posters that are written in English or are odd translations of local languages do not work'*, particularly as people are not often literate in local languages. Findings from this study have also highlighted the need to meaningfully engage fathers in health education and demand-generation. As Enato et al [22] conclude, *'a husband/partner was the most responsible for children's malaria decision taking in the home in these two communities. This finding has a very important implication in that to effectively implement home management of malaria, the role of the husband/partner must be taken into consideration'*. There is currently no such activities in Kebbi or Cross River targeted specifically at men, male household heads, or fathers. This should be urgently reconsidered in both states because, as discussed, fathers remain the key decision makers regarding whether a child receives treatment or not, and in Kebbi, are often the primary care-seekers.

Traditional and spiritual healers and other actors in the informal sector (e.g. PMVs and TBAs) should also be incorporated into C4D and related initiatives, a view supported by Falade et al [23] who conclude that *'without doubt, traditional healers constitute an important treatment option for the treatment of severe malaria and a core group of opinion makers in all the communities... This is a clear pointer to the need to educate traditional healers on the diagnosis and treatment of acute uncomplicated malaria and in the recognition of the signs and symptoms of severe and complicated malaria, as this subset of children have poorer prognosis'*. Their comments are equally valid for other childhood illnesses, including diarrhoea and pneumonia.

A final area to which this research may contribute insight is with regards to financial and social protection policies. As described by respondents in both states, local saving schemes and distributions are not equitable and as they stand do not adequately serve the poorest and most vulnerable members of the community who are most in need. Social protection as a response to poverty is emerging slowly in Nigeria, supported by the government and development partners, but programmes currently remain small-scale in the context of the country's high rates of poverty and vulnerability [56]. Nigeria ranks low on the OECD Social Institutions and Gender Index (SIGI) that reflects inequalities in human capital, political representation and economic participation between women and men [57]. Federal government-led social protection includes three main programmes: the conditional cash transfer In Care of the People (COPE) targeted at households with specific social categories; the health fee waiver for pregnant women and children under five (financed through the Debt Relief Gain fund); and the community-based health insurance scheme (described earlier in relation to a village in Cross River). Holmes et al [56] identify challenges in developing an effective social protection agenda in Nigeria, and stress the need to increase investment in social service delivery to maximise the effectiveness of social protection

programmes in terms of human development impacts, and to integrate an equity focus into the design and implementation of programmes [58]. In this way, a suite of social protection mechanisms can help address the social and economic vulnerabilities identified as preventing individuals and households from accessing health services [59,60].

In the context of increasing demand for and access to childhood health services, UNICEF and partners have the opportunity to reframe the agenda so that, as Williams and Jones [61] note, 'instead of trying to provide an answer to the question how can we get them to..., we should be pressing to find ways to increase people's capacity to access and complete effective treatments'. There is a need to support the community to identify health and healthcare as a priority. As a mother in Cross River concluded, '*what worries women here is money, school and feeding the children, not healthcare*'. Working in collaboration with the NPHCDA and through the primary healthcare review process, partners should advocate a focus on the operational level of primary healthcare, utilising a systematic method of bottleneck identification and analysis as well as the development of harmonised indicators to assess performance [62].

As emphasised by the recommendations made by the UN Commission on Life-Saving Commodities (particularly recommendation 6 – supply and awareness; 7 – demand and utilisation; and 8 – reaching women and children), demand- and supply-sides of health interventions are interrelated and, to some extent, mutually dependent. Stockouts are a major supply-side issue that have negative and far-reaching ramifications on care-seeking behaviour. Managing resources to ensure a reliable supply of drugs to health facilities could have significant impact on patient attendance, compliance and positive engagement with health services. If medication was available at government health facilities, and was supplied free of charge at the point of delivery to children under five years (in line with national policy), then the financial barrier all carers discussed would be reduced. Building trust in service delivery is a core aspect of solutions to barriers to care-seeking and resolving messages about free treatment is key. This would encourage attendance in both states and in Cross River, for example, would help change perceptions of a health facility from a location for immunisation and ANC, to a centre at the frontline of prevention and treatment of child illness.

In line with its key objectives, this research has successfully generated new empirical data and identified barriers and local solutions to care-seeking and treatment uptake of childhood malaria, diarrhoea and pneumonia in Nigeria. UNICEF must now strive to put this evidence into policy, and policy into practice.

Table 2 – Summary of policy/programmatic implications and action points

	Policy/programmatic implications and action points
C4D	<ul style="list-style-type: none"> • Develop key messages that better address the causation, symptoms and prevention strategies regarding childhood illness (particularly pneumonia and diarrhoea) and incorporate related issues such as water, hygiene and sanitation. • Strengthen demand generation through targeted C4D that emphasises the recognition of danger signs, advocate timely care-seeking, and promote adherence to treatment protocols. • Implement strategic and sustained health education, specifically target fathers and household decision makers. • Involve key community members in education and communication, particularly local leadership. • Build trust in biomedicine and service delivery, and devise strategy to encourage a shift in demand from other providers (traditional and spiritual healers, informal vendors) to health facilities as frontline in prevention and treatment of childhood illness. • Address religious prohibition of biomedicine and health facility attendance. • Integrate rigorous monitoring and evaluation to assess the effectiveness and impact of all health education, communication strategies and demand-generating activities.
Financial and social protection	<ul style="list-style-type: none"> • Advocate and support the government to implement and publicise the national policy of free treatment to children under-five years at the point of service delivery. • Advocate and support the economic and social empowerment of women, assess the scalability of initiatives including micro-credit for small business. • Support a range of equitable social policy and protection solutions (e.g. COPE, the community based health insurance scheme).
Health system strengthening and human resources for health	<ul style="list-style-type: none"> • Provide support and technical assistance for health system strengthening to improve both service delivery and patient experience. • Assess the potential of incorporating PMVs into the formal sector to deliver integrated care. • Expand the role of VCMs and CHWs to include case detection, tracing and follow up, and the identification and monitoring of vulnerable families. Encourage a schedule of regular home visits for one-to-one support and counselling of care-givers. Evaluate the VCM programme in terms of impact and efficiency. • Ensure a cascade of regular refresher training, high quality supervision and sustained support. • Consider developing outreach services (and the potential of house-to-house service delivery) in line with IMCI initiatives.
Supply side	<ul style="list-style-type: none"> • Strengthen supply side chain management at all levels to prevent stockouts of essential commodities. Revise protocols for maintaining standard minimum stock levels for essential commodities. • Strengthen the monitoring of stockouts through routine HMIS, regular supervision visits and annual rapid assessments.
Other	<ul style="list-style-type: none"> • Increase the number of LLITNs distributed per household (through campaigns and other mechanisms such as ANC) to encourage universal coverage. Undertake a rigorous assessment of bed net use. • Work in collaboration with the NPHCDA and primary healthcare review process to prioritise primary healthcare.



Conclusion

The demand-side of health interventions to improve child survival has often been neglected in research, policy and programming, or at least, has not been afforded the weight it deserves. As the Nigerian government and its partners strive to improve equitable coverage of interventions that are known to improve child survival, attention must be given to understanding demand-side (and supply-side barriers) encountered by care-givers as well as to locally derived and relevant solutions.

This research was conducted under the auspices of the UN Commission on Life-Saving Commodities for Women and Children, which recognises the importance of barriers in affecting the availability, accessibility and rational utilisation of selected commodities for maternal and child health. It is UNICEF's intention that the UN Commission use the information generated through this research to recommend innovative strategies that raise awareness of, and strengthen demand for, these lifesaving products amongst end users.

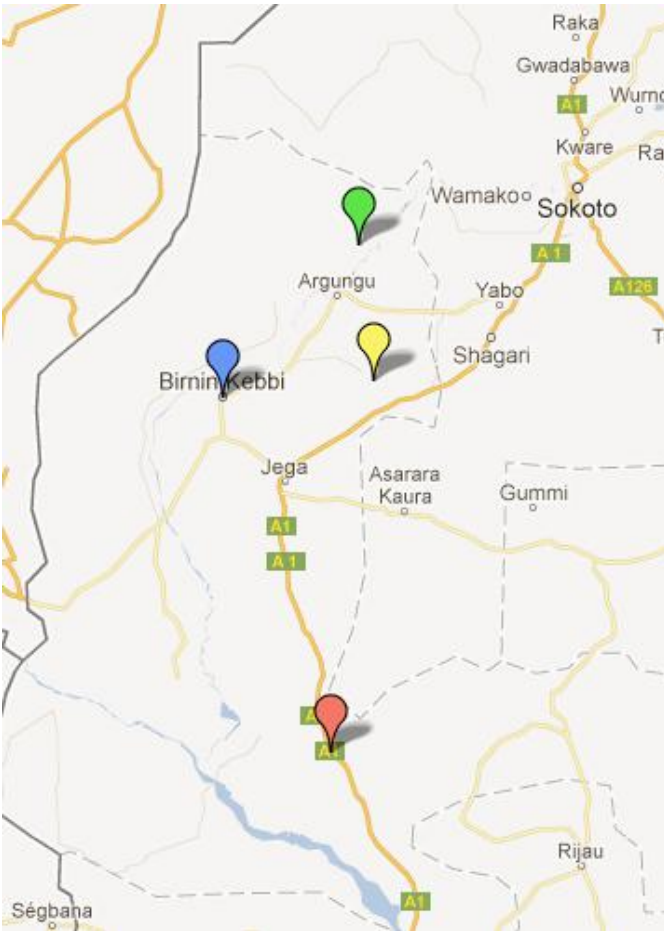
Against this backdrop and in line with UNICEF's mission to achieve equity for and realise the rights of the world's most marginalised children, the research resulted in a number of key implications for policy and programming in Nigeria. Building upon these specific points, five general recommendations are offered in conclusion:

1. Utilise the solutions identified as a platform to develop effective and sustainable interventions that are rooted in the lived experience of the intended beneficiaries.
2. Ensure interventions are oriented towards the community. Support caregivers to make decisions and seek treatment within their local context, rather than characterise a lack of engagement with health facilities as a product of poor health literacy. Accept that home management is likely to remain the frontline of care. Promote safe and appropriate practices at a community level and simple processes for seeking treatment at health facilities.
3. Synergise supply- and demand-side initiatives so that health is not adversely affected. Whilst demand-side generation will 'backfire' if patients expend time, energy and resources seeking care only to be denied because of stock-outs or staff shortages, demand-side generation takes time to evolve and take effect, and should therefore be implemented in parallel to supply-side challenges being resolved.
4. It is imperative that health interventions are critically and rigorously monitored and evaluated. This will promote accountability and transparency as findings are meaningfully incorporated into the cycle of programme and policy development and implementation.
5. Focused research that can be operationalised should continue to seek answers to specific questions. For example, would recruiting, training and deploying male health volunteers increase positive engagement with fathers and household heads, thereby contributing to both a reduction in childhood illnesses and an improvement in care-seeking for childhood illness?



Nigeria is a diverse and complex country facing particular challenges to health and healthcare. If Nigeria and its partners can combine resources and expertise, however, they could make a significant and positive impact on the health and survival of the most disadvantaged women and children, and enable Nigeria to accelerate progress towards achieving its Millennium Development Goals.

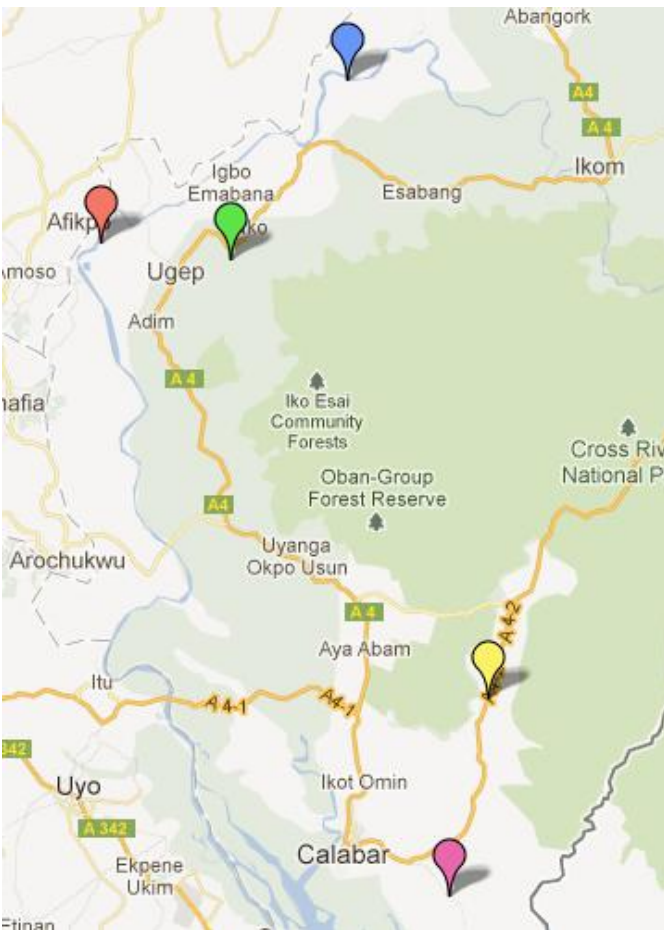
Appendix 1 – Map of fieldsites





Kebbi State
(approximate locations)

-  Birnin-Kebbi LGA
-  Koko LGA
-  Augie LGA
-  Gwandu LGA



Cross River State
(approximate locations)

-  Obubra LGA
-  Abi LGA
-  Akamkpa LGA
-  Yakurr LGA
-  Akpabuyo LGA

Appendix 2 – Methodological tools

Topic Guide

- **Malaria, pneumonia and diarrhoea**

Language

Local theories of causation

Recognition of illness

Preventive measures, disease prevention strategies

Risk /danger

- **Care- and treatment-seeking behaviour for malaria, diarrhoea and pneumonia**

Response to illness

Previous experiences

Treatment strategies, treatments sought (including gender)

- **Modes of healthcare**

Biomedical / local / traditional

Relations with healthcare providers

Non-medical impact of seeking different modes of healthcare

- **Location of healthcare**

Distance

Time

Terrain

Transport

Access (independent and collective)

- **Household and community**

Socio-cultural norms

Household (priorities and negotiation)

Social relationships, decision-making continuum and agency to act (including gender)

Role of religious and spiritual beliefs

- **Financial**

Costs (direct and indirect)

Commodification of care

- **Level of (biomedical) knowledge**

Health education exposure

Information about services available

- **Other determinants**

- **Behaviour and change**

Divergence between theory and practice (e.g. know what should do, but doesn't – why?)

Triggers and processes of change in health beliefs and practices

- **Local solutions**

Interview framework – carers of children under 5 years old

Demographic details

- Age
- Relationship to child
- Marital status
- Number of children in care
- Age of children
- Gender of children
- Do children go to school
- Did carer go to school
- Does family (paternal, maternal) live near
- Religion
- Employment
- General income range

Q1

What are the main child health problems in your community?

Do many young children (under 5) die in this area?

What do they die from?

Q2

What do you call malaria in your community?

What causes malaria and what are the symptoms?

How do you prevent malaria and do you do this?

Do your family sleep under bed nets?

Where did you get your family's bed net(s) from? Were they treated? How much did they cost?

Do bed nets have any other uses?

If the children sleep under a bed net, when and how do they get malaria? What can be done?

What do you call diarrhoea in your community?

What causes diarrhoea and what are the symptoms?

How do you prevent diarrhoea and do you do this?

Where does your family get water from? Do you drink it directly from the source?

Where does your family (adults and children) go to the toilet? (If in the bush, do you leave it?)

Does your family (adults and children) wash their hands? With water only?

What do you call pneumonia in your community?

What causes pneumonia what are the symptoms?

How do you prevent pneumonia and do you do this?

Q3

For child illness, do you use traditional medicine / home remedies?

What for? How do you prepare? Where do you get the herbs? Who should you how to use them?

Does your family use a traditional doctor / herbalist / spiritual healer for child illness?

What for? Do you have to pay? How much?

Do you sometimes go to the health centre for child illness?

Who takes the child to the health centre? If they are admitted who stays with the child?

How far is the health centre from your place? How do you get there?

What cost is incurred to visit the health centre and obtain medicine?

What is your opinion about the quality of the services provided by the health centre?

Do you have to wait to be seen at the health centre?

Do you sometimes use the chemist for child illness?
Why do you use the chemist (instead of the health centre?)
How far is the chemist from your place? How do you get there?
What cost is incurred to visit the chemist and obtain medicine?

Q4

When a child is ill, who do you tell?
What kind of help does your husband / family provide to you when a child is ill?
Who takes the decision to treat the child?

Q5

What cultural beliefs influence child illness and treatment-seeking in your community?

Q6

How often is your child ill?
How often do you get treatment for your child?
When did you last visit the health centre because of child illness? (Elicit narrative)

Q7

Of the three illnesses, which is the most dangerous / serious for children in your opinion?
Of the three illnesses, which are you most likely to visit a health centre for?

Q8

Where do you get your information about child illness?
What child survival information, education and communication activities are targeted at mothers?
What measures should be taken to improve the community's knowledge about child illness?

Q9

What are the main challenges your family faces in going to the health centre or accessing treatment for child illness?
What are the reasons that some families not take their child for treatment if they are ill?
Does the cost of accessing treatment sometimes prevent you taking the child?

Q10

What are the solutions to these challenges / barriers?

Q11

What can be done to improve the health of children in this area?

Focus group discussion framework – fathers of children under 5 years old

Q1

What are the main child health problems in your community?

Do many young children (under 5) die in this area?

What do they die from?

Q2

What causes malaria and what are the symptoms?

How do you prevent malaria and do you do this?

If the children sleep under a bed net, when and how do they get malaria? What can be done?

What causes diarrhoea and what are the symptoms?

How do you prevent diarrhoea and do you do this?

What causes pneumonia and what are the symptoms?

How do you prevent pneumonia and do you do this?

Q3

For child illness, does your wife use traditional medicine / home remedies? What for?

Does your family use a traditional doctor / herbalist / spiritual healer for child illness?

Do you sometimes go to the health centre for child illness?

How far is the health centre from your place?

What is your opinion about the quality of the services provided by the health centre?

Do you sometimes use the chemist for child illness?

Why do you use the chemist (instead of the health centre?)

Q4

What kind of help do you provide to your wife when a child is ill?

Who takes the child for treatment, you or your wife?

Q5

What cultural beliefs influence child illness and treatment-seeking in your community?

Q6

What role should fathers play to prevent children getting malaria, diarrhoea and pneumonia?

What role should fathers play to ensure children access treatment quickly & easily?

What role should fathers play to create awareness about childhood illness?

Where do you get information about child illness?

Do you get any information from the imams/mosque or pastor/church?

Are there any child survival information, education and communication activities targeted at men?

What measures should be taken to improve fathers' knowledge about child illness?

Q7

What are the main challenges your family faces in going to the health centre or accessing treatment for child illness?

What are the reasons that some families do not take their child for treatment if they are ill?
Are there problems with different types of healthcare?
Does the cost of accessing treatment sometimes prevent you taking the child?

Q8

What are the solutions to these challenges / barriers?

Q9

What can be done to improve the health of children in this area?

Focus group discussion – volunteer community mobilisers / community health workers

Q1

What are the main child health problems in your community?

Do many young children (under 5) die in this area?

What do they die from?

Q2

What causes malaria and what are the symptoms?

How do you prevent malaria and do you do this?

If the children sleep under a bed net, when and how do they get malaria? What can be done?

What causes diarrhoea and what are the symptoms?

How do you prevent diarrhoea and do you do this?

What causes pneumonia and what are the symptoms?

How do you prevent pneumonia and do you do this?

Q3

For child illness, do some families use traditional medicine / home remedies? What for?

Do some families use a traditional doctor / spiritual healer for child illness?

Do some families go to the health centre for child illness?

What is your opinion about the quality of the services provided by the health centre?

Do some families use the chemist for your child illness?

Why do they use the chemist (instead of the health centre?)

Q4

What kind of help do husbands / family provide to mothers when a child is ill?

Is it the mother or the father of the child who take it for treatment?

Q5

What cultural beliefs influence child illness and treatment-seeking in this community?

Q6

Where do the community learn about child illness?

What child survival information, education and communication activities are targeted at mothers/fathers?

Is information provided through the mosques / churches?

What measures should be taken to improve the community's knowledge about child illness?

Q7

What activities do VCMs / health workers undertake in the community?

What challenges do VCMs / health workers face doing their work in the community?

Do you get support from the health centre, the government, the community?

Q8

What are the main challenges families in this community face in going to the health centre or accessing treatment for child illness?

What are the reasons that some families do not take their child for treatment if they are ill?

Does the cost of accessing treatment sometimes prevent some families from taking the child?

Q9

What are the solutions to these challenges / barriers?

Q10

What can be done to improve the health of children in this area?

Appendix 3 – Consent form

English language version

UNICEF / Anthrologica
Qualitative research to identify solutions to local barriers to care-seeking and treatment
for diarrhoea, malaria and pneumonia in Nigeria

Background to the study

Diarrhoea, malaria and pneumonia remain the three largest killers of children. Simple, inexpensive treatments are available for these conditions and in many countries, including Nigeria, efforts are being made to expand access by making the treatments available within communities and health facilities. Yet, too few children receive appropriate care. UNICEF and Anthrologica are interested in developing a better understanding of barriers that prevent uptake of treatment in Nigeria, and seek to develop specific strategies to address the barriers identified.

Objective of the study

The objective of this study is to learn from care givers in Cross River State. We are interested in:

- Your perceptions and experiences of diarrhoea, malaria and pneumonia
- Your treatment-seeking behaviour for diarrhoea, malaria and pneumonia
- The barriers, difficulties and challenges you face in accessing treatment for these illnesses
- Your ideas about solutions to these challenges, ways in which the barriers can be overcome, and what would need to happen for better and more timely access to treatment for these illnesses.

Interview

For this purpose, we would like to talk to you about matters relating to diarrhoea, malaria and pneumonia in children. The informal interview will last for approximately one hour. You have the right to withdraw from the discussion at any time without reason.

We will ensure that your information, opinions and experiences are kept confidential and will only be used for the purpose of the study outlined. We will not use your name. During our conversation, we will make an audio recording for our records. It will be destroyed at the end of the study. During our discussion we will take a number of photographs of you. These will be used for the purpose of the current study and may be included in academic publications and other material for UNICEF and Anthrologica. If your photograph is published, you shall not be identified by name and the usual confidential process shall be followed.

In regard to collecting information for this study we would greatly appreciate your help and therefore seek your consent and cooperation. You may ask any questions related to the study and we will answer these questions to your satisfaction.

INFORMED CONSENT

I have been informed in detail about the purpose and nature of this study.

I have received satisfactory answers to all my questions relating to this study.

I have decided that I will participate willingly and can withdraw at any time for any reason.

I give my informed consent to participate in this study and have my photograph taken as part of the study.

Name of Participant

Signature

Date

Name of Witness

Signature

Date

As a witness of this letter, I ensure that I have the above information has been accurately conveyed to the participant. I also ensure that they have decided to participate in this study freely and willingly.

Hausa language version

UNICEF / Anthrologica Qualitative research to identify solutions to local barriers to care-seeking and treatment for diarrhoea, malaria and pneumonia in Nigeria

Gabbatarwa

Zawo/gudawa, zazabin cizon sauro, da lamuka/rangaza su ne manyan cututuka da ke kashe yara. Akwai magunguna marasa tsada ma wannan cututuka a kasashe da yawa, kaman Nijeriya, kuma a na kokari a kara hanyoyin bayar da wannan taimako wa al'ummai da gidajen lafiya. Duk da haka, yara dayawa ba su samun isheshen taimako. UNICEF da Anthrologica su na neman kyakyawan ganewa na al'amure da su ke hanna wannan taimako a Nijeriya, da kuma hanyoyin da za a magance wadanan masalolin.

Dalilin Wannan Bincike

Makasudin shirin nan shi ne koya da ga wurin masu lura da yara a jihar Kebbi. Mu na neman ganewa a:

- Menene ganewan ku da zawo/gudawa, zazabin cizon sauro, da lamuka/rangaza
- Yaya ne ku ke neman taimako ma zawo/gudawa, zazabin cizon sauro, da lamuka/rangaza
- Masaloli da ku ke fuskanta a neman taimako ma wadanan cututuka
- Tunanin ku a yanda za a magance wadanan masalolin, da kuma hanyoyi da za a tabbata cewa taimako ya samu da wuri

Tambayoyi

A kiman nan, mu na son mu yi ma ku tambayoyi game da zawo/gudawa, zazabin cizon sauro, da lamuka/rangaza. Tambayoyin nan ba za su dauki lokaci mai yawa ba. Za ka/ki iya pasa bayar da amsa idan ran ki/ka bai dauka ba.

Muna tabbata ma ka/ki cewa wadanan suna, amsoshi, ko bayanai ba za mu yi amfani da shi don wani nufi ba amma don samun haske ne da cigaban wannan neman sanni. Za ka/ki iya tambaya idan akwai in da ba ka/ki gane ba, ina shirye don in ba ka/ki amsa.

Za mu so mu yi rekod na wanan tambayoyin da kuma dauki hotuna sabo da cigaban wannan neman sani. Ya zamana watakila za a yi amfani da wanan hotuna a takadun UNICEF da Anthrologica. Idan ya zamance haka, ba za mu ambata sunan ka/ki ba.

Sabili da wannan neman sanni, mu na roko kuma za mu ji dadi idan za ka/ki amince.

Mika Kai Don Aiki

Na gane nufin zararin nan.

Na samu daman tambaya kuma an ban amsoshi ma su ka'itarwa.

Takardan yanci ta ban daman kin tankawa, ko pasawa a ganin dama na, haka kuma bai shafi wani abun cutarwa na rayuwa ta ba.

Sunan mai ba da amsa

Signature

Det

Sunan shaida

Signature

Det

Ni shaidan wannan takadda ne, kuma na tabbata cewa mai ba da amsa ya/ta gane da tambayoyi. Na kuma tabbata cewa ya/ta amince da wannan binciken kuma ya/ta ba da amsa da sanin shi/ta.

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